social sciences

Selected Papers from the 7th World Conference on Qualitative Research

Edited by
Gianina-Estera Petre and António Pedro Costa

MDPI

Selected Papers from the 7th World Conference on Qualitative Research

Selected Papers from the 7th World Conference on Qualitative Research

Editors

Gianina-Estera Petre
António Pedro Costa

Editors

Gianina-Estera Petre
Adventus University
Cernica
Romania

António Pedro Costa
University of Aveiro
Aveiro
Portugal

This is a reprint of articles from the Special Issue published online in the open access journal *Social Sciences* (ISSN 2076-0760) (available at: https://www.mdpi.com/journal/socsci/special_issues/29548TUZKP).

For citation purposes, cite each article independently as indicated on the article page online and as indicated below:

Lastname, Firstname, Firstname Lastname, and Firstname Lastname. Article Title. *Journal Name* **Year**, *Volume Number*, Page Range.

Contents

About the Editors

Gianina-Estera Petre

Gianina-Estera Petre earned her Ph.D. in Education, Curriculum, and Instruction from the Adventist International Institute of Advanced Studies, Philippines. Her research interests encompass pre-service and in-service teacher education, the integration of values into teaching, teacher training for both face-to-face and online instruction, and the development of qualitative research. She has conducted workshops to train educators in designing and delivering online classes using interactive methods, as well as qualitative research methodologies. The outcomes of her work have been presented at international conferences, and she has authored numerous articles on these subjects. Additionally, she has contributed chapters to two SAGE publications: *"The SAGE Handbook of Online Higher Education"* (Online Higher Education in Europe) and *"The SAGE Handbook of Qualitative Research in the Asian Context"* (Action Research in the Asian Context). Currently, she serves as an Associate Professor at Adventus University in Romania, where she also holds positions as the Director of the Teaching Staff Training Department and the Director of the Research Center in Education. Furthermore, she serves as the Editor-in-Chief of the *Journal of Educational Studies*. She also holds guest professorship positions at the Adventist International Institute of Advanced Studies in the Philippines and Montemorelos University in Mexico.

António Pedro Costa

António Pedro Costa is a principal researcher at the Research Centre on Didactics and Technology in the Education of Trainers (CIDTFF), Department of Education and Psychology, University of Aveiro (Portugal). He is a co-author of the qualitative analysis supporting software webQDA. In this area, he has published, in co-authorship, several papers in national and international congresses and journals and book chapters. He currently teaches curricular units of research methodologies. He is the Coordinator of the Ibero-American Congress on Qualitative Research and the World Conference on Qualitative Research. He has organized several Special Issues and books on qualitative research. He is the main editor of the journal *New Trends in Qualitative Research (NTQR)*. He is a principal researcher at the Research Centre on Didactics and Technology in the Education of Trainers (CIDTFF), Department of Education and Psychology, University of Aveiro, and a collaborator at the Artificial Intelligence and Computer Science Lab (LIACC), Faculty of Engineering, University of Porto. His areas of interest include qualitative research and mixed methods, emphasizing the study of methods, data collection techniques, and analysis for implementation in the webQDA software. In 2023, he was distinguished with an honorable mention in the Arts and Humanities in the "UA Researcher Award" category. In addition, he has carried out studies in this field on data representation and visualization, ethics, decision-making, and customer/user satisfaction, among others. He has also coordinated several projects with public and private funding worth more than 3 million euros.

Preface

This Special Issue contains a selection of the works accepted for presentation and discussion at the seventh World Conference on Qualitative Research (WCQR2023), held on January 25-27, 2023, in the Algarve, Portugal (hybrid conference). WCQR2023 was organized by the University of Azores and Ludomedia of Portugal. The conference organizers also collaborated with or were sponsored by several universities, research institutes, and companies, including the Research Centre on Didactics and Technology in the Education of Trainers (CIDTFF) of the University of Aveiro; the University of Alberta; the National Centre for Research Methods (NCRM); the Asian Qualitative Research Association (AQRA); the Adventus University; the Nursing Research, Innovation and Development Centre of Lisbon, a part of ESEL; the Vivekanand Education Society Institute of Management Studies and Research (VESIM); the Society of Qualitative Studies and Research (in Portuguese, Sociedade de Estudos e Pesquisa Qualitativos); the Ibero-American Congress on Qualitative Research (CIAIQ); the Action Research Network of the Americas; Global CAR; Atlas.ti; Timberlake; and DiscoverText.

The conference focused on qualitative research with an emphasis on methodological aspects and their relationship with research questions, theories, and results. This Special Issue focuses mainly on *Qualitative Research in Education* and *Qualitative Research in Social Science* to assist researchers in using the correct methodological approaches for qualitative research projects. WCQR2023 featured four main application fields (Education, Health, Social Sciences, and Engineering/Technology) and seven main topics: Rationale and Paradigms of Qualitative Research (theoretical studies, and critical reflection on epistemological, ontological, and axiological dimensions); Systematization of Approaches to Qualitative Studies (literature review, integrating results, aggregation studies, meta-analysis, meta-synthesis, and meta-ethnography); Qualitative and Mixed Methods Research (emphasis on research processes that build on mixed methodologies with a priority to qualitative approaches); Data Analysis Types (content analysis, discourse analysis, thematic analysis, narrative analysis, etc.); Innovative Processes of Qualitative Data Analysis (design analysis, articulation, and triangulation of different sources of data images, audio, and video); Qualitative Research in Web Context (e-Research, virtual ethnography, interaction analysis, Internet latent corpora, etc.); and Qualitative Analysis with the Support of Specific Software (usability studies, user experience, and the impact of software on the quality of research and analysis). After carefully reviewing each article with the help of at least three independent reviewers, 13 high-quality works were selected for publication. These articles comprise 38 authors from nine countries, including Chile, Ireland, Italy, Lithuania, Poland, Portugal, South Africa, Spain, and the United Kingdom.

We would like to take this opportunity to express a particular word of acknowledgment to the organizers of WCQR2023, Conceição Ferreira, Jaime Ribeiro, Fábio Freitas, Hugo Mártires, Mfanelo Ntsobi, Marisa Mártires, Grzegorz Bryda, King Costa, Elizabeth Pope, and Sónia Mendes, for their intricate and delicate work on the scientific management, local logistics, publicity, publication, and financial issues. We also express our gratitude to all members of the WCQR Program Committee and the additional reviewers, as they were crucial in ensuring the high scientific quality of the event. We also acknowledge all authors and delegates whose research work and participation made this event successful. Finally, we acknowledge and thank all Social Sciences (MDPI) staff for their help in the production of this volume.

Gianina-Estera Petre and António Pedro Costa
Editors

Editorial

Advancing Qualitative Research: Insights from the 7th World Conference on Qualitative Research

Gianina-Estera Petre [1,*] and **António Pedro Costa** [2]

[1] Theology-Social Work-Education Sciences Department, Adventus University, 077035 Cernica, Romania
[2] Research Centre on Didactics and Technology in the Education of Trainers, Department of Education and Psychology, University of Aveiro, 3810-193 Aveiro, Portugal; apcosta@ua.pt
[*] Correspondence: gianina.petre@uadventus.ro

The 7th World Conference on Qualitative Research convened scholars, researchers, and practitioners across various domains to exchange insights into the wide-ranging utilisation of qualitative research. Within this distinctive *Social Sciences* Special Issue, readers will encounter invaluable suggestions on employing qualitative research methodologies within diverse cultural and environmental contexts. These directives not only aid researchers in adeptly tailoring their investigative approaches to varying settings, but also underscore the importance of employing digital tools and embracing stringent practices to uphold methodological credibility.

In the contemporary globalised landscape—the global village (McLuhan 1962)—societies must be able to effectively respond and adjust to perpetually evolving environments (Liu et al. 2023). Qualitative research presents a valuable avenue for acquiring insight into diverse cultural norms, equipping researchers with adequate methodologies and tools to navigate this dynamic world. Through thorough immersion in the research context (Creswell and Poth 2018), researchers can more efficiently collect, expand on, and utilise information, thus easily adapting to challenging environments. In today's international setting, researchers must establish connections with their global counterparts, aiming to augment knowledge, enrich understanding, and advocate for adopting optimal research practices, ultimately contributing to advancing both individuals and society.

Therefore, advancements in the domain of research methodology must be grounded in peer-to-peer interaction and collaboration, which encompasses diverse components such as formulating methodologies (Tracy 2013), identifying appropriate research settings and participants (Neale 2021), and selecting efficient data collection methods (Creswell and Creswell 2018; Creswell and Poth 2018). These initiatives aim to address research challenges effectively and foster advancements worldwide while acknowledging the importance of situating discoveries and methods within the framework of qualitative research.

Nind and Katramadou (2023) emphasise the positive impact of qualitative research in empowering individuals amidst adversities and stress how important it is for researchers to be well versed in these outcomes. One key advantage of qualitative research lies in its ability to offer a profound comprehension of the subject by clarifying diverse research designs (König et al. 2022). As Anderson et al. (2021) highlighted, qualitative investigation can empower women by providing them with local and global platforms to voice their experiences and viewpoints. Furthermore, a noteworthy aspect is the increasing integration of digital tools and platforms into qualitative research for data collection and analysis, which enables researchers to cultivate crucial skills relevant to the digital era (Dumitrica and Jarmula 2022). Additionally, qualitative researchers play a pivotal role in enhancing educational settings by examining participant input (Debnam et al. 2021), promoting a more profound understanding of ethical principles in research practices (Taquette and Borges da Matta Souza 2022), and fostering innovation within research endeavours (Opara et al. 2023).

This Special Issue presents papers delivered at the 7th World Conference on Qualitative Research (WCQR2023), held on 25–27 January 2023 in Algarve, Portugal (hybrid conference).

The WCQR2023 was organised by the ESEC of the University of Algarve and Ludomedia of Portugal, with collaboration/sponsorship from multiple universities, research institutes, and companies, such as the CIDTFF, University of Aveiro; University of Alberta; NCRM; AQRA; Adventus University; and the Nursing Research, Innovation and Development Centre, Lisbon (ESEL). Other partners included VESIM, Society of Qualitative Studies and Research, CIAIQ, Action Research Network, Global CAR, Atlas.ti, Timberlake, and DiscoverText.

The conference's main topic was qualitative research, focusing on methodological considerations and how they relate to research questions, concepts, and findings. Encompassing four main application fields—Education, Health, Social Sciences, and Engineering and Technology—the WCQR2023 covered seven core areas: Rationale and Paradigms of Qualitative Research (theoretical studies, critical reflections on epistemological, ontological, and axiological dimensions); Systematisation of Approaches to Qualitative Studies (literature reviews, integrating results, aggregation studies, meta-analyses, meta-syntheses, meta-ethnographies); Qualitative and Mixed-Methods Research (with an emphasis on research processes that build on mixed methodologies, prioritising qualitative approaches); Data Analysis Types (content analysis, discourse analysis, thematic analysis, narrative analysis, etc.); Innovative Processes of Qualitative Data Analysis (design analysis, articulation, and triangulation of different sources of data, such as images, audio, and video); Qualitative Research in Web Contexts (e-research, virtual ethnography, interaction analysis, Internet corpora, etc.); and Qualitative Analysis with the Support of Specific Software (usability studies, user experience, the impact of software on the quality of research and analysis). With each article carefully reviewed by at least three independent reviewers, thirteen high-quality works (of nineteen invited articles) from the WCQR were selected for this publication. They bring together thirty-eight (38) authors from nine (9) countries, namely Chile, Iceland, Ireland, Italy, Poland, Portugal, South Africa, Spain and the United Kingdom.

Special thanks go to Conceição Ferreira, Jaime Ribeiro, Fábio Freitas, Hugo Mártires, Mfanelo Ntsobi, Marisa Mártires, Grzegorz Bryda, King Costa, Elizabeth Pope, and Sónia Mendes for their careful and dedicated work on this publication, including financial matters, local logistics, promotion, and scientific supervision. We also thank the other reviewers and all members of the WCQR Programme Committee, whose contributions ensured the excellent calibre of scholarship at this event, as well as the writers and attendees whose work and presence made this event possible. Lastly, we would like to thank the *Social Sciences* editorial staff for their help in producing this Special Issue.

Conflicts of Interest: The authors declare no conflict of interest.

References

Anderson, C. Leigh, Travis W. Reynolds, Pierre Biscaye, Vedavati Patwardhan, and Carly Schmidt. 2021. Economic Benefits of Empowering Women in Agriculture: Assumptions and Evidence. *The Journal of Development Studies* 57: 193–208. [CrossRef]

Creswell, John Ward, and Cheryl Poth. 2018. *Qualitative Inquiry and Research Design. Choosing among Five Approaches*, 4th ed. Los Angeles: SAGE.

Creswell, John Ward, and John David Creswell. 2018. *Research Design. Qualitative, Quantitative & Mixed Methods Approaches*, 5th ed. Melbourne: SAGE.

Debnam, Katrina, Kelly Edwards, and Dewey Cornell. 2021. Improving the School Environment: School Staff Perceptions of School Climate Data and Reporting Practices. *Journal of Community Psychology* 49: 1965–82. [CrossRef] [PubMed]

Dumitrica, Delia, and Paulina Jarmula. 2022. Teaching Qualitative Research Methods in Media and Communication: The Benefits and Limitations of Digital Learning Objects. *The Qualitative Report* 27: 1934–51. [CrossRef]

König, Johannes, Rossella Santagata, Thorsten Scheiner, Ann-Kristin Adleff, Xinrong Yang, and Gabriele Kaiser. 2022. Teacher Noticing: A Systematic Literature Review of Conceptualizations, Research Designs, and Findings on Learning to Notice. *Educational Research Review* 36: 100453. [CrossRef]

Liu, Ming, Haomin Wu, Bingxuan Lin, and Jingxia Zhang. 2023. A Small Global Village: The Effects of Collectivist, Tight and Confucian Cultures on the Spread of COVID-19. *Humanities and Social Sciences Communications* 10: 789. [CrossRef]

McLuhan, Marshall. 1962. *The Gutenberg Galaxy*. Toronto: University of Toronto.

Neale, Bren. 2021. *The Craft of Qualitative Longitudinal Research*. Melbourne: SAGE.

Nind, Melanie, and Angeliki Katramadou. 2023. Lessons for teaching social science research methods in higher education: Synthesis of the literature 2014–2020. *British Journal of Educational Studies* 71: 241–66. [CrossRef]

Opara, Victoria, Sabrina Spangsdorf, and Michelle Kim Ryan. 2023. Reflecting on the Use of Google Docs for Online Interviews: Innovation in Qualitative Data Collection. *Qualitative Research* 23: 561–78. [CrossRef]

Taquette, Stella Regina, and Luciana Maria Borges da Matta Souza. 2022. Ethical Dilemmas in Qualitative Research: A Critical Literature Review. *International Journal of Qualitative Methods* 21: 160940692210787. [CrossRef]

Tracy, Sarah J. 2013. Qualitative Research Methods. In *Collecting Evidence, Crafting Analysis, Communicating Impact*. Hoboken: Wiley-Blackwell.

Essay

Qualitative Research in Digital Era: Innovations, Methodologies and Collaborations

Grzegorz Bryda [1,*] **and António Pedro Costa** [2]

1   CAQDAS TM Lab, Institute of Sociology, Jagiellonian University, 31-007 Kraków, Poland
2   Research Centre on Didactics and Technology in the Education of Trainers, Department of Education and Psychology, University of Aveiro, 3810-193 Aveiro, Portugal; apcosta@ua.pt
*   Correspondence: grzegorz.bryda@uj.edu.pl

Abstract: The differentiation of contemporary approaches to qualitative data analysis can seem daunting even for experienced social science researchers. Especially when they move forward in the data analysis process from general analytical strategies used in qualitative research to more specific approaches for different types of qualitative data, including interviews, text, audio, images, videos, and so-called virtual data, by discovering the domain ontology of the qualitative research field, we see that there are more than twice as many different classes of data analysis methods as qualitative research methods. This article critically reflects on qualitative research and the qualitative computer data analysis process, emphasising its significance in harnessing digital opportunities and shaping collaborative work. Using our extensive analytical and research project experience, the last research results, and a literature review, we try to show the impact of new technologies and digital possibilities on our thinking. We also try to do the qualitative data analysis. The essence of this procedure is a dialectical interplay between the new world of digital technology and the classic methodology. The use of digital possibilities in qualitative research practices shapes the researcher's identity and their analytical and research workshop. Moreover, it teaches collaborative thinking and teamwork and fosters the development of new analytical, digital, and Information Technology (IT) skills. Imagining contemporary qualitative research and data analysis in the humanities and social sciences is difficult. Opening to modern technologies in computer-based qualitative data analysis shapes our interpretation frameworks and changes the optics and perception of research problems.

Keywords: CAQDAS; artificial intelligence; digital methods; digital skills; collaborative analysis

1. Introduction

In the modern era, technological advancements have dramatically transformed research and data analysis within the realm of social sciences. Big data, advanced statistical tools, digital platforms, and, notably, CAQDAS (Computer Assisted Qualitative Data Analysis Software) have broadened the scope of research possibilities. Tools such as NVivo, Atlas.ti, webQDA, and MAXQDA under the CAQDAS umbrella have revolutionised qualitative research. They enable scholars to efficiently organise, categorise and analyse vast amounts of textual, audio, and visual data. These software solutions offer nuanced coding mechanisms, facilitating a deeper understanding of the themes, patterns, and narratives present in the data. This systematic approach enhances the rigour and credibility of qualitative analyses and bridges the divide between qualitative and quantitative methods. Moreover, social media sentiment analysis and large-scale surveys provide researchers with more prosperous and diverse datasets. Machine learning and artificial intelligence techniques can now comb through these vast datasets precisely, identifying patterns and insights that were once beyond reach.

Additionally, data visualisation tools make complex data more understandable, promoting a more explicit interpretation and communication of the results. Navigating the

intricacies of the digital age, the intersection of technology and social sciences—as strengthened by tools like CAQDAS—promises to enhance our understanding of societies. This fusion ensures that we are equipped with more effective, data-driven solutions to address the multifaceted challenges faced by contemporary societies.

Emerging technologies are revolutionizing how researchers collaborate on projects, transcending social, cultural, and geographical boundaries. This new age of qualitative research underscores the unique challenges and opportunities, emphasizing the imperative for collaborative strategies. The CAQDAS leads these technological advancements. This essay delves into the opportunities and challenges CAQDAS presents, examining its pivotal role in collaborative research. Researchers must harness these tools since digital networks empower extensive expression and content dissemination. This essay contends that becoming proficient in qualitative research methodologies and computer-assisted data analysis is closely linked to grasping and applying new digital technologies and enhancing digital skills. As Costa and Costa (2017) suggested, conducting research in digital environments can offer fresh perspectives to traditional research methodologies.

Furthermore, we emphasise that technological advancements enable researchers to engage in real-time sharing and collaboration on the same project, regardless of geographical boundaries. Research inherently presents challenges and opportunities, making adopting collaborative strategies highly beneficial. This essay seeks to stimulate conversation around the benefits and challenges of collaborative research for researchers and how technology facilitates this collaborative approach. Indeed, the digital realm offers numerous avenues for expressing and disseminating information. It falls upon researchers to harness and navigate these abundant resources.

We aim to spotlight five pivotal areas in qualitative research that technological advancements have profoundly influenced. These areas represent the evolution of research methodologies and the promising future of digitally augmented research. At the forefront of this evolution is CAQDAS. This software provides researchers with a robust platform to analyse qualitative data meticulously and efficiently. As the backbone of digital qualitative research, CAQDAS symbolises the seamless marriage of technology with traditional research methodologies, ensuring precise and streamlined outcomes. Beyond tools, the digital era introduces new paradigms of managing information. "Datafication" pertains to converting various forms of information into a digital format. This process streamlines data analysis and ensures that qualitative researchers can easily handle extensive and complex datasets. The digital realm offers various innovative tools and methodologies that fundamentally alter the qualitative research landscape. From virtual interviews to AI-assisted transcription and beyond, the scope of what is possible in research has been expanded manifold, leading to more prosperous, more nuanced insights. One of the most profound shifts brought about by the digital age is the transformation of collaboration in research. Digital platforms have made real-time, global collaboration feasible. This interconnectedness fosters a more holistic and multidisciplinary approach to research, where varied perspectives converge to produce more prosperous outcomes. Finally, with the integration of cutting-edge technologies like virtual reality, augmented reality, and machine learning, the boundaries of what qualifies as "qualitative research" are being continually redefined. These innovations enable researchers to explore previously uncharted territories, producing more comprehensive and reflective findings. In conclusion, understanding these five areas is paramount as the lines between technology and qualitative research become increasingly intertwined. The future promises a closer synergy between digital tools and research methodologies, opening doors to deeper insights and revolutionary findings.

2. The CAQDAS R/Evolution: Bridging Technology with Tradition

Throughout the history of qualitative research, a paradigm-shifting r/evolution has been led by CAQDAS. This computer-aided analysis is a cornerstone of modern qualitative research, especially in content (textual) analysis and linguistic evaluations. The origins of data analysis software and the integration of computers in social sciences are rooted

in the latter half of the twentieth century (Brent and Anderson 1990; Fielding and Lee 1991). CAQDAS was primarily linked with leveraging technology for quantitative content analysis (Berelson 1984) and Grounded Theory (Glaser and Strauss 1965). Within this domain, debates over the use of computers in qualitative research are most heated and continue to evoke strong emotions. Yet, with the digital revolution of the past two decades, the surge of new information technologies, and the rise of digital media, CAQDAS has expanded its reach and has found broader applications. This expansion, fuelled by digital advancements, has paved the way for more general applications in traditional qualitative research, encompassing narrative methods, interviews, and textual and visual content analyses. A fundamental transition occurred when state-of-the-art technology began integrating with conventional research methodologies, marking a transformative phase in the ever-evolving qualitative research methodology landscape. Through this synthesis of technology and tradition, CAQDAS bridges traditional data analysis methods and the modern, digitised methods enabled by technological advancements between historical methodologies and the demands of contemporary practices. It harmoniously merges quantitative and qualitative research methods, enhancing the depth of data visualisation.

The social sciences, education, health and medicine, business, and the humanities are just a few of the fields that employ CAQDAS. For instance, qualitative researchers utilise it to gather, plan, and analyse substantial volumes of qualitative data from several teams in an international project (Robins and Eisen 2017) and support analytical awareness and reflexivity (Woods et al. 2016). Additionally, it is utilised to help with record-keeping, organise and manage qualitative data, give an audit trail, improve and show methodological rigour, and allow researchers to advance from theory creation to description (Bringer et al. 2006). CAQDAS plays a pivotal role in data management and the overarching research process within these disciplines. Its capabilities are vast, segmenting text, image, sound, and video into manageable units and semantically indexing them for in-depth analysis. The software suite includes functionalities ranging from coding, memoing, and paraphrasing to annotating, grouping, and network-building. Moreover, its tools aid in lexical searching, data retrieval, and comparisons, evolving into a comprehensive platform for researchers. Features like data visualisation, collaboration support across time and space, and facilitating quantitative and qualitative methodologies make CAQDAS a prominent tool in today's research. Notably, it assists in illustrating patterns and trends and aids qualitative researchers in visualizing code relations and creating semantic networks (Bryda 2019, 2020). These multifaceted utilities ensure a transparent research process, bolstering methodological rigour and empowering scholars in their analytical endeavours.

Contrary to the 1980s and 1990s, CAQDAS programs now include various functionalities dedicated to users in the humanities and social sciences. However, availability depends on the type of software. CAQDAS software is divided into three groups: licensed programs equipped with many advanced and exciting analytical functionalities, open-source tools that usually have a basic range of functionality, and online programs that are functionally advanced to varying degrees. These innovations have positioned CAQDAS at the forefront of the modern qualitative research revolution, striking a balance between the cherished methods of yesteryears and the technological potential of today. Their advantage, as opposed to licensed and open-source ones, is an extensive range of flexibility that enables the development or implementation of new algorithms and analytical techniques based on programming languages. Their advantage is the possibility of synchronous and asynchronous teamwork and combining qualitative and quantitative methods classes. The literature meta-analyses of the contemporary field of qualitative research (Qualitative Domain Ontology) show that the development of CAQDAS over the last three decades is reflected in the currently dominant narrative qualitative methodology (Bryda et al., forthcoming). The publications in the field of CAQDAS show that software development and its analytical functionalities tend towards the methods and procedures of textual and visual data content analysis. Conversely, an emerging trend integrates computer-aided qualitative data analysis with methods from the digital humanities, natural language processing, and text

mining (Bryda 2014; Bryda and Tomanek 2014). This convergence has given rise to the new interdisciplinary field of Digital Qualitative Sociology (Bryda 2014).

The rapid advancement of technology has reshaped many sectors, with qualitative research being prominently affected. Understanding and leveraging new digital technologies, alongside enhancing digital capabilities, are crucial for researchers in this domain. In qualitative research, it is essential to understand the latest digital technologies and skills. Tools like CAQDAS have significantly changed the way we approach qualitative research. Over the past years, the applications of CAQDAS have expanded, moving beyond its original purpose. However, it is critical to remember that traditional research methods remain vital even with these new digital tools. The two complement each other, enhancing the overall quality of research. Collaboratively cultivating and harnessing digital potential has become a hallmark of modern qualitative research methodology and data analysis. Digitality is pivotal for advancing the contemporary qualitative research methodology and CAQDAS. For researchers to excel in computer-assisted data analysis, proficiency in these fast-evolving digital tools and methods is imperative. The benefits of mastering digital technology are evident in the diverse applications and advantages of tools like CAQDAS. It is a platform that harmoniously integrates both old and new research methods. A robust understanding of digital skills is essential to use these tools to their fullest potential. Qualitative researchers must employ these digital tools and methodologies in the contemporary research landscape.

3. Digital Society, Methods, and Possibilities

Digitality is a foundational element in understanding the concept of a digital society. This term encapsulates modern societies' transformative shifts as they embrace and integrate information and communication technologies across daily life, including home, work, education, and leisure. As Lindgren (2022) notes, digital innovations are reshaping our societal structures, economic dynamics, and cultural landscapes at an unprecedented pace and magnitude. Digitality can be defined as the experience of living within a digital culture. This term is inspired by Nicholas Negroponte's book, "Being Digital," drawing parallels with the concepts of modernity and post-modernity (Negroponte 1996), especially with the Digital Society approach. The Digital Society, as defined by Schwarz (2021), is an emergent and interdisciplinary research domain that arises from integrating advanced technologies into our societal fabric and cultural norms. Central to this evolution is a need to grasp the profound shifts in understanding and studying society. This includes a deep dive into how technological transformations influence our lives, such as private and social interactions, education, governance, democratic processes, and business. As the scale and dynamics of these technological changes evolve, so does the methodology employed in social sciences, especially in qualitative research. Research in the 1990s began to delve into the implications of digitality and digital interactivity. Scholars explored the immediacy and omnipresence of digital communication, the interactive and participatory characteristics of digital media, and the trend towards "shallow" information searches that are quick and surface-level. They may not dive deep into the topics. These discussions share roots with Postmodernism, acknowledging the media's profound influence on identity, culture, and societal structures. They follow the tradition of postmodernism, assuming that media plays a crucial role in forming personality, culture, and social order; they diverge significantly from analogue critical theory. They highlight a departure from traditional analogue critical theories in that audiences can produce new texts that support the actions of other participants rather than just their idiolect, implying that in the digital age, everyone has the potential to be a creator or influencer. In this digital age, audiences are not just passive interpreters of the content; they actively create new content, influencing and shaping the behaviours and perspectives of others.

Today, digitality primarily manifests in the ability to store, search, and categorise information, exemplified by tools and platforms such as the World Wide Web, Google search engines, and Big Data repositories. It also facilitates communication via mobile

phones, blogs, vlogs, YouTube, and email. However, the digital era has not come without its drawbacks. Issues like computer viruses, loss of anonymity, the spread of fake news, and spam emails plague this information age. Thanks to digital possibilities and advances, our society, economics, and culture are changing and revolving in ways we have never seen before. Mobile technologies, Cloud collaboration, Big Data analytical systems, Natural Language Processing, Text Mining, Neural Networks algorithms, and the Internet of Things offer incredible and unseen individual and social opportunities, driving economic growth, improving citizens' lives and efficiency in many areas of our lifeworld, i.e., transforming the way we live and interact. These innovations drive economic progress, enhance the quality of life for individuals, and boost efficiency across diverse sectors, from education and health services to transportation, energy, agriculture, manufacturing, retail, and public administration (Schallmo and Tidd 2021). Beyond these tangible benefits, digitality also plays a transformative role in governance and policymaking. Digital tools empower policymakers with data-driven insights, fostering more informed decision-making. Furthermore, these technologies stimulate citizen engagement, promote greater transparency, and enhance the accountability of governing entities. Notably, the widespread accessibility of the Internet holds the promise of strengthening democracy, championing cultural diversity, and safeguarding fundamental human rights, such as the freedom of expression and access to information and connectivity.

To better understand how these technological changes affect our social and private life, education, science, government, democracy, or business, we must also understand how their scale and dynamics affect the contemporary research methodology of social sciences, including qualitative methods. This highlights the interplay between technology and research methodologies. The digital revolution demands that we critically evaluate changes in data collection techniques, analysis procedures, and qualitative theorizing. Discerning the potential advantages and challenges of digitizing qualitative research and computer-assisted analytical practices is crucial. Indeed, the rise of digital methodologies has opened the door to many qualitative digital possibilities. A case in point is the recent COVID pandemic, which, as noted by Wa-Mbaleka and Costa (2020), compelled qualitative researchers to pivot from traditional in-person methods like focus groups and interviews to online platforms. Researchers can communicate with more people in less time in more difficult-to-reach regions. Conducting interviews in the comfort of participants' homes fosters deeper intimacy. They can leverage technology to record interviews, create transcripts, and use mobile devices to organise the sequence of answers. This transition represents a shift in research methods due to technological advancements. However, as Palys and Atchison (2012) emphasise, the rapid change to online qualitative research methodologies has been met with mixed responses from the research community. Some voice concerns, citing epistemological and methodological reservations against swift digitisation and Computer-Assisted Qualitative Data Analysis Software.

Conversely, others view this as an opportunity to innovate in qualitative research and enhance their methodological and analytical prowess. This highlights the debate and differing opinions among researchers about the role and impact of technology in research. The evolution of research methodologies has always been influenced by technological advancements and the changing ways we interact with the world. The widespread adoption of digital technologies made their impact evident in academic research and exploration. This integration of technology and research opened up novel avenues, challenging traditional paradigms and forging new directions. As digital technologies became more pervasive, their influence seeped into academic research and investigation.

Around 2007, internet-related research underwent a significant transformation, often called the "computational turn" or data study (Berry 2011). This "computational turn" describes adopting new techniques and methodologies from computer science and its associated fields. At this point, the Internet ceased to be viewed as a distinct "cyberspace" or an extension of offline society. While the digital divide among Internet users persists, there is no return to "virtual" research in the old style. Instead, the Internet began to be

studied as collections of different social and cultural data, a space for communication and interactivity, which can revolutionise our understanding of collective human behaviour (Rogers 2009). In this regard, two critical articles were published: "A twenty-first-century Science" (Watts 2007) and "Computational social science" (Lazer et al. 2009). Their authors discussed how we could study societal conditions and cultural preferences with Internet data. Most research on human interaction has been based on selected data relating to thematically focused case studies. Digital technologies offer an unusual, second-by-second picture of interaction over extended periods, providing information about relationships' structure, dynamics, and content (i.e., ego or social network analysis). The research shift is from individuals to societies, individual to collective thinking, and single behaviour to social patterns, without limiting the number of study participants. The term computational turn refers to the process by which new techniques and methodologies are drawn from computer science (including interactive information visualisation, scientific visualisation, data pre/processing, geospatial representation, statistical data analysis, network analysis, natural language processing, and data/text mining), and related fields (cognitive science, machine learning, data science, and computational linguistics) are implemented in the humanities and social sciences. They help to aggregate, manipulate, and manage structured and unstructured data. In social science, two terminologies relate to this turn: Social Science Computing (SSC) and Computational Social Science (CSS). CSS is referred to as the field of social science that uses computational approaches in studying social phenomena. SSC is the field in which computational methodologies are created to assist in explanations of social phenomena.

Digital methods help us to study social change and cultural conditions using various online data leveraging technologies to gain deeper insights into societal trends and patterns. These methods can use, for example, computational algorithms embedded in digital devices or computer language objects such as HTML or XML hyperlinks, tags, timestamps, likes, shares, and retweets to learn how people communicate, their opinions, and how they behave online. Digital methods are part of a computational turn in the contemporary humanities and social sciences. They are positioned alongside other recent approaches, such as cultural analytics, cultural studies, webometrics, and altmetrics, where distinctions are made between the data types (natively digital or digitised) and the algorithms (written or implemented). Their versatility allows the development of new strategies in computer-aided qualitative data analysis. With the increased computing power of computers over the last few years, together with the growing amount of cultural data now available in digital form, computer software can analyse an unlimited number of textual and visual data contained in corpora. This is a new dimension of thinking in narrowly focused, contextual data analysis and qualitative research methodology. The field of digital qualitative research is becoming a rapidly growing multidimensional and multifaceted research area. More and more researchers are addressing the social, cultural, political, anthropological, and other dimensions of Computer-Mediated Communication (CMC) or using CMC to generate, collect, and analyse field data. Digital methods provide various research strategies for dealing with online data's temporal and unstable nature. In addition, these methods have been successfully used to identify the problems with online data, such as the unsustainability of web services and the instability of data streams, where APIs are reconfigured or cease to function. Qualitative research practices in the digital world can be supported by digital tools at every step of the research project, from the data collection, transformation, and data analysis to the outcomes. These observations combine three elements: (a) digital technologies and their possibilities ensure doing new things that the qualitative research community has never undertaken before and doing better things than it has always performed; b) the social dynamics triggered, supported, and fuelled by the development of digital technologies and the implications they have for sampling and social research; and (c) the possible implications of these social and technological changes for the development of the field of qualitative research (Palys and Atchison 2012).

4. Datafication, Digital Humanities, and New Analytical Approaches

The digital era brings datafication (Flensburg and Lomborg 2023), permeating the very fabric of qualitative research. The widespread digital integration between traditional and new approaches has reshaped how we understand and interpret information. This constant influx of data derived from numerous digital sources challenges traditional methodologies and beckons for novel approaches to qualitative inquiry. Datafication—the constantly increasing amount of data in daily life and the improvement of analytical techniques (new algorithms, new functionalities, more efficient software)—represents a paradigm shift in our analytical mindset (Dijck 2014). This makes theorising redundant in discovering knowledge about the regularities that govern society. In essence, we are transitioning from assumption-based models to data-driven understandings. Big Data, Digital Humanities, and other new approaches to data analysis help produce meaningful knowledge about complex social phenomena without the need to formulate hypotheses. The data are supposed to speak for themselves, free from theoretical limitations or researchers' assumptions. It is a move towards a more organic interpretation of data.

Big Data and new digital technologies help researchers focus on finding causes by looking at related data. The answer to why becomes less important than the search for the answer to what. This represents a profound shift in how we approach research questions. The aim is not to discover the causes of phenomena and processes but to look for the connections and relationships between the data, codes, categories, or concepts, as in qualitative data analysis. Without digitisation and datafication, there would be no Big Data and the modern CAQDAS, combining interdisciplinarity and multiparadigmacity in qualitative data analysis and research. The digital transformation has, in many ways, revolutionised the landscape of qualitative research. The breadth of contemporary approaches to qualitative data analysis can seem daunting even to experienced social scientists or researchers, especially as they move from the general analytic strategies used in qualitative research to more specific approaches for different types of qualitative data, including interviews, text, sounds, images, videos, and so-called virtual data. These diverse datasets call for nuanced methods of interpretation and understanding. However, general observations regarding implementing new digital technologies into the methodology of computer-assisted qualitative data analysis and qualitative research practices require comprehensive solutions regarding data archiving, data security, or computational capabilities. As we innovate, we must ensure the integrity and security of our data and methodologies.

Big Data, Digital Humanities, and new technologies introduce a novel epistemological perspective on designing and implementing social research. The rise of Big Data means that researchers are now confronted with far larger qualitative data sets than before. This shift has changed how we perceive and approach the gathering and analysis of data. Knowledge in such research is not solely derived from testing theories based on relevant empirical data. Instead, data, digital methods, and advanced algorithms, especially from Natural Language Processing (NLP), have become paramount sources of cognition. Utilizing computer data analysis, mainly via NLP tools, ensures that qualitative research is conducted more systematically and comprehensively. NLP, a subset of artificial intelligence, enhances the analysis by facilitating automated sentiment and topic evaluations. Our understanding of the social world emerges from these tools and data sources. Traditional methods of theory testing are now complemented by insights gleaned directly from the vast amounts of data processed using digital tools. Rob Kitchin astutely noted this transformation. He emphasised that this shift affects the broader scientific community, not just qualitative research. Kitchin underscored the profound implications of these evolving methodologies on the world of science (Kitchin 2014a, 2014b). We are witnessing a multidisciplinary, digital paradigm that cannot be solely defined in terms of traditional scientific cognition. This paradigm champions CAQDAS for adept data management and coding.

With the help of NLP tools, this method can easily manage data from many different sources, making more data available for qualitative research. This evolution suggests that the traditional notion of a "one-size-fits-all" approach to science is under revision.

Instead, we now have a methodology that can easily handle vast qualitative (textual and visual) data sets, bridging the qualitative–quantitative divide and fostering the rise of mixed-methods research. The digitisation process in research and analysis showcases the diverse strategies inherent in qualitative research and highlights ethical considerations concerning data privacy, consent, and transparency. As digitisation becomes integral to research, it reflects qualitative researchers' myriad techniques and perspectives, ensuring the data is responsibly collected, stored, and analysed.

In a Digital Society, qualitative research methodology can be implemented by extracting data from pre-existing digital platforms like forums, social media, and websites through web scraping techniques, or by employing digital tools designed for researchers that facilitate direct interaction with participants in their online environments. Examples of such tools include web-based software for conducting interviews and software for online interview transcription. Moreover, considering modern qualitative research, we must consider the digital possibilities opening up as these platforms and tools redefine how we interact and convey information because of the virtual revolution of portable computing power brought about by the different mobile devices like smartphones, tablets, and wearables, and also by the digital possibilities generated by business trendsetters such as Apple, Facebook, or Google, and their respective apps which have millions to billions of users, making them significant data sources. The digitally managed research process requires an understanding of the impact of digital technologies on all aspects and phases of design, implementation, coding, and analysis and the dissemination of qualitative research results, which means considering both the advantages and challenges posed by these technologies. Along with the datafication and digitisation of qualitative research and greater collaboration, their methodology is changing, adapting to the dynamic nature of the digital age and the language of data analysis and research practices (digital/online methods, virtual ethnography, hypermedia methods, and so forth), which requires clarification and classification to ensure consistent understanding and application among researchers. Using digital tools in qualitative social science research is not necessarily new but appears to be steadily increasing, highlighting the growing trust and reliance on these tools. Digitality helps to research without time and space limits, offering researchers unprecedented flexibility and reach, blurring between quality and quantity—on the way to digital mixed methods. These changes, in turn, lead us to a discussion on the validating standards of practising digital qualitative research, emphasizing the need for rigour and integrity in the digital era (Brown 2002; Dicks 2012; McCrohon 2013). Digital qualitative methodologies not only introduce challenges in data management but also raise essential queries regarding the genuineness and reliability of data obtained through digital means. Achieving a delicate balance between capitalising on digital advantages and upholding research integrity necessitates a profound comprehension and reflective implementation of these digital techniques. In facing these challenges, researchers must continuously strive to reconcile cutting-edge digital methodologies with fundamental research ethics, research principles and qualitative data security.

Ensuring robust digital data security has become pivotal in the era of datafication and digitisation, particularly in CAQDAS and qualitative research. The prevalent use of interactive collection methods, such as online surveys and computer-assisted interviews, necessitates stringent protocols to safeguard data and uphold the anonymity of respondents, especially amidst escalating concerns over cyber-attacks and data breaches. It's worth noting that technological means to secure data, which have become paramount, include robust cybersecurity measures and well-established procedures for data management and researcher training in ethical data handling. Furthermore, adherence to various data protection regulations, notably the General Data Protection Regulation (GDPR) in the European Union, is imperative, underscoring the necessity of obtaining explicit and informed consent, practising data minimisation, and having a legitimate basis for data collection, storage, and usage. Non-compliance with these regulations can result in significant fines and damage to reputation. Therefore, a clear understanding of these regulations is not just a legal ne-

cessity but also informs ethical research practices, ensuring that participant data is treated with the utmost respect and integrity throughout the research process. Anonymisation, which involves meticulously altering personal data to prevent the identification of subjects without additional information, emerges as a crucial tool. Researchers, therefore, must ensure that data, even when stripped of identifiable markers or replaced with pseudonyms, remains thoroughly anonymous and is immune to reverse-engineering tactics that could compromise participant identity. Employing technological solutions to bolster data security, such as frequent software updates, the use of strong, unique passwords, and the application of encryption in data transit and storage, is not merely an operational requirement but also an ethical obligation. Moreover, the implementation of these technological and procedural safeguards must be transparently communicated to participants, ensuring that they are fully aware of how their data will be protected throughout the research and beyond. Some commercial CAQDAS programs, including Atlas TI, NVivo, Maxqda, and webQDA, offer solutions facilitating collaborative analysis, like client-server or cloud-based working spaces, enabling researchers to collaborate without jeopardising data security. However, ensuring data security in these collaborative platforms rests with the researchers or the analytical tool providers. Thorough vetting of third-party providers and software used in the research process is essential to mitigate risks. Prudent selection of digital platforms for research, hence, not only safeguards data but also enhances the reliability and validity of the research findings, ensuring that they are derived from a secure and stable digital environment. While desktop solutions remain available, the burgeoning phenomenon of datafication and associated computational demands deem traditional data storage and analysis methods progressively unreliable. Consequently, researchers seek more potent and secure data-handling solutions. In conclusion, as the digital landscape continues to evolve, researchers must balance leveraging advanced digital and collaborative tools and maintaining rigorous data protection, consistently placing the ethical treatment of participant data at the forefront of their practices.

5. The Importance of Researcher's Digital Skills

We can access various innovative tools and methodologies in today's digital age. However, their practical use is less about the tools themselves and more about the professional skill set that wields them. These skills, encompassing technical, soft, and ethical dimensions, form the bedrock of quality research in our digital era (Janssen et al. 2013; Oberländer et al. 2020; Pope and Costa 2023).

A primary component of this skill set is technical proficiency. Modern professionals should be familiar with various software and platforms and adept at leveraging their intricate features and functionalities. Alongside this, technological know-how is a crucial aspect of digital literacy. This goes beyond just using digital tools; it involves discerning which tool is best suited for a specific task and evaluating the credibility of online resources. While AI tools bring advanced capabilities, they are not without flaws (Costa 2023). This is where the skill of AI interpretation becomes indispensable. Professionals must be competent in reviewing AI-generated outputs, identifying potential inaccuracies, and ensuring precise products, like transcriptions. Understanding cybersecurity fundamentals is paramount, given the increasing cyber threats in our digital-centric world. Professionals should be versed in best practices related to data encryption, secure data storage, and safe data transmission.

Soft skills, which can sometimes be undervalued next to technical skills, are equally essential. In the realm of virtual interactions, active listening becomes vital. Professionals must be attuned to subtle vocal nuances, pauses, and inflexions without physical cues. Effective communication is also paramount, especially in virtual settings where physical cues are lacking. Moreover, the rapid advancements in the digital world necessitate professionals to be adaptable, ready to learn, and pivot as new tools and methodologies come to the fore. As digital tools erase geographical boundaries, cultural awareness and empathy become more critical. Professionals must navigate these global interactions sensitively,

understanding the varied cultural nuances to foster genuine exchanges. Efficient project management is another crucial skill, especially when dealing with digital resources, virtual teams, and online tasks. This ensures that projects progress seamlessly, even in dispersed digital environments. Ethics is pivotal in the digital age, accompanied by unique data privacy and transparency challenges. Professionals must maintain integrity and uphold stringent ethical standards. Coupled with this is the commitment to ongoing learning. Professionals should stay updated via regular workshops, webinars, and training sessions as the digital landscape evolves. Of course, collaboration, too, is essential. While digital tools have made it easier to bridge geographical divides, they also require a solid collaborative spirit to ensure smooth teamwork, even when teams are globally dispersed. Finally, the significance of feedback in this digital age cannot be overstated. Professionals should proactively seek, analyse, and utilise such input as a driving force for methodological refinement and overall growth.

In an increasingly digitised world, where almost every facet of daily life intersects with technology, mastering the tools of CAQDAS and digital methods becomes imperative for qualitative researchers. However, a distinct disparity in the grasp of analytical and IT skills is evident among many in the field (Mertens et al. 2017; Torrato et al. 2023). This mismatch impedes fully realising digitisation's potential in the social sciences. This potential, which lies in processing vast amounts of data and identifying patterns at a pace unimaginable a few decades ago, adds a layer of depth to research. The initial expectation for researchers might have been a primary focus on their study area, but the rapid pace of technological advancements has set a new paradigm. This shift has moved from pen-and-paper data analysis to a reliance on complex digital tools and software. Many researchers without formal training in IT or computer sciences find themselves on a steep learning curve. Navigating this curve requires patience, determination, and often a willingness to venture outside one's comfort zone. The self-learning process (Freitas et al. 2018a, 2018b) might be daunting, but it is propelled forward by these researchers' innate curiosity and analytical prowess. By immersing themselves in the dynamic realm of technology, researchers bridge the competency gap and bring innovative solutions that defy the constraints traditionally associated with digitisation. These innovative solutions might range from new data visualisation techniques to implementing machine learning algorithms in qualitative research. This technological era has emphasised the pivotal role of interdisciplinary collaboration, particularly between IT and qualitative research. Melding the methodologies and tools from fields like Digital Humanities, Corpus Linguistics, Big Data Analysis, and Computer Science has redefined the contours of qualitative data analysis. This fusion allows for harnessing machines' computational power and precision with a nuanced understanding of human behaviour, facilitating deeper research explorations. This amalgamation enriches the research process, allowing for more profound insights and broader applications. Such expanded scope is akin to opening a previously locked door in the mansion of knowledge. Yet, even as the horizons expand, challenges persist.

For instance, the realm of collaborative technologies or the intricacies of database systems often remains enigmatic for many qualitative researchers. In the digital age, a researcher is not merely expected to possess expertise in data analysis methodologies or field experience; their skillset now must encompass database management and even touch upon programming. They are expected to wear multiple hats, transitioning seamlessly from a core researcher to a pseudo-technologist. Integrating CAQDAS programs with languages like Python or R is a testament to this shift. Such advancements cater to tasks like data pre-processing, automatic coding, and deeper analyses. However, lacking these nuanced skills compels qualitative researchers towards more collaborative avenues. Recognizing one's limitations and seeking partnerships becomes crucial. Teaming up with professionals from diverse domains like computer science and mathematics fills the knowledge gap and brings a confluence of perspectives to the research, enriching it manifold. In essence, the future of qualitative research hinges upon a harmonious blend of traditional methodologies

and the evolving digital toolkit. Embracing this change, researchers stand at the cusp of a revolution in how qualitative data is collected, analysed, and interpreted.

6. CAQDAS, Digitality, and Collaborative Working

We live in digital culture, meaning digitality encourages us to connect, collaborate, communicate, and participate in global social networks. One of our "digital culture" core beliefs is that digital networks encourage excellent connectivity, collaboration, communication, community, and participation. This can be seen in social and news media discourse (Facebook, Twitter, YouTube, blogs, peer-to-peer TV/Internet networks, Netflix platforms, open-source software, etc.). But, it becomes even more visible and tangible in the computer-aided analysis of qualitative data software, which is becoming more collaborative, systematic, and interactive. In social sciences, there is a shift from the digitality of qualitative research to collaborative data coding, analysis, and thinking (Uehara et al. 1996; Richards and Hemphill 2018). We have commercial and online software for collaborative data collection, collaborative data coding, collaborative analysis, collaborative thinking, collaborative writing, etc. The qualitative research process can be conducted digitally and collaboratively on the web (server or cloud computing) or desktop software: interview transcribing, project and task managing, codebook preparing and coding, data analysis and modelling, interpretation and theorising, and final writing and representing findings. With the digitalisation of qualitative research and the prevalence of CAQDAS among researchers, a new style of thinking and approach in qualitative data analysis is taking shape based on collaborative methodology and teamwork.

There has been a growing interest in research collaboration in recent years, and different terminologies have emerged to describe this phenomenon. In a descriptive literature review conducted by Yang and Tate (2012), they explored the field of cloud computing research and proposed a classification structure. Similarly, other scholars have been inspired by the potential of web-based collaboration and have used terms similar to those employed in this study. For example, Bröer et al. (2016) introduced the concept of collaborative interpretation, which involves researchers working together to interpret and analyse data, leveraging the power of online collaboration tools. This approach acknowledges the benefits of collective intelligence and the diverse perspectives that can be brought to the interpretation process. Another related term is online collaborative research, which refers to research conducted openly and collaboratively, often leveraging online platforms and communication tools. This approach embraces the principles of openness, inclusivity, and shared knowledge creation, allowing for greater engagement and participation from a diverse range of researchers. These terminologies reflect the evolving nature of research collaboration and the increasing reliance on digital technologies to facilitate collaboration and knowledge sharing. The emergence of cloud computing and web-based platforms has expanded the possibilities for collaboration beyond geographical boundaries, enabling researchers to connect and collaborate globally. It is important to note that while the specific terminologies may vary, the underlying principles and objectives remain consistent. The goal is to enhance research collaboration, foster innovation, and leverage the collective expertise of researchers to advance knowledge and address complex challenges. These terminologies offer valuable insights into the various dimensions of research collaboration and provide a foundation for further exploration and understanding in this rapidly evolving field.

The literature review shows that collaborative analysis and research can be carried out on three primary methodological levels: interdisciplinary (Makel et al. 2019; Frost et al. 2010; Tartas and Muller Mirza 2007), international (Akkerman et al. 2006; Marková and Plichtová 2007), or interpersonal: senior–junior (Hall et al. 2005; Rogers-Dillon 2005), insider–outsider (Louis and Bartunek 1992), and academic–practitioner (Hartley and Benington 2000). Collaborative analysis of qualitative data seems to hold a variety of effects, from a more informed, complex, or helpful digitally supported qualitative data analysis leading to new interpretations, transcending present knowledge, or creating possibilities for

individual learning or improving new analytical skills (Cornish et al. 2014). Such potential benefits are not risk- or cost-free. Risks and costs, like the benefits, are derived from the confrontation of diverse perspectives and research methodologies. In that case, collaboration needs institutional support and flexibility, straightforward working procedures, and social relations, promoting open research debate without threatening the researcher's identity. All may help to alleviate the potential risks of collaborative analysis and research. Of course, effective collaboration in qualitative research depends on the classes of research and analytical methods applied, the number of people participating in the project, or the project scale. The digitisation that permeates our daily lives further blurs the distinctions between commercial software programs. These now boast enhanced analytical capabilities and foster a more collaborative environment for research (Costa 2016). The digital transformation has reshaped the dynamics of scientific work, drawing it closer in nature to conventional business projects.

Emphasizing the pivotal role of digital tools, this article delves into the evolution of computer-assisted qualitative data analysis. It underscores the importance of collaboration and harnesses digital advancements in modern qualitative data collection and analysis. The growing evidence suggests that digital tools are invaluable in bolstering collaborative efforts and refining the qualitative research process. For instance, Costa et al. (2016) introduced the 4C collaborative work model, outlining the collaborative capabilities of the qualitative analysis software webQDA. Echoing the importance of collaboration, Davidson et al. (2016) stressed the necessity for thriving communities of practice. These communities are crucial in facilitating the development and application of digital tools in qualitative research. Furthermore, Crichton (2012) posited that digital tools not only streamline the tasks of qualitative researchers but also enrich the data, offering more significant depth. Reinforcing this viewpoint, Paulus et al. (2014) delivered a comprehensive overview, showcasing how digital tools can be leveraged at various junctures of the research journey.

In practice, research collaboration and collaborative analysis have numerous methodological advantages. Three notable benefits are analytical credibility, methodological reflexivity, and intersubjective thinking. Credibility is a synthetic outcome of the primary analytical process stages, including data coding, investigating the code's relationships, developing interpretations, and qualitative theorizing. Measuring methodological reflexivity or intersubjective thinking presents a challenge and becomes more apparent in later data analysis stages than credibility. Thus, we can demonstrate what does not work within the team coding process. Coding is at the core of qualitative analysis, but its effectiveness depends on the size of the volume of data we have. This is an iterative process in which the structure of the codes is dynamic and undergoes a continuous transformation with the researchers delving into semantic contexts and the semantic structure of data. With the digitisation of qualitative research and the development of new CAQDAS functionalities, greater emphasis is placed on the data validation procedure and ensuring the reliability of coding (Lu and Shulman 2008; Sweeney et al. 2013; O'Connor and Joffe 2020). To verify this reliability, we use the inter-coder agreement procedure. Computing the compatibility of coding is used to compare coding consistency between several coders. Such a procedure can help uncover the differences in interpretation, clarify equivocal rules, identify ambiguity in the text, and finally quantify the level of agreement obtained by coders. In practice, we can uncover the differences in interpretation, clarify ambiguous rules, identify ambiguity in the text, and ultimately quantify these coders' final level of agreement.

Unfortunately, applying inter-coder agreement procedures often involves requirements or assumptions incompatible with the qualitative data analysis processes. At least two compatibility problems can be identified: the codebook problem (using codes) and the segmentation problem (applying codes to texts). Generally, the CAQDAS software may use the four inter-coder agreement criteria based on the code occurrence, frequency of using code, importance (text covered by code), and overlapping codes in a text (two codes cover the same piece of text). The methodological, collaborative reflexivity is overcoming individual rationality to collective rationality and incorporating local understanding

(common thinking) into global understanding (scientific thinking). This involves the third aspect of collaboration, creating an intersubjective space for open dialogue, discussion, and perspective-transcending knowledge. This process may be described as collaborative knowledge production in computer-assisted qualitative data analysis and digitally supported research. In a collaborative context, the researcher must be willing to work in a framework of mutual support between peers and participate in the synergy of the group to organise complex tasks via communication. The collaborative process offers, in particular, the possibility of interacting effectively and allows the development of analysis, synthesis, problem-solving, and evaluation skills. Thus, as a source of encouragement and support, the collaborative process presents itself as a means of learning and enrichment, in which the sphere of collaboration does not supplant the sphere of action of the individual. However, for the researcher to adopt this attitude, they must see themselves in the collaborative approach and have the means to enable, promote, and facilitate collaboration.

7. Summary: Going Digital and Collaborative but Staying Qualitative

As the wave of digitisation and datafication intensifies, the domain of social sciences, particularly the qualitative research methodology, is evolving into a predominantly data-driven sphere. Intriguingly, this shift aligns with the core principles of grounded theory. What is paradoxical about this transition is that data scientists now frequently explore questions that were once the exclusive domain of sociologists. These data specialists utilise vast datasets and employ methodologies that diverge considerably from the conventions of social sciences. Such a shift exposes traditional social sciences, such as sociology and anthropology, to the potential risks of becoming overshadowed. This looming risk is amplified by the surge of digital research techniques demanding advanced computational knowledge. Further compounding the situation is the heightened rivalry from the corporate realm, which often has superior access to data. This potential sidelining is especially pertinent when discussing qualitative research. However, it is crucial to underscore that sociologists and anthropologists, unlike many data scientists, possess a rich history and expertise in qualitative research. With the exponential growth of quantitative datasets, extracting meaningful insights without integrating qualitative methodologies becomes a formidable challenge. Thus, the current landscape underscores the importance of "Thick Data" amidst the prevailing "Big Data" epoch (Jemielniak 2020).

The ascendency of digitality and digital technology is fundamentally altering the practice of qualitative research and computer-assisted data analysis. Becoming proficient in qualitative research methodologies and computer-assisted data analysis is closely linked to grasping and applying new digital technologies and enhancing digital skills. The mediation of research and analysis via digital technology is becoming a norm, subtly shifting perceptions of qualitative analysis and its execution. These changes resonate with our research initiatives' epistemological and ontological foundations. In the past decade, qualitative research, especially multimedia digital data, has benefited from developing and advancing software tools that support most core qualitative methodological techniques. Contemporary qualitative research is no longer limited to small interviews but calls for concerted cooperation among researchers. The digitalisation of qualitative research and the growing prevalence of CAQDAS is forging a new paradigm in qualitative data analysis built on collaboration and teamwork (Seror 2012). CAQDAS and other new digital tools illustrate how technology can bolster the research process, offering time efficiency and adding substantial depth to qualitative work. They facilitate every phase of the research process, drawing on various tools, possibly already familiar to many researchers and providing practical case studies drawn from actual research. Whether we use traditional or digital, computer-assisted methods, it is essential to recognise that qualitative data analysis mandates the careful, systematic, and thorough management of substantial text data, such as interviews, notes, and internet data. Thus, the prerequisite for reliable qualitative analysis is efficient and consistent data management, for which adopting digital technologies and appropriate CAQDAS software is natural and obvious.

Qualitative analysis, which is inherently complex and multifaceted, begins with field-work and involves a carefully planned sequence of activities: conducting interviews, transcribing recordings, reading transcriptions, retrieving phrases, coding text and images, analysing data and visualising it. Due to the nature of this fieldwork flow, CAQDAS and other digital solutions facilitate a seamless transition through the various stages—from the subtleties of the transcription process to the complexities of data analysis to the formulation of theory. Software and digital tools such as CAQDAS empower researchers by streamlining the transcription process, enabling collaborative research, and supporting the development of robust qualitative analysis models. In the broader perspective, integrating digital tools into qualitative research is not a mere convenience but a necessity. The objective is clear: to attain a nuanced comprehension of the data and rigorously evaluate the effectiveness of the analytical strategies employed. As we delve deeper into the digital age, digitisation, collaboration, and relationality unmistakably define the essence of contemporary computer-aided qualitative data analysis and qualitative research methodology on a broader scale. The transformative effects of digitisation, datafication, and innovative technologies have been profound. They have reshaped qualitative research's data collection, processing, and analysis methodology. With the advent of these modern information and communication technologies, a fresh era is unfolding—one marked by unprecedented interconnectedness, presenting researchers with diverse and previously unthought-of opportunities. This new era, empowered by these transformative technologies, has transcended the traditional confines of time and space, forging pathways for enhanced collaborative endeavours in research. Furthermore, it is worth noting the democratizing influence of these digital tools on the research landscape. Their ability to tap into vast virtual networks allows qualitative researchers to observe and actively immerse themselves in the investigative process.

The spirit of collaboration, rooted in mutual reliance, collective synergy, and shared objectives, drives more successful and impactful research outcomes. Yet, an evident paradox exists: while the technological potential is boundless, its full exploitation is hampered by researchers' reticence. Whether overlooking the available software or an inability to fathom the collaborative potential of these tools, the root cause often traces back to a fundamental unfamiliarity and lack of expertise with these digital resources. This disconnect between the technological possibilities and their adoption is glaring. To bridge this chasm, a dual-pronged strategy is essential. Practically speaking, amplifying awareness about these tools' multifaceted capabilities and dependability is urgently needed. On a cultural front, the research community must evolve, transitioning from the siloed, individual-centric research ethos to a more inclusive, dialogic model that is holistic in its approach.

In conclusion, the emergence of novel information and communication technologies has enhanced networking capacities and revolutionised collaborative work in qualitative research and computer data analysis. Nevertheless, challenges arise due to researchers' insufficient knowledge and utilisation of these tools. Via focused instrumental and cultural interventions, researchers can fully harness the transformative potential of these technologies, aligning with the prevailing trends of datafication, digitisation, and collaboration that underpin computer-assisted qualitative data analysis and qualitative research methodology.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Not applicable.

Conflicts of Interest: The authors declare no conflict of interest.

References

Akkerman, Sanne, Wilfried Admiraal, Robert Jan Simons, and Theo Niessen. 2006. Considering Diversity: Multivoicedness in International Academic Collaboration. *Culture & Psychology* 12: 461–85. [CrossRef]

Berelson, Bernard. 1984. *Content Analysis in Communication Research*. New York: Hafner Press.

Berry, David Michael. 2011. The Computational Turn: Thinking About the Digital Humanities. *Culture Machine* 12: 1–22.

Brent, Edward E., and Ronald E. Anderson. 1990. *Computer Applications in the Social Sciences*. Philadelphia: Temple University Press.

Bringer, Joy D., Lynne Halley Johnston, and Celia H. Brackenridge. 2006. Using Computer-Assisted Qualitative Data Analysis Software to Develop a Grounded Theory Project. *Field Methods* 18: 245–66. [CrossRef]

Bröer, Christian, Gerben Moerman, Johan Casper Wester, Liza Rubinstein Malamud, Lianne Schmidt, Annemiek Stoopendaal, Nynke Kruiderink, Christina Hansen, and Hege Sjølie. 2016. Open Online Research: Developing Software and Method for Collaborative Interpretation. *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research* 17: 3. [CrossRef]

Brown, David. 2002. Going Digital and Staying Qualitative: Some Alternative Strategies for Digitizing the Qualitative Research Process. *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research* 3. [CrossRef]

Bryda, Grzegorz. 2014. CAQDAS, Data Mining i Odkrywanie Wiedzy w Danych Jakościowych. In *Metody i Techniki Odkrywania Wiedzy. Narzędzia CAQDAS w Procesie Analizy Danych Jakościowych*. Edited by Jakub Niedbalski. Łódź: Wydawnictwo Uniwersytetu Łódzkiego. Available online: http://hdl.handle.net/11089/24464 (accessed on 23 September 2022).

Bryda, Grzegorz. 2019. *From CAQDAS to Text Mining. The Domain Ontology as a Model of Knowledge Representation about Qualitative Research Practices*. Advances in Intelligent Systems and Computing. Edited by António Pedro Costa, Luís Paulo Reis and António Moreira. Cham: Springer International Publishing AG, vol. 1068, pp. 72–88. [CrossRef]

Bryda, Grzegorz. 2020. Whats and Hows? The Practice-Based Typology of Narrative Analyses. *Przegląd Socjologii Jakościowej* 16: 120–42. [CrossRef]

Bryda, Grzegorz, and Krzysztof Tomanek. 2014. Od Caqdas Do Text Miningu. Nowe Techniki w Analizie Danych Jakościowych. In *Metody i Techniki Odkrywania Wiedzy. Narzędzia CAQDAS w Procesie Analizy Danych Jakościowych*. Łódź: Wydawnictwo Uniwersytetu Łódzkiego. Available online: http://dspace.uni.lodz.pl/xmlui/bitstream/handle/11089/24532/191-217-bryda. pdf?sequence=1&isAllowed=y (accessed on 23 September 2022).

Bryda, Grzegorz, Martini Natalia, Gajda Joanna, and Płatek Daniel. Forthcoming. *Domain Ontology. The New Method of Mapping the Field of Qualitative Research Practices*. Przegląd Socjologii Jakościowej (under final review).

Cornish, Flora, Alex Gillespie, and Tania Zittoun. 2014. Collaborative Analysis of Qualitative Data. In *The SAGE Handbook of Qualitative Data Analysis*. London: SAGE Publications Ltd., pp. 79–93. Available online: http://methods.sagepub.com/book/the-sage-handbook-of-qualitative-data-analysis/n6.xml (accessed on 30 September 2022).

Costa, António Pedro. 2016. Cloud Computing Em Investigação Qualitativa: Investigação Colaborativa Através Do Software WebQDA. [Cloud Computing in Qualitative Research: Collaborative Research Through WebQDA Software]. *Fronteiras: Journal of Social, Technological and Environmental Science* 5: 153. [CrossRef]

Costa, António Pedro. 2023. Qualitative Research Methods: Do Digital Tools Open Promising Trends? *Revista Lusófona de Educação* 59: 67–74. [CrossRef]

Costa, António Pedro, Francislê Neri de Souza, Luís Paulo Reis, and Fábio Mauro Freitas. 2016. Funcionalidades Para a Promoção Do Trabalho Colaborativo Em Investigação Qualitativa: O Caso Software webQDA [Features for Promoting Collaborative Work in Qualitative Research: The WebQDA Software Case]. In *Actas de La 11 a Conferencia Ibérica de Sistemas y Tecnologías de Información*. Edited by Álvaro Rocha, Luís Paulo Reis, Manuel Pérez Cota, Octavio Santana Suárez and Ramiro Gonçalves. Gran Canária: AISTI—Associação Ibérica de Sistemas e Tecnologias de Informação, pp. 935–40.

Costa, Elisabete Pinto da, and António Pedro Costa. 2017. O Trabalho Colaborativo Apoiado pelas Tecnologias: O Exemplo da Investigação Qualitativa [The Collaborative Work supported by Technologies: The Example of Qualitative Research]. *Educação a Distância e Práticas Educativas Comunicacionais e Interculturais* 17: 61–69. Available online: https://seer.ufs.br/index.php/edapeci/issue/view/v17.n2.2017 (accessed on 1 June 2023).

Crichton, Susan. 2012. Using Digital Tools in Qualitative Research. In *Online Research Methods in Urban and Planning Studies*. Hershey: IGI Global, pp. 284–98. [CrossRef]

Davidson, Judith, Trena Paulus, and Kristi Jackson. 2016. Speculating on the Future of Digital Tools for Qualitative Research. *Qualitative Inquiry* 22: 606–10. [CrossRef]

Dicks, Bella. 2012. *Digital Qualitative Research Methods*. Edited by Bella Dicks. {SAGE} Benchmarks in Social Research Methods. London and Thousand Oaks: SAGE Publications.

Dijck, Jose Van. 2014. Datafication, Dataism and Dataveillance: Big Data between Scientific Paradigm and Ideology. *Surveillance & Society* 12: 197–208. [CrossRef]

Fielding, Nigel G., and Raymond M. Lee. 1991. *Using Computers in Qualitative Research*. London: SAGE Publications.

Flensburg, Sofie, and Stine Lomborg. 2023. Datafication Research: Mapping the Field for a Future Agenda. *New Media & Society* 25: 1451–69. [CrossRef]

Freitas, Fábio, Jaime Ribeiro, Catarina Brandão, Francislê Neri de Souza, António Pedro Costa, and Luís Paulo Reis. 2018a. In Case of Doubt See the Manual: A Comparative Analysis of (Self)Learning Packages Qualitative Research Software. *Advances in Intelligent Systems and Computing* 621: 176–92. [CrossRef]

Freitas, Fábio, Jaime Ribeiro, Catarina Brandão, Luís Paulo Reis, Francislê Neri Souza, and António Pedro Costa. 2018b. Learn for Yourself: The Self-Learning Tools for Qualitative Analysis Software Packages. *Digital Education Review* 32: 97–117. [CrossRef]

Frost, Nollaig, Sevasti Melissa Nolas, Belinda Brooks-Gordon, Cigdem Esin, Amanda Holt, Leila Mehdizadeh, and Pnina Shinebourne. 2010. Pluralism in Qualitative Research: The Impact of Different Researchers and Qualitative Approaches on the Analysis of Qualitative Data. *Qualitative Research* 10: 441–60. [CrossRef]

Glaser, Barney G., and Anselm L. Strauss. 1965. *Awareness of Dying*, 10th ed. Piscataway: Aldine Publishing Company.

Hall, Wendy A., Bonita Long, Nicole Bermbach, Sharalyn Jordan, and Kathryn Patterson. 2005. Qualitative Teamwork Issues and Strategies: Coordination through Mutual Adjustment. *Qualitative Health Research* 15: 394–410. [CrossRef] [PubMed]

Hartley, Jean, and John Benington. 2000. Co-Research: A New Methodology for New Times. *European Journal of Work and Organizational Psychology* 9: 463–76. [CrossRef]

Janssen, José, Slavi Stoyanov, Anusca Ferrari, Yves Punie, Kees Pannekeet, and Peter Sloep. 2013. Experts' Views on Digital Competence: Commonalities and Differences. *Computers & Education* 68: 473–81. [CrossRef]

Jemielniak, Dariusz. 2020. *Thick Big Data: Doing Digital Social Sciences*. New York: Oxford University Press.

Kitchin, Rob. 2014a. Big Data, New Epistemologies and Paradigm Shifts. *Big Data & Society* 1: 205395171452848. [CrossRef]

Kitchin, Rob. 2014b. *The Data Revolution: Big Data, Open Data, Data Infrastructures & Their Consequences*. London: SAGE Publications Ltd. [CrossRef]

Lazer, David, Alex Pentland, Lada Adamic, Sinan Aral, Albert-László Barabási, Devon Brewer, Nicholas Christakis, James Fowler, and Marshall Van Alstyne. 2009. Computational Social Science. *Science* 323: 721–23. [CrossRef] [PubMed]

Lindgren, Simon. 2022. *Digital Media & Society*. Los Angeles: Sage.

Louis, Meryl Reis, and Jean M. Bartunek. 1992. Insider/Outsider Research Teams: Collaboration Across Diverse Perspectives. *Journal of Management Inquiry* 1: 101–10. [CrossRef]

Lu, Chi-Jung, and Stuart W. Shulman. 2008. Rigor and Flexibility in Computer-Based Qualitative Research: Introducing the Coding Analysis Toolkit. *International Journal of Multiple Research Approaches* 2: 105–17. [CrossRef]

Makel, Matthew C., Kendal N. Smith, Matthew T. McBee, Scott J. Peters, and Erin M. Miller. 2019. A Path to Greater Credibility: Large-Scale Collaborative Education Research. *AERA Open* 5: 233285841989196. [CrossRef]

Marková, Ivana, and Jana Plichtová. 2007. East–West European Project: Transforming and Shaping Research Through Collaboration. *Integrative Psychological and Behavioral Science* 41: 124–38. [CrossRef]

McCrohon, Mark. 2013. Towards a Digital Methodology for Qualitative Research. Presented at the Contemporary Approaches to Research in Mathematics, Science, Health and Environmental Education Symposium, Virtual, November 7–8. [CrossRef]

Mertens, Evelyne, Ann Heylighen, Anja Declercq, Karin Hannes, Fred Truyen, Yvonne Denier, and Bernadette Dierckx De Casterlé. 2017. QualiBuddy: An Online Tool to Improve Research Skills in Qualitative Data Analysis. *Qualitative Research Journal* 17: 306–18. [CrossRef]

Negroponte, Nicholas. 1996. *Being Digital*. New York: Vintage Books, 1. Vintage.

Oberländer, Maren, Andrea Beinicke, and Tanja Bipp. 2020. Digital Competencies: A Review of the Literature and Applications in the Workplace. *Computers and Education* 146: 103752. [CrossRef]

O'Connor, Cliodhna, and Helene Joffe. 2020. Intercoder Reliability in Qualitative Research: Debates and Practical Guidelines. *International Journal of Qualitative Methods* 19: 160940691989922. [CrossRef]

Palys, Ted, and Chris Atchison. 2012. Qualitative Research in the Digital Era: Obstacles and Opportunities. *International Journal of Qualitative Methods* 11: 352–67. [CrossRef]

Paulus, Trena, Jessica Lester, and Paul Dempster. 2014. *Digital Tools for Qualitative Research*. London: SAGE Publications Ltd. [CrossRef]

Pope, Elizabeth, and António Pedro Costa. 2023. The Case for Computational Competence and Transversal Skills: Using Digital Tools and Spaces for Qualitative Research. *The Qualitative Report* 28: 2838–47.

Richards, K. Andrew R., and Michael A. Hemphill. 2018. A Practical Guide to Collaborative Qualitative Data Analysis. *Journal of Teaching in Physical Education* 37: 225–31. [CrossRef]

Robins, Cynthia S., and Karla Eisen. 2017. Strategies for the Effective Use of NVivo in a Large-Scale Study: Qualitative Analysis and the Repeal of Don't Ask, Don't Tell. *Qualitative Inquiry* 23: 768–78. [CrossRef]

Rogers-Dillon, Robin H. 2005. Hierarchical Qualitative Research Teams: Refining the Methodology. *Qualitative Research* 5: 437–54. [CrossRef]

Rogers, Richard. 2009. *The End of the Virtual: Digital Methods*. Amsterdam: Amsterdam University Press. [CrossRef]

Schallmo, Daniel, and Joseph Tidd. 2021. *Digitalization: Approaches, Case Studies, and Tools for Strategy, Transformation and Implementation*. Edited by Daniel Schallmo and Joseph Tidd. Management for Professionals. Cham: Springer.

Schwarz, Ori. 2021. *Sociological Theory for Digital Society: The Codes That Bind Us Together*. Cambridge and Medford, MA: Polity Press.

Seror, Jeremie. 2012. Computer-Assisted Qualitative Data Analysis Software. In *The Encyclopedia of Applied Linguistics*. Hoboken: Wiley. [CrossRef]

Sweeney, Angela, Kathryn E Greenwood, Sally Williams, Til Wykes, and Diana S. Rose. 2013. Hearing the Voices of Service User Researchers in Collaborative Qualitative Data Analysis: The Case for Multiple Coding. *Health Expectations* 16: e89–e99. [CrossRef]

Tartas, Valérie, and Nathalie Muller Mirza. 2007. Rethinking Collaborative Learning Through Participation in an Interdisciplinary Research Project: Tensions and Negotiations as Key Points in Knowledge Production. *Integrative Psychological and Behavioral Science* 41: 154–68. [CrossRef]

Torrato, Janette B., Socorro E. Aguja, and Maricar S. Prudente. 2023. *Educators' Digital Literacy Competence in a Hybrid Learning Environment*. ACM International Conference Proceeding Series. New York: ACM, pp. 19–24. [CrossRef]

Uehara, Edwina S., Martha Farris, Thomas Graham, Paula T. Morelli, Richard Phillips, Lisa Smith, and Robin E. Bates. 1996. A Collaborative-Comparative Approach to Learning Qualitative Data Analysis. *Journal of Teaching in Social Work* 14: 45–67. [CrossRef]

Wa-Mbaleka, Safary, and Antonio Pedro Costa. 2020. Qualitative Research in the Time of a Disaster Like COVID-19. *Revista Lusofona de Educacao* 48: 11–26. [CrossRef]

Watts, Duncan J. 2007. A Twenty-First Century Science. *Nature* 445: 489. [CrossRef] [PubMed]

Woods, Megan, Rob Macklin, and Gemma K. Lewis. 2016. Researcher Reflexivity: Exploring the Impacts of CAQDAS Use. *International Journal of Social Research Methodology* 19: 385–403. [CrossRef]

Yang, Haibo, and Mary Tate. 2012. A Descriptive Literature Review and Classification of Cloud Computing Research. *CAIS* 31: 35–61. [CrossRef]

Article

Teaching Research Methods Courses in Education: Towards a Research-Based Culture

João Filipe Matos [1], André Freitas [1,*], Elsa Estrela [1], Carla Galego [1] and João Piedade [2]

[1]   CeiED—Interdisciplinary Research Centre for Education and Development, Lusofona University, 1700-284 Lisboa, Portugal; joao.matos@ulusofona.pt (J.F.M.); elsaestrela@gmail.com (E.E.); carla.galego@ulusofona.pt (C.G.)

[2]   UIDEF—Education and Training Research and Development Research Unit, Institute of Education, Lisboa University, 1649-013 Lisboa, Portugal; jmpiedade@ie.ulisboa.pt

*   Correspondence: andre.freitas@ulusofona.pt

Abstract: This paper aims to identify and discuss what constitutes a research-based pedagogical culture in teaching research methods courses in master's and doctoral programs in education. The discussion draws on empirical results of a set of five focus group interviews with teachers responsible for teaching research methods courses in educational programs in higher education institutions in Portugal. Data are analyzed and interpreted within a situated learning framework that acknowledges the relevance of creating social learning spaces which accommodate the variety of students. The article closes with a characterization of what could be a research-based pedagogical culture in teaching research methods in advanced studies in education in the near future.

Keywords: research methodologies in education; teaching research methods; student-centered learning approach; pedagogical culture of research methods

1. Introduction

There has been a shift across most countries towards de-centralized decision making in education, giving more responsibility and mandating power to local authorities. Given greater information, less quality control, a more informed public, and a greater diversity of policy makers, the role of research for evidence-informed policy in education becomes newly important. In Portugal, research in education is mainly carried out by academics in higher education institutions (HEI) where research methods courses are included in the study plans in a variety of master's and doctoral programs (Matos et al. 2023).

It is non-controversial that solid preparation in research methods provides important knowledge and skills to undertake better research and thus significantly contribute to the educational community. Quality teaching in research methods requires developing a clear understanding of the complex relationships between the explicit syllabus guidelines of the courses, the previous competences of students, and the pedagogical options (Matos et al. 2023). It is a great challenge to teach research methods in education as the target population of students usually come with different forms of prior knowledge and is made up of diverse backgrounds, interests and expectations. The literature on teaching and learning research methodologies in education reflects several controversies regarding students' methodological understandings of research and the pedagogical challenges experienced by teachers (Nind et al. 2019; Ross and Call-Cummings 2020). Hence, it is possible to organize three main topics regarding knowledge dispositions and methodological competencies: anxiety and 'fear' of methodologies (mainly quantitative) experienced by students (Lovekamp et al. 2017; Saeed and Qunayeer 2021); the complexity of epistemological understanding and its applicability in life (Coronel Llamas and Boza 2011; Ivankova and Clark 2018); the lack of specific training on methodologies and a variety of ideological conceptions of research held by teachers (Kucukaydin and Gokbulut 2020; Talbott and Lee 2020). In this context, the type

of pedagogic research environment created is composed of mismatches between teaching and learning research methodologies in education that add complexity to a methodological scenario that is already challenging in itself. The same literature reveals scant empirical, epistemological and methodological reflection of teaching research methodologies in education (Wagner et al. 2019), indicative of the need to identify and understand a pedagogical culture in that domain (Lewthwaite and Nind 2016). From pitfalls to trends, the literature review reveals some insights for this shift to happen. The creation of pedagogical research communities among teachers and students (Wagner et al. 2019) emerges as the main topic with four characteristics: engaging students with ongoing research projects and real data (Engbers 2016; Müller et al. 2020); recognizing current research perspectives (Gray et al. 2015; Fonseca and Segatto 2021); promoting scientific autonomy, the acquisition of scientific writing skills and their dissemination (Müller et al. 2020; Motjolopane 2021); and providing active experience, partnerships and disciplinary work combined with information gathering and resource processing (Onwuegbuzie et al. 2009; Ananth and Maistry 2020). This complex learning scenario (Pedro et al. 2019; Kukulska-Hulme et al. 2022) of scientific engagement consolidates a research-based approach and debate about what makes quality research methods courses. The Research Methods in Advanced Studies in Education (ReMASE) project emerges from this evidence.

2. Research Methods in Advanced Studies in Education

The ReMASE project pursues the idea that teachers in HEIs will benefit from the use of a framework as a tool to design and implement research methods courses in educational programs. The project takes the idea that the quality of research in education impacts the quality of its results and therefore provides evidence that may inform decision makers and other stakeholders in education. This leads to rethinking the design of research methods courses and the pedagogical approaches taken. The aim of the project is to identify and provide research-based principles and guidelines for the design of research methods courses in education, that will be put together as a framework. The research team constituted experienced researchers teaching research methods in advanced programs in education, as well as young researchers, embracing the task of interrogating and improving the design and implementation of research methods courses. The key research question of the project is as follows: what principles and guidelines are appropriate to constitute a framework for the design of research methods courses in advanced studies in education in Portugal?

The ReMASE project is organized into three phases: (i) Phase I, which is concerned with mapping the field (theoretical and empirical)—meaning conducting literature reviews and consulting a database with all courses in Portugal; (ii) Phase II, which is the time for data collection and analysis (survey questionnaire followed by focus-group interviews) carried out by teachers responsible or involved in teaching research methodologies in education; and (iii) Phase III, which takes the results of the theoretical mapping and the empirical results to produce a framework—constituted by principles and corresponding guidelines—for the design of research methods courses (Matos et al. 2023).

This article aims to discuss the relevance of a pedagogical research-based culture in teaching research methods in master's and doctoral programs in education. The discussion draws on empirical results of a set of five focus group interviews with teachers responsible for teaching research methods in education in HEIs in Portugal. Given the crucial role of a conceptual framework (Eisenhart 1991) in producing evidence, the results are interpreted within a situated learning framework (drawing upon the work of Lave and Wenger 1991 and Wenger 1998) that acknowledges the relevance of creating social learning spaces which accommodate the variety of students. The discussion closes with a characterization of what could be a research-based pedagogical culture in teaching research methods in advanced studies in education in the near future.

The following key research question is addressed: what constitutes a research-based pedagogical culture in teaching research methods courses in advanced studies in education?

3. Methodological Approach

Within the ReMASE project, the general research problem was addressed through the (i) a content analysis of the Research Methods in Education (RME) syllabus courses' description (objectives, learning objectives, content programs, teaching methods, learning activities, assessment and mandatory bibliography) that structure the RME syllabus courses, with (ii) the empirical data coming from a survey questionnaire given to teachers responsible in those courses, and (iii) a set of focus group interviews with some participants from the previous phase of data collection (Matos et al. 2023).

Concerning the RME courses in Portugal, we identified 214 master's and doctoral programs, accredited by the national responsible agency, operating in the 2021/22 academic year, with available course syllabus information. The 214 programs are distributed across 195 master's programs in education (N = 86) and in initial teacher education (N = 109), and across 19 doctoral programs in education (N = 15) and in teaching (N = 4). Most of the educational programs in HEI offer some type of research methodologies courses or modules. Just a small part (less than 10%) of the programs set as optional the research methods courses. However, there are programs that do not include any type of course in research methodologies. Despite the type of institutional options, the main areas that are included in the research methods courses are specific competences; transversal competences; authorial/ original work; and applicability and transferability.

In this article, for the purpose of relevant discussion of research-based pedagogical culture creation, the report is centered on data coming from the focus group interviews.

The focus group interviews were conducted with 20 teachers organized into 7 groups. The selection criteria combined the rule that every focus group should have 3 to 4 teachers from different institutions plus one moderator chosen among the ReMASE project members. Each focus group included teachers responsible for RME course teaching from different Portuguese HEIs (private and public universities and polytechnic institutes). They were selected from those people who previously answered the ReMASE survey questionnaire and who volunteered to be interviewed by the research team. An invitation was included at the end of the survey questionnaire to allow participants to voluntarily participate in a follow-up focus group interview. This sampling criteria were defined by the research team considering the possibility that those who volunteered were most probably the ones who were more eager to share their experience and perspectives on teaching and learning RME.

To save time and traveling costs, the focus group interviews took place through the Zoom video conferencing system (provided by the ReMASE project's host institution). The interviews were conducted by one of the research team members who had the support of a second researcher. The guidelines and protocol previously defined were applied and the interview's average duration was 90 min.

Informed consent was obtained from all teachers involved in the study. The interviews were videorecorded with permission from all the participants in each focus group who signed an informed consent form acknowledging the purpose of the data collection, the procedures to preserve confidentiality and the actions implemented to protect the participants' identity. All appropriate ethical issues were addressed and the correspondent procedures were previously approved by the Ethics Committee of Interdisciplinary Research Centre for Education and Development-Lusófona University (the ReMASE project's host institution). The study was conducted in accordance with the Declaration of Helsinki.

The construction of the content guidelines for the focus-group interviews and protocol of its application were developed in two phases; firstly, a draft was prepared considering the project's key research questions and the trends identified in the results of the survey questionnaire given to teachers. The guidelines and protocol of application were reviewed and adjusted by other three team members, resulting a final version for implementation (see Appendix A). The protocol for implementation describes the strategies, timing, phases to contact the selected participants for interviews and the researcher guidelines.

The focus of the interviews was placed on the following key items: the relative degree of importance of the background methodologies of technical research methods; time

allocated to the various themes included in the Research Methods in Education (RME) syllabus course; pedagogies used in teaching; the degree of involvement of students in hands-on research activities (data analysis, assessment of articles, production of essays and literature reviews, etc.).

The video recordings of the focus group interviews were uploaded to and organized in the NVivo software to create the conditions for (a) a systematic and recurrent analysis to be carried out by a group of researchers, and (b) an organized review of the analysis from other members of the project's research team. In the first step, a priori categories were used following the concepts derived from the theoretical mapping of the field (Matos et al. 2023). In particular, we concentrated on two main categories: the objectives of the RME syllabus courses and their learning outcomes.

For the purpose of identifying, in teachers' voice, traces of a research-based pedagogical culture in teaching research methods, data were additionally analyzed using a situated learning-based conceptual framework (drawing on the work of Wenger 1998) that includes the following categories: (i) engagement in activity, that unfolds in forms of engagement, mutuality processes (interaction facilitates the definition of joint tasks), competence (taking initiative in the social space and creating conditions to make it knowledgeable to others, creating accountability instances), and the continuity of practices (through producing reificative memory as well as participative memory); (ii) imagination which includes the subcategories of orientation (creating possibilities for people to realize their position in the learning space, creating possibilities for people to locate themselves in time, creating possibilities for people to find themselves located in the shared meanings, creating conditions for people to locate themselves in the power relations within the class and the scientific community in general), encouraging reflection (acknowledging consciousness of learning and developing (the self and community), and promoting exploration (acting through initiative and intentionality in participation) and sharing (intentionally showing difficulties and successes); (iii) alignment that includes both convergence (participants sharing a common telos) and coordination (participants intentionally finding points of articulation and ordering them). Instances of these processes were identified in the resources and the artifacts used by the participants (teachers and students) as described by the teachers in the focus group interviews.

Those categories were used in a dialogic process for the generation of meanings and sub-categories following a grounded-theory-based strategy; the research team tagged ideas and concepts and succinctly summarized them, the codes being grouped into higher-level concepts, and then into categories. Therefore, the strategy for the analysis followed a top–down (from a priori categories to data) and bottom–up (from data to theory-based categories) double movement creating evidence for the specification of a research-based pedagogical culture that takes a situated learning stance. The focus group interviews' transcripts are anonymous, respecting the ethical framework referred to above. In this text, the participants are identified with a number (e.g., P4) after reference to the focus group's code (e.g., FG1); for example, FG1-P4 indicates teacher P4 of focus group 1. Data analysis for this paper involved two members of the research team for around 80 working hours.

4. Results: The Research Answers to Pedagogic Culture of Teaching RME

The literature review (Matos et al. 2023) shows pitfalls and trends (regarding practices, interactions, commitments, and knowledge) in the teaching of research methods in education. Regarding the pitfalls of the pedagogic environment, the situation consists of a practice of isolation and loneliness, disagreements and misunderstandings, commitments of discouragement and disaffection, and a type of knowledge that is disconnected and fragmented. Despite this fragile picture, the literature makes it possible to reveal other possibilities of teaching research methodologies in education. In this respect, trends can be organized into the following: a practice formulated by collaborative ways; an interaction organized through active pedagogies where teachers can act as learners and learners as experts; commitments that are centered on the elaboration of a scientific culture promoted

by teachers in which autonomy is increased in students, and in this idea the knowledge organized is student-centered, promoted through hands-on course designs.

4.1. Purpose and Learning Outcomes in RME Courses

The production of a RME course follow a process based on the identification of its constitutive elements (objectives, learning outcomes, contents, working methods, and forms of assessment) in similar courses in other HEIs. The main strategy for elaborating on the course plan relies on the contents to be delivered afterwards, combining and articulating them with objectives and learning outcomes. This may be due to a lack of background in research methods and an absence of a more general view of the purpose of the master's or doctoral program in which the course appears. However, it is possible that a perception of the pressure inherently perceived by the institution responsible for the formal permission to run the program (the national Agency for Assessment and Accreditation of Higher Education) may have an important role in that matter. This is illustrated in a teacher's statements:

> "what I usually do when available is to go and check at other universities what are the contents that are usually covered in that course, not so much to copy, but to try to have something common to the other universities so that more or less the same contents or the same materials so that later there is no difference and there is not always to compare (to other major universities) (. . .)" (FG1-P4).

> "(. . .) Additionally, it is from there that I make the curricular plan of the course, the objectives, the methodologies, the contents, the teaching strategies and then the assessment that will have to be coherent with everything that is behind as well" (FG1-P4).

A serious implication of this largely adopted process of producing a course is that a sort of equalitarian trend is visible in most of the RME syllabus course's description. For example, referring to the objectives of the RME syllabus course, more that 80% of the course description included in master's programs use formulations such as "taking into account the skills that are intended to be developed in this master's degree, the purpose of this course is to carry out an introductory approach to the most important principles of scientific procedure, the stages of its practical application and the main methods and techniques of research in education".

However, teachers recognize that a content-based organization of a RME course evades much of the purpose of such a course as illustrated by teacher FG4-P3:

> "(. . .) students sometimes have difficulties, therefore, in formulating research objectives and questions, even because they confuse objects, research objectives with teaching-learning objectives (. . .), we are always in the struggle . . . and therefore this is, perhaps, our biggest problem" (FG4-P3).

In addition to the discomfort shown by the teacher, it is apparent the lack of clear view of the purpose of a RME course in relation to its audience:

> "(it is important) to learn to know the structure and importance of scientific thinking. Hence, in undergraduate studies you have to understand the structure, (it is) an introduction to scientific thinking. It means that it is a phase, it is a level in which you must know the importance, relevance, and the form of its structure, reading and analyzing some scientific articles. A master's degree, in contrast, in the Bologna model, is already a level where research is taught (. . .). That's right, but the master's also has different audiences, different objectives, some of them are professional and the construction of thinking is not always relevant to their curriculum. Hence, we will have to take a good look at what is the audience, what is the objective of the master's degree so that we can really build a curriculum that leads and teaches how to build scientific thinking" (FG4-P3).

In general, the RME syllabus' course description include as important learning outcomes the identification and use of different types of methodological strategies, mastering their theoretical, methodological and technical requirements, so that they can make appropriate choices. Additionally, teachers generally agree that "understanding scientific rationale" should be included in every RME course's learning outcomes. However, while teachers underline the relevance of understanding how science is produced, they quickly jump to the list of topics to be addressed (such as research paradigms, types of research studies, emphasizing qualitative versus quantitative approaches, and methods for data collection), showing difficulties in the articulation of so called "theoretical items" with practicalities for data collection.

4.2. Content-Centered Pedagogies

As suggested in the section above, teachers value the efforts put into helping students understand elements of the theoretical background of research in education although this is a difficult task both because of students' lack of previous knowledge as well as because the syllabus's course specific contents are supposed to be covered in classes.

"(...) at least from the experience I have, (...) the most critical part is in data collection and analysis ... do a 15-min interview and treat the interview, make a small questionnaire, etc ... but creating the instruments because a questionnaire is not a list of questions, an interview is not a list of questions and, therefore, from the idea of how it is done to how it is applied, of course, (you have to deliver) a minimum on how you can analyze quantitatively, qualitatively, a simple descriptive quantitative" (FG2-P2).

It is apparent that most teachers believe that concrete methods for data collection are at the kernel of the issue of teaching research methods; therefore, they center their working methodologies with students around successful strategies for that purpose. This has an impact on students' autonomy and ability to methodologically address concrete research problems, as demonstrated below:

"(...) as an advisor I see that they have a lot of difficulties, they usually have a lot of difficulties in operationalizing the theoretical concepts that we are dealing with (in RME courses)" (FG2-P1).

Teachers make extensive references to pedagogies that include project-based learning and problem-based learning, a flipped classroom and collaborative work although they tend to be in full control of the class activities and assume the initiative for all those activities. The syllabus course (in particular, the contents to be covered) tend to play a strong structuring role as a resource that teachers use and that formats their own pedagogies. These are circumstances that clash with the complexity of understanding RME beyond abstract conceptions. The lack of application of knowledge, in relation to this range of pedagogies, creates constraints on teaching and learning RME courses.

Data collected within project ReMASE show that in the doctoral and master's RME syllabus courses' description, there is a prevalent (around 90%) mention of "theoretical and practical teaching" although only 10% refer to "practical laboratorial teaching". Most of the RME courses in doctoral programs refer to "seminar" as the working model although it is not clear how seminars are conceptualized or the role of students and teachers in those activities. It becomes apparent that the notion of a seminar is connected more to doctoral programs than to master's programs but there is no explicit reference to the responsibility of students in those seminars. In fact, in some cases it comes up that seminars are more a way to describe classroom activities based on sharing and discussion, therefore not having a clear seminar-like identity. Teacher P1 in focus group interview FG-5 addressed the way seminars operate:

"Then, in the seminar, we respond to specific problems, for example, (...) when we are building data collection instruments, in these classes those who make questionnaires or who make interview guidelines, they show them to their

colleagues, the seminar teachers and usually with the methodology teacher, (. . .) and then everyone analyzes and suggests changes. This is important because sometimes colleagues put themselves in the respondent's shoes and remember that there is still one more answer option missing, that those answer options are not mutually exclusive (. . .)" (FG5-P1).

At the same time, that teacher referred to extending the discussion on how appropriate it is to use a given instrument to address a particular research problem and brought in the issue of time dedicated to that discussion. The time allocated to the analysis and discussion of research approaches and methodologies is referred to by all teachers as a key issue in teaching RME courses. However, this brings in the traditional structural separation between RME courses and other courses of the study plan that represent the current model of organizing master's and doctoral programs in education in Portugal.

In summary, we can point as a key issue to the fact that teachers focused on the research methods contents to be taught and easily set aside the purpose and learning outcomes that are formulated in the design of the courses. When a teaching curriculum supplies structuring resources for learning and controls access to it, the meaning of what is learned is mediated by an external view of what knowing is about (Lave and Wenger 1991).

4.3. Teachers' Role and Responsibility

If teachers show a sense of discomfort regarding the way they implement the RME courses—claiming for more time and more opportunities to go deeper in important dimensions of research methods, and complaining about students' previous knowledge—the fact is that they manifest a concern with their own preparation to teach in the area. All teachers interviewed said that they had no specific preparation to teach RME courses apart from the practice of research during their advanced studies and, in some cases, a few short courses on research methods. However, they referred to the importance of the practice of advanced research to be able to recontextualize the knowledge that emerges from that practice into teaching RME courses. Teacher P3 interviewed in FG2 declared the following:

"(. . .) my education (in RME) as a researcher both in terms of the training courses of the postgraduate programs I attended and in participation (in research projects) is a decisive aspect. The participation I had in research projects (provided) all aspects of nature, both theoretical and practical, which had been discussed at the level of methodology (. . .) and the application of its practical aspects in quite different contexts (. . .)" (FG2-P3).

This is a very important aspect that teachers bring into the issues of teaching—the relationships between undertaking research and teaching in higher education. They all recognize this as part of their own professional development efforts but eventually feel the need for a stronger background and for the structural organization of ideas in research methods.

"(in research practice within projects) with a greater incidence in methodologies of a qualitative nature, quantitative nature, mixed nature, therefore going deeper in research projects, we went deeper into certain specific methodologies of inquiry. In addition, another work that is extremely important is individual reading, that is, that we are doing based on the various research manuals and literature, this ends up being extremely rich . . . and also because they respond to what our needs, our desires, to look specifically, to delve into certain areas in accordance with our interests and our needs" (FG2-P3).

Teachers explicitly show that their background in research methodologies comes from their individual efforts in recontextualizing their research practice into forms of addressing research methods, issues, techniques, and problems. The risk of reification of methods is certainly present in that process of recontextualizing the research practice in teaching RME courses—in fact, there were traces of that phenomenon in the voices of teachers. Teacher

P4 of FG2 provided a clue to try to overcome that risk within the process of designing the activities with students:

> "How do I bring my research center to my classes? Exactly with my examples that I can bring in and basically with examples of investigations already carried out, investigations that are ongoing, in which they participate, that the research center as such has also supported" (FG2-P4).

> "Then there is an education that I consider important, which is my experience as a researcher. This is where I understand the main difficulties and problems and the main ethical questions that arise and I also think that at this level the education is very useful when sharing it with my students" (FG4-P2).

In summary, teachers recognize their responsibility in leading activities that create conditions for students to develop appropriate knowledge and competence in research methods and in most cases bring in their own experience in research. Even if they assume that their preparation to teach RME courses is part of their efforts in professional development, a feeling of discomfort emerges when they recognize that mostly they have no specific academic preparation to teach in the area.

4.4. Towards a Research-Based Pedagogical Culture

Data collected in the focus group interviews show both the effort of teachers in designing and teaching RME courses as well as a discomfort partly with the results of their work and the way it is implemented. We argue for a need to support teachers in rationalizing the (implicit) need for a research-based pedagogical culture that emerges from their voices.

4.4.1. Time in a Research-Based Pedagogical Culture

There are indications that teachers are aware of the need to improve the way RME courses are designed and implemented. Perhaps the most commonly referred to issue is time dedicated to learning research methods in education. Teacher P2 interviewed in FG4 was very explicit about this and linked the issue of time with the maturity of ideas when students deal with research methods:

> "The first issue is really the question of the time given for students to integrate information about scientific thinking and the way how scientific knowledge is said to be valid. I (have to) guarantee that people validate what I build. Therefore, the question of validating the scientific process is one of the questions that one must address permanently and cannot be resolved with little experience. Validating a survey requires a lot of experience and a lot of training. Otherwise, it's a joke that can't be accepted as scientific thinking. That would be the primary issue—time" (FG4-P2).

The time for learning represents an entry point to the discussion that teachers bring in on how to make proper changes to improve students' preparation on research methods. They understand that the academic organization and structure of master's and doctoral programs in Portugal add constraints that act against the prime objective of those programs: to develop high-level understanding and competence in research in education. This means that teachers are aware of the space needed for students to take initiative in RME courses and the conditions required to make that initiative knowledgeable to others, thus contributing to stimulating learning. This reference to time is both connected to the time of the student as well as the time of the teacher (to teach). With reference to the time of the student, it appears obvious that the difficulty of ambition can be explained by the structural organization of RME courses into 2 or 3 contact hours per week. Teacher P4 from FG-2 spoke of the sort of activity elected as more productive:

> "(. . .) the process of analysis of works and research itself, therefore closely linked to the issue of articles and dissertations (. . .). Together with that analysis, we

make the students also plan methodological approaches in the sense that it is easier for them to apprehend the concepts they read in such guiding texts when they are confronted with that need. (. . .) often we are realizing and identifying (needs) for the development of the dissertation" (FG2-P4).

Although we have many references to time in teaching RME courses, teachers draw from the unamendable and rigid definition of time given by institutions to plan and work with students. In fact, time is an important part of the culture of school in general and plays the role of a structuring resource that determines most schooling activities. That is why it must be challenged by taking a critical stance on its orientational role in teaching RME courses. As participants in an academic culture, students need a form of orientation that helps them to locate themselves in the learning space and this is carried out through creating opportunities for them to locate themselves in time and find themselves located in the meanings that time takes. The time for reflecting and acknowledging the consciousness involved in learning and development is crucial. Reflection and exploration involve acting and initiative as well as intentionality in participation, therefore creating (intentionally) opportunities to show the difficulties and successes which are all together inherent to learning.

4.4.2. Participation and Engagement in a Research-Based Pedagogical Culture

Students' participation in research as a way of learning research methods means absorbing and being absorbed in the culture of the practice of research. If this principle—formulated from a situated learning perspective—carries potentialities for the design and implementation of RME courses, teachers face difficulties in attracting students to modes of participation that are not part of their schooling culture. This was a key idea in the voice of teacher P2 interviewed in FG-4:

"What happens, and I have not had success with, I clearly say, when students start thinking about research and, above all, when they start thinking about their research projects or their research work to present the final dissertation, they become very much in control of their research problem, and it seems that they do not want to share it" (FG4-P2).

We see in these traces of dissatisfaction and even discomfort with the lack of engagement of students in collective activity participation in the RME course. However, we understand that participation involves mutuality (Wenger 1998) that is apparent for example when joint tasks are defined by participants and interactional facilities are available. The very idea of participation in course activities involves allowing peripherality and in fact the consideration of dynamic trajectories of participation. It is not clear if teachers are conscious of the relevance of attributing responsibility and power to students regarding their own modes of participation. This is part of a research-based pedagogical culture, that necessarily includes the production of reified memories (e.g., an article or a student project presentation in class) as well as corresponding participative memories (Wenger 1998).

Teachers value the participation of students in all activities in the RME courses although they tend to assume participation as oral intervention, setting aside more engaged forms of participation. Teacher P1 of FG-5 evaded this light interpretation and went into more significant forms of participation:

"(another important issue) is student participation in research projects, but in a way that is ethically integrated. We cannot do research at the expense of our students, we cannot, that is not what it is about and that is very clear (for me), but it is very important that a student understands how to transcribe an interview and that she goes through this experience before to decide (about the methods to use)" (FG5-P1).

Learning as participation—assumed as a situated phenomenon (Lave and Wenger 1991)—is associated with the evolution and transformation of the individual's participation and their sense of belonging. Teachers realize that the notion of participation includes

simultaneously a process and a product. This would mean that students, more than being equated at the individual level, are thought of as participants in the social learning space constituting the class of RME courses.

The unit of analysis in research necessarily encompasses simultaneously the person, the activity and the contexts in which it unfolds. Additionally, this premise has implications in terms of the way teaching research methods is conceptualized, designed and implemented by teachers in master's and doctoral programs.

4.4.3. Shared Repertoire as Element of a Research-Based Pedagogical Culture

Research inherently has an intentional basis and a productive character, linked to the transformation of an object into a given outcome or result. The essence of research activity is the production of new structures of understanding a social activity, that are objectively oriented, creating new objects. The very object of research can be identified with productive social practices, in their diversity and complexity, thus distancing from the idea of learning as reproduction. Research is intrinsically linked to the capacity for creation and innovation.

A central element of any culture is the repertoire of its members—the participants in the practices that make up that culture. In RME courses, teachers put most of their efforts into enabling students to acquire a shared repertoire (Wenger 1998) whose visible content is apparent in students' forms of writing and talking about research, but this includes core concepts, strategies, processes, terminology, etc.

Most of the teachers interviewed reported a contradictory situation referring to the idea that on one hand students are able to describe a 'menu' of possible research approaches and methods but on the other show difficulty in making sense of the relationships between research problems, substantive theory and methods. Teacher P1 interviewed in FG-5 reported her forms of working with students in order to both avoid a menu-like research methods approach as well as to follow the norms and structure of the RNE course curriculum:

> "We give (to students) a practical situation, a research design and ask them to write as if they were building the methodology section. Because, it is not easy indeed. These are skills and abilities that require a lot of writing work. And, we also ask them to do a research project, it is not (necessarily) their individual project, but it is for them to realize that there are a set of steps (to do research) (. . .) in this process there is also a product that is delivered and that should follow criteria of criticism, of scientific writing, etc. And then there's a test, but the test is more about application, so, yes, they are application exercises" (FG5-P1).

In this statement, it is revealed that the teacher attempts to domesticate the processes of learning RME by combining "knowledge" of forms of planning research and the concepts and the associated terminology with a curricularization of that knowledge, postponing the practice of research. This is visible in the forms of assessment that are indicated.

The repertoire that is shared, throughout participation in the social practice in learning RME, goes far beyond the knowledge of terminology. A repertoire includes forms of organization of the practice by the practitioners and the artifacts that mediate the processes inherent to the practice. If, for example, we consider a questionnaire as an artifact that is appropriate to collect empirical data to address a certain research problem, it should be understood not as an object (external to the practice) but as part of the pedagogical culture of teaching RME courses.

5. Conclusion: Rationalization of Research-Based Pedagogical Culture in Teaching RME Courses

The analysis of the focus group interviews, together with the literature review of teaching RME (Matos et al. 2023), indicates a bittersweet sense of what should be considered relevant changes in teaching research methods in education in advanced studies in education. From this, we identify a mostly implicit call for a transformation of the pedagogic culture that informs teachers' practices in RME courses.

5.1. Constitutive Elements of a Research-Based Pedagogical Culture

A teaching culture based on research should adopt principles that value the participation of teachers in research. This would entail (i) emphasis on inquiry practices, promoting the use of inquiry-based learning approaches that encourage students to investigate problem and generate working hypotheses and forms of addressing them with the proper tools; (ii) data-driven decision making, because a research culture should encourage (in a recursive way) the use of data to inform teachers' decision making, necessarily including the use of formative assessments to monitor students' progress and adjust activities accordingly; (iii) collaboration among teachers and with other researchers to share ideas and create opportunities to learn and practice research; (iv) professional development prioritizing ongoing professional development opportunities informed by research to support teacher growth and continuous improvement; (v) student-centeredness because a pedagogical culture should place a strong emphasis on student learning, with a focus on creating learning scenarios (Pedro et al. 2019; Kukulska-Hulme et al. 2022) that are responsive to the needs and interests of diverse learners; (vi) rigor in the analysis and discussion of pieces of research informed by the relevant literature.

The key idea resulting from the findings that contribute to the state of the art in teaching and learning research methods in education concerned with creating a research-based pedagogical culture is participation. Putting participation at the kernel of a research-based culture involves creating opportunities for active engagement and involvement from all stakeholders, including students, teachers, researchers, and education community members.

5.1.1. Student Participation

Student participation is crucial when we assume that learning is an integral part of the social practice (Lave and Wenger 1991) in which the class is involved. Therefore, student participation is translated into access to activities that encourage inquiry, reflection, and collaboration (Lewthwaite and Nind 2016). This can take the form of classroom discussions, group work, student-led research projects or any other kind of activity that allows students' agency to encourage their participation and engagement in situations and problems (Matos et al. 2023).

5.1.2. Teacher Participation as Researcher

Teachers are inherently participants in classroom activities. However, the form of contribution to creating a pedagogical culture based on research should value their involvement in research-based professional development opportunities with their peers (e.g., within the organizational structure of a concrete collaborative research studies framework) and involve engaging in dialogue with other teachers and researchers to share best practices and lessons learned (Wagner et al. 2019).

5.1.3. Educational Community Participation

Members of the local or national educational communities can be engaged in the research process through partnerships and collaborations that promote the co-creation of knowledge (Wagner et al. 2019). This may involve working with community-based organizations, parents, and other stakeholders to design and conduct research studies that address local issues and concerns.

5.2. Reification in a Research-Based Pedagogical Culture

Participation and reification constitute any practice (Wenger 1998). In the design and implementation of RME courses, it is required to consider as equally important the reified products of participation. In a pedagogical culture based on research, reification translates into tangible outcomes that result from the active engagement and involvement of participants in the research process.

5.2.1. Research Studies

Research studies are the most common reified product of participation in a pedagogical culture based on research. These studies can take various forms, including empirical studies focused on addressing educational problems or issues. This is the most commonly referred to form of tangible reification in RME courses. At stake are the epistemic, methodological and ontological specificities of the different scientific rationales in education, the ways of operationalizing educational research and even the ways of organizing and publishing the knowledge that is produced and understandable to the educational community, which, e.g., in Portuguese studies, vary from quantitative approaches assuming a descriptive and exploratory nature (Piedade and Pedro 2019), to qualitative approaches adopting narrative and poetic methodologies (Freitas et al. 2020). This is a reflection that, on an international scale, is limited by the boundaries of science itself, but with increasing epistemological, methodological and ontological breadth, and is therefore complex to understand and act upon.

5.2.2. Curriculum Materials as Artifacts

Participation by teachers and students in the research process can result in the development of new curriculum materials that are grounded in evidence-based practices (Saeed and Qunayeer 2021). These materials can include lesson plans, instructional strategies, and assessment tools, and are designed to improve student learning outcomes.

5.2.3. Professional Development Resources

The participation of teachers in ongoing professional development opportunities can result in the creation of new resources that support teacher growth and development (Fonseca and Segatto 2021). These resources can include workshops, training materials, and online courses that are based on the best practices and grounded in research.

5.2.4. Community Partnerships

Participation from community members in the research process can lead to the development of new partnerships and collaborations that support the co-creation of knowledge (Ivankova and Clark 2018). These partnerships can result in the development of new programs, initiatives, and policies that address local educational issues and concerns.

5.2.5. Dissemination Materials

Dissemination materials are products that are designed to communicate research findings to a wider audience. These can include research reports, academic articles, conference presentations, and other materials that are intended to share research findings and insights with other researchers, practitioners, and policymakers.

Perhaps the most relevant form of orientation towards the construction of a research-based pedagogical culture in RME courses refers to forms of participation in the social practice that takes place in seminars or classes. Participation in practices in which knowledge of a research method results in reified products (in fact, the domain of research practice) is an epistemological principle of learning research methods. The social structure of participating in research practice (that includes the diverse trajectories of students and teachers), together with the inherent power relations and the conditions of legitimacy, both define the possibilities of participation and, therefore, of learning.

Appendix A

Project ReMASE

Guidelines and protocol for focus group interviews

General objective: understanding professional practices and respective pedagogical and scientific characteristics of teachers responsible for teaching RME courses.

Invitation to the FG interview was sent in advance briefly explaining the orientation of the study and its objectives and explaining the orientation of the focus group and its objectives.

Introduction: introduction of participants by team members. Scenario: online interview via Zoom videoconferencing tool.

Context and transition: invitation of participants to share their pedagogical experiences in teaching research methodologies in education.

Permission in writing for the videorecording of the focus group interview was obtained at the time of scheduling it. Permission was orally confirmed at the beginning of the interview.

Key Discussion 1—prior methodological knowledge.

A. Pertinence and characteristics: Research methodologies in education make a substantial contribution to student training; should this contribution be more in the practical or theoretical domain? What is the relevance/what is most characteristic and distinctive about the course for student learning in your specific program?

B. Attitudes and representations: Do students come prepared from the master or doctoral program with the expected level of understanding/interpretation that is required?

C. Are faculty qualified to teach research methodologies? How are they trained?

Key discussion 2—pedagogical and scientific practice.

D. Work/teaching methods and activities: What organizational and pedagogical orientations, communication styles, technical devices, resources and activities can be identified in your practice? How do you approach research and research methodologies while teaching technical/operational skills?

E. Recommendations: What are the best pedagogical and scientific practices? What scientific processes can be adopted to promote hands-on/hands-on learning?

Key discussion 3—pedagogical and scientific culture.

F. Attitudes and representations: What is the relationship between research concepts (in their different dimensions) and the culture built between students and professors, namely through the RME course?

G. Recommendations: What pedagogical processes should be adopted to promote an environment of inquiry?

Key discussion 4—institutional environment.

H. Scientific management: How does the institution perceive research impact on the educational offer of RME courses?

I. Physical, material and human resources: How can higher education institutions ensure that the objectives of teaching quality research methods in education courses will be achieved?

Key discussion 5—being a teacher-researcher and student-researcher

J. Attitudes and representations: Is research a profession per se or is it an activity implied in a profession? Are students, future teachers, researchers in training?

K. Recommendations: What pedagogical and scientific processes can be adopted to engage students in research methodologies in education? What possibilities do you see for the future?

References

Ananth, Anisha, and Suriamurthee Maistry. 2020. Invoking interactive qualitative analysis as a methodology in statistic education research. *The Journal for Transdisciplinary Research in Southern Africa* 16: 1–12. [CrossRef]

Coronel Llamas, Jose M., and Ángel Boza. 2011. Teaching research methods for doctoral students in education: Learning to enquire in the university. *International Journal of Social Research Methodology* 14: 77–90. [CrossRef]

Eisenhart, Margaret. 1991. Conceptual frameworks for research circa 1991: Ideas from a cultural anthropologist. Paper presented at Thirteen Annual Meeting—Psychology of Mathematics Education, Blacksburg, VA, USA, October 16–19; Edited by Robert G. Underhill. Christiansburg: Christiansburg Printing Company, pp. 202–19.

Engbers, Trent A. 2016. Comparative research: An approach to teaching research methods in political science and public administration. *Teaching Public Administration* 34: 270–83. [CrossRef]

Fonseca, Elize Massard da, and Catarina Segatto. 2021. Teaching qualitative research methods in political science: Does one size fits all? *Journal of Political Science Education* 17: 493–501. [CrossRef]

Freitas, André, Fátima Pereira, and Paulo Nogueira. 2020. Reconceptualizing expressive arts education in Portugal through a biographical narrative approach. *Education Sciences* 10: 388. [CrossRef]

Gray, Claire, Rebecca Turner, Carole Sutton, Carolyn Petersen, Sebastian Stevens, Julie Swain, Bill Esmond, Cathy Schofield, and Demelza Thackeray. 2015. Research methods teaching in vocational environments: Developing critical engagement with knowledge? *Journal of Vocational Education and Training* 67: 274–93. [CrossRef]

Ivankova, Natalyia, and Vicki Plano Clark. 2018. Teaching mixed methods research: Using a socio-ecological framework as a pedagogical approach for addressing the complexity of the field. *International Journal of Social Research Methodology* 21: 409–24. [CrossRef]

Kucukaydin, Mensure Alkis, and Yasin Gokbulut. 2020. The impact of a research methods course on teacher candidates' epistemological beliefs. *Australian Journal of Teacher Education* 45: 18–33. [CrossRef]

Kukulska-Hulme, Agnes, Carina Bossu, Koula Charitonos, Tim Coughlan, Rebecca Ferguson, Elizabeth FitzGerald, Mark Gaved, Montse Guitert, Christothea Herodotou, Marcelo Maina, and et al. 2022. *Innovating Pedagogy 2022: Open University Innovation Report 10*. Milton Keynes: The Open University.

Lave, Jean, and Etienne Wenger. 1991. *Situated Learning: Legitimate Peripheral Participation*. Cambridge: Cambridge University Press.

Lewthwaite, Sarah, and Melanie Nind. 2016. Teaching Research Methods in the Social Sciences: Expert Perspectives on Pedagogy and Practice. *British Journal of Educational Studies* 64: 413–30. [CrossRef]

Lovekamp, William E., Shane D. Soboroff, and Michael D. Gillespie. 2017. Engaging students in survey research projects across research methods and statistics courses. *Teaching Sociology* 45: 65–72. [CrossRef]

Matos, João Filipe, João Piedade, André Freitas, Neuza Pedro, Nuno Dorotea, Ana Pedro, and Carla Galego. 2023. Teaching and Learning Research Methodologies in Education: A Systematic Literature Review. *Education Sciences* 13: 173. [CrossRef]

Motjolopane, Ignitia. 2021. Teaching Research Methodology: Student-centered Approach Computing Education Undergraduate Course. *Emerging Science Journal* 5: 34–43. [CrossRef]

Müller, Patrick A., Thomas Bäumer, Jan Silberer, and Stefan Zimmermann. 2020. Using research methods courses to teach students about sustainable development: A three-phase model for a transformative learning experience. *International Journal of Sustainability in Higher Education* 21: 427–39. [CrossRef]

Nind, Melanie, Michelle Holmes, Michela Insenga, Sarah Lewthwaite, and Cordelia Sutton. 2019. Student perspectives on learning research methods in the social sciences. *Teaching in Higher Education* 25: 797–811. [CrossRef]

Onwuegbuzie, Anthony J., Kathleen M. T. Collins, and Qun G. Jiao. 2009. Performance of cooperative learning groups in a postgraduate education research methodology course: The role of social interdependence. *Active Learning in Higher Education* 10: 265–77. [CrossRef]

Pedro, Ana, João Piedade, João Filipe Matos, and Neuza Pedro. 2019. Redesigning initial teacher's education practices with learning scenarios. *International Journal of Information and Learning Technology* 36: 266–83. [CrossRef]

Piedade, João, and Neuza Pedro. 2019. Análise da utilização das tecnologias digitais por diretores escolares e professores. *Revista Educação em Questão* 57: 1–30. [CrossRef]

Ross, Karen, and Meagan Call-Cummings. 2020. Reflections on failure: Teaching research methodology. *International Journal of Research & Method in Education* 43: 498–511.

Saeed, Murad Abdu, and Huda Suleiman Al Qunayeer. 2021. Can we engage postgraduates in active research methodology learning? Challenges, strategies and evaluation of learning. *International Journal of Research & Method in Education* 44: 3–19.

Talbott, Maria M., and Junghee Lee. 2020. Ambiguous terminology: A challenge in teaching social science research methods and statistics. *International Journal of Teaching and Learning in Higher Education* 32: 519–27.

Wagner, Claire, Barbara Kawulich, and Mark Garner. 2019. A mixed research synthesis of literature on teaching qualitative research methods. *SAGE Open* 9: 2158244019861488. [CrossRef]

Wenger, Etienne. 1998. *Communities of Practice: Learning, Meaning and Identity*. Cambridge: Cambridge University Press.

Article

Teaching Qualitative Research in Psychology: A Look at the Portuguese Reality

Ana Pereira Antunes [1,2,*] and Silvana Martins [3,4]

1 Department of Psychology, Faculty of Arts and Humanities, University of Madeira, Campus Universitário da Penteada, 9020-105 Funchal, Portugal

2 Research Centre on Child Studies, Institute of Education, University of Minho, Campus de Gualtar, 4710-057 Braga, Portugal

3 ProChild CoLab Against Poverty and Social Exclusion Association, Campus de Couros, Rua de Vila Flor, 4810-225 Guimaraes, Portugal; silvana.martins12@gmail.com

4 Health Sciences Research Unit: Nursing School of Coimbra, Avenida Bissaya Barreto, Polo C, 3046-851 Coimbra, Portugal

* Correspondence: aantunes@uma.pt

Abstract: Qualitative research has been increasingly used in the field of psychology. Consequently, concerns about the development of students' skills in qualitative research have arisen. The main goal of this paper is to characterize the current state of art of the qualitative research teaching in Portuguese bachelor's degrees in psychology. A documentary analysis was performed, and the data collection was conducted through an online search: first on the website of the General Directorate of Higher Education, and afterwards on the online sites of each of the Portuguese universities where the first cycle of psychology is taught. A content analysis was made by two coders and a discussion about categories was made until a consensus was reached. The data revealed the existence of 31 undergraduate courses in psychology at 31 Portuguese teaching institutions. There were 12 undergraduate courses at 12 public universities, and 19 undergraduate courses at 19 private universities. Despite the diversity in the study plans in the degree of psychology, most of them included qualitative research methodology teaching. However, the data analysis revealed different designations of the curricular units (CUs) related to qualitative research, as well as a different number of credits (European Credit Transfer and Accumulation System—ECTS). In addition, there were variations in the academic year in which the qualitative research CUs were taught and registered in their syllabi. This study indicates that undergraduate Portuguese psychology students generally have some training in qualitative research but the way it is carried out and the training contents are not uniform for all the existing degrees. It is important to reflect on the importance of qualitative research in psychology and further studies on qualitative methods teaching practices are still needed.

Keywords: qualitative research; teaching and learning; educational psychology; psychology training; psychology research; qualitative researchers; psychological qualitative studies; research qualitative skills; qualitative methods

1. Introduction

Qualitative research is a form of scientific research that is recognized as a fully fledged research domain (Denzin and Lincoln 2017). Nevertheless, qualitative research is currently facing a redefinition of its position in the production of science and its characterization. New challenges are being created, and new nomenclatures are emerging (e.g., qualitative research or qualitative inquiry) (Denzin and Lincoln 2017). Despite this, qualitative research continues to be seen from the perspective of studying the social environment in a naturalistic context, aiming to interpret and make the world visible, as well as to transform it (Denzin and Lincoln 2017). Nevertheless, due to the diversity of techniques that can be applied, the designation of qualitative research is still an umbrella expression that embraces

the multifariousness of methods and approaches that can be used within the qualitative research framework (Saldaña 2011).

In general, qualitative research methods can be characterized into three main types concerning the use of words, images, and observation, which can be used in a combined or isolated form (De Souza et al. 2018). There may be multiple data sources (e.g., interviews transcripts, fieldnotes, photographs, videos, Internet sites) (Saldaña 2011); for this reason, qualitative researchers can be seen as a bricoleur because they manage different materials that must be interpreted and given meaning (Denzin and Lincoln 2017).

Qualitative research can be used in a wide range of scientific areas, such as education, sociology, anthropology, and psychology (to mention but a few) (Saldaña 2011). However, in the field of psychology, quantitative methods have been the prevalent means of psychological scientific production (Povee and Roberts 2014; Roberts and Castell 2016; Roberts and Povee 2014; Rubin et al. 2018; Wiggins et al. 2015). Despite its secondary role, qualitative research in psychology has been carried out by some researchers, and questions about the way that qualitative research should be conducted in this scientific domain have emerged. Consequently, epistemological issues have been discussed. For instance, concerning epistemological topics, some authors defend the idea that psychology should adopt a "generic qualitative inquiry" to investigate "people's reports of their subjective opinions, attitudes, beliefs, or reflections on their experiences, of things in the outer world" (Percy et al. 2015, p. 78) because sometimes traditional approaches do not seem to be an appropriate way to support the research. The use of a generic frame for some psychological research is suggested by Percy et al. (2015), rather than the typical qualitative approaches that are well-described in the literature, such us phenomenology, case study, ethnography, narrative, and grounded theory (Creswell 2007).

In fact, qualitative studies have moved forward and, in recent years, psychology journals focusing on qualitative research have been established (Brinkmann 2017). An important factor in the use of qualitative research in psychology is the Publication Manual of the American Psychology Association (APA) (2020) and its specific sections on Reporting Standards for Qualitative Research and Reporting Standards for Mixed Research Methods. This manual and a previous work published by Levitt et al. (2017) are important milestones in the recognition of qualitative research in psychology and development of quality qualitative studies.

Due to the growing acceptance of qualitative research, Murray (2019) organized a Special Issue dedicated to its progress over the previous 40 years in European countries. The author emphasized the value of rethinking qualitative research, mainly its purposes and assumptions, and how it can contribute to equality and social justice, specifically the evident significance of the use of qualitative methods after the communist era for Czech and Slovak psychologists, who deemed qualitative research an opportunity to develop new and critical approaches (Masaryk et al. 2019). Kovács et al. (2019) conducted research in some Central–Eastern European countries (Hungary, Slovakia, Czech Republic, Poland, and Romania), analyzing articles published after those countries joined the European Union. They again highlighted the importance of political and social background in qualitative research and found a predominance of constructivist/interpretivist approaches, as well as mixed paradigms. Effectively, the authors suggested that maybe "the true nature of the qualitative approach is that it does not require a rigorously defined identity and formula or systematically structured frames" (Kovács et al. 2019, p. 369). In fact, Restivo and Apostolidis (2019) explained how important the expansion of mixed methodologies can be for qualitative research. They mentioned that qualitative research was underrepresented in France, despite its growing representation, over the last 20 years, mainly due to the use of mixed methodologies. Therefore, these authors considered triangulation and mixed research designs to be an asset to the development of qualitative research.

Looking at the Spanish case, Gemignani et al. (2019) evidenced the use of qualitative research to understand and change the social reality after a dictatorship. However, a predominance of quantitative studies was registered, despite the existence of a nuclei of

qualitative researchers. They argued that perhaps this small number could be explained by the competitive publication process and the perception that qualitative researchers are less appreciated. Again, mixed research was referred as a possibility for investigations and when dealing with the complexity of the studied phenomena. Gemignani et al. (2019) highlighted a sign of hope for qualitative research by referring to the National Agency for Quality Assessment and Accreditation of Spain (ANECA), who stated, in 2005, that the study plans for psychology should include qualitative and quantitative research methods so that students could develop skills in both areas. With that in mind, we can also note the situation in the United Kingdom (UK), where most of the study plans for psychology degrees incorporate qualitative methods at present (Riley et al. 2019). This is a result of a previous path and reflects the consolidation of qualitative research in psychology. In this country, it seems that the use of qualitative research in psychology has been recognized in a more structured way. For instance, in 2005, the Qualitative Methods in Psychology (QMiP) Section of the British Psychology Society (BPS) was created in a context in which several qualitative studies were taking place. However, qualitative research was associated with a minority status and achieving government-level quantitative research systems is still a challenge that needs to be addressed (Riley et al. 2019).

We can see that as more work is carried out using qualitative methods, and throughout the appropriation of qualitative research in psychology, discussions about the quality of qualitative researchers arose as well as discussions about qualitative research teaching. Although there are several manuals about qualitative research, there are still few investigations into teaching qualitative methods and the best evidence-based practices (Castell et al. 2022; Wagner et al. 2019).

In general, teaching qualitative research requires several changes to be made by teachers (Amado 2014), and the domain of psychology is not exempt from these (Gibson and Sullivan 2012). Thinking of qualitative research as an integral and required part of psychology professionals' training, as Howitt (2010) suggested, implies thinking about training opportunities and modalities. Thus, it is being demanded that qualitative research is taught to psychology students and implemented in the study plans, for instance, in the United States (US) (Rubin et al. 2018). In Europe, in the UK, teaching qualitative research seems to be more frequent, at least in clinical psychology training programs that registered some training in this methodology in 1992 (Harper 2012). It is worth mentioning that, in the UK, psychology training programs must include qualitative research methods according to the national bodies (Gibson and Sullivan 2018). Obviously, the implementation of qualitative research training practices is determined by the department researchers and their dominant practice, background, openness to qualitative research and willingness to truly invest in qualitative research teaching (Cox 2012; Gibson and Sullivan 2018).

Concerning psychology students' training, the European Federation of Psychologists Associations (EFPA), for those pursuing an academic education and professional training of psychologists' standards, offers a framework for the curriculum for EuroPsy certification (European Certificate in Psychology). As can be seen on their webpage, in the first phase of the EuroPsy certification curriculum, that is, the Bachelor's degree, students must have curricular units (CUs) that include qualitative research to promote the development of their methodological knowledge ("qualitative and quantitative methods") and methodological skills ("Data acquisition training, qualitative analysis") (EuroPsy 2022a). In the second phase of the EuroPsy certification curriculum, concerning master's degrees, students must have the opportunity to develop their qualitative methodology knowledge ("Qualitative research design, including advanced interviewing and use of questionnaire, qualitative data analysis") and skills, especially the "skills training in above mentioned methods and techniques" (EuroPsy 2022b). However, the EFPA guidelines are not mandatory and different universities across Europe can stipulate different study plans, including or not including qualitative research teaching.

Castell et al. (2022) presented a very interesting study where they summarize important points for psychology qualitative teachers to consider. Recognizing qualitative

research as a legitimate research approach, they defended the idea that qualitative topics such as epistemological approaches, methodologies, and analysis must not be taught at once. They also highlighted the importance of qualitative students embracing uncertainty. Several authors referred to epistemology and methodologies as the main topics in teaching qualitative research, which might enable students to develop the research skills required in qualitative research (Clarke and Braun 2013; Terkildsen and Petersen 2015). Experiential activities have long been recommended (Fontes and Piercy 2000) and practical demonstrations in the field of psychology have been presented (e.g., Danquah 2017; Soares et al. 2020), as well as suggestions for teachers (e.g., Forrester and Koutsopoulou 2008).

In Portugal, the country in which the present study is taking place, research on teaching qualitative investigation in psychology is scarce, although some work on pedagogical practices and the impact of classes on qualitative research methods has already been carried out (Antunes 2017a, 2017b; Antunes and Araújo 2021).

Thus, starting from the gap in qualitative research and qualitative research teaching in psychology in Portugal, we designed this study to better understand psychology students' training in this methodology. Therefore, the main goal of this paper is to characterize the current state of the art in qualitative research teaching in the Portuguese bachelor's degrees in psychology through the analysis of the official study plans. Therefore, four research questions were formulated: (1) Is qualitative research included in the students' training? (2) Is qualitative research recognized as a fully fledged research domain? (3) What are the main topics related to qualitative research in the syllabi? (4) What teaching methods are used?

2. Materials and Methods

2.1. Study Design

As the purpose of this study was to obtain a better understanding of the Portuguese reality, a documentary analysis was performed (Silva 2021). A documentary analysis is a suitable option because: (a) the collected documents may reveal data related to the topic; (b) the data may reveal questions and other situations that need to be considered in the research; (c) supplementary data may be provided by the collected documents and may make important contributions to the field; (d) the available documents may check changes and developments over time; and (e) documents may be analyzed to verify or corroborate findings (Bowen 2009). According to Morgan (2022), the "document analysis is a valuable research method that has been used for many years" (p. 64). When following this method, a range of documents (e.g., newspaper articles or institutional reports) can be analyzed using quantitative or qualitative methods (Morgan 2022).

2.2. Materials and Procedures

To collect the information, the categories were a priori defined and organized in a grid. Those categories were: name of the CU (it is important to identify the CU and note whether it is seen as a specific domain); academic year (it is important to know when students learn qualitative research); semester (it is meaningful to know when students are taught qualitative research); number of credits: European Credit Transfer and Accumulation System (ECTS) (it is important to know the credits associated to the CUs because they are related to the time students dedicate to the CU); program (it is important to understand the main themes being taught because of the variety of topics in qualitative research); teaching methodologies, including evaluation (it is significant to know the teaching and learning process as well as the evaluation process); and access link (it is important to credit the information source).

A documentary analysis was performed, and the data collection was conducted through an online search divided into two phases:

(a)   First, on the website of the General Directorate of Higher Education, Portuguese teaching institutions offering bachelor's degrees in psychology were found;

(b) Second, on the online sites of each of the Portuguese universities, where the first cycle of Psychology is taught, online documents (information at the webpages) about qualitative research methods were searched.

The online search was conducted separately by two researchers, filling in the grid, and following the described steps. One researcher conducted the online search in October 2022 and January 2023, and the other researcher conducted the online search in February 2023. After comparison and discussion, a last online search was conducted in April 2023 to check the information.

The collected data revealed the existence of 31 undergraduate courses in psychology at 31 Portuguese teaching institutions. Specifically, there were 12 undergraduate courses at 12 public universities (Table 1), and 19 undergraduate courses at 19 private universities (Table 2).

No approval from the Ethics Committee of the researcher's institution was needed to conduct this research because it did not involve human participants or health-related data collection. Despite that, data were processed according to the General Data Protection Regulation and were used strictly for research purposes.

Table 1. Public universities with a psychology degree.

n	Universities	Source [a]*
1	University Institute of Lisbon (ISCTE)	https://www.iscte-iul.pt/course/7/bachelor-bsc-in-psychology/studyplan
2	University of Beira Interior	https://www.ubi.pt/en/studyplan/45/1657/2022
3	University of Madeira	https://www.uma.pt/en/ensino/1o-ciclo/licenciatura-em-psicologia/
4	University of Aveiro	https://www.ua.pt/en/c/42/p
5	University of Coimbra	https://apps.uc.pt/courses/EN/programme/8861/2023-2024?id_branch=21001#branch-21001
6	University of Évora	https://www.uevora.pt/en/study/courses/bachelors-and-integrated-master-degrees?cod=9219&v=plano-estudos
7	University of Lisbon	https://www.psicologia.ulisboa.pt/ensino/cursos/licenciaturas/psicologia/#plano-estudos
8	University of Trás-os-Montes e Alto Douro	https://side.utad.pt/cursos/psicologia/disciplinas/paginas
9	University of Algarve	https://www.ualg.pt/en/curso/1452/plano
10	University of Minho	https://www.psi.uminho.pt/pt/ensino/1-ciclo/licenciatura/Paginas/Plano-de-Estudos.aspx
11	University of Porto	https://sigarra.up.pt/fpceup/pt/cur_geral.cur_planos_estudos_view?pv_plano_id=29724&pv_ano_lectivo=2022&pv_tipo_cur_sigla=&pv_origem=CUR
12	University of the Azores	https://fcsh.uac.pt/cursos/licenciatura-em-psicologia/

[a] Links for the webpages of the universities where a study plan of the respective psychology degree is available; * Accessed on 17 April 2023.

Table 2. Private universities with a psychology degree.

n	Universities	Source [a*]
1	Higher Institute of Intercultural and Transdisciplinary Studies of Almada	https://ipiaget.org/licenciaturas/psicologia/#1523959897308-29174b42-1aa7 [b,c]
2	Higher Institute of Intercultural and Transdisciplinary Studies of Viseu	https://ipiaget.org/licenciaturas/psicologia/#1523959897308-29174b42-1aa7 [b,c]
3	Manuel Teixeira Gomes Higher Institute	https://www.ismat.pt/ensino/licenciaturas/licenciatura-em-psicologia.html [c]
4	Miguel Torga Higher Institute	https://ismt.pt/pt/psicologia#study-plan [b,c]
5	University Institute of Health Sciences	https://www.cespu.pt/ensino/ensino-universitario/cursos-iucs/detalhes-do-programa-de-estudos/?course=IUCSP#program-study-plan [c]
6	Egas Moniz School of Health and Science	https://www.egasmoniz.com.pt/estudar/licenciaturas/psicologia [b]
7	University Institute of Psychological Sciences, Social Sciences and Life Sciences (ISPA)	https://www.ispa.pt/oferta-formativa/licenciatura-psicologia/ [d]
8	Luís de Camões Autonomous University of Lisbon	https://autonoma.pt/cursos/psicologia-2/ [b]
9	Catholic University—Faculty of Human Sciences	https://fch.lisboa.ucp.pt/licenciaturas/programas/licenciatura-em-psicologia/curriculum?change-language=1
10	Catholic University—Faculty of Education and Psychology	https://fep.porto.ucp.pt/pt-pt/licenciatura-em-psicologia/plano-de-estudos [e]
11	Catholic University—Faculty of Philosophy and Social Sciences	https://ffcs.braga.ucp.pt/en/undergraduate-courses/programs/degree-psychology/curricular-plan?change-language=1 [b]
12	University of Maia	https://www.umaia.pt/en/courses/bachelors-degree/psychology [b,c]
13	European University	https://www.europeia.pt/licenciatura-psicologia/ [b]
14	Fernando Pessoa University	https://ingresso.ufp.pt/en/psychology/#study-plan
15	Lusíada University—Lisbon	https://www.lis.ulusiada.pt/pt-pt/cursos/2022-2023/1%C2%BAciclo%E2%80%93licenciaturasemestradosintegrados/psicologia.aspx
16	Lusíada University—Porto	https://www.por.ulusiada.pt/cursos/1ciclo/1ciclo.php?cp=202
17	Lusófona University—Lisbon	https://www.ulusofona.pt/lisboa/licenciaturas/psicologia [b,c]
18	Lusófona University—Porto	https://www.ulusofona.pt/porto/licenciaturas/psicologia
19	Portucalense University	https://www.upt.pt/inicio/departamentos/departamento-de-psicologia-e-educacao/cursos-dpe/licenciatura-em-psicologia/

[a] Links of the webpages of universities where a study plan for the respective psychology degree is available; * Accessed on 17 April 2023; [b] detailed information about the syllabus of the CU related to research methods that were not available online; [c] detailed information about the syllabus of the CU of qualitative research that was not available online; [d] no CU related to qualitative research was found; [e] only the objectives of the CU were available online and it was possible to see that they were related to qualitative research.

2.3. Data Analysis

As mentioned before, the collected information was organized in the grid, so a comparison could be made between data and a respective analysis could be carried out. A comparison and discussion of the collected data was made by two coders until consensus was reached. To analyze the content of the documents, the contributions of Bardin (2008) were followed, namely, the preparation of the material, and the questioning and interpretation of data. Specifically, the main steps of analysis were:

(a) First, the qualitative research curricular units (CUs) or CUs related to qualitative research in the study plans were identified;

(b) Second, the syllabus of the selected CUs was analyzed, considering the a priori defined categories: name of the CU; academic year; semester; number of ECTS; program; and teaching methodologies, including evaluation.

After checking the study plan of each university, the contents of the CUs related to research methods (mentioning qualitative research or a general designation) were analyzed. All public universities had online information about their CUs related to qualitative research (Table 1). Four psychology degrees at private universities only had general designations for the CUs and did not have available online information about them, so they were not included in that specific analysis (Table 2). In one psychology degree at one private university, CUs related to qualitative research, were not found. Thus, for the purpose of this study, CU data from 12 psychology courses at public universities and 14 psychology courses at private universities were considered. In these 26 psychology undergraduate courses, 31 CUs related to qualitative research were found, with 16 CUs at public universities and 15 CUs at private universities, but only seven of the latter had programs that were available online, so the others could not be included in the program analysis (Tables 3 and 4). The information (document) collected about each CU was coded with the letter F and an alphanumeric number.

Table 3. CUs related to qualitative research in psychology degrees at public universities.

n	CU	Program Available Online	CU Topics	Source [a*]	Code
1	Methods and application areas of psychology	Yes	QQ	https://fenix.iscte-iul.pt/ disciplinas/L5001/2023-2024/1- semestre/fuc?locale=pt	F1
2	Qualitative research methods	Yes	Quali	https://fenix.iscte-iul.pt/ disciplinas/L5207/2023-2024/2- semestre/fuc?locale=pt	F2
3	Academic competencies II	Yes	QQ	https://fenix.iscte-iul.pt/ disciplinas/L5245/2023-2024/2- semestre/fuc?locale=pt	F3
4	Research methods in psychology	Yes	QQ	https://www.ubi.pt/en/ discipline/14874	F4
5	Research methods in psychology I	Yes	QQ	https: //www.uma.pt/en/ensino/1o- ciclo/licenciatura-em-psicologia/ 25898/?contentid=25898	F5
6	Research practice I	Yes	QQ	https://www.ua.pt/pt/uc/12999	F6
7	Research methodology in psychology II	Yes	QQ	https: //apps.uc.pt/courses/EN/unit/ 22190/21002/2023-2024?common_ core=true&type=ram&id=8861	F7

Table 3. *Cont.*

n	CU	Program Available Online	CU Topics	Source [a*]	Code
8	Introduction to research methods in psychology	Yes	QQ	https://www.uevora.pt/en/study/courses/bachelors-and-integrated-master-degrees?cod=9219&v=plano-estudos&uc=PSI11091L	F8
9	Research methods in psychology: advanced topics	Yes	QQ	https://www.psicologia.ulisboa.pt/wp-content/uploads/2022/06/FUC-2223-3ano-2sem-MIPTA-PT.pdf	F9
10	Research methodology in psychology	Yes	QQ	https://side.utad.pt/cursos/psicologia/disciplinas/2417/descricao/fichacurriculareng	F10
11	Qualitative methods in psychology	Yes	Quali	https://side.utad.pt/cursos/psicologia/disciplinas/2215/descricao/fichacurriculareng	F11
12	Research methods and techniques II	Yes	Quali	https://academico.ualg.pt/netpa/doc?codeDiscip=14521009&anoLectivo=202223&codInstituic=8&stage=FichaUnidadeCurricular&_event=publicacaoFUC&docIsAttachment=false	F12
13	Qualitative research methods in psychology	Yes	Quali	https://www.psi.uminho.pt/en/education/1-ciclo/licenciatura/Pages/Study%20Plan.aspx	F13
14	Workshop on qualitative and quantitative psychology research	Yes	QQ	https://sigarra.up.pt/fpceup/en/UCURR_GERAL.FICHA_UC_VIEW?pv_ocorrencia_id=498237	F14
15	Research methods in psychology	yes	QQ	https://sigarra.up.pt/fpceup/en/UCURR_GERAL.FICHA_UC_VIEW?pv_ocorrencia_id=498209	F15
16	Research in psychology II	Yes	Quali	https://uac.pt/ensino/disciplina.php?id=81309&l=EN&a=2022/2023&f=FCSH&curId=4322	F16

[a] Links to the webpages of the universities where the CU programs were available; * Accessed on 17 April 2023; QQ = quantitative and qualitative methods; Quali = qualitative methods.

Table 4. CUs related to qualitative research in psychology degrees at private universities.

n	CU	Program Available Online	CU Topics	Source [a*]	Code
1	Qualitative data analysis	No	-	https://ipiaget.org/en/licenciatura-de-psicologia-2/	-
2	Qualitative data analysis	No	-	https://ipiaget.org/en/licenciatura-de-psicologia-2/	-
3	Qualitative models in psychology (optional)	No	-	https://www.ismat.pt/ensino/licenciaturas/licenciatura-em-psicologia.html	-
4	Qualitative research methods	No	-	https://ismt.pt/en/psicologia	-

Table 4. *Cont.*

n	CU	Program Available Online	CU Topics	Source [a]*	Code
5	Qualitative methodologies	No	-	https://www.cespu.pt/ensino/ensino-universitario/cursos-iucs/detalhes-do-programa-de-estudos/?course=IUCSP#program-study-plan	-
6	Qualitative methods	Yes	Quali	https://fch.lisboa.ucp.pt/course/qualitative-methods-191	F17
7	Research methodology in psychology I	No [b]	Quali	https://fep.porto.ucp.pt/pt-pt/unidade-curricular/metodologia-de-investigacao-em-psicologia-ii-11111	-
8	Qualitative methods	No	-	https://www.umaia.pt/en/courses/bachelors-degree/psychology	-
9	Research methods in psychology	Yes	QQ	https://www.ufp.pt/inicio/estudar-e-investigar/licenciaturas/psicologia/#plano	F18
10	Qualitative methods	Yes	Quali	http://sv.lis.ulusiada.pt/DocsPDF/p_20315_2022.pdf	F19
11	Qualitative methods	Yes	Quali	https://www.por.ulusiada.pt/cursos/1ciclo/programa.php?v=pt&cp=202&uc=20223&pId=5819	F20
12	Qualitative research methodology	No	-	https://www.ulusofona.pt/en/lisboa/undergraduate/psychology/ULHT35-13887	-
13	Research methods in psychology	Yes	QQ	https://www.ulusofona.pt/porto/licenciaturas/psicologia/ULP608-9398	F21
14	Qualitative research methodology	Yes	Quali	https://www.ulusofona.pt/en/porto/undergraduate/psychology/ULP608-13887	F22
15	Research methodology 2	Yes	QQ	https://siupt.upt.pt/aulas/ficha_uc_impressao.php?df_id=6234	F23

[a] Links to the webpages of the universities where the CU programs were available; [b] only objectives of the CU were available online; * Accessed on 17 April 2023; Quali = qualitative methods; QQ = quantitative and qualitative methods.

3. Results

At present, psychology undergraduate courses exist at 31 Portuguese teaching institutions: 12 of them are public and 19 are private. Thus, from the available data, in 26 psychology undergraduate courses, 31 CUs related to qualitative research were found. The collected data showed diversity in the general study plans of the universities and concerning the presence of qualitative research/methodologies. Most of the undergraduate study plans that were analyzed included the teaching of qualitative research methodologies. However, differences in the designation of the research methods regarding the curricular units (CUs), taught academic year, and number of their European Credit Transfer and Accumulation System (ECTS), as well as in the formulated syllabus, were registered. These concrete results are shown in the following.

3.1. Designations of the CUs Related to Qualitative Research

We registered 21 different CU designations for the 31 CUs related to qualitative research (Figure 1). From those 21 CU designations, the most frequent were qualitative methods (n = 4) and research methods in psychology (n = 4), followed by research method-

ology in psychology I (n = 2), qualitative research methodology (n = 2), qualitative research methods (n = 2) and qualitative data analysis (n = 2), while the other 15 appeared just once.
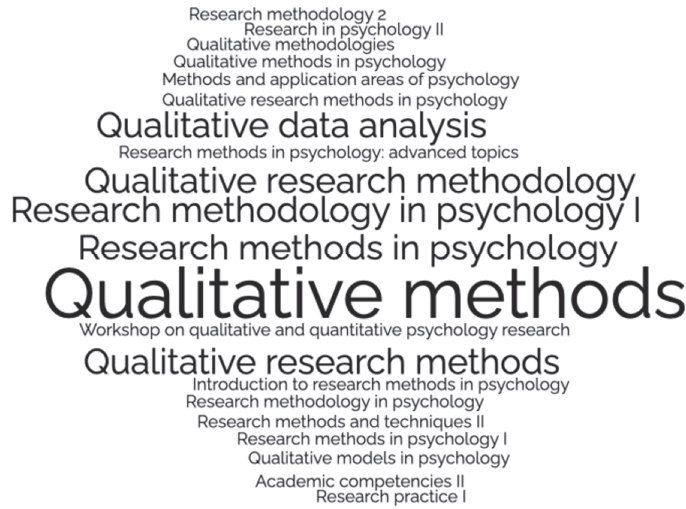
Figure 1. Designations of the CUs.

Of all the 21 CU designations, only 9 included the specific word "qualitative": workshop on qualitative and quantitative psychology research, qualitative research methods in psychology, qualitative research methods, qualitative research methodology, qualitative models in psychology, qualitative methods in psychology, qualitative methods, Qualitative methodologies, and qualitative data analysis.

The other CUs were designated by generic names (research practice I, research methods in psychology: advanced topics, research methods in psychology I, research methods in psychology, research methods and techniques II, research methodology in psychology I, research methodology in psychology, research methodology 2, research in psychology II, methods and application areas of psychology, introduction to research methods in psychology, and academic competencies II), except the workshop on qualitative and quantitative psychology research, which included both methods explicitly.

3.2. Frequency of CUs Related to Qualitative Research

The 31 CUs related to qualitative research from 26 psychology undergraduate courses were distributed in the study plans along the three academic years of the degree (Table 5). However, they were more frequent in the second year (n = 13), followed by the first year (n = 12), and much less frequent in the third year (n = 5).

Table 5. Frequency of CUs related to qualitative research at public and private universities.

Academic Year	Public Universities [a]		Total	Private Universities [b]		Total
	1st Semester	2nd Semester		1st Semester	2nd Semester	
1st	5	3	8	2	2	4
2nd	3	1	4	3	6 [d]	9
3rd	2	2	4	1 [d]	-	1
Total	10	6	16 [c]	6	8	15 [e]

[a] n = 12; [b] n = 14; [c] There are two psychology undergraduate courses with two CUs and another with three CUs; [d] in one psychology undergraduate course, the CU is an option in the second or in the third academic year, so it is only included as one CU at the final count (Total = 15). Students may take it or not. It is not included in this counting; [e] There is one psychology undergraduate course with two CUs.

3.3. Number of ECTS of the CUs Related to Qualitative Research

The data analysis revealed that, in addition to these differences, the CUs related to qualitative research were also dissimilar concerning the respective number of ECTS (Table 6). Nevertheless, most of them had six ECTS, mainly from psychology courses at public universities.

Table 6. Frequency of the CUs related to qualitative research concerning their ECTS at public and private universities.

ECTS	Public Universities	Private Universities	Total
5	1	9	10
6	15	6	21

3.4. Programs of the CUs Related to Qualitative Research

The content analysis of the programs of the UCs related to qualitative research revealed two main categories:

(a)   CUs with topics on both quantitative and qualitative methods (n = 14);
(b)   CUs with topics exclusively about qualitative methods (n = 9).

The subcategories of these categories are shown in Tables 7 and 8.

Table 7. Subcategories of CUs with topics on both quantitative and qualitative methods.

Subcategories	Specific Contents	Source	Extracts from the UCs Programs [a]
Only one point of the CU program regarding qualitative research	The differences between qualitative and quantitative methods	F1 and F6	"Recognize and demonstrate the different research methods employed in the discipline and its main goals"—F1
	The qualitative approaches	F5	"Qualitative research plans (e.g., case-study, grounded theory, phenomenology, ethnography"
	The data collection	F18	Interview
	The data analysis	F2 and F7	"Analyses of quantitative and/or qualitative data"—F2
	The framework and data collection and analysis	F9 and F10	"Interview methods (…) Brief approach to qualitative, quantitative and mixed analysis in psychology"—F10
	The researcher and data collection	F15	"Introduction to qualitative methodologies: The role of the researcher; Qualitative data collection: Interviews; focus groups; Observation; Qualitative Surveys; Printed/digital/documented materials; Videos/documentaries"
More points of the CU program regarding qualitative research	Introduction to qualitative research	F4, F8, F21, and F23	"Quantitative vs. qualitative research in psychology: convergences and divergences" —F8
	Phases of qualitative research	F8, and F21	The process of scientific research/Planning and conducting a research (comparison between quantitative and qualitative methodologies—F21
	Data collection	F4, F14, F21 and F23	"the main qualitative research methods: observation, interviews, discourse analysis, focus groups, content analysis, logbooks, ethnography, historical analysis;"—F4

Table 7. *Cont.*

Subcategories	Specific Contents	Source	Extracts from the UCs Programs [a]
	Data analysis	F4, F8, and F14	"Data coding, insertion, processing, and analysis, applying inductive and deductive content analysis procedures (…)—F14
	Data analysis software	F4	"(…) introduction to research by computer"
	Qualitative approaches	F8, and F21	Case studies and ethnographic studies—F8; or "Phenomenology, Ethnography, Grounded Theory, Case study"—F21
	Writing and report	F14, and F23	Data presentation in qualitative research—F23
	Mixed research	F14, and F23	Mixed methods in Psychology—F23

[a] Extracts from the CU programs that were translated or transcribed according to the language in the analyzed document.

Table 8. Subcategories of CUs with topics exclusively focused on qualitative methods.

Subcategories	Source	Extracts from the UCs Programs [a]
Introduction to qualitative research	F2, F11, F12, F13, F16 F17, F19, and F20	"The debate between qualitative and quantitative methods in the development of scientific knowledge. The specificity and utility of qualitative methods"—F2
Qualitative approaches	F11, F12, F13, F19, and F20	"Theoretical positions in qualitative research: A Grounded theory. The phenomenological interpretative approach. The discourse analysis approach"—F11
Phases of qualitative research	F11, F13, F16, and F9	"Phases of the research process: from the problem to the results"—F13
Data collection	F2, F11, F12, F13, F16, F17, and F19	"Data production techniques (interview, direct observation, etc.) and regulatory strategies used by descriptive-interpretative research"—F16
Data analysis	F2, F11, F12, F13, and F17	"Methods for analysing qualitative data. Content analysis. Grounded theory analysis"—F2
Data analysis software	F11, F17, and F22	"The NVivo 10 software as a resource for qualitative data analysis"—F22
Writing and report	F2, F11, F13, F16, F19, and F22	"The writing of scientific articles with qualitative methodologies"—F11
Quality of the qualitative research	F2, F11, F13, F16, F17, F20 and F22	"Quality assessment and QR writing: Quality criteria. Structure and features of a qualitative research work"—F22
Ethical issues	F13, F16, and F19	Ethics in the qualitative approach—F19
Mixed research	F13, and F19	Mixed Methodological Research Approaches—F19

[a] Extracts from the CU programs that were translated or transcribed according to the language in the analyzed document.

3.5. Teaching Methodologies (Including Evaluation)

The content analysis of the teaching methodologies (including evaluation) of the UCs related to qualitative research revealed that these are generally organized in theoretical and

practical classes (sometimes laboratorial practices also exist). The teaching and learning process is developed through three methods:

(a) Expositive, mainly theoretical classes, where teachers explain the qualitative research contents (e.g., "The expositive techniques used in the theoretical classes are fundamental to clarify the concepts associated to the curricular unit."—F11);

(b) Interrogative, sometimes used in conjunction with the expositive method, where teachers ask students and determine their understanding of the subject ("...specific aspects are presented and discussed with the students..."—F2);

(c) Active, mainly practical classes, which demands students' interaction, application of knowledge and active development of qualitative research skills (e.g., "There will feature examples of previous research to illustrate methods and techniques. Supporting materials will be available in the form of manuals or obtained through students' own research. Practical exercises will be conducted in class, such as construction of instruments for the collection of qualitative data, simulation of interviews and focus groups, as well as data analysis using the software MAXQDA.—F17).

Regarding the evaluation process, qualitative research teachers generally evaluate the competences developed by the students during the semester through:

(a) Written exams, asking students to answer questions individually (one or two exams);

(b) Research works, requiring students to develop qualitative research skills (group work and sometimes individual work).

4. Discussion and Conclusions

The analyzed data made it possible to achieve the objective of the study, that is, to provide an overview of the qualitative research methods being taught in Portuguese bachelor's degrees in psychology. In fact, most of the undergraduate Portuguese psychology courses contain some training in qualitative research methods. However, differences could be found in CUs related to qualitative research. Since there is no description of the current situation of psychology qualitative research teaching in Portugal as there is for other European countries (Gemignani et al. 2019; Kovács et al. 2019; Masaryk et al. 2019; Restivo and Apostolidis 2019; Riley et al. 2019), this work makes a contribution to that issue.

According to data collection, in the Portuguese psychology students' training there is, generally, an opportunity to learn qualitative research. Undergraduate Portuguese psychology degrees seem to be in line with the standards of EuroPsy (2022a) for a bachelor's degree. So, if students from that psychology course want to ask for the European Certificate in psychology, they meet the conditions regarding the training methodology, knowledge ("qualitative and quantitative methods") and methodological skills ("Data acquisition training, qualitative analysis") (EuroPsy 2022a). Hence, it would be expected that qualitative research methods are contained in the study plans in European psychology universities. Thus, it would be also expected that the Portuguese universities might consider the aforementioned guidelines in their study plans, despite their not being mandatory, so future psychologists can obtain EuroPsy certification. However, not all countries contain qualitative research teaching in their study plans (Castell et al. 2022), and neither do all Portuguese psychology courses have it (e.g., we found one psychology course degree without qualitative training).

Following a closer look at the undergraduate courses and the CUs related to qualitative research, diversity in the syllabi was found. Very different syllabi were registered, which might be due to the autonomy that Portuguese universities possess to organize their academic plans if they are approved by the National Agency of Assessment and Accreditation of Higher Education *(Agência de Avaliação e Acreditação do Ensino Superior (A3ES))*. This heterogeneity may also correspond to the heterogeneity of teaching objectives or reflect the incipient stage of qualitative research teaching in our country and universities, and teachers are still mainly embedded in quantitative research (Cox 2012; Gibson and Sullivan 2018). This Portuguese Agency has not clearly assumed qualitative research to be an asset in psychology students' training, as opposed to Spain, the neighboring country

of Portugal (Gemignani et al. 2019), and UK (Gibson and Sullivan 2018), where national boards have determined this.

The data seem to reveal the supremacy of quantitative methods, especially CUs that teach quantitative and qualitative methods. In all the study plans, students have more training in quantitative research, similarly to what has been found in other countries (Povee and Roberts 2014; Roberts and Castell 2016; Roberts and Povee 2014; Rubin et al. 2018; Wiggins et al. 2015) and testified by Portuguese students (Antunes 2017a; Antunes and Araújo 2021).

In fact, some CUs contain qualitative research, but its inclusion is only introductory and generic. However, in other cases, the syllabus includes a wider range of contents in a manner similar to syllabi containing CUs exclusively related to qualitative research. Therefore, it is important to note what Castell et al. (2022) said about not teaching all topics at the same time, and consider that this is the students' first introduction to qualitative research. If teachers assume that qualitative research is a valid and scientific perspective (Castell et al. 2022), the undifferentiated designations of the CUs and respective programs must be considered. We think that the lack of specificity might be related to teachers assuming they are qualitative researchers and adopting a mixed position, teaching both qualitative and quantitative methods. In fact, the difficulties faced by qualitative researchers to be recognized and qualitative projects should also be sponsored in other countries, as documented in the literature (e.g., Gemignani et al. 2019; Riley et al. 2019).

It is true that the diversity and ambiguity of qualitative research might lead to the miscellaneous syllabi we found, and this might also reflect the different authors' perspectives (Castell et al. 2022). Nevertheless, the categories and subcategories found in the curricular program analysis (reflecting epistemological and methodological topics) seem to reveal teachers' concerns regarding students' learning of qualitative research and consequent development of research skills, albeit at an initial level (Clarke and Braun 2013; Terkildsen and Petersen 2015). The teaching methods and students' evaluation demonstrate that teachers want to explain epistemological positions and train students in the development of qualitative skills through experiential activities such as practical exercises or teamwork (Clarke and Braun 2013; Fontes and Piercy 2000; Terkildsen and Petersen 2015).

The uncertainty that Castell et al. (2022) recommended that students embrace must be adopted by teachers as well. The picture we drew about qualitative research showed the challenging task that qualitative research teachers face when teaching, as already mentioned in the literature (Amado 2014; Gibson and Sullivan 2012). No guidelines are available in the field in Portugal and teachers can learn from the experience of the few existing works by foreign authors (e.g., Danquah 2017; Forrester and Koutsopoulou 2008; Soares et al. 2020). Although qualitative research is not mandatory in Portuguese undergraduate psychology courses, a growing interest in those research methods has been registered and, as in other countries, we think that Portuguese psychology courses are growing able to accommodate this research perspective (Roberts and Castell 2016; Rubin et al. 2018).

The results corroborate the need to study teaching practices focusing on qualitative methods (also in Portugal) because there is limited research available in the field about teaching qualitative methods and the best evidence-based practices (e.g., Antunes 2017a, 2017b; Antunes and Araújo 2021; Castell et al. 2022; Danquah 2017; Wagner et al. 2019).

Despite the contributions of this study, some limitations should be addressed. Firstly, some private universities did not have information about their study plans available online, so it was not possible to analyze their data and, consequently, we did not obtain "the whole picture" about the Portuguese psychology courses. Secondly, some of the available information was too generic; knowing the specific contents would help to deepen the knowledge and understanding of the syllabi. Therefore, information collected directly from teachers (through interview or survey) would be an asset. Lastly, there was limited transferability of these findings to other courses or fields due to the nature of the study.

In sum, future studies could be conducted focusing on bachelor's degrees as well as in master's degrees to better know and understand the state of qualitative research teaching

to future Portuguese psychologists. The present paper has revealed part of the current situation in the psychology field.

Author Contributions: Conceptualization, A.P.A.; methodology, A.P.A. and S.M.; formal analysis, A.P.A. and S.M.; investigation, A.P.A. and S.M.; data curation, A.P.A. and S.M.; writing—original draft preparation, A.P.A. and S.M.; writing—review and editing, A.P.A. and S.M.; visualization, A.P.A. and S.M.; supervision, A.P.A.; project administration, A.P.A.; funding acquisition, A.P.A. All authors have read and agreed to the published version of the manuscript.

Funding: This research was financially supported by Portuguese national funds through the FCT (Foun-dation for Science and Technology) within the framework of the CIEC (Research Center for Child Studies of the University of Minho) projects under the references UIDB/00317/2020 and UIDP/00317/2020.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data analyzed and presented in this study are referenced in the published article.

Conflicts of Interest: The authors declare no conflict of interest.

References

Amado, João. 2014. A Formação Em Investigação Qualitativa: Notas Para a Construção de Um Programa. In *Investigação Qualitativa: Inovação, Dilemas e Desafios*. Edited by António Pedro Costa, Francislê Neri Souza and Dayse Neri Souza. Oliveira de Azeméis: Ludomédia, vol. 1, pp. 39–67.

American Psychology Association (APA). 2020. *Publication Manual of the American Psychological Association*, 7th ed. Washington, DC: American Psychology Association.

Antunes, Ana Pereira. 2017a. Ensinar Investigação Qualitativa: Experiência de Unidade Curricular Num Curso de Mestrado Em Psicologia Da Educação [Teaching Qualitative Research: Experience of a Curricular Unit in a Masters Course in Educational Psychology]. Paper presented at CNaPPES 2016: Congresso Nacional de Práticas Pedagógicas No Ensino Superior, Lisbon, Portugal, July 14–15; Edited by Patrícia Rosado Pinto. pp. 219–25. Available online: https://cnappes.org/cnappes-2016/files/2014/03/Livro-de-Atas-do-CNaPPES-2016-3.pdf (accessed on 7 October 2022).

Antunes, Ana Pereira. 2017b. Formação Académica Em Metodologia Qualitativa: Prática Pedagógica Em Psicologia Da Educação. *Revista Lusofona de Educacao* 36: 147–61. [CrossRef]

Antunes, Ana Pereira, and Sara Barros Araújo. 2021. Qualitative Research Teaching in (Educational) Psychology: Perceived Impact on Master's Degree Students. *Revista Lusofona de Educacao* 51: 153–69. [CrossRef]

Bardin, Laurence. 2008. *Análise de Conteúdo*, 4th ed. Lisboa: Edições 70.

Bowen, Glenn A. 2009. Document Analysis as a Qualitative Research Method. *Qualitative Research Journal* 9: 27–40. [CrossRef]

Brinkmann, Svend. 2017. Humanism after Posthumanism: Or Qualitative Psychology after the 'Posts'. *Qualitative Research in Psychology* 14: 109–30. [CrossRef]

Castell, Emily, Shannon Muir, Lynne D. Roberts, Peter Allen, Mortaza Rezae, and Aneesh Krishna. 2022. Experienced Qualitative Researchers' Views on Teaching Students Qualitative Research Design. *Qualitative Research in Psychology* 19: 978–1003. [CrossRef]

Clarke, Victoria, and Virginia Braun. 2013. Teaching Thematic Analysis: Overcoming Challenges and Developing Strategies for Effective Learning. *The Psychologist* 26: 120–23.

Cox, Rebecca D. 2012. Teaching Qualitative Research to Practitioner-Researchers. *Theory into Practice* 51: 129–36. [CrossRef]

Creswell, John W. 2007. *Qualitative Inquiry and Research Design: Choosing among Five Approaches*, 2nd ed. London: Sage Publications.

Danquah, Adam N. 2017. Teaching Qualitative Research: A Successful Pilot of an Innovative Approach. *Psychology Teaching Review* 23: 69–79. [CrossRef]

De Souza, Maria Cecília, Minayo António, Pedro Costa, and Revista Lusófona De Educação. 2018. Fundamentos Teóricos Das Técnicas de Investigação Qualitativa. *Revista Lusófona de Educação* 40: 139–53. Available online: https://revistas.ulusofona.pt/index.php/rleducacao/article/view/6439 (accessed on 8 April 2023).

Denzin, Norman K., and Yvonna S. Lincoln. 2017. Introduction: The Discipline and Practice of Qualitative Research. In *The SAGE Handbook of Qualitative Research*, 5th ed. Edited by Norman K. Denzin and Yvonna S. Lincoln. London: Sage, pp. 1–26.

EuroPsy. 2022a. Curriculum Content of the First Phase Bachelors. Available online: https://europsy-bg.com/en/bachelors-degree/ (accessed on 7 October 2022).

EuroPsy. 2022b. Curriculum Content of the Second Phase Masters. Available online: https://europsy-bg.com/en/masters-degree/ (accessed on 7 October 2022).

Fontes, Lisa Aronson, and Fred P. Piercy. 2000. Engaging Students in Qualitative Research through Experiential Class Activities. *Teaching of Psychology* 27: 174–79. [CrossRef]

Forrester, Michael A., and Gina Z. Koutsopoulou. 2008. Providing Resources for Enhancing the Teaching of Qualitative Methods at the Undergraduate Level: Current Practices and the Work of the HEA Psychology Network Group. *Qualitative Research in Psychology* 5: 173–78. [CrossRef]

Gemignani, Marco, Sara Ferrari, and Isabel Benítez. 2019. Rediscovering the roots and wonder of qualitative psychology in Spain: A cartographic exercise. *Qualitative Research in Psychology* 16: 417–40. [CrossRef]

Gibson, Stephen, and Cath Sullivan. 2012. Teaching Qualitative Research Methods in Psychology: An Introduction to the Special Issue. *Psychology Learning & Teaching* 11: 1–5. [CrossRef]

Gibson, Stephen, and Cath Sullivan. 2018. A Changing Culture? Qualitative Methods Teaching in U.K. Psychology. *Qualitative Psychology* 5: 197–206. [CrossRef]

Harper, David J. 2012. Surveying Qualitative Research Teaching on British Clinical Psychology Training Programmes 1992–2006: A Changing Relationship? *Qualitative Research in Psychology* 9: 5–12. [CrossRef]

Howitt, Dennis. 2010. *Introduction to Qualitative Methods in Psychology*. London: Pearson Education Limited.

Kovács, Asztrik, Dániel Kiss, Szilvia Kassai, Eszter Pados, Zsuzsa Kaló, and József Rácz. 2019. Mapping qualitative research in psychology across five Central-Eastern European countries: Contemporary trends: A paradigm analysis. *Qualitative Research in Psychology* 16: 354–74. [CrossRef]

Levitt, Heidi, Sue Motulsky, Fredrick Wertz, Susan Morrow, and Joseph G. Peterotto. 2017. Recommendations for Designing and Reviewing Qualitative Research in Psychology: Promoting Methodological Integrity. *Qualitative Psychology* 4: 2–22. [CrossRef]

Masaryk, Radomír, Magda Petrjánošová, Barbara Lášticová, Nikoleta Kuglerová, and Wendy Stainton Rogers. 2019. A story of great expectations. Qualitative research in psychology in the Czech and Slovak Republics. *Qualitative Research in Psychology* 16: 336–53. [CrossRef]

Morgan, Hani. 2022. Conducting a Qualitative Document Analysis. *Qualitative Report* 27: 64–77. [CrossRef]

Murray, Michael. 2019. Some thoughts on qualitative research in psychology in Europe. *Qualitative Research in Psychology* 16: 508–12. [CrossRef]

Percy, William H., Kim Kostere, and Sandra Kostere. 2015. Generic Qualitative Research in Psychology. *Qualitative Report* 20: 76–85. [CrossRef]

Povee, Kate, and Lynne D. Roberts. 2014. Qualitative Research in Psychology: Attitudes of Psychology Students and Academic Staff. *Australian Journal of Psychology* 66: 28–37. [CrossRef]

Restivo, Léa, and Thémis Apostolidis. 2019. Triangulating Qualitative Approaches within Mixed Methods Designs: A Theory-Driven Proposal Based on a French Research in Social Health Psychology. *Qualitative Research in Psychology* 16: 392–416. [CrossRef]

Riley, Sarah, Joanna Brooks, Simon Goodman, Sharon Cahill, Peter Branney, Gareth J. Treharne, and Cath Sullivan. 2019. Celebrations amongst challenges: Considering the past, present and future of the qualitative methods in psychology section of the British Psychology Society. *Qualitative Research in Psychology* 16: 464–82. [CrossRef]

Roberts, Lynne D., and Emily Castell. 2016. 'Having to Shift Everything We've Learned to the Side': Expanding Research Methods Taught in Psychology to Incorporate Qualitative Methods. *Frontiers in Psychology* 7: 688. [CrossRef]

Roberts, Lynne D., and Kate Povee. 2014. A Brief Measure of Attitudes towards Qualitative Research in Psychology. *Australian Journal of Psychology* 66: 249–56. [CrossRef]

Rubin, Jennifer D., Sarah Bell, and Sara I. McClelland. 2018. Graduate Education in Qualitative Methods in U.S. Psychology: Current Trends and Recommendations for the Future. *Qualitative Research in Psychology* 15: 29–50. [CrossRef]

Saldaña, Jonny. 2011. *Fundamentals of Qualitative Research*. New York: Oxford University Press.

Silva, Carlos Guardado. 2021. Investigação Documental [Documentary Research]. In *Manual de Investigação Qualitativa: Conceção, Análise e Aplicações*. Edited by Sónia P. Gonçalves, Joaquim P. Gonçalves and Célio Gonçalo Marques. Lisboa: PACTOR, pp. 103–23.

Soares, Laura Cristina Eiras Coelho, Ariane Agnes Corradi, and Déborah David Pereira. 2020. O Ensino de Métodos Qualitativos Em Psicologia: Ampliando Perspectivas Científicas Sob o Enfoque de Direitos Humanos. *Curriculo Sem Fronteiras* 20: 459–79. [CrossRef]

Terkildsen, Thomas, and Sofie Petersen. 2015. The Future of Qualitative Research in Psychology—A Students' Perspective. *Integrative Psychological and Behavioral Science* 49: 202–6. [CrossRef]

Wagner, Claire, Barbara Kawulich, and Mark Garner. 2019. A Mixed Research Synthesis of Literature on Teaching Qualitative Research Methods. *SAGE Open* 9: 2158244019861488. [CrossRef]

Wiggins, Sally, Alasdair Gordon-Finlayson, Sue Becker, and Cath Sullivan. 2015. Qualitative Undergraduate Project Supervision in Psychology: Current Practices and Support Needs of Supervisors across North East England and Scotland. *Qualitative Research in Psychology* 13: 1–19. [CrossRef]

Article

Digital Presence and Online Identity among Digital Scholars: A Thematic Analysis

António Quintas-Mendes [1],* and Ana Paiva [2]

[1] LE@D—Laboratory of Distance Education and E-Learning, Open University, 1250-100 Lisbon, Portugal
[2] LE@D—Laboratory of Distance Education and E-Learning, University of Algarve, 8005-139 Faro, Portugal; amvpaivaster@gmail.com
* Correspondence: antonio.mendes@uab.pt

Abstract: In today's postdigital society, the public presence of academics on the Web and the consequent affirmation of a given identity or of a multidimensional identity imply a much more complex and multifaceted management of their image than when we were dealing with a scholar whose identity was affirmed in circumscribed spaces and times. In this work, we seek to analyze the positioning of the subjects about their online identities and the ways in which they express the multiple facets of the construction of their online selves. We adopted a Thematic Analysis approach to qualitative research and used NVivo to analyze the data collected through semi-structured interviews of 13 subjects from a purposive sample of digital scholars. Three major themes were identified: Theme A—Digital-Presence Awareness; Theme B—The Public and the Private Spheres; and Theme C—Offline, Online, and Hybrid Selves. Overall, subjects clearly express the awareness of the need to build a presence on the Web. While there is a general concern to preserve a certain level of authenticity, intimacy, and privacy on the Web, there seems to be some heterogeneity in the experiencing of these processes. For some participants, the distinction between public and private and between personal and professional should be clearly marked, while for others, the necessarily hybrid nature of identity should be assumed, arguing that it is no longer possible to make a clear separation between the offline and the online world. This work, thus, shows different shades in the way academics construct their presence on the Web and how differently they assume several of the constitutive dimensions of their identities.

Keywords: digital presence; online identity; digital scholars; thematic analysis

1. Introduction

The development of social Web technologies and the characteristics of today's networked societies has promoted a "participatory culture" with profound implications for sociotechnical systems of higher education. The abundance of contents and the ease of use of the spaces in which people communicate and interact with each other and with the information have profoundly changed interpersonal and institutional relationships, namely in what concerns relationships with people and with information and knowledge. Concepts such as "participatory culture" (Jenkins 2006) or "produsage" (Bruns 2008) lead us to the idea of a social environment created by citizens through their digital participation on the Web. This era of participatory and digital culture expresses a passage, with regard to information and knowledge, from a culture of scarcity to a culture of abundance (Jenkins 2006; Stewart 2015) and from a culture of the "homo clausus" to a culture of the "homo conexus", where the networked self tends to predominate over a closed self (Pettitt 2013). Naturally, these transformations have profound consequences at the level of academia, whether in the roles of teacher, student, or researcher. As Weller (2011) and Veletsianos (2016) point out, social media have penetrated higher education and have impacted not only the ways in which students and teachers connect with each other but also the ways in which scholarship is organized, delivered, enacted, and experienced. Thus, the traditional scholar is

expected to take on new roles, which has given rise to new designations, such as "Digital Scholar" (Weller 2011), "Networked Participatory Scholar "(Veletsianos and Kimmons 2012; Veletsianos 2016), or "Open Educational Scholar" (Jhangiani 2017; Nascimbeni 2020). In this context, several studies have been made about the question of Scholarly Networks, namely about Social Network Sites (SNS), Institutional Repositories and Academic Social Networks (ASNs) (Dron and Anderson 2014; Nentwich and König 2014; Basantes-Andrade et al. 2022). Just as several studies have been developed investigating the issues of scholarly networks there have also been several qualitative studies that seek to study the issue of Scholars *in* Networks (Stewart 2015; Veletsianos 2016; Grand et al. 2016), attempting to capture and analyze the concrete experience of scholars in their experiencing of interaction and connection, sharing, and collaboration in networks, beyond the restricted contexts of the academy. As Veletsianos (2016) states, *"shifting our focus from scholarly networks to scholars in networks allows us to face the fact that scholars will engage, exist, and function within networks in a myriad of ways, and will perform both scholarly and non-scholarly activities in them"* (op.cit, p. 107). In fact, it has been observed (Stewart 2015) that participation in networks greatly extends the traditional scope of academic life through fostering extensive cross-disciplinary public ties and rewarding connections, collaboration, and curation between individuals rather than roles or institutions. This transition process is not exempt from difficulties and contradictions. Since it is a process that may require a high degree of public exposure, it may generate some contradictions between the professional identity and the personal identity of each individual. As Veletsianos (2016) points out, many professionals may feel uneasy about how their activities on social media may be perceived by students, colleagues, administrators, potential employers, or policy makers. According to the author, scholars are currently experiencing significant tensions between their personal and academic lives in a kind of fragmented identity lived in fragmented networks within a context in which academia still does not fully and formally recognize the work developed in networks. As Hildebrandt and Couros (2016) also note, the online personas of academics frequently undergo more meticulous scrutiny because they serve as mentors, and the norms and rules for maintaining a suitable online presence can be quite rigid, and this may prevent them from more fully participating on the Web (Hildebrandt 2018).

1.1. Digital Presence, Social Presence, and Online Identity

Digital presence manifests itself in various ways: through interactions; through shared artefacts; through presence in online groups, communities, or collectives; or even through the mere membership to such groups or communities. Closely related to digital presence is the notion of social presence. Initially defined by Short et al. (1976), social presence relates to the extent to which a person is perceived as "real and present" in any technology-mediated process of communication (Quintas-Mendes et al. 2008). The concept of social presence has become a crucial element in numerous online education theoretical models (Garrison et al. 2010; Lowenthal and Dennen 2017). In scenarios where teachers and learners are not co-present, increasing social presence among participants can lead to an enhanced socioemotional environment, fostering closeness, intimacy, and "mediated proximity" (O'Sullivan et al. 2004) and then facilitating learning. Digital presence and social presence can also be viewed as closely related to online identity. According to Warburton (2010), an individual's online presence can be shaped through the accumulation of data resulting from his/her cyber activities: *"digital identity, online persona, or virtual self, all refer to the amassed electronic information that represents us as individuals—what we reveal about ourselves and the outcomes of our human-machine or machine-machine interactions"* (op. cit. p. 8). Moreover, according to Costa and Torres (2011), these identities encompass two primary aspects: presentation and reputation. Presentation concerns how we portray ourselves online, our engagement within common spaces, and the adoption of a particular "persona" for our online interactions. Reputation, on the other hand, focuses on other people's perceptions of us. In his dramaturgical conception of the presentation of self, Goffman (1967) uses the metaphor of life as a stage for activity where we all have a front stage and a backstage.

Individuals engage in performances where they selectively give and give off details in a complex process of "impression management" (Chester and Bretherton 2007; Hogan 2010).

1.2. Online Communication and Impression Management

In a way, we can say that online communication amplifies the possibilities and complexities of "impression management". From the early days of studying what was then called Computer Mediated Communication (CMC), Walther (1996) proposed a model of "hyperpersonal communication". According to this model, the senders of a message can optimize their self-presentation; that is, they can present themselves in a more positive light than they would be able to during face-to-face communication, since, in online communication, they have more time to prepare and edit a message, and they do not have to worry about their immediate non-verbal behavior. To be free of the need to allocate scarce mental resources in the control of our visual cues and appearance means that we can allocate more resources to the elaboration of the message, leading to a more constructed image presented to others. In short, the core of the model's assumptions was briefly described by Utz (2000): "*in CMC, users have the opportunity for selective self-presentation. They have time to think about how to present themselves and can choose the positive aspects*". In a way, this relates to what (Turkle 2011) later called the "edited self": "*Whenever one has time to write, edit, and delete, there is room for performance. The "real me" turns out to be elusive. (. . .) Which pictures to add? Which facts to include? How much of personal life to reveal?*" (op. cit. p. 180).

1.3. Context Collapsing

The other side of the question of the presentation of the self is related to the question of reputation. Because the presentation of self is directed toward an audience, or audiences, we are then confronted with the problem of context collapsing. Context collapse refers to the merging of multiple social settings in the same online space (Davis and Jurgenson 2014). It occurs when people, information, and norms from one context seep into another, affecting self-presentation and identity. Originally linked to broadcast media, context collapse became more significant with digital media and the rise of social network sites. Tensions around identity are at the core of this dilemma, as individuals may perform different personas for different audiences. However, due to factors such as persistence, searchability, and replicability, items posted on social network sites may be seen by unintended audiences, leading to possible discomfort and identity-narrowing behaviors (boyd 2007, 2011; Hogan 2010; Dennen and Burner 2017).

1.4. Conceptions about Identity

Issues such as impression management, the edited self, or the problem of context collapsing, make us to reflect more deeply on the nature of identity and online identity, in particular, since the latter can be characterized by a certain malleability and fluidity. This is a widely and long-discussed problem. While some scholars and thinkers adhere to an essentialist perspective, viewing identity as a fixed and singular entity, post-structural approaches suggest that identity is multiple, fluid, and malleable according to sociohistorical contexts (Hildebrandt and Couros 2016). In the more traditionalist view, identity is a fixed and unitary concept that makes up one's authentic self. Under this framework, an "authentic identity" could be derived from a coherent understanding of the self. This perspective has been widely debated and discussed in the context of digital environments, where individuals increasingly participate in various online platforms that shape their identities.

Post-structuralist thinkers emphasize the fluidity and malleability of identity. According to these theories, individuals hold multiple identities or facets of identity that are shaped by various contexts and experiences, which can change or evolve over time. Foucault (1988), for example, speaks about processes of subjectivation instead of identity; Deleuze emphasizes the processes of "becoming" (Semetsky (2011) and Butler (2006)) associates identity with performance and performativity. Of crucial importance are also sociomaterial approaches that emphasize the entanglement between subjects and technology.

Criticizing traditional humanist approaches (Biesta 2006) that separate subject and object (Latour 2005), these perspectives emphasize the entanglement between subjects, artefacts, and technology (Barad 2007; Fawns 2022), and in doing so, they presuppose that it is not possible to envisage identities where subjects are separated from technology. Instead of a clear separation between subject and object, the agentivity of artifacts is underlined and, thus, sociomaterial perspectives are also essential for understanding the way the subjects position themselves (and are positioned) in relation to the Web and how they construe their digital identities.

However, neither essentialist nor post-structuralist and liquid views on identity should be considered dominant or exclusive. All of these perspectives may offer valuable insights into the essential human questions about identity. Moreover, subjects have their own implicit theories of what identity is, and these implicit theories will, in a way, also determine how they manage their identities in the various contexts in which they interact. It is possible that some individuals privilege in their own lives a more static and fixed view of themselves, while others privilege a more fluid and changeable view.

2. Methodology

2.1. Research Questions

The questions that are relevant for this research are the following:: How do digital scholars position themselves in the context of participatory culture? How do they approach their digital presence, and how do they construe and manage their online selves? What problems, difficulties, and conflicts do they confront in the building of their digital presence and digital identities?

2.2. Participants

This study utilized purposive sampling, a suitable procedure for qualitative research (Breckenridge and Jones 2009; Webster 2016). The participants were selected in a non-random way in order to purposefully select participants who have been involved with activities related to digital scholarship. The participants are teachers and researchers linked to digital participation practices in social networks, groups, and communities who stand out for having active public profiles in social media or in academic repositories and for acting in areas especially relevant to the study in question: integration of technologies in education, online teaching, research in cyberculture, production of open educational resources, etc. We thus sought to choose people who seemed to us to be good informants in the area of the use of networked digital media.

As we describe in a later section, we followed (Braun and Clarke 2006, 2012) a Thematic Analysis approach for data analysis. Thus, in terms of the sample size, we followed the guidelines of these authors (Clarke and Braun 2013; Braun and Clarke 2021) regarding the appropriate sample size for qualitative studies using a Thematic Analysis: 6–10 interviews for small TA projects, 10–20 interviews for medium projects, and more than 30 interviews for a large project. Guest et al. (2006) point out that, when working with a relatively homogenous population, 12 interviews is the number in which "data saturation" and "thematic exhaustion" is attained, or, in other words, it is the point where no significant new codes or new themes emerge. Thus, 13 teachers and researchers participated in this study, 8 of whom are Portuguese and 5 are Brazilian, with 7 being males and 6 being females (see Table 1).

As we can see, in Table 1, our sample is constituted by relatively experienced subjects who, as digital scholars, progressively and over time have been immersed in the digital environments that have pervaded society and, accordingly, and have lived through successive waves of digital innovation and successive moments of digital transformation.

Table 1. Participants in the study.

Participants	Years of Professional Activity	Gender	Nationality	Age
(S1) Gabriel	>40	Male	Brazilian	>60 <65
(S2 Milton	>40	Male	Brazilian	>60 <65
(S3) Cesária	>10 <20	Female	Brazilian	>40 <45
(S4) Gil	>20 <30	Male	Portuguese	>55 >60
(S5) Damásio	>40	Male	Portuguese	>65 <70
(S6) Clara	>20 <30	Female	Portuguese	>50 <55
(S7) Cláudio	>10 <20	Male	Portuguese	>55 <60
(S8) Carlos	<10	Male	Portuguese	>30 <35
(S9) Telma	>10 <20	Female	Portuguese	>40 <45
(S10) Vanda	>10 <20	Female	Brazilian	>50 <55
(S11) Elisa	<10	Female	Brazilian	>35 <40
(S12) Joana	>30 <40	Female	Portuguese	>55 <60
(S13) Francisco	>10 <20	Male	Portuguese	>50 <55

2.3. Data Collection

The research instrument used for data collection was constituted by semi-structured interviews guided by open-ended questions around a set of themes or guiding topics grounded on the stated research questions (Peel 2020). Thus, the interviews aimed to elicit a reflective analysis of research participants' practices, ideas, beliefs, attitudes, and perceptions about their processes of participation on the Web. The interviews were conducted in a conversational and empathic register, in a process of active listening (Holstein and Gubrium 2004), aiming to generate a conversational situation in which the interviewees felt they were leading the account of their experiences and practices.

The interviews were conducted via videoconference, and the average time per interview was 1 h and 59 min, representing a corpus of 23 h and 48 min of video–audio recordings. All participants were previously informed about the objectives of the interview and were provided with written material with information about the research and an informed-consent protocol. After the transcriptions, the interviewers were sent to each subject to validate the respective transcription. All transcripts were then anonymized; consequently, all the names of the participants appearing in this paper are pseudonyms.

2.4. Data Analysis

All transcripts were analyzed using software for Computer Aided Qualitative Data Analysis, namely the NVivo software, version 11. As a method of data analysis, we adopted the Thematic Analysis as it was described by Braun and Clarke (2006, 2012). Thematic Analysis is a method for systematically identifying, organizing, and offering insight into patterns of meaning (themes) across a dataset. Through focusing on meaning across data, the Thematic Analysis allows the researcher to see and make sense of collective or shared meanings and experiences. Therefore, TA is considered useful for studying people's views and opinions, for studying people's practices, and for studying the reasons why people think or feel or do particular things and the factors or processes that underlie particular experiences or decisions (Clarke and Braun 2013). It should be noted, however, that Thematic Analysis differs from approaches such as Interpretative Phenomenological Analysis, which is more ideographic in nature and oriented by a phenomenological epistemology and also differs, for example, from Grounded Theory, which, although it may have similarities in the ways of coding and characterizing themes, is more oriented toward theory development.

While a Thematic Analysis can produce conceptual interpretations of data, it does not attempt to develop a theory nor the generalization of results to other contexts.

We followed the six phases proposed by Braun and Clarke (2006) that consist of (1) familiarizing oneself with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the report.

Phase one represented a process of intense familiarization with the data, either by listening to the interviews repeatedly or by reading and re-reading their transcripts multiple times. Multiple notes were then taken, and memos were developed in NVivo. Both researchers discussed these notes with each other and developed some preliminary ideas about initial codes. In the second phase, both researchers developed coding separately. Open coding was then used rather than imposing pre-existing codes on our data from a pre-specified conceptual framework or codebook. This constituted a more inductive approach through the creation of meaningful "nodes" rather than a projection onto the data of previous, preconceived ideas by the researchers. During this process, we were always comparing, discussing, and modifying our codes. In the third phase, we aggregated codes with similar contents and created the initial themes. These themes express the most prevalent patterns emerging from the data relevant to the research questions. In stage four, we reviewed, modified, and developed the themes. The main revisions we made included combining themes where there were overlaps and creating new themes; previous themes were transformed into subthemes, while ensuring that each theme and subtheme was coherent and distinct. In phase five, we refined and defined the themes and subthemes to ensure that there were, on the one hand, features of distinctiveness between them and, on the other hand, clear and organic relationships between them. There were multiple rounds of coding at this stage, categorizing the codes into themes and refining the themes and subthemes before the final stage. In phase six, we selected the most representative examples of these themes and subthemes and generated the final analysis of these in relation to the research questions. We tried to ensure that the themes had a thread running through them and were meaningful both in relation to the data and the literature.

The whole process is dynamic and recursive, so all of these stages interact with each other: you do not exactly end one to move on to the next; rather, they build on each other, sometimes overlapping. They are, therefore, not linear phases: they operate in a recursive manner through a shuttling process between data, coding, interpretation, and writing processes. Whilst there is always an ongoing discussion in the field of qualitative analysis as to whether it is more bottom-up or more top-down guided (Kelle 2005; Byrne 2022), it is clear that the questions posed to subjects during interviewing thematize the data obtained from the outset; however, it should also be emphasized that the themes generated are not directly derived from the interviewees' questions and responses. The active roles of interpretation and reflexivity of researchers are clearly assumed (Byrne 2022). As Braun et al. (2022) point out, data alone do not speak, and themes do not emerge "naturally" from the data; rather, they are constructed, generated, and developed by the researchers, as emphasized by Braun et al. (op.cit.) under their conception of "reflexive thematic analysis".

3. Results

Three major themes were identified: Theme A—Digital-Presence Awareness; Theme B—The Public and the Private Spheres; and Theme C—Offline, Online, and Hybrid Selves. These themes cover several subthemes, which range from the discovery of the digital footprint that each person leaves on the Web to the progressive construction of an intentional and deliberate online presence and the various forms that this digital presence can take.

3.1. Theme A—Digital-Presence Awareness

Included in the theme Digital-Presence Awareness were the statements in which subjects refer to a progressive awareness of their of digital footprint and of the importance of building an intentional online personal identity and statements in which subjects refer to

historical/biographical changes in the way their identities have been built on the Web (see Table 2).

Table 2. Theme A: Digital-Presence Awareness.

Theme A	Subtheme	Subtheme Description
Digital Presence Awareness	A1. Digital-Footprint Awareness	Subjects report a progressive awareness of their digital footprint and report historical/biographical changes in the way their identities have been constructed on the Web.
	A2. A Strategic, Deliberate, and Intentional Online Presence	Subjects report that there is a thoughtful, deliberate, and intentional strategy to build their online presence.

3.1.1. Subtheme A1: Digital-Footprint Awareness

For many of the subjects we studied, digital presence and identity are not things that appear as a given and immediate fact. It is a matter of a progressive biographical construction, of becoming aware of the importance of digital presence and identity. Clara (S6) states the following:

"I think that the question of online identity is a question that is being raised (. . .) but it is only now that I am starting to become aware of it, isn't it? This is to say that I never thought about what I was doing with my online identity, I just went along with the boat following what interested me, what I like, what I don't like. So I never thought about it as an online identity, as a digital footprint, or whatever you want to call it. But now I admit that at this moment it is important, it is important to think about it and it is important perhaps from a very early stage to start thinking about these aspects. . . ". (S6 Clara)

Francisco situates the awareness of his personal presence on the Net as something relatively recent:

"I realised I had an online identity a few years ago when I happened to do a search on a search engine, (. . .) and I realised that in fact, my own name had a few pages, I realised that even things that I thought had no value at all, were written there. And so I realised that for better or for worse there is an online identity". (S13 Francisco)

Telma tells us that she started a blog while she was a master's student and that she ended up keeping this blog for many years and became aware of her digital presence precisely because of this blog, which was already circulating in contexts she was not aware of:

"The blog was a personal blog, that is, I talked a lot about things that. . . It was not so much confessional as about things that meant something to me, it had some of my poems,. . . it had what I did with the students. . . I found out about two years later that this blog had been the subject of a course in a Psychology degree course in Brazil. Imagine how I felt when I read someone's work talking about what was "my self" in the blog. Really, at that time it was already as if it was another person for me. . . But feeling that dissected and analysed, really!!!. . . these tools really have a terrible potential!". (S9 Telma)

It is this awareness of the existence of a digital footprint built by the various ways of participating in online spaces and that the marks of online presence can be out of the individual's control that is highlighted by Clara when she mentions the following:

"There are already stories that we hear that, in I don't know in how many years you'll be applying for I don't know what, and the first thing they do is go to the Net to find out about everything you've done in your life and, of course, if we've put photographs on FB or I don't know where, then this will appear and may or may not condition you, (. . .). In fact, we now have a record of ourselves on the net and I think it's really something you

have to think about and it. Until very recently I didn't think about it, now I think about it in terms of my identity construction online...". (S6 Clara)

3.1.2. A Strategic, Deliberate, and Intentional Online Presence

In the subtheme A Strategic Online Presence, we included the statements in which subjects indicate that there is a thought-out, deliberate, and intentional strategy to build their online presence. It is this awareness that precisely leads subjects to attempt to build an intentional and deliberate online identity. Narrating how becoming aware of his "online footprint" made him think about the importance of "being careful", of creating a "thoughtful identity", Francisco (S13) says the following:

"we leave an online footprint and that reminded me exactly, it made me realise, made me try to realise, that on the one hand I had to be careful and on the other hand since that was the case I could also create a thoughtful identity and therefore instead of being very casual or very thoughtless it could be more reflective". (S13 Francisco)

Gil (S4) also underlines the importance, at least from a professional point of view, of assuming a thoughtful, deliberate strategy for building a digital identity:

"for those who work in the online context it is important to develop an online presence haa... in a more, more planned way or with a strategy. I am a researcher nowadays, I am a teacher... it is clear that nowadays haa... if people want to keep up with the times and keep up with the way people are communicating and reading information it is very important to have an online presence". (S4 Gil)

3.2. Theme B: The Public and Private Spheres

The theme of The Public and the Private Spheres encompasses statements where participants discussed the presence or absence of clear boundaries between their public and private lives, as well as between their professional and personal spheres (see Table 3).

Table 3. Theme B: The Public and the Private Spheres.

Theme B	Subtheme	Subtheme Description
The Public and the Private	B1. Privacy and Intimacy	Subjects indicate the presence or absence of clear boundaries between their public and private/intimate lives.
	B2. The Personal and the Professional	Subjects indicate whether or not there is a clear separation between their professional and personal/private spheres.

3.2.1. Subtheme B1: Privacy and Intimacy

Statements in which subjects refer to the existence or not of a clear separation between their public and private spheres were included in the Privacy and Intimacy subtheme. There are important differences between subjects in the way they perceive the degree of exposure of their privacy and intimacy. For some of them, there is a clear and strong separation between public and private. For others, there is not. Let us take, for example, this passage from Gabriel (S1):

"in the relational field I just got a message now from a brother of mine, with his daughter in his lap and he giving his daughter a very tight hug saying "I love you very much", then I thought it's beautiful, isn't it? a father can express his intimacy with his daughter, this affection, this caress, it made me want to do the same thing with my daughter. I do it publicly, right? (...) inequivocally that I think it is a message of humanity for whoever wants to read it in my networks". (Gabriel S1)

Let us then contrast this statement by Gabriel with the following statements by Joana (S12) and Clara (S6):

"things with my family, I don't share, I don't do that..., I don't do that for several reasons, and so activities that I consider to be of my personal concern, right?". (S12 Joana)

"I avoid, on Facebook, I avoid putting very personal things, but that's because I don't like that thing of putting the photograph of..., it doesn't mean that if I put one or another, or if someone puts one or another photograph that it upsets me, but I don't like... well, Facebook is used a lot for this thing that is almost a diary of life, isn't it? I don't feel like doing that kind of exposure, so I avoid that kind of thing, of being there showing very personal things and so on, but otherwise, in the professional sphere, I don't avoid it". (S6 Clara)

3.2.2. Subtheme B2: The Personal and the Professional

The subtheme of The Professional and the Personal includes statements in which subjects indicate that there is or there is not a clear separation between their professional and personal/private spheres. Most participants emphasized the importance of having a public professional presence. Gil (S4), for example, states the following:

"It is very important that people find you, that people can have ways to perceive that you live in that context, that you share information in that context, that they can communicate with you. From this point of view I think it is fundamental. For those who are not,... who are not researchers, teachers or don'nt work in an area that is closely connected to or dependent on technologies, I don't know..., but for those who work in these areas it is very important". (S4 Gil)

However, the professional and personal dimensions of digital presence are assumed differently by the subjects. In fact, we can see that there are marked differences between subjects who believe that there is no clear separation between a professional and a personal online identity and subjects who clearly separate these dimensions. Joana (S12), for instance, states that there is a clear separation between her professional sphere and her personal/private sphere:

"I think it is evident that I consider this intentional presence important as a teacher, isn't it? As a teacher, I have always been concerned with this theme and with defining this presence. As I was saying initially, one of the questions I personally faced was a certain dilemma in which this presence would be a distinct presence between what I am personally, as a person, my habits, my habitats, etc., and on the other hand what I'm in the Web, isn't it? Therefore, I had this dilemma and what I do privilege is the professional part, therefore, my presence is very much on that side". (S12 Joana)

In this sense, Clara (S6) also reaffirms the importance of a professional online presence but clearly distinguishing it from her private presence:

"I use it a lot from the professional, relational point of view, but the public part, so to speak, is a relational part which is not a very, very private relational, isn't it? From the point of view of my professional activity, it is important to disseminate what I write, what I do, it is good when someone finds interest in what we do, isn't it? And now, more and more (...) and especially in the area I am in, it is important to be on the networks, isn't it? It is also important in terms of recognition by others, of people knowing what we do". (S6 Clara)

However, for Cesária (S3), there is no longer this differentiation between the personal and the professional:

"there is no longer a separation between this professional identity on and off, because with hybridism, cyberspace is no longer a space separated from the town. The mobility, the 3 g connections, WI-F,I plus the access to the net in the palm of your hand.... We no longer separate this thing of Cesária in the University and of Cesária on Facebook or in Instagram. I am in the hybrid of these spaces. So, deep down, the networked digital technologies are in us and mediate our daily construction". (S3 Cesária)

3.3. Theme C: Hybrid Identities and Context Collapsing

This last assertion from Cesária (S3) leads us to the consideration of what we will call Hybrid Identities. Can we separate our offline and online identities, or are we definitely living "onlife" identities? Thus, in Theme C (see Table 4), we encompassed the statements where subjects position themselves toward this question and questions associated with it, such as authenticity and reputational risks on the Web.

Table 4. Theme C: Offline, Online, and Hybrid Selves.

Theme C	Subtheme	Subtheme Description
Offline, Online, and Hybrid Selves	C1. Offline, Online, and Hybridization	Subjects assume strong boundaries between offline and online identity or weak boundaries between them, assuming then a hybrid identity.
	C2. Differentiation Between Contexts and Context Collapsing	Subjects assume strong or weak boundaries between contexts and report how they deal with possible context collapsing.
	C3. Authenticity, Identity Projection, and Reputation	Subjects refer to problems of authenticity and identity projection and to possible reputational risks.

3.4. Subtheme C1: Offline Identity, Online Identity, and Hybrid Identities

The distinction between what is intimate and what is private, what is personal and what is public, is different depending on whether subjects assume a clear separation between offline life and online presence or whether subjects assume that this distinction is not determinant anymore, assuming instead a hybrid identity. Usually, the subjects that assume a more hybrid identity are the subjects who make lesser distinctions between the public and private and between the personal and professional. For example, Gil (S4) states the following:

"I think in the future, I think we will inevitably end up living in a world where the physical world and the virtual world will be very intertwined". (S4 Gil)

However, for Cesária (S3), this future to which Gil refers is already the present. For Cesária, it is no longer possible to separate the offline identity from the online identity since they intersect and overlap in a natural way. On the other hand, she is clearly aware of the historicity of digital identity and how it has been transformed over the years:

"Initially, before Web 2.0, being online meant publicising and giving visibility to what we did in a face-to-face setting. Today, with mobility, with a more consolidated digital culture in the palm of people's hands, there is no longer a separation between this on and off professional identity, because with hybridism, cyberspace is no longer a space separated from the town". (S3 Cesária)

Damásio (S5) also assumes the necessarily hybrid nature of identity by arguing that it is no longer possible to separate an offline identity from an online identity:

"I think that in our days the identity of each one of us cannot fail to be present online. I don't advocate the artificial construction of an identity for online consumption but rather that the reflection that each person conducts on a daily basis, when building him/herself as a citizen, should take into account both the face-to-face and online dimensions. I understand that, by definition of identity, these two dimensions merge into one". (S5 Damasio)

In the same sense, pointing to a continuum between the spheres of online and face-to-face communication, Gil (S4) mentions the following:

"the technologies as they become more. . . more widespread people stop having the notion of technology I mean. . . as things became more widespread and became natural, especially with social networks and the many means of communicating via online, people are already starting to stop seeing the technology in that, right? It's starting to become something that's very transparent, isn't it? And it's true that people end up getting along, above all, with people they know from the physical world or, for professional reasons they often end up getting to know several people well that they met online in meetings, conferences. . . congresses and so on. . . , so I think that this is starting to be more and more. . . more fluid you jump from one dimension to another, it's all part of your sociability, isn't it?". (S4 Gil)

For Carlos (S8), the continuity between the online and offline worlds is an opportunity for individual and social learning of other ways of "projecting the extension of the self" and the "discovery of the other" in these new spaces of socialization, where identity is built:

"in personal terms, it has been a curious learning because it has allowed me to discover perspectives that I had no access to in any other way and that allow me to reflect on that space. I think it's interesting because maybe in an environment between friends, even acquaintances and friends, we don't expose ourselves to certain roles or certain conversations (. . .), but as it is not exactly an extension of ourselves, sometimes we discover characteristics of the person on the Web that we hadn't discovered in person and which then end up triggering a conversation in person, derived from that social conversation that we had online (. . .) I think that it is a very great potential, the extension of the self and the discovery of the other, to have an online space where we can project ourselves and where others can project themselves. I think it's important". (S8 Carlos)

3.5. Subtheme C2: Differentiation between Contexts and Context Collapsing

"Context collapse" refers to the phenomenon where people, information, and norms from one context infiltrate the boundaries of another. The merging of various social contexts appears as an important topic among our subjects due to their frequently blurring the lines between public and private, and the professional and personal, as well as the myriad of personas and situations individuals find themselves in. Gil (S4), assuming the need for a clear separation between contexts, explains that just as in offline situations there are different groups and scenarios where we act differently, the same should happen online, where he also shows concern regarding the authenticity projected on the Net:

"I don't share a lot of things about my personal life. . . there's a little photo there or there's a little comment there, but I mean. . . most of my online activity, and my online identity is very connected to my professional activity, but in this role connected to the professional activity I am very much the person I am, I mean. . . no. . . I don't have a. . . a. . . a character, I don't have a mask, right?. . . it doesn't mean that a person cannot have these two sides, right? Haam. . . now I think that in the world, in the physical world we also don't have these two sides at the same time right? So in the physical world we are also expressing the various facets of our personality in different contexts aren't we? And so I think it's strange that people do this in the same context and there are people who do this online isn't it?" (S4 Gil)

Thus, he points out the need for not confusing contexts when interaction takes place in digital settings, similarly to what happens offline:

"I think that people have to separate the waters and either create another profile or post in another network or use different networks for different purposes right? but. . . but. . . because then people confuse a little bit. . . people don't realize this sometimes, which is, we in life. . . in the physical world we are also very multifaceted people haa. . . .we are people who have different groups with whom we get along and we never mix them many times, right? I don't invite to my house for lunch or dinner my high school students, my university colleagues and Siemens and Stephen Downes [Gil is referring here to two very well-known researchers in the field of digital education] I mean, I'm not going to put all

these people at my table because they're not related aren't they? And people sometimes on the internet do this don't they?". (S4 Gil)

On the other hand, for Cesária (S3), who, as we saw earlier, advocates for a hybrid identity without major boundaries between the offline identity and online identity, the mixing of contexts is not seen as problematic and, on the contrary, sometimes appears to be desirable:

"For example yesterday I saw 2 art exhibitions, I shared and I have already triggered my students, see this, go there! it is a way of encouraging a cultural life beyond having a beer with the husband at the weekend. How are you going to educate if you don't use the cultural repertoire? Are you going to be a teacher of school content only? I discuss this exhaustively in my research group so it is fundamental to go to the cinema, it is fundamental to go to the museum, it is fundamental to walk in the garden... you can take this into the classroom and discuss it with your students, for me it is fundamental, I do a lot of this work with my students". (S3 Cesária)

Apparently, for subjects who assume to a lesser extent a hybrid identity on the Net, the risk of context collapsing is greater. On the contrary, for the subjects who assume more of a hybrid identity, the relationship with different contexts and diverse audiences appears to be easier, more fluid, and less conflictive.

3.6. Subtheme C3: Authenticity, Identity Projection, and Reputation

Naturally, the construction of an intentional and deliberate online presence leads us to the construction of an "edited self" where we have to decide what to write and what not to write, what to show and what not to show, and what to reveal and what not to reveal. This immediately brings us back to the problem of authenticity/inauthenticity, to the vision of identity as a performance, and to the question of the reputational costs that the projection of certain facets may have for the individual or even for the institution to which he or she belongs.

The subtheme of authenticity refers to the statements in which subjects reveal an explicit concern with the authenticity of the identity they project online, avoiding the creation of "characters" or "masks". For example, Carlos (S8) states the following:

"I think that what I am is what I end up projecting, what I am in the overall sense is what I project on the social network, and what I am and do individually, with each person, I also do individually with that person online. In other words, there is always an extension of our I, and I try to be what I am, I don't try to be what I would like to be, or dream of being, or try to take on a very big role to test myself. No, it's not that way, it's really an extension of what I am in my everyday life". (S8 Carlos)

Elisa (S11) poses the problem of authenticity not so much as a need for sincerity but as a need for coherence between what one is personally and what one is professionally:

"First, I think it is coherence. We have to have coherence between what we do in the professional and in the personal sphere. So, I think, there is no point in being concerned with academic seriousness, building myself as a teacher in the space where I work, if I then go to a social network like FB and I am contradictory in terms of what I post there, of my political thoughts, I don't know, economic thoughts, my ideals, right? There's no point in going there and, for example, posting a comment on YouTube if you're inconsistent with what you were discussing conceptually with your students in class. I think that this conceptual, professional and personal coherence we have to have, I worry a lot about this... this coherence, it worries me a lot, in the sense of building a profile, an identity, right?". (S11 Elisa)

One of the strong motivations to connect and share something on the networks has to do with the need to give visibility to what you do. Cesaria states the following (S3):

"My main motivation is to expand the networks (...) The visibility of what one does is fundamental to have and to expand the networks (...) Therefore, fundamentally, my

main motivation is to give visibility to what we do, even because I think that what we do is important and the more we share and give visibility to our things and the things of our friends or intellectual partners, the more powerful is the network we form". (S3 Cesaria)

However, this gain of visibility comes with some reputational risks. Cesária (S3) refers the risk of her sharing being taken as exhibitionism:

"I see sharing as generosity but many people perceive sharing as exhibitionism, even this appears in the speech of some colleagues or in the literature in some way, so I think that the person who is connected, shares, right?, I think she is much more generous, once she shares, she triggers, invites, I really like it when people remember that I am interested in a theme they call me there and show me…". (S3 Cesária)

In a similar vein, Damásio (S5) says the following:

"I share what I do but I do so with coyness, for the risk of being confused with the narcissism that characterizes social media". (S5 Damásio)

4. Discussion

The participants in this study revealed a clear awareness of the importance of online presence and of establishing interactions, relationships, and bonds on the Web. This is a general and obvious observation, given the fact that the participants were chosen precisely because they are active participants in networks. It is worth noting that we are not dealing, in this study, with supposedly "digital native" individuals but instead with subjects with a relatively older age and an experienced life as digital scholars, who progressively and over time have been immersed in the digital environments that have permeated society and, consequently, have experienced successive waves of digital innovation and have tried to adapt to these successive moments of digital transformation.

After analyzing our data, we identified our first theme, Digital-Presence Awareness, in which two subthemes emerge: (A1) Digital-Footprint Awareness, in which subjects report a progressive awareness of their digital footprint and their historical/biographical changes in the way their identities have been constructed on the Web; and (A2) A Strategic, Deliberate and Intentional Online Presence, where subjects report that there is a thoughtful, deliberate, and intentional strategy to build their online presence.

We have seen then that the awareness of the importance of building an online identity is, on the one hand, progressive and, on the other hand, heterogeneous in terms of its nature among the participants. It is progressive because, for many subjects, it is the awareness of the existence of a digital footprint built by the various forms of participation in online spaces and the realization that the marks of online presence may be beyond the individual's control, leading to the need for the construction of an intentional and deliberate identity. This is precisely what (Marshall 2015) points out when she states that if the subject does not deliberately create a presence and a digital identity, this identity will be created by others. This can be especially detrimental for academics if they take a "laissez faire" attitude toward the matter. In other words, if the digital scholar does not have a clear/explicit strategy to create a digital identity/presence, he/she will let agents such as Google, for example, to create that identity for him/her through the tracking of his/her digital footprint.

On the other hand, those processes are heterogeneous because, once established the clear necessity of having an intentional and deliberate digital presence, we may say that subjects are heterogeneous in the way they view their online presence and in the way they construct that deliberate online presence. There is no place here for some kind of technological determinism, and there is a place for conscious choice and volitional deliberation from the part of subjects (Howard 2017).

This is particularly visible when we address the issues in Theme B. Theme B is The Public and Private Spheres, for which we identified two subthemes: (B1) Privacy and Intimacy, where participants refer to the presence or absence of clear boundaries between their public and private/intimate lives; and (B2) The Personal and the Professional, in which participants refer to whether or not there is a clear separation between their personal

and professional spheres. If in Theme A it was underlined that online identity was a progressive and biographical construction, Theme B alerts us to the heterogeneity of these construed identities. The distinctions between the public and private and between the personal and professional aspects of life are constitutive dimensions of the different ways of constructing online identities. These identities differ regarding whether individuals perceive a clear separation between their offline lives and their online presence or whether they assume less strict boundaries between those dimensions and then assume a more hybrid identity. If some subjects assume that there are strong boundaries between their private and their public lives, as well as between their personal and their professional lives, others assume a hybrid nature of identity, arguing that the move from an offline world to an online world is something natural, resulting from a process of identity development in the context of cyberculture. Typically, those who embrace a more hybrid identity tend to draw fewer boundaries between the public and private spheres, as well as the personal and professional realms. These questions of boundaries across certain dimensional traits are closely related to the question of the importance of categorization processes in human interactions (Psathas 1999; Davis and Jurgenson 2014; Martikainen 2022). In fact, what emerges as very manifest in our work is that subjects construct their identities around dimensional traits constitutive of more or less tight categories. Basil Bernstein (1977) elaborated upon the concept of strong and weak classification, which refers to the ways in which categories are classified and to the strength or weakness of boundaries between contexts and categories. Categories may be more insulated, implying that there is a strong classification (C+), or less insulated and more porous, with weak classification (C−), implying that they are more flexible and open to new categorizations. We would say, then, that subjects whom we characterized as having hybrid identities construct their identity from categories that have less rigid boundaries between contexts, while those who differentiate their offline from their online identity tend to organize themselves within more strongly classified categories (public versus private, personal versus professional, and online versus offline). Moreover, if for some authors hybridization is the "new normal" (Floridi 2014; Howard 2015), authors such as Hildebrandt and Couros (2016) suggest that we still live an era of "digital dualism", where online relationships, spaces, and selves are sometimes seen as "less real' or less important than those in the offline world, and this certainly may explain why subjects who make a clear separation between their offline and online identities differ from subjects who assume more hybrid identities.

This is what we have identified in Theme C, Offline, Online, and Hybrid Selves. In this theme, we identified three subthemes: (C1) Offline, Online, and Hybridization, where participants assume strong boundaries between offline and online identity or weak boundaries between them, assuming then a hybrid identity; (C2) Differentiation Between Contexts and Context Collapsing, where participants assume strong or weak boundaries between contexts and report how they deal with possible context collapsing; and (C3) Authenticity, Identity Projection and Reputation, where participants refer to problems of authenticity and identity projection and to possible reputational risks when presenting themselves in online contexts.

We relate these processes of hybridization and of "networking the self" with what (Pettitt 2013) has called the "privatization of experience" and the "privacy parenthesis". Pettitt contrasts two different types of identities: that of the "homo clausus" and that of the "homo conexus". "Homo clausus" refers to someone who is closed off from others, seeking privacy and isolation in his/her personal life. In this category, a person values his/her individuality and autonomy and seeks to protect him/herself from the outside world. On the other hand, "homo conexus" refers to someone who is connected to others, valuing communal living and social interaction. In this category, people see themselves as part of a larger social network and value their relationships with others. This is part of a historical and cultural process that Pettitt characterized as the "Gutenberg Parenthesis", for which the "privacy parenthesis" is a subtheme. According to Ong (1982) and Pettitt (2013), pre-print societies were based mainly on orality, proximity, and direct relationships, and this has

changed due to the emergence of print. Print tends toward closeness. The culture of the print, Ong and Pettit assert, tends to mark knowledge as closed, condensed, and delimited (ideally in a book), separate from other works, constituting a unit in itself, separated from other units. Similarly, the individual also becomes more encapsulated, turned in on him/herself, and the image of the individual reading a book silently is a symbol of this. Alternatively, as Norbert Elias states (quoted by (Pettitt 2013, p. 5)), we are taken by *"self perceptions as an actually existing cage which separates and excludes the "self" from the world "outside" the individual... the notion of the individual "ego" in its locked case, the "self" divided by an invisible wall from what happens outside"*. However, according to Pettitt, it is precisely with the Internet that there is a certain return to the Pre-Gutenberg era where the relationship with knowledge and with others becomes again more direct, more dialogical, less encapsulated in a well-delimited Ego. It is based on this theoretical framework that Pettitt elaborates the categories of "homo clausus" and "homo conexus".

Thus, we would say that some of our subjects are more situated in the "homo clausus" category (with well-defined lines between public and private and between personal and professional) while others are already beyond the edge of that boundary, prefiguring what Pettitt (2013) has called "homo conexus" and others have labelled it as "networked self" (Barabási 2010), hybrid identities (Howard 2015), or "crowdsourcing identities" (Hällgren 2019).

Apparently, for subjects who assume to a lesser extent a hybrid identity on the Net, the fear of context collapsing is greater. Context collapse occurs when multiple social settings come together in the same online space. It can be intentional (context collusion) or unexpected (collision) (Davis and Jurgenson 2014). boyd (2007) described these processes when various groups converge within a single space on social network sites. In each of these contexts, an individual may exhibit a slightly altered version of him/herself. However, since everyone can access one's online content whenever he/she want, this leads to a loss of context for these interactions and artifacts. Instead of being associated with specific situations, artifacts and interactions become linked to individual profiles. This means that the same interactions and artifacts are displayed to all "friends" by the person, and this may lead to misperceptions and misunderstandings or reveal what was not meant to be revealed to a particular audience. On the contrary, for the subjects who assume a more hybrid identity, the relationship with different contexts and diverse audiences appears to be more fluid, although not exempt from conflicts and misunderstandings, because, in the end, they assume more risks, and they do not have such a defensive positioning as non-hybrid subjects relating to the possibilities of context collapsing. We have seen with the testimonials of Damásio (S5) and Cesária (S3) that some discomfort and fear of reputational risks may appear. Although being fully embedded in the networks and engaged in interacting and sharing processes, these participants express some hesitation or discomfort at times: *"I share what I do but I do so with coyness, for the risk of being confused with the narcissism that characterises social media"* (S5 Damásio); *"I see sharing as generosity but many people perceive sharing as exhibitionism"* (S3 Cesária).

5. Conclusions

In conclusion, we would say that while there are certainly historical and social–historical forces (Pettitt 2013) that shape how we construct our identities in relation to technologies, there is also a volitional and conscious dimension (Howard 2017) in the process of identity construction that can explain why, in the same historical period, different people construct different visions of what identities should be online. We certainly agree with Kimmons and Veletsianos (2014) when they state that early works on online identity that viewed virtual selves as a continuous process of experimentation of possible or alternative selves (Turkle 1997) are very much marked historically by a period when the Internet was essentially a communication environment that was characterized by anonymity. Partly because of the emergence of social network sites that shaped the presentation of subjects based on their real, authentic, and non-anonymous identity (Kimmons 2014), the presenta-

tion of the self today has that stamp of reality that perhaps it did not have at the time of Turkle's first theoretical explorations, with the exception of certain virtual environments such as games, simulations, and immersive environments that include the use of avatars. In this sense, we agree with Barbour and Marshall (2012) when they state that we are studying real identities and not identity games.

We are not so much in agreement with Turkle (2011) or (Kimmons and Veletsianos 2014) when they imply that Goffman's dramaturgical approach implies, in some way, a perspective of identity inauthenticity. Goffman uses the metaphor of the dramaturgical staging to describe the social game in which we are all immersed and not as the affirmation of some kind of ontological inauthenticity that would be characteristic of human beings. Kimmons and Veletsianos (2014) use the expression "fragmented selves" to refer to parts of the self that are projected onto the network and are socially acceptable. Now, this is precisely what Goffman states when he writes the following: *"the term face may be defined as the positive social value that a person actually claims for himself through the line that others assume he has adopted during a given contact. Face is an image of the self delineated in terms of approved social attributes"* (Goffman 1967, p. 5). What our study shows is that individuals interpret in different ways what are approved social norms in the academic context as digital scholars: some retain a more traditional view of identity (with strong boundaries between offline and online, public and private, and personal and professional), while others interpret these norms in a much more nuanced way. However, instead of "fragmented selves", as they are called by Kimmons and Veletsianos (2014), or elusive selves (Turkle 2011), we found coherent profiles with regard to digital presence and online identity that were structured around specific dimensions.

References

Barabási, Albert-Lázlo. 2010. Introduction and Keynote to A Networked Self. In *A Networked Self*. Edited by Zizi Papacharissi. New York: Routledge. [CrossRef]

Barad, Karen. 2007. *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Durham: Duke University Press.

Barbour, Kim, and David Marshall. 2012. The academic online: Constructing persona through the World Wide Web. *First Monday* 17. [CrossRef]

Basantes-Andrade, Andrea, Naranjo-Toro Miguel, Guerra-Reyes Frank, Carrascal Ramiro, and Benavides-Piedra Andrés. 2022. Visibility of Scientific Production and Digital Identity of Researchers through Digital Technologies. *Education Sciences* 12: 926. [CrossRef]

Bernstein, Basil. 1977. On the classification and framing of educational knowledge. In *Basil Bernstein, Classes, Codes and Control. Towards a Theory of Educational Transmissions*, 2nd ed. London, Boston and Henley: Routledge & Kegan Paul, vol. 3, pp. 85–115.

Biesta, Gert. 2006. *Beyond Learning. Democratic Education for a Human Future*. Boulder: Paradigm Publishers.

boyd, danah. 2007. Why Youth (Heart) Social Network Sites: The Role of Networked Publics in Teenage Social Life. In *MacArthur Foundation Series on Digital Learning—Youth, Identity, and Digital Media Volume*. Edited by David Buckingham. Cambridge: MIT Press.

boyd, danah. 2011. Social network sites as networked publics: Affordances, dynamics, and implications. In *A Networked Self.* Edited by Zizi Papacharissi. New York: Routledge, pp. 39–58.

Braun, Virginia, and Victoria Clarke. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology* 3: 77–101. [CrossRef]

Braun, Virginia, and Victoria Clarke. 2012. Thematic analysis. In *APA Handbook of Research Methods in Psychology, Volume 2: Research Designs: Quantitative, Qualitative, Neuropsychological, and Biological*. Edited by Harris Cooper, Paul M. Camic, Debra L. Long, Abigail T. Panter, David Rindskopf and Kenneth J. Sher. Washington, DC: American Psychological Association, pp. 57–71.

Braun, Virginia, and Victoria Clarke. 2021. To saturate or not to saturate? Questioning data saturation as a useful concept for thematic analysis and sample-size rationales. *Qualitative Research in Sport, Exercise and Health* 13: 201–16. [CrossRef]

Braun, Virginia, Victoria Clarke, and Nikki Hayfield. 2022. 'A starting point for your journey, not a map': Nikki Hayfield in conversation with Virginia Braun and Victoria Clarke about thematic analysis. *Qualitative Research in Psychology* 19: 424–45. [CrossRef]

Breckenridge, Jenna, and Derek Jones. 2009. Demystifying theoretical sampling in grounded theory research. *The Grounded Theory Review* 8: 113–26. Available online: https://groundedtheoryreview.com/2009/06/30/847/ (accessed on 10 July 2022).

Bruns, Axel. 2008. *Blogs, Wikipedia, Second Life, and Beyond: From Production to Produsage*. New York: Peter Lang.

Butler, Judith. 2006. *Gender Trouble*. Routledge Classics. London: Routledge.

Byrne, David. 2022. A worked example of Braun and Clarke's approach to reflexive thematic analysis. *Quality & Quantity* 56: 1391–1412. [CrossRef]

Chester, Andrea, and Di Bretherton. 2007. Impression Management and Identity Online. In *The Oxford Handbook of Internet Psychology*. Edited by Adam Joinson, Katelyn McKenna, Tom Postmes and Ulf Dietrich Reips. New York: Oxford University Press, pp. 223–36.

Clarke, Victoria, and Virginia Braun. 2013. *Successful Qualitative Research*. Newbury Park: SAGE Publications.

Costa, Cristina, and Ricardo Torres. 2011. To be or not to be, the importance of Digital Identity in the networked society. *Educação, Formação & Tecnologias* 4: 47–53. Available online: http://eft.educom.pt (accessed on 19 August 2022).

Davis, Jenny, and Nathan Jurgenson. 2014. Context collapse: Theorizing context collusions and collisions. *Information, Communication & Society* 17: 476–85. [CrossRef]

Dennen, Vanessa, and Kerry Burner. 2017. Identity, context collapse, and Facebook use in higher education: Putting presence and privacy at odds. *Distance Education* 38: 173–92. [CrossRef]

Dron, Jon, and Terry Anderson. 2014. *Teaching Crowds—Learning and Social Media*. Edmonton: AU Press, Athabasca University. [CrossRef]

Fawns, Tim. 2022. An Entangled Pedagogy: Looking beyond the pedagogy–technology dichotomy. *Postdigital Science and Education* 4: 711–28. [CrossRef]

Floridi, Luciano. 2014. *The Onlife Manifesto: Being Human in a Hyperconnected Era*. Cham: Springer. [CrossRef]

Foucault, Michel. 1988. Technologies of the self. In *Technologies of the self: A seminar with Michel Foucault*. Edited by Luther Martin, Huck Gutman and Patrick Hutton. London: Tavistock, pp. 16–49.

Garrison, Randy, Martha Cleveland-Innes, and Tak Shing Fung. 2010. Exploring Causal Relationships among Teaching, Cognitive and Social Presence: Student Perceptions of the Community of Inquiry Framework. *The Internet and Higher Education* 13: 31–36. [CrossRef]

Goffman, Erving. 1967. *Interaction Ritual. Essays on Face-to-Face Behavior*. Albany: Anchor Books. New York: Doubleday & Company, Inc.

Grand, Ann, Richard Holliman, Trevor Collins, and Anne Adams. 2016. "We muddle our way through": Shared and distributed expertise in digital engagement with research. *Journal of Science Communication* 15: 1–16. [CrossRef]

Guest, Greg, Arwen Bunce, and Laura Johnson. 2006. "How Many lnterviews are Enough? an Experiment with Data Saturation and Variability. *Field Methods* 18: 59–82. [CrossRef]

Hällgren, Camilla. 2019. Crowdsourcing identities: On identity as an existential practice mediated by contemporary digital technology. *First Monday* 24. [CrossRef]

Hildebrandt, Katia. 2018. Nurturing Teacher Voice: Why educators' online presence matters to educational equity. *Texas Education Review* 6: 34–38. [CrossRef]

Hildebrandt, Katia, and Alec Couros. 2016. Digital selves, digital scholars: Theorising academic identity in online spaces. *Journal of Applied Social Theory* 1: 87–70.

Hogan, Bernie. 2010. The presentation of self in the age of social media: Distinguishing performances and exhibitions online. *Bulletin of Science, Technology & Society* 30: 377–86. [CrossRef]

Holstein, James, and Jaber Gubrium. 2004. The active interview. In *Qualitative Research: Theory, Method and Practice*. Edited by David Silverman. London: SAGE Publications, vol. 2, pp. 140–61.

Howard, Robert Glenn. 2015. Introduction: Why Digital Network Hybridity Is the New Normal (Hey! Check This Stuff Out). *The Journal of American Folklore* 128: 247–59. [CrossRef]

Howard, Robert Glenn. 2017. GunNets: Why a Theory of Heterogeneous Volition Is Necessary in the Study of Digital Communication. *Cultural Analysis* 16: 116–33.

Jenkins, Henry. 2006. *Convergence Culture: Where Old and New Media Collide*. New York: New York University Press.

Jhangiani, Rajiv. 2017. Open as Default: The Future of Education and Scholarship. In *Open: The Philosophy and Practices That Are Revolutionizing Education and Science*. Edited by Rajiv Jhangiani and Robert Biswas-Diener. London: Ubiquity Press, pp. 267–79. [CrossRef]

Kelle, Udo. 2005. Emergence vs. Forcing of Empirical Data? A Crucial Problem of "Grounded Theory" Reconsidered. *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research* 6: 133–56. [CrossRef]

Kimmons, Royce. 2014. Social networking sites, literacy, and the authentic identity problem. *TechTrends* 58: 93–98. [CrossRef]

Kimmons, Royce, and George Veletsianos. 2014. The fragmented educator 2.0: Social networking sites, acceptable identity fragments, and the identity constellation. *Computers & Education* 72: 292–301. [CrossRef]

Latour, Bruno. 2005. *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford: Oxford University Press.

Lowenthal, Patrick, and Vanessa Dennen. 2017. Social presence, identity, and online learning: Research development and needs. *Distance Education* 38: 137–40. [CrossRef]

Marshall, Kelli. 2015. How to Maintain Your Digital Identity as an Academic [Web Log Post]. Available online: https://chroniclevitae.com/news/854-how-to-maintain-your-digital-identity-as-an-academic (accessed on 11 August 2022).

Martikainen, Jari. 2022. Membership categorization analysis as means of studying person perception. *Qualitative Research in Psychology* 19: 703–21. [CrossRef]

Nascimbeni, Fabio. 2020. Empowering University Educators for Contemporary Open and Networked Teaching. In *Book Series Lecture Notes in Educational Technology—Radical Solutions and Open Science. An Open Approach to Boost Higher Education*. Edited by Daniel Burgos. Singapore: Springer Open, pp. 123–34. [CrossRef]

Nentwich, Michael, and René König. 2014. Academia Goes Facebook? The Potential of Social Network Sites in the Scholarly Realm. In *Opening Science: The Evolving Guide on How the Internet is Changing Research, Collaboration and Scholarly Publishing*. Edited by Sönke Bartling and Sascha Friesike. Heidelberg: Springer Open, pp. 107–24. [CrossRef]

O'Sullivan, Patrick Brian, Stephen Hunt, and Lance Lippert. 2004. Mediated Immediacy: A Language of Affiliation in a Technological Age. *Journal of Language and Social Psychology* 23: 464–90. [CrossRef]

Ong, Walter. 1982. *Orality and Literacy: The Technologizing of the Word*, 1st ed. London: Methuen & Co., Ltd.

Peel, Karen. 2020. A beginner's guide to applied educational research using thematic analysis. *Practical Assessment, Research & Evaluation* 25: 1–15. Available online: https://scholarworks.umass.edu/pare/vol25/iss1/2/ (accessed on 7 July 2022).

Pettitt, Thomas. 2013. The Privacy Parenthesis: Gutenberg, Homo Clausus, and the Networked Self. MIT Lecture, April. Available online: http://web.mit.edu/comm-forum/legacy/mit8/papers/TomPettitt%20Paper.pdf (accessed on 10 August 2022).

Psathas, George. 1999. Studying the Organization in Action: Membership Categorization and Interaction Analysis. *Human Studies* 22: 139–62. Available online: https://www.jstor.org/stable/20011237 (accessed on 25 August 2022). [CrossRef]

Quintas-Mendes, António, Lina Morgado, and Lúcia Amante. 2008. Online Communication and E-Learning. In *Handbook of Research on Instructional Systems and Technology*. Edited by Terry Kid and Holim Song. Hershey: IGI Global, pp. 927–43.

Semetsky, Inna. 2011. Becoming-other: Developing the Ethics of Integration. *Policy Futures in Education* 9: 138–44. [CrossRef]

Short, John, Ederyn Williams, and Bruce Christie. 1976. *The Social Psychology of Telecommunications*. London: Wiley.

Stewart, Bonnie. 2015. In abundance: Networked participatory practices as scholarship. *The International Review of Research in Open and Distributed Learning* 16: 318–40. [CrossRef]

Turkle, Sherry. 1997. *Life on the Screen: Identity in the Age of the Internet*. New York: Simon & Schuster.

Turkle, Sherry. 2011. *Alone Together: Why We Expect More from Technology and Less from Each Other*. New York: Basic Books.

Utz, Sonja. 2000. Social Information Processing in MUDs: The development of friendships in virtual worlds. *Journal of Online Behavior* 1: 2002.

Veletsianos, George. 2016. *Social Media in Academia: Networked Scholars*. New York: Routledge.

Veletsianos, George, and Royce Kimmons. 2012. Networked Participatory Scholarship: Emergent Techno-Cultural Pressures Toward Open and Digital Scholarship in Online Networks. *Computers & Education* 58: 766–74. Available online: https://www.sciencedirect.com/science/article/pii/S0360131511002454 (accessed on 2 February 2023).

Walther, Joseph. 1996. Computer-mediated communication: Impersonal, interpersonal, and hyperpersonal interaction. *Communication Research* 23: 3–43. [CrossRef]

Warburton, Steven. 2010. *Identity Matters*. London: King's College London.

Webster, Mark David. 2016. Examining Philosophy of Technology Using Grounded Theory Methods. *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research* 17. [CrossRef]

Weller, Martin. 2011. *The Digital Scholar: How Technology Is Changing Academic Practice*, 1st ed. Basingstoke and London: Bloomsbury Academic. [CrossRef]

Article

High-Tech Augmentative and Alternative Communication Devices: Observing Children's Need for Help and Interaction with Caregivers

Ivone Almeida [1], António Moreira [1] and Jaime Ribeiro [2,*]

[1] CIDTFF—Research Centre on Didactics and Technology in the Education of Trainers, University of Aveiro, 3810-193 Aveiro, Portugal; ivonealmeida@ua.pt (I.A.); moreira@ua.pt (A.M.)

[2] aTOPlab—Assistive Technology and Occupational Performance Laboratory, ciTechCare—Center for Innovative Care and Health Technology, Polytechnic of Leiria, 2410-541 Leiria, Portugal

* Correspondence: jaime.ribeiro@ipleiria.pt

Abstract: There are many children with disabilities who need specialised devices to communicate and to be understood, which poses an added challenge for their caregivers. This study aims to diagnose the training needs of informal caregivers concerning high-tech devices for augmentative and alternative communication (AAC), to enhance the use of these devices in the home setting. The aim is to study children's performance and their interaction with caregivers, to improve practices and contribute to reducing technology abandonment at home. Participant observation sessions were carried out in three home settings to describe the interaction between children and their caregivers, as well as to assess the former's need for assistance in using the Grid3 software when combined with eye-gaze-controlled technology. The findings seem to demonstrate the importance of interactions between caregivers and children for carrying out tasks and improving performance. Therefore, it can be inferred that positive reinforcement is important to foster children's motivation to overcome difficulties in using such devices, along with corrective feedback. The data suggest the need to promote technology-mediated communicative interaction in all life contexts. It is also possible to infer that the lack of regular device use at home compromises skills development. These findings have contributed to the planning and implementation of parental training intervention regarding using assistive technology for augmentative and alternative communication.

Keywords: augmentative and alternative communications systems; home environment; high-tech devices; caregivers; social interaction; family support

1. Introduction

"The public has been deceived by believing the illusion that AAC [augmentative and alternative communication] technology by itself causes someone to talk who cannot speak". Although written almost three decades ago, this quotation by David Beukelman (1991, p. 2) remains relevant today and highlights the importance of receiving training for and using a communication device regularly, in order to be proficient in using it. Indeed, the use of AAC devices imposes significant learning costs since individuals must learn not only how to operate a computer-based device but also how to use the technology to successfully participate in communicative interactions (Kent-Walsh and Mcnaughton 2005; Light and Mcnaughton 2015; Mcnaughton et al. 2008). Moreover, the literature reinforces the importance of ensuring that both children and their families are active members of the intervention team, alongside therapists and teachers (Bailey et al. 2006; Brotherson et al. 1996; Mandak et al. 2017; O'Neill et al. 2017; Parette et al. 2000).

In light of the above, this study considers the research problem of how to promote assistive technology (AT) use by children with cognitive and/or motor limitations in the home setting. This study aims to analyse children's performance and also their interaction

with their caregiver(s) to improve practices regarding the use of AT, thus contributing to reducing the problem of AT abandonment at home. In this way, we aim to describe caregivers' interactions, abilities and training needs, thereby answering one of our main research questions: what are the training needs of informal caregivers to support the use of high-tech devices for AAC?

Many caregivers still have little or no idea of what AAC options are available for the children in their care (Williams et al. 2008), despite increasing recognition of the importance of early intervention with AAC (O'Neill et al. 2017; Romski et al. 2011). Furthermore, it has also been shown that having only one technique, one communication partner, or one environment in which the AAC system can be used is insufficient (Williams et al. 2008). AAC users must develop sufficient skills to meet the functional communicative demands of real-world interactions with various partners in their natural environment (Holyfield et al. 2019; Light and Mcnaughton 2015). The lack of attention towards communication partners in AAC intervention is especially worrying, given the convincing evidence establishing the efficiency of partner instruction and its positive impact on the communication of individuals with complex communication needs (Borgestig et al. 2016; Kent-Walsh and Mcnaughton 2005; Romski et al. 2011). Furthermore, AAC systems must be customised to meet users' needs, in terms of ease of use and learning, and each device must fit the age and personality of its user (Mcnaughton et al. 2008; Williams et al. 2008). Williams et al. (2008) also emphasise the ethical responsibility of involving individuals in decision-making regarding every aspect of AAC research, development, and intervention. However, individuals with complex communication needs often have limited information and restricted access to training. Furthermore, they are often restricted in their communication partners and opportunities and are, thus, hindered from fully participating in society (Williams et al. 2008). In this context, gaze-based assistive technology, for instance, has the potential to provide opportunities for communication, interaction and activities to children affected by severe impairments that inhibit the use of limb or head movements (Borgestig et al. 2016; Holmqvist et al. 2017).

As adversity often does not appear in a single form, due to the COVID-19 pandemic, 2020 and the subsequent years were particularly difficult for children with disabilities. Distance learning and communication, whether due to scarce resources, novelty, isolation, or little or no digital literacy, made interacting and learning for most students challenging enough. For those with disabilities and also for their carers, it was still more difficult, even overwhelming. To everyone's difficulties was added the despair of their already atypical ways of functioning, which were often dependent on assistive technologies and augmentative communication systems. Regarding this issue, Puli et al. (2021) explored the experiences and impacts of the COVID-19 pandemic on AT providers. They stressed that the public health response to COVID-19 further exposed and exacerbated existing weaknesses in AT systems and services and posed new challenges. The authors also emphasized the need for AT providers to be better prepared and supported in the future, although barriers to access to AT resources existed long before COVID-19.

Therrien et al. (2022) and Biggs et al. (2022) sought to understand the impact of COVID-19 on children, families, service providers and the delivery of AAC-related communication services. They believed that the global pandemic instigated a dramatic change in service delivery for students with communication disorders, including students with complex communication needs who used aided augmentative and alternative communication (AAC), such as speech-generating devices. From the perspective of the parents and speech-language pathologists who participated in the study conducted by Therrien et al. (2022), COVID-19 will have lasting impacts on the lives of children with complex communication needs.

Therefore, recent research highlights the essential role of the family and access to quality AAC services for children during the pandemic and onwards (Puli et al. 2021; Therrien et al. 2022; Biggs et al. 2022). According to these studies, it is believed that characterisation of the family environment and training tailored to the needs and skills

of the users of augmentative communication systems and their carers in a (family) care context is an option that should be considered in order to bridge the gaps often overlooked by conventional methods.

Through an exploratory descriptive study with a limited number of participants, it is possible to find details that are often ignored and thus deepen our knowledge of the area under study. What is lost in length, and consequently in generalisation, is gained in the depth with which the theme is addressed, allowing us to discern details that should be considered and that are transferable to similar situations, in order to meet the needs encountered and those that may occur in various family environments.

2. Materials and Methods

2.1. Participants

A description of each participant's age, gender, health condition, school level, relationship to caregiver and the device used is shown in Table 1. The inclusion criteria for the participating children were: (i) under 12 years old; (ii) the presence of cognitive and/or motor limitations; (iii) the use of high-tech AAC communication devices in the home setting.

Table 1. Characterisation of the participants and devices used.

	Participant A	Participant B	Participant C
Gender of the child	female	male	male
Age/school level of the child	4 years old/preschool	8 years old/grammar school	11 years old/lower secondary
Caregiver	Mother	Mother	Father
Health condition	Cerebral palsy (tetraparesia)		
AT devices used	PC + software Grid 3 + Tobii PC Eye mini		

The data were collected in the participants' home settings, with the written consent of their caregivers. The three children participating in this study use a personal computer with Smartbox® Grid 3, a comprehensive AAC software that enables alternative communication, environment control and computer access. This software can be used with every type of alternative access, from eye-gaze and switch technology to touch and pointing devices, making it suitable for people with cognitive and/or motor disabilities. Since the participants in this study have severe motor limitations, they use eye-gaze technology to access the computer—the Tobii® PC Eye Mini. This is a small eye tracker that replaces the standard mouse, meaning that a target is selected when the user fixates on it for a certain length of time (Holmqvist et al. 2017).

2.2. Research Design

This exploratory and descriptive study has a qualitative approach intended to explore the characteristics of caregivers' interactions with the children in their care, emphasising their attitudes and perceptions (Amado et al. 2017; Moreira and Caleffe 2008). It aims to obtain a comprehensive and holistic understanding of the situation's historical, socioeconomic and cultural background and to interpret it through an inferential and inductive process (Amado et al. 2017). Thus, the objectives of this study are to identify the training needs of informal caregivers, to devise a training programme adjusted to them and, ultimately, to contribute to reducing the abandonment of AT.

This investigation qualifies as action research since, alongside the researcher, the caregivers have a participative role in identifying their training needs and contributing to the development of a training programme adjusted to their circumstances. Three observation sessions were conducted with each participant and their caregiver in the home setting. Ethical principles and requirements were taken into consideration, such as informed con-

sent and confidentiality. Therefore, the participants were informed about the ongoing investigation and were guaranteed confidentiality and anonymity.

2.3. Materials

Task guidelines for 3 twenty-minute observation sessions were planned with each caregiver, considering the pre-existing contents/grids in the participants' computers. For instance, participants A and B had grid sets created by their therapists and their own special education teacher, with vocabulary games, songs, and rhymes. The researcher met with the participants' speech therapists and teachers before the sessions to learn about the specific child's skills and the tasks usually performed at school. Participant C had very few grid sets in place and was not using their device at school when the first and second observation sessions occurred. Moreover, it was not possible to meet their teacher beforehand, so the task guidelines for participant C were defined according to the caregiver's feedback. The action of calibrating the eye-gaze camera was chosen to initiate each session because of its relevance to the children's performance. Gaze calibration is performed by having the user look at a set of on-screen targets before usage. It is essential to obtain reliable results for the specific user during usage (Borgestig et al. 2016; Holmqvist et al. 2017). After each set of sessions, each caregiver was asked to answer a post-observation questionnaire consisting of two parts. The first part included a Likert scale to ascertain the caregiver's opinion of the sessions' duration, relevance, usefulness and contribution. It also included two closed questions to assess the continuity and regularity of AT device use after the sessions. The second part consisted of three open-ended questions to obtain the caregivers' opinions regarding their training needs.

2.4. Procedures

Sessions of participant observation were carried out in the home setting, where the children used the devices to describe the interaction between the child and caregiver and the child's need for assistance in using the device. A structured, systematic observation protocol was followed, task guidelines were predefined, and observation categories were organised according to the research aims, allowing content analysis of the references and extracting numerical data from the observation (Cohen et al. 2003).

The task guidelines for each session were defined with each caregiver, and the sessions were video-recorded to allow later visualisation and detailed written narrative description of the tasks carried out by the child and to ensure the reliability of the observation. The child was present throughout the whole process, so as to become familiar with the researcher and the dynamics of the observation. The researcher had a significant level of involvement since there was interaction with the participants in preparing the task guidelines and giving suggestions to the caregivers during the sessions. The literature on AAC associates several advantages with participant observation, which is considered the best way to obtain deeper, more detailed and concise information. This also provides a valid image of the social reality, which, in this case, is the use of assistive AAC devices in the home (Moreira and Caleffe 2008). Bearing in mind that participant observation may raise data validity issues, it is advisable to have gained previous access to the observation context to interact with participants and gain their trust. In this case, the caregivers had previously been interviewed by the researcher regarding their perception of the child's ability to use the AT device and their own training needs (Almeida et al. 2019a); thus, they promptly accepted the need to carry out these observation sessions in the home.

The video recordings were analysed with the qualitative data processing software, WebQDA. Based on the literature, predefined categories of data content analysis were used, namely, the executive function performance test (EFPT) developed by Baum et al. (2007), which provided a theoretical framework for the categories of analysis regarding the child's independence in fulfilling the tasks that were proposed. The main objective of the EFPT is to determine an individual's ability for independent functioning and the amount of assistance necessary to complete a specific task (Baum et al. 2007).

To analyse the content of the observed data in terms of the need for assistance to complete a task, the subcategories used to analyse the content of the sessions were based on the EFPT system of cues and help, which ranges from no cues required to indirect verbal guidance, gestural guidance, direct verbal assistance, physical assistance and, at the other extreme, performing the step on behalf of the participant.

The cues from the EFPT shown in Table 2 were converted into specific categories of analysis regarding the video-recording content of the observation sessions. Moreover, the analysis of the data that were gathered in the observation sessions resulted in the creation of an additional category of analysis—visual cues—to describe situations when the child is provided with visual support for a written word, picture or object in order to complete the task, or when the caregiver intentionally places the cursor on the icon that the child is supposed to click and select.

Table 2. Subcategories of analysis of the child's independence/need for help.

Description of the Cues and Help from EFPT (Baum et al. 2007)	
No cues required	The participant requires no help or reassurance, does not ask questions for clarification, goes directly to the task and does it.
Indirect verbal guidance	The participant requires verbal prompting, such as an open-ended question or a statement, to help them move on. Indirect verbal guidance should come in the form of a question, not direct instruction.
Gestural guidance	The participant requires gestural prompting. Such gestures should mimic the necessary action to complete the task or make a movement that guides the participant.
Direct verbal assistance	It is necessary to deliver a one-step command so that the participant is cued to take the intended action.
Physical Assistance	The participant is physically assisted with the step, but no one is doing it for him or her.
Act for the Participant	It is necessary to perform the step for the participant.

Likewise, categories regarding the interaction between the caregiver and child, as shown in Table 3, emerged during the content analysis of the data, in an inductive, exploratory process of units of meaning during the search for patterns, consistencies and/or exceptions. It is worth noting that vocalisations coded within the category "request for help" are only those interpreted as clear evidence that the child asked the caregiver for help to fulfil the task, for instance: "The child vocalises/emits a vocalisation". Other references coded as a request for help may be described more explicitly, for example, when the child uses the vocative "Mummy/Daddy", points, or intentionally looks at the caregiver.

Table 3. Subcategories of analysis of the interaction caregiver>child during the sessions.

Category of Analysis: Interaction Caregiver>Child	
Subcategory	Description
Positive reinforcement	Encouragement given by the caregiver to the child for their good performance, in a verbal form (compliment) or non-verbal (a kiss, a hug).
Corrective feedback	Verbal feedback given by the caregiver to the child when they make a mistake.
Incentive to overcome difficulty	Verbal or non-verbal encouragement given by the caregiver to motivate the child to overcome difficulty.
Request for help	The child requests verbal or non-verbal assistance from the caregiver.

The three open questions of the post-observation questionnaire, posed by the researcher in person and the answers audio-recorded with the respondents' consent, were transcribed verbatim and then sent to the respondents for validation. The content of the answers was analysed using the WebQDA software. Repeated readings allowed their codification under the emerged categories from the data, as shown in Table 4.

Table 4. Categorisation of the open-ended questions in the post-observation questionnaire.

Question	Categories	Subcategories
Are there areas where you feel the need to have further training?	Training needs	Setting up software to meet the identified needs Motivating the child to use the device Contribution of these sessions Need for further training
How could the child's communication interactions be more effective?	Ways to promote effective communication interaction	Combining the device with other AAC forms Using practical, lightweight devices Regular use of the device at home Identifying obstacles to effective interaction
Can you handle technical issues, software installation or setting up?	Caregivers' ability to solve technical issues	Autonomy Difficulties Online technical support

3. Results

3.1. Participant A

With caregiver A, some tasks were chosen from the three grid sets of Communication, Music and Games, as depicted in Table 5. The child was initially asked to click on specified photos/songs/games but did so only after the caregiver insisted. Therefore, in the subsequent sessions, they were granted more freedom to select their favourite songs, which proved to be a successful strategy. Likewise, associating particular body parts with photographs of their clothes appealed to the child, as evidenced by their smiling. Again, the data seem to point to the importance of incorporating the child's own experiences, interests and preferences (Mcnaughton et al. 2008; Williams et al. 2008).

Regarding the category of analysis known as "independence of the child/need for help", the second session not only stands out for its longer duration (thirty-seven minutes), on the one hand, but also for its greater number of references to actions performed without assistance, on the other. In some situations, these actions (opening grids, selecting symbols and returning) were fulfilled after several attempts, as illustrated by references such as: "Finally, the child selects the song requested". Moreover, in all sessions, there are references to direct verbal assistance. Many of these direct verbal commands are complemented with gestural guidance, for instance: "The caregiver points to the school activities grid set and adds: 'Here, this one!'" Indeed, even though some indirect verbal guidance is provided (" . . . reads the options and says they need to answer in the symbols below"), caregiver A uses mostly gestural guidance, accompanying their instructions with gestures, mainly to point out the grid sets or the icons. For this reason, many references are coded in all sessions, as shown in Figure 1.

Table 5. Tasks guidelines—Participant A.

|	Session 1	Session 2	Session 3
Date	11 June 2019	25 June 2019	2 July 2019
Duration	~22 min	~37 min	~21 min
Initiation	Calibrating the eye-gaze camera		
Task 1	Access the Communication grid set	Access the Communication grid set	Access the Communication grid set
Task 2	Identify the photos of some relatives	Answer the questions: How are you? Do you like working?	Identify the photos of some classmates, teachers and school staff
Task 3	Choose an activity: listen to music or play with a doll	Identify the photos of some classmates, teachers and school staff.	Access the Music grid set
Task 4	Access the Music grid set	Access the Music grid set	Select a song and play it
Task 5	Select a specific song and play it	Select a song and play it	Access the School Activities grid set
Task 6	Access the Games grid set	Access the School Activities grid set	Select a specific activity and associate jobs with tools
Task 7	Select a specific game and play it	Select the Clothing activity and associate clothes with parts of the body	
Task 8	Access the rhymes grid set	Access the Colours game	
Task 9	Listen to a specific rhyme	Identify the colour of an object or fruit	
Finalise	Go back to the main menu		
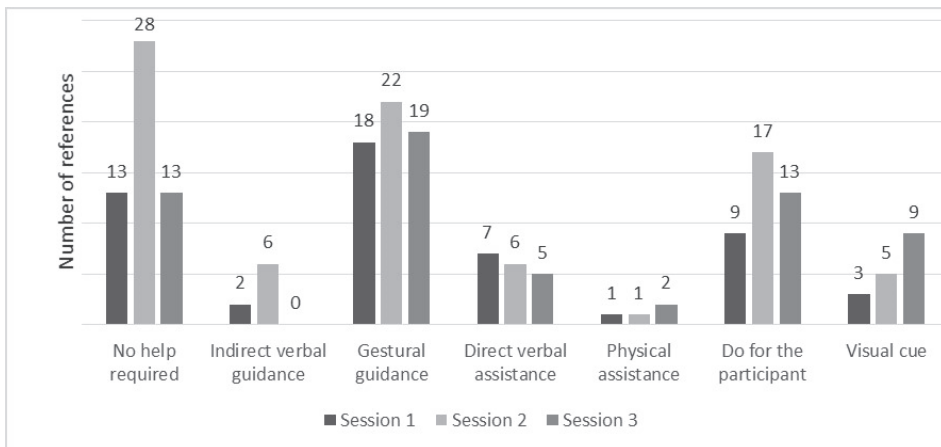
Figure 1. Participant A—References coded in the subcategories of analysis of the category "Independence of the child/need for help".

It is worth mentioning that the references coded as visual cues shown to participant A refer to those situations where caregiver A placed the cursor on the desired icon/symbol, e.g., "the caregiver places the cursor on the Music icon". This occurrence was more frequent in the third session, as seen in Figure 1. It should be noted that there are very few references to physical assistance throughout the sessions, referring only to those situations when the caregiver tries to improve the child's posture on the chair, to overcome difficulty in clicking on the icons ("The caregiver straightens up the child's upper body and head"). However, in all sessions, there was a significant number of references to actions performed by the caregiver on behalf of the child, such as clicking to go back to a previous item and opening and closing grid sets and folders.

Concerning the interaction between caregiver and participant, Figure 2 shows that references coded as positive reinforcement are present in all sessions, both in verbal and gestural form, but were more frequent in the first session. Some examples are: "The caregiver says 'Good' and gestures OK"; "That's right!"; "Very good!" In turn, there are also references to the child's responding with happy vocalisations and smiles. Thus, these caregivers' positive reinforcement produced joyful, positive responses, and it can be inferred that this fosters children's self-fulfilment and motivation.
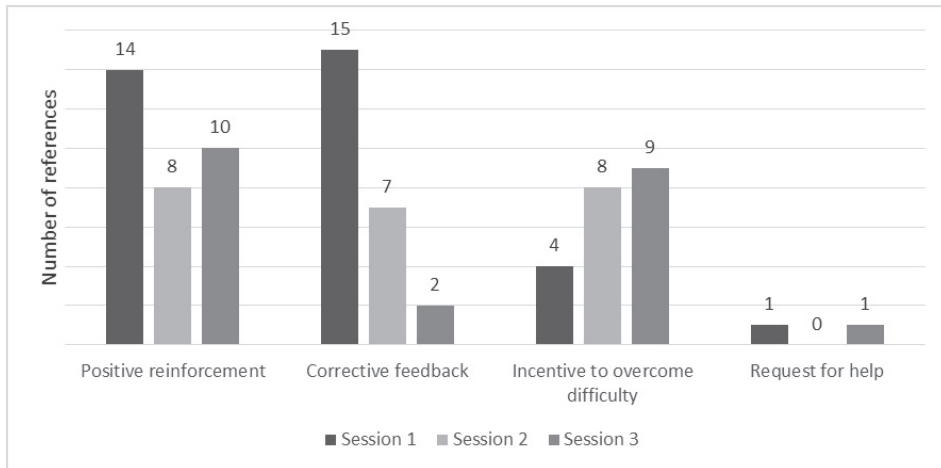

Figure 2. Participant A—References coded in the subcategories of analysis of the category "Interaction between caregiver and child".

Similarly, the number of references to corrective feedback is more frequent in the first session, as observed in Figure 2. Caregiver A provides feedback to direct the child towards the intended task: "The mother says she hasn't asked for that one and points at the desired icon". There are also references to corrective feedback intended to confirm whether the child intentionally selected an item; for instance: "The child selects pause several times and the caregiver asks if the child really doesn't want to play anymore".

Despite the child's difficulty in clicking, only two references of requests for help can be found throughout the sessions. In the first session, "The child sighs with effort", then in the third session, "The child produces vocal sounds/vocalisations denoting effort in clicking on the symbols".

Faced with the child's difficulty, caregiver A also tried to increase the participant's motivation, with references found mostly in the second and third sessions, as shown in Figure 2, such as: "The caregiver encourages trying again and not giving up". Some references also contain gestural guidance, such as: "Come on, click, see...? Here, here"; "The caregiver points and repeats: Come on, click here, go on!" The child reacts positively to that incentive, emitting joyful vocalisations.

Regarding the duration of the interaction, Table 5 shows that sessions 1 and 3 were within the expected time (twenty minutes), although a reduced number of tasks may have contributed to this shortened duration in session 3. On the other hand, in session 2, the interaction time was beyond the expected duration, despite many references to the category "No help required", compared to the other sessions. To sum up, the participant's data seem to point to an uneven performance in terms of independence throughout the sessions, even though the child willingly attempted to fulfil all tasks. Interaction with caregiver A in the subcategories of positive reinforcement, corrective feedback and incentives to overcome difficulty were referred to in all sessions, but the data seem to point to the child's

limitations in asking for help with either verbal or non-verbal signals (gestures, glances, vocalisations, etc.).

3.2. Participant B

Participant B had been using Grid 3 and the eye-gaze system for over a year. Since the child attends a school following the standard elementary school curriculum, the following tasks were proposed: writing words and short sentences, internet research, and Portuguese and Maths homework exercises (see Table 6).

Table 6. Tasks guidelines—Participant B.

	Session 1	Session 2	Session 3
Date	26 September 2019	9 October 2019	14 November 2019
Duration	~36 min	~40 min	~40 min
Initiation		Calibrating the eye-gaze camera	
Task 1	Search YouTube for a song that is of interest to the child	Write their name and surname	Write three sentences about their daily routine
Task 2	Write some sentences about the child's birthday	Write the date	Play a game: four-in-a-row
Task 3	Choose and play a game of interest to the child	Search the internet for information about their hometown	Write the parents' names
Task 4		Write a sentence about the school	Perform Maths homework task: completing a diagram
Task 5		Perform some Portuguese homework tasks: writing short sentences	
Finalise		Go back to the main menu	

Regarding the participant's independence, the analysis of Figure 3 shows a large number of references to the subcategory "No help required" throughout the sessions. These relate to diverse actions: "The child successfully calibrates after the first attempt"; "Clicks to open the Word processor"; "Adjusts the volume"; "Reopens the Grid and accesses the games"; "Selects the words in the text predictor"; "Scrolls down".
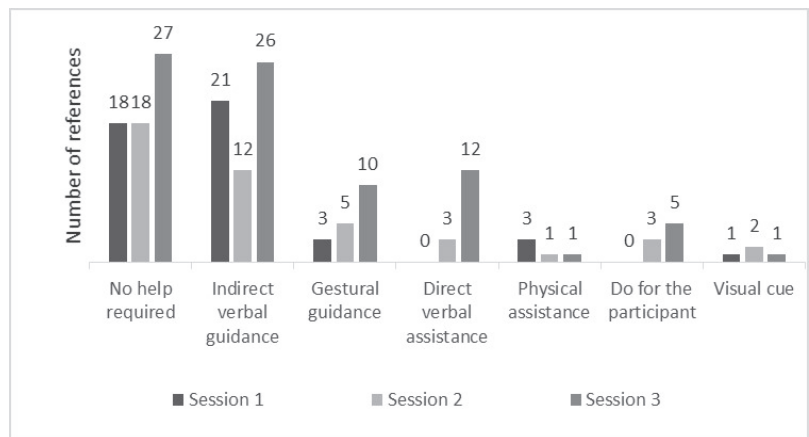

Figure 3. Participant B—References coded in the subcategories of analysis belonging to the category: "Independence of the child/need for help".

Nevertheless, Figure 3 shows an equally high number of references to indirect verbal guidance from caregiver B, for instance, in the internet research tasks: "Caregiver says which icon to click on the toolbar to open Google". Most references coded as indirect verbal guidance are related to writing tasks, comprising name, date, birthday and school: "The caregiver dictates the graphemes"; "The caregiver repeats the syllables". Given the child's difficulty in writing some words, such as their hometown and the months, visual cues were shown: a piece of paper with their written form.

Having noticed this constant need for help to fulfil writing tasks, resulting in delays and weariness, the researcher suggested using text prediction at the end of the second session, as this strategy would turn writing into a faster and easier process for both the child and the caregiver. It is worth noting that participant B reached for the prediction bar in the third session, as shown in these references: "The caregiver starts dictating the next word and the child selects it from the prediction bar". Caregiver B sometimes provides indications to that effect, as in: "The caregiver adds that it is already in the prediction bar and the child clicks on it". Indeed, despite several references to actions performed with no help required (opening the Grid, selecting symbols and clicking to open folders), there are also references to the indirect verbal guidance provided by caregiver B, dictating the sentences and orienting the child towards the right symbols.

Due to delays in the writing tasks, the interaction time in the sessions was beyond what had been expected, due to the child's need for verbal, gestural and even physical assistance. For instance: "Caregiver B comments that they aren't reaching the top of the screen and adjusts the child's position on the chair".

Participant B's slowness in using the writing board may be responsible for the extended time taken in performing both the writing tasks and the Maths task (completing a diagram) since the child needed verbal and gestural guidance: "The child hesitates and the caregiver points to the graphemes and numbers that can be used". Caregiver B even reached for a visual cue to help complete the diagram ("Caregiver B shows the child an egg package to visualise half a dozen eggs in it"). Despite the predominance of verbal guidance, Figure 3 also shows some references to actions performed by the caregiver on the child's behalf, for instance: "The child tries to place the sensor twice and the caregiver ends up doing it".

Regarding the interaction between the caregiver and child, Figure 4 shows an increasing number of references to positive reinforcement in the second and third sessions, both in verbal and non-verbal forms. For instance: "Caregiver B smiles"; "Comments: 'That's it!'". Nevertheless, it is also noticeable that there are references to corrective feedback throughout all sessions, particularly in the sentence writing tasks, where the expected performance time was exceeded. There are also references coded as incentives to overcome difficulty, such as: "'Come on'"; "'Once more, there you go'".

In summary, this observation data indicates a relatively steady performance in carrying out the tasks throughout the sessions, adding to the child's high levels of motivation regarding the device, allowing them access to the regular curriculum and full participation in school classes. Despite references to corrective feedback and the incentive to overcome difficulties throughout the sessions, Figure 4 shows few references to the subcategory of requests for help. It is worth mentioning that in the first and second sessions, there are very few references regarding vocalisations interpreted as a request for help, while the references coded in the third session occur during the writing task, the performance time of which was exceeded, as mentioned above.
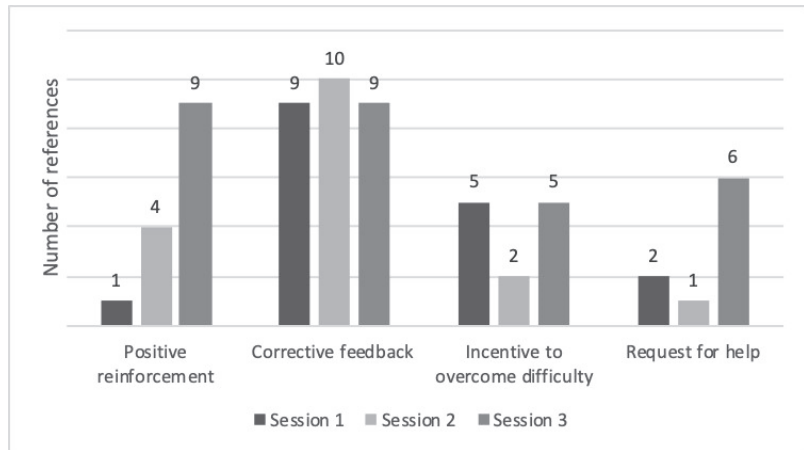
Figure 4. Participant B—References coded in the subcategories of analysis to the category "Interaction between caregiver and child".

3.3. Participant C

Since participant C had used Grid 3 and the eye camera gaze equipment for only a few months and the parents had reported rarely using the devices at home, simple tasks were chosen, such as writing words and short sentences and playing games, as described in Table 7.

Table 7. Tasks guidelines—Participant C.

	Session 1	Session 2	Session 3
Date	21 October 2019	4 November 2019	31 January 2020
Duration	~21min	~20 min	~16 min
Initiation		Calibrating the eye-gaze camera	
Task 1	Write their name and surname	Write their name and surname	Write their name and surname
Task 2	Write the date	Write the date	Write the date
Task 3	Choose and play a game of interest to the child	Watch a presentation about a school field trip	Write the name of their hometown
Task 4		Choose and play a game of interest to the child	Write a sentence about the school
Task 5			Choose and play a game of interest to the child
Finalise		Go back to the main menu	

Concerning the category of analysis named "Independence of the child/need for help", Figure 5 shows that throughout the sessions there was a growing number of references coded as "No help required," related to diverse tasks such as calibrating the camera, clicking on the icons, deleting, and selecting the relevant word in the text prediction bar. It is worth noting that, despite successfully calibrating the camera on their first attempt, the child struggled to access some icons throughout the sessions.
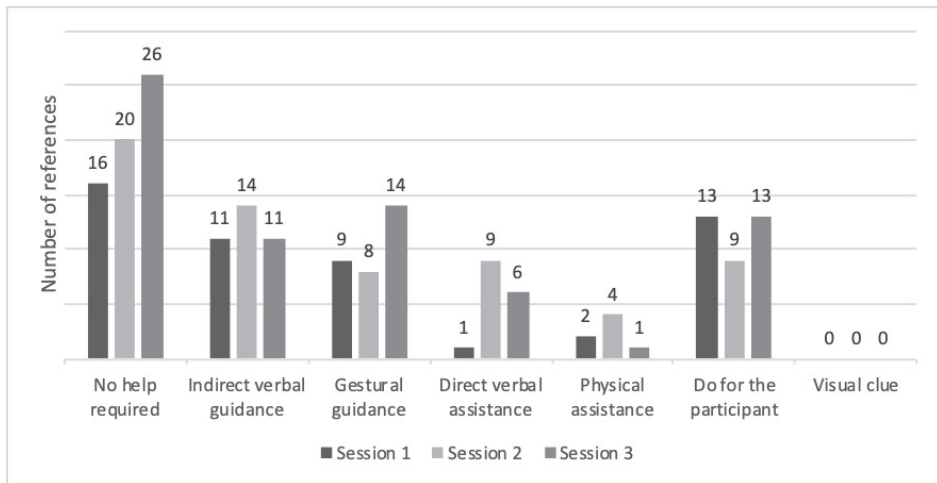
Figure 5. Participant C—References coded in the subcategories of analysis of the category "Independence of the child/need for help".

Figure 5 also shows an equally high number of references in all sessions to the indirect verbal guidance provided by the caregiver. For example, to carry out writing tasks—their name and the date—that were common to the three sessions, there followed: "Caregiver C prompts to open the writing board on the top"; "Suggests using the words in the prediction bar". The child's difficulties in writing the name and date are evidenced in references coded as verbal guidance, gestural guidance and even the caregiver's physical assistance. Caregiver C felt the need to provide physical assistance to the child ("The caregiver straightens the child's head"; "The caregiver repositions the child on the chair"), to deal with the child's efforts to use the eye-gaze camera. Figure 5 shows that there were no references to visual cues throughout the sessions with participant C.

In the first and second sessions, two weeks apart, despite successful calibration, the child revealed some difficulty in using the equipment (an eye-gaze camera and touch-screen PC with an articulated mounting system), which, on both occasions, was set on a wooden sitting-room chair. A few days later, the parents were asked to take the equipment to the child's school for an intervention by a technician, who set it on a chair equipped with specific ergonomic features to fit it correctly. The caregiver reported that the equipment would have to be used only with that ergonomic chair, but its large dimensions did not fit the car that transports the child to school, making it impossible to take the device home. Therefore, the third observation session was only conducted almost three months later since it was not possible to take the equipment home, not even during the Christmas school holidays. As a result of the researcher's insistence, the caregiver transported the chair, the mounting system and the computer and set them up just before the third session.

As in the previous sessions, the child was asked to calibrate the camera, which was successfully achieved on the first attempt. However, the data indicated that between the second and third sessions, the child's skill was not evolving in terms of using the eye-gaze camera. In all sessions, besides references to verbal and gestural guidance, there is a large number of references to actions taken by the caregiver on the child's behalf, such as clicking to open the programme, clicking on the username, clicking on the icons, deleting, and going back to the main menu. It is also worth mentioning that in the second and third sessions, there are several references to direct verbal assistance. On the other hand, Figure 6 shows a similar number of requests for help in all sessions through vocalisations or moaning: "The child vocalises while struggling to select the icon"; "The child sighs and vocalises". Moreover, there are references to corrective feedback in all sessions, but the writing tasks

in the first session stand out as having the most references. Some references illustrate the feedback provided by the caregiver: "The caregiver comments: 'No! Go further left! Come on, delete it'"; "'The caregiver comments, smiling: 'Is that your name? Not quite right. Come on, delete that'".
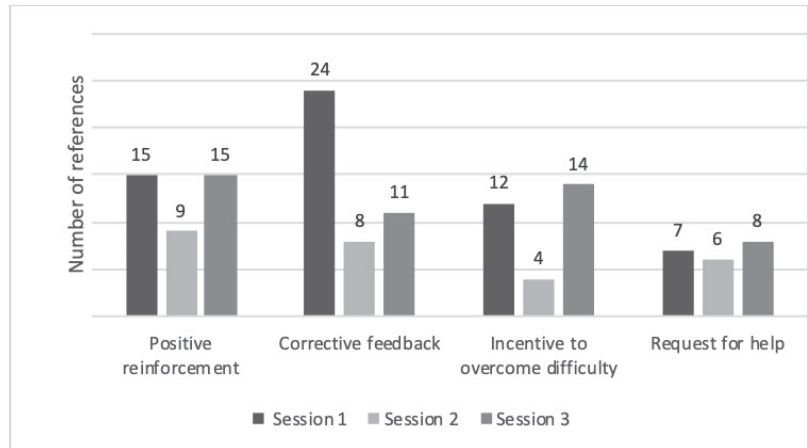

Figure 6. Participant C—References coded in the subcategories of analysis of the category "Interaction between caregiver and child".

Still, regarding the interaction between caregiver and child, it should be noted that the child willingly collaborated in all sessions. There are references to the positive verbal reinforcement provided by the caregiver in all sessions, such as: "'Yes, Good! Well done!'"; "'Good, now you can go on'"; "'Ah! Finally!'"; "'And that's it'"; "'Look! Good! Now you made it!'". References coded as positive reinforcement are more frequent in the first and third sessions, as well as references to incentives to overcome difficulty, for instance: "'Go on'"; "'Once more, come on"; "'Come on, you were almost there'". This participant's difficulties in using the eye-gaze device slowed the performance time, resulting in weariness and demotivation. Nevertheless, participant C willingly attempted to complete all the proposed tasks and managed to perform quite a few tasks, considering the number of references to the subcategory "No help required". It should be noted that the task guidelines for participant C were adjusted to the limitations derived from the fact that the equipment was away from home for two months between the second and third sessions.

3.4. Post-Observation Questionnaire

A questionnaire containing three open-ended questions (Table 4) was given to the caregivers a month after the sessions. The data gathered show that caregivers A and B mentioned training needs related to software set up to adapt to the child's needs, in references such as: "'Yes, yes, of course. Training so that we could change the cells.'" [Caregiver A]; "In the future, I may need training on the Grid programme. I would like to know how to create grid sets." [Caregiver B]. There is a reference to the subcategory "Motivating the child to use the device", as Caregiver A mentions that "it depends on their willingness to collaborate with us or not.", reflecting this caregiver's need to learn how to motivate the child and raise awareness to the advantages of the AT device.

Regarding the subcategory of analysis "Contribution of the sessions to address needs", caregiver C mentions that: "The observation sessions were good because I got more familiar with the equipment", but also adds: "I think I won't need more training because the computer is going to be used at school" and proceeds to justify that: "'At home, we understand what my son means, in part we do'" [Caregiver C]. This caregiver reported that after the observation sessions, the child had not used the computer at home ever again and

stressed: "At school, yes, it will be better to use the computer there" adding that the child "will even have the support of two therapists who will work on the computer at school" [Caregiver C].

Within the second category of analysis ("Ways to promote effective communication interaction"), caregivers were questioned about what could be done to foster the child's communicative interactions. Caregiver B stressed that the child "should have more speech therapy to promote such interaction" [Caregiver B]. These data are in line with the references coded as obstacles to the child's effective interaction, namely, a shortage of specialised resources, both at school and from the Cerebral Palsy Association. For instance: "We are waiting for the Cerebral Palsy Association to build the communication board (. . .) I don't know if it will take one, two or three weeks . . . " [Caregiver A]. "At the Cerebral Palsy Association, they only have speech therapy for one hour every two weeks, which is too little" [Caregiver B]. Furthermore, caregiver C refers to architectural barriers: "At first, my child used to attend church classes, but due to difficulty to access the church class floor, their mother now teaches the catechism at home". Another aspect relates to the need to use practical, lightweight devices, the portability of which is likely to make interactions easier. This aspect is justified by caregiver C in the reference: "Because they can't walk around carrying the computer to communicate with other people". Portability is also the reason indicated by this caregiver for not using the equipment at home: "The chair does not fit in the car that daily transports the child to and from school (. . .) I would have to go there myself to pick it up and carry the device home, which is very difficult with my busy working schedule" [Caregiver C]. According to this caregiver, that was a major obstacle to using the device at home during the Christmas and Carnival school holidays.

All respondents expressed their willingness to combine the device with other ways of AAC communication, such as boards: "As I don't have so much possibility to work at the computer, the paper communication board was designed for me" [Caregiver A]; "To communicate with outsiders, a board with pictures and symbols would be useful" [Caregiver C]. Caregiver B considered that it would be effective to use non-verbal language in some contexts, as evidenced in the references: "My child attends church classes. The catechist poses questions which are answered with vocalisations similar to the intended word and are usually understood" [Caregiver B]; "Classmates play and interact through sounds and gestures because my child does not carry the computer to the school playground" [Caregiver B]. A reference from caregiver B also reinforces the need for regular use of the device when the child is at home.

Regarding the category of analysis "Caregiver's skills to solve technical problems", there are two references coded in the "Autonomy" subcategory: "I can do the essential" [Caregiver B]; "One programme or other I could install. I could manage to change the Grid definitions" [Caregiver C]. Nevertheless, a reference from the same caregiver was coded in the subcategory "Difficulties": "It is more complicated to solve technical matters (. . .) I am not very familiar with that" [Caregiver C]. To try and solve these problems, users of Grid 3 have mentioned benefiting from online technical support, both by the Cerebral Palsy Association and by a training team: "We have a helpline, and I call whenever I need (. . .) there is a password, and they enter our computer and do whatever is needed." [Caregiver A]; "To prepare their settings for the final evaluation tests, I will need some help. An Anditec trainer can perform online access and make those changes" [Caregiver B]. Anditec is a company based in Portugal, which sells assistive technology equipment and provides training and assistance in augmentative communication, digital accessibility and mobility.

To sum up, from the respondents' answers, it can be inferred that using the Grid 3 programme, along with the issues it raises, requires technical support skills and specialised training. This data-gathering instrument has provided significant contributions to the diagnosis of training needs, limitations and the resources available to the caregivers of children who use Grid 3 when combined with eye-gaze technology.

4. Discussion

The interaction between caregiver and child was a subject of analysis both in these observation sessions and in interviews with caregivers that were previously conducted by Almeida et al. (2019a). All respondents mentioned the home as being their main interaction context with the children, mostly during daily life activities and for homework tasks at the end of the day (Almeida et al. 2019a). Therefore, these observation sessions were carried out at home and aimed at analysing the caregiver's interaction with the child during the tasks mediated by the AT device. The importance of positive reinforcement to foster the child's motivation to overcome difficulties is noteworthy, along with corrective feedback. Indeed, it was found that all caregivers provided positive reinforcement with either words, clapping, gesturing or kisses. Applied behaviour analysis for verbal behaviour identifies the importance of reliable, immediate and high-quality responses for building new AAC skills (Holyfield et al. 2019; Johnston et al. 2004). Therefore, according to Johnston et al. (2004), besides providing a socially responsive environment, communication partners should provide immediate and high-quality reinforcement, thereby contributing to ensuring that a learner's AAC system is efficient. At the same time, all caregivers provided corrective feedback to direct the child to the intended task or to instruct them to correct their errors by themselves and be resilient. Resilience is a psychological factor that influences whether or not the individual perseveres with communication despite the many challenges and potential failures encountered (Light and Mcnaughton 2014). Furthermore, frequent references to the subcategory "Incentive to overcome difficulty" reflect these caregivers' strong desire to motivate the children.

Motivation is also considered by Light and Mcnaughton (2014) to be another important factor impacting communicative competence in individuals with complex communication needs. Since communication via AAC is a complex process with significant motor, cognitive, sensory, and linguistic demands, individuals will be more likely to tackle the demands involved if the motivation to communicate is high. On the other hand, when motivation is low, they may be overwhelmed by these demands and may miss many communication opportunities (Light and Mcnaughton 2014).

Throughout the session, all participants requested the help of their caregivers through vocalisations, glances and gestures. Taking into account participants B and C's constant need for help to use the writing board, which resulted in delays and tiredness, the fact that these two children were already familiar with the use of the text predictor suggests a positive and useful strategy to make writing quicker and more efficient.

The data gathered with these observation sessions meets a need, widely mentioned in the literature, to promote technology-mediated communicative interaction in all contexts of the life of the child, with a particular focus on the home setting (Brotherson et al. 1996; O'Neill et al. 2017). Moreover, an effective augmentative communication system requires a commitment from all social partners, including family members. A lack of regular use of the AT device at home also prevents the development of skills (Bailey et al. 2006; Parette et al. 2000).

Indeed, it was observed that even though the children carried out many actions without requiring any help, subcategories for indirect verbal guidance, gestural guidance and direct verbal assistance were referred to in all sessions. It was often observed that an order or direct verbal assistance was supplemented by gestural guidance. Caregivers verbalise as the child performs the task, to keep them focused and motivated. Since individuals with complex communication needs require numerous positive and successful communication experiences to build their motivation (Light and Mcnaughton 2014), the caregivers' drive to foster the participants' interest and focus on the task plays an important role.

On the other hand, according to the type of task proposed in each session, the children may have needed more verbal and gestural guidance. Despite this need for assistance, the data gathered seem to show that children participating in the study reveal initiative regarding some actions. The few references to physical assistance refer to situations where the children had difficulty selecting the icons, and caregivers tried to improve their posture

to facilitate their performance. Many references stand out in the subcategory reporting on actions performed by the caregiver on behalf of the participant, which may be derived either from the participant's difficulty in understanding the caregiver's instructions or from limitations calibrating the eye-gaze camera.

The general opinion of the focus group conducted by Almeida et al. (2019b) was that teachers should not be the only ones to be trained in the use of AT devices. Likewise, all respondents in the study by Almeida et al. (2019a) agreed that caregivers should give continuity to the training at home. The main reason for suggesting this is the need to involve and assign responsibility to everyone intervening on the child's behalf (teachers, therapists, relatives, tutors, etc.). The need to generalise the use of the device to all the life contexts of the child was also pointed out by the focus group, not only due to the advantages of using the technology both at school and/or in the context of therapies but also to embed their use into the daily routines at home. Furthermore, the study's respondents to the interview also stressed that using the device at home increased the child's motivation and awareness of the advantages of its use (Almeida et al. 2019a).

However, the data gathered in the post-observation questionnaire referenced caregiver C, who deflected the responsibility of using the device at home, arguing that it was meant to be used at school by the teachers and therapists. These data are in line with the findings of previous studies focusing on the reasons behind the abandonment or discontinuity of use of the AT device: lack of material and technical conditions; lack of time; lack of articulation with professionals; absence of the perception of the need to use the AT device (Almeida et al. 2019a, 2019b). This unawareness may refer to the child's perception or that of the caregivers. For instance, caregiver C argued that they understood their child's non-verbal language and could manage without the AAC device.

Similarly, the subcategory "lack of awareness of the need to use AT" is the most salient factor in the data from the interviews conducted by Almeida et al. (2019a). One possible reason for the limited use of an AAC system may involve the device's efficiency compared with the efficiency of other competing behaviours, such as gesturing, facial expressions or vocalising. The option that results in the greatest reinforcement value for the least work is likely to be the one that is most frequently used (Johnston et al. 2004). Therefore, it is important to model the use of AAC within the interaction context, which can increase the likelihood that beginning communicators will use the AAC technology successfully during the interaction (Holyfield et al. 2019).

The literature suggests that gaze-controlled technology can provide children who have severe multiple disabilities with new opportunities to communicate, interact, and perform activities independently (Borgestig et al. 2016; Holmqvist et al. 2017). Holmqvist et al. (2017) showed gains for the children regarding empowerment, social interaction, learning opportunities and efficient computer use. Time spent, expert support, collaboration, and enthralling content were considered prerequisites to making the technology useful and sustainable.

Recruiting participants in the authors' geographical area proved difficult since few children met the inclusion criteria for using these high-tech devices in the home setting with their caregivers. The fact that only three pairs of participants (caregiver and child) were observed might be considered insufficient to generalise the results or to replicate such a study. Indeed, the data collected through observation depend greatly on the researcher's interpretation and are specific to a place and time (Moreira and Caleffe 2008). Nevertheless, having a sample of children attending different school levels allowed us to design individual task guidelines for each and achieve a deeper analysis of the data gathered.

Despite observing only a small number of participants, relevant data were gathered, and a deep content analysis was conducted. The data regarding the child's need for help/independence in fulfilling tasks were interpreted according to the predefined categories of analysis. However, the time intervals between the three observed sessions were too short, considering the findings from similar studies. For instance, Borgestig et al. (2016) examined changes in eye-gaze performance in children with severe physical impairments,

without speaking ability, using gaze-based AT. Their findings showed that the children improved in time on task after 5 months and became more accurate in selecting targets after 15–20 months. It indicates that these children could improve eye-gaze performance, but they need long-term practice to acquire the skills needed to develop fast and accurate performance (Borgestig et al. 2016). Therefore, future research should be conducted on a long-term basis to evaluate the development of fast and accurate eye-gaze performance.

5. Conclusions

Assistive technologies are likely to promote communication, autonomy and the inclusion of children with cognitive and/or motor disabilities. It opens a wide range of opportunities for learning and participating in all contexts of life, as long as the caregivers have an active role in implementing the AAC devices and promoting their regular use in the home setting. This research, in particular, sought to study children's performance and their interactions with caregivers. To accomplish this, we conducted observation sessions in the participants' homes, video-recorded them while carrying out predefined tasks with their caregivers, and analysed the audio-visual data gathered through qualitative data analysis software. The data seem to demonstrate the importance of the interaction between the caregiver and the child to fulfil the tasks and improve the child's performance, hence emphasising the need to extend the use of these devices to all contexts of the child's life and significant activities. Therefore, professionals should be sensitive to the specific needs of each individual and their family (Mcnaughton et al. 2008). Aligned with this thought, Williams et al. (2008) remarked that the failure to provide appropriate AAC technology, strategies and services means a loss of opportunities for the individual and for society.

This study, taking a qualitative approach, using a limited number of individuals, allowed us to deepen the research and elaborate on this idiosyncratic problem. However, a more extensive survey of the needs of the targeted users and their families is considered useful, in order to scrutinise some of the aspects that should also be targeted in their functionality.

Continued research, education and advocacy work are needed to ensure that all individuals and their caregivers have access to the appropriate technology and support (Williams et al. 2008) to develop their operational, linguistic, social and strategic competence (Mcnaughton et al. 2008).

Author Contributions: Conceptualization, I.A., A.M. and J.R.; methodology, I.A., A.M. and J.R.; validation, A.M. and J.R.; data collection, I.A. and A.M.; formal analysis, I.A., A.M. and J.R.; investigation, I.A., A.M. and J.R.; writing—original draft preparation, I.A.; writing—review and editing, I.A., A.M. and J.R.; supervision, A.M. and J.R. All authors have read and agreed to the published version of the manuscript.

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki and approved by the ethics and deontology committee of the University of Aveiro (Opinion No. 05-CED/2019 in a plenary meeting on 3 April 2019), as well as the free and informed consent of the participants, including consent regarding the use of recording equipment.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: All data generated or analysed during the current study are included in this published article.

Conflicts of Interest: The authors declare no conflict of interest.

References

Almeida, Ivone, Jaime Ribeiro, and António Moreira. 2019a. Assistive technologies for children with cognitive and/or motor disabilities: Interviews as a means to diagnose the training needs of informal caregivers. *Disability and Rehabilitation: Assistive Technology* 16: 340–49. [CrossRef]

Almeida, Ivone, Jaime Ribeiro, and António Moreira. 2019b. Assistive technology for children with motor and/or cognitive disabilities: A diagnosis of the training needs of informal caregivers. Paper presented at the MIPRO 42nd International Convention on Information and Communication Technology, Electronics and Microelectronics, Opatija, Croatia, May 20–24; pp. 811–16. [CrossRef]

Amado, João, António Pedro Costa, and Nilma Crusoé. 2017. A técnica da análise de conteúdo. In *Manual de Investigação Qualitativa em Educação*, 3rd ed. Edited by João Amado. Coimbra: Imprensa da Universidade de Coimbra, pp. 303–52.

Bailey, Rita, Howard P. Parette Jr., Julia B. Stoner, Maureen E. Angell, and Kathleen Carroll. 2006. Family members' perceptions of augmentative and alternative communication device use. *Language, Speech and Hearing Services in Schools* 37: 50–60. [CrossRef] [PubMed]

Baum, Carolyn, Tracy Morrison, Michelle Hahn, and Dorothy F. Edwards. 2007. *Test Protocol Booklet. Executive Function Performance Test.* Program in Occupational Therapy. St. Louis: Washington University School of Medicine.

Beukelman, David. 1991. Magic and cost of communicative competence. *Augmentative and Alternative Communication* 7: 2–10. [CrossRef]

Biggs, Elisabeth E., Elizabeth Burnett Rossi, Sarah N. Douglas, Michelle C. S. Therrien, and Melinda R Snodgrass. 2022. Preparedness, training, and support for augmentative and alternative communication telepractice during the COVID-19 pandemic. *Language, Speech, and Hearing Services in Schools* 53: 335–59. [CrossRef] [PubMed]

Borgestig, Maria, Jan Sandqvist, Richard Parsons, Torbjörn Falkmer, and Helena Hemmingsson. 2016. Eye gaze performance for children with severe physical impairments using gaze-based assistive technology—A longitudinal study. *Assistive Technology* 28: 93–102. [CrossRef] [PubMed]

Brotherson, Mary Jane, Christine C. Cook, and Howard P. Parette Jr. 1996. A home-centered approach to assistive technology provision for young children with disabilities. *Focus on Autism and Other Developmental Disabilities* 11: 86–95. [CrossRef]

Cohen, Louis, Lawrence Manion, and Keith Morrison. 2003. *Research Methods in Education*, 5th ed. London: Routledge.

Holmqvist, Eva, Gunilla Thunberg, and Marie Peny-Dahlstrand. 2017. Gaze-controlled communication technology for children with severe multiple disabilities: Parents and professionals' perception of gains, obstacles, and prerequisites. *Assistive Technology* 30: 201–8. [CrossRef] [PubMed]

Holyfield, Christine, Jessica Caron, and Janice Light. 2019. Programing AAC just-in-time for beginning communicators: The process. *Augmentative and Alternative Communication* 35: 1–10. [CrossRef]

Johnston, Susan S., Joe Reichle, and Joanna Evans. 2004. Supporting augmentative and alternative communication use by beginning communicators with severe disabilities. *American Journal of Speech-Language Pathology* 13: 20–30. [CrossRef]

Kent-Walsh, Jennifer, and David Mcnaughton. 2005. Communication partner instruction in AAC: Present practices and future directions. *Augmentative and Alternative Communication* 21: 195–204. [CrossRef]

Light, Janice, and David Mcnaughton. 2014. Communicative Competence for Individuals who require Augmentative and Alternative Communication: A New Definition for a New Era of Communication? *Augmentative and Alternative Communication* 30: 1–18. [CrossRef] [PubMed]

Light, Janice, and David Mcnaughton. 2015. Designing AAC research and intervention to improve outcomes for individuals with complex communication needs. *Augmentative and Alternative Communication* 31: 85–96. [CrossRef] [PubMed]

Mandak, Kelsey, Tara O'Neill Zimmerman Mandak, Janice Light, and Gregory Fosco. 2017. Bridging the gap from values to actions: A family systems framework for family-centered AAC services. *Augmentative and Alternative Communication* 33: 32–41. [CrossRef] [PubMed]

Mcnaughton, David, Tracy Rackensperger, Elizabeth Benedek-Wood, Carole Krezman, Michael B. Williams, and Janice Light. 2008. "A child needs to be given a chance to succeed": Parents of individuals who use AAC describe the benefits and challenges of learning AAC technologies. *Augmentative and Alternative Communication* 24: 43–55. [CrossRef] [PubMed]

Moreira, Herivelto, and Luiz Gonzaga Caleffe. 2008. *Metodologia da Pesquisa para o Professor Pesquisador*, 2ª edição. Rio de Janeiro: Lamparina Editora.

O'Neill, Tara, Kelsey Mandak, and Krista M. Wilkinson. 2017. Family Leisure as a Context to Support Augmentative and Alternative Communication Intervention for Young Children with Complex Communication Needs. *Seminars in Speech and Language* 38: 313–20. [CrossRef] [PubMed]

Parette, Howard P., Jr., Mary Jane Brotherson, and Mary Blake Huer. 2000. Giving families a voice in augmentative and alternative communication decision-making. *Education and Training in Mental Retardation and Developmental Disabilities* 35: 177–90.

Puli, Louise, Natasha Layton, Daniel Mont, Kylie Shae, Irene Calvo, Keith D. Hill, Libby Callaway, Emma Tebbutt, Abner Manlapaz, Inge Groenewegen, and et al. 2021. Assistive technology provider experiences during the COVID-19 pandemic. *International Journal of Environmental Research and Public Health* 18: 10477. [CrossRef] [PubMed]

Romski, MaryAnn, Rose A. Sevcik, Lauren B. Adamson, Ashlyn Smith, Melissa Cheslock, and Roger Bakeman. 2011. Parent perceptions of the language development of toddlers with developmental delays before and after participation in parent-coached language interventions. *American Journal of Speech-Language Pathology* 20: 111–18. [CrossRef] [PubMed]

Therrien, Michelle C. S., Elizabeth E. Biggs, Andrea Barton-Hulsey, Sara C. Collins, and Mollie Romano. 2022. Augmentative and alternative communication services during the COVID-19 pandemic: Impact on children, their families and service providers. *Augmentative and Alternative Communication* 38: 197–208. [CrossRef] [PubMed]

Williams, Michael B., Carole Krezman, and David McNaughton. 2008. "Reach for the stars": Five principles for the next 25 years of AAC. *Augmentative and Alternative Communication* 24: 194–206. [CrossRef]

Article

Sustainability at Play: Educational Design Research for the Development of a Digital Educational Resource for Primary Education

Patrícia Sá [1,*], Patrícia Christine Silva [1], Joana Peixinho [2], Ana Figueiras [3] and Ana V. Rodrigues [1]

[1] Research Centre on Didactics and Technology in the Education of Trainers, Department of Education and Psychology, University of Aveiro, 3810-193 Aveiro, Portugal

[2] Intermunicipal Community Viseu Dão Lafões, 3460-613 Tondela, Portugal

[3] Centre for Research in Applied Communication, Culture, and New Technologies, Universidade Lusófona, Campo Grande, 1749-024 Lisboa, Portugal

[*] Correspondence: patriciasa@ua.pt

Abstract: Quality education is an indispensable element for the successful implementation of the 2030 Agenda for Sustainable Development, as it equips all children with the essential skills to promote sustainable development within the context of their lifestyles, in line with the fourth Sustainable Development Goal (SDG4). This will have to be an innovative education, not only in the contents and guidelines to be followed but also in the educational strategies and resources to be used. This article aims to present and describe the methodology used to develop the digital educational resource (DER) "Sustainability at Play," a serious game intended for primary education and based on the concept of the ecological footprint. This DER was developed through educational design research (EDR) by a multidisciplinary team within a project to create Digital Educational Resources for Primary Education. The EDR approach was organized in four phases—Phase I—Problem Analysis, Phase II—Exploration of Possible Solutions, Phase III—Design, and Phase IV—Reflection—allowing for an iterative DER development process shared by different participants (researchers, illustrators, web designers, primary school teachers and students). As a result, this study enabled not only the development of an innovative DER to work on issues related to education for sustainability in primary school but also the understanding and validation of the suitability of the EDR methodology for the development of this type of educational resource.

Keywords: educational design research; education for sustainability; digital educational resource; primary education

1. Introduction

The central role that education assumes in implementing the 2030 Agenda for Sustainable Development is recognized and reinforced in several international documents and guidelines (Leicht et al. 2018; UNESCO 2015, 2017a). As a result, quality education explicitly emerges as one of the Sustainable Development Goals (SDG4). However, in the 2030 Agenda document, education is not limited to SDG4. It appears in several other SDGs and is also recognized as an essential means of achieving this agenda (Leicht et al. 2018; UNESCO 2015, 2017b).

According to UNESCO, one of the main objectives of education for sustainability (EduS) is to empower citizens to make informed decisions and act responsibly toward environmental integrity, economic viability, and social justice (UNESCO 2017a). Implementing a cross-cutting and integrated EduS orientation can include more than just new content in the curriculum. It requires a transformative, action-oriented pedagogy focused on learning from the earliest years of schooling, which makes subjects responsible for exercising conscious citizenship and solidarity. For the innovation and reorientation that this

implementation requires, research in education, teacher education, and the development of new educational resources will be essential. This article focuses mainly on educational design research (EDR) and its contribution to developing new educational resources and innovation in education in the field of EduS.

According to Napal et al. (2020), one of the fields that most urgently needs to utilize the potential benefits of digital technologies to transform learning is sustainability, evidencing the pertinence of studies such as the one presented here. In particular, several authors emphasize the relevance of serious games in an EduS approach (Neset et al. 2020; Ouariachi et al. 2019; Stanitsas et al. 2019). Serious games are important since they allow players to experience unfamiliar circumstances that are not possible in real life, enabling awareness to be raised and changes in attitude and behavior in players to be promoted (Ouariachi et al. 2019; Stanitsas et al. 2019). Neset et al. (2020) emphasized the importance of these resources in the teaching and learning process, stating that serious games can support teachers to strengthen their EduS, as they provide an experience of climate adaptation based on systems thinking and action orientation.

The growing acknowledgment of EduS and the perceived benefit of serious games for teaching students about sustainability are both recognized arguments that highlight the relevance of this field of study (Hallinger et al. 2020).

In recent years, there has been a growing trend towards creating Digital Educational Resources (DER) for early years of schooling in the field of EduS. Digital games have emerged as a popular didactic strategy, providing students a playful and meaningful learning experience (Veronica and Calvano 2020; Chappin et al. 2017; Jesus et al. 2021; Leal et al. 2022; Oliveira et al. 2021; Sá et al. 2013; Souza et al. 2020; Vestena and Bem 2020). The following studies showcase digital games with educational purposes underlying sustainability themes. These studies provide detailed descriptions of the games, outline the validation process involving the target audience, and present the outcomes observed during the implementation.

The prototype of the game "BioSolo" (Leal et al. 2022), subordinated to the theme of environmental sustainability, was developed for children aged 6 to 11 years old and aims to raise awareness about soil fauna. With the soil as the main screen, the player is challenged to uncover various organisms found in it and classify them appropriately. Points are accumulated as these organisms are classified correctly and may be doubled by taking the final quiz related to the theme explored. The prototype was evaluated through interviews with experts from various areas, and the results point to it being an adequate resource for its proposed purposes.

The game "RECICLAPPSM" (Vestena and Bem 2020), developed for primary school children, aims to raise awareness about the proper treatment of the solid waste we produce, considering its toxicity and hazardousness. The player is challenged through drag-and-drop dynamics to place the waste in the correct containers, gaining points for its correct separation. Separating solid waste requires gloves that are suitable for this purpose. If the player does not use them correctly, they lose points. The game is completed after the six levels have been reached. It was tested with a group of children, and the results of this implementation reveal the game's suitability as a contribution to developing the learning objectives it proposes.

The game "SimSustentabilidade" (Jesus et al. 2021) is configured as a simulation and strategy game, challenging the player to build a city (companies, research centers) and manage financial and environmental resources. The game develops with the player's decision-making to manage the city sustainably, creating the least environmental impact possible. They must guarantee economic growth and eliminate polluting gas emissions by planting forests. The evaluation carried out on the game indicated that the game could be a potentiator of more learning about sustainability in a ludic way, but limitations include the small, minimalist interface and the few construction options offered to the player.

The game "Produtos Perigosos ou Sustentáveis" (Oliveira et al. 2021) aims to develop skills related to ecotoxicology, specifically environmental contamination by chemicals. It

was developed for children attending the 9th grade. The average duration of the game is about 50 min, and it was developed to be used in a classroom context. It consists of 13 stages, and in each of the game's situations, the player can win up to 10 points, for a maximum score of 130 points. In a game situation, the player completes the spaces with letters (forming words) to fill the sentence with the missing words. Points are removed if the player needs hints to progress in the game or for any mistakes. The 10 points are received in each phase if the player manages to advance without a request for hints and without making a mistake. By conducting a pre- and post-test and questionnaire, it was determined that the children learned, and the evaluation carried out of its functionality, usability, and playful component was positive.

Veronica and Calvano (2020) developed a game entitled "SeAdventure" targeting children in the 4th grade, with a central theme of ocean literacy. As a complement, an introductory and contextualizing video was developed that focuses on the issue of marine debris, titled "A plastic ocean." The game, through an avatar, takes players on an underwater journey, during which they encounter a variety of garbage. Four endangered species, including tuna, shark, turtle, and seahorse, are featured as characters. The objective is for children to guide their characters to find food without consuming the surrounding garbage, raising awareness about the challenges these species face in survival. The additional information provided also promotes knowledge about the species' habitat, lifestyle, food, and other perils they face in the ocean. Players accumulate points by feeding their characters correctly but lose points if they consume solid waste. Evaluations carried out led to the determination that the game is an enabler of further learning related to ocean literacy.

The game "Universal Machine Ecological: U.M.E." (Souza et al. 2020) entails a game developed between the 2nd and 5th grades that addresses the issue of some types of pollution. A droid named U.M.E. is the character of the game, who aims to raise awareness about the issue of environmental pollution. At this stage there is no time limit for reading in order to respect the individuality of the children. One of the other goals is to collect the garbage within a time limit of 20 s; if the player cannot meet this challenge they lose. In the last phase, the objective is to raise awareness about the consequences of pollution and the importance of change in this context.

The game "Catan: Oil Springs" (Chappin et al. 2017) is an entertainment game with incorporated sustainability concepts. The idea of this game is for it to act as an addition to the board game "Settlers of Catan" released in October 2011. The game introduces oil as an additional resource within the world of Catan, complementing the regular gameplay. Through the game dynamics, players are confronted with real sustainability issues and are compelled to reevaluate their strategies, not only for their own victory but also to address broader sustainability concerns, particularly related to climate change. Oil in the game serves as a substitute for fossil fuels and other mineral resources, highlighting its benefits while emphasizing the risks of pollution and adverse effects associated with climate change. The scenario aims to raise awareness about pressing sustainability challenges, with the ultimate goal of fostering a transformation in thinking and consciousness, and, as a result, a change in behavior.

Another example of a digital game is the Courseware SeRe® "The Human Being and Natural Resources" (Sá et al. 2013). This courseware emerged from the awareness of the lack of quality digital educational resources for science education towards education for sustainable development (ESD). The objective of this project was to encourage primary school teachers in a new way of understanding science education, thereby promoting the integration of ESD principles into their science lessons. This resource allows for the adoption of new orientations, digital educational resources, and new science teaching and learning strategies.

Although not identified as such by the authors, part of these games could be classified as "serious games." Clark C. Abt (1987) coined the term "serious games" in a book with the same title, arguing that games could be used for more than just entertainment and could have educational, training, and simulation intentions. In his definition, he approaches these

games as being constructed with an explicit and carefully thought out educational purpose and not intended to be played primarily for entertainment. However, the term has since been widely adopted to designate games with a primary purpose other than entertainment, such as education, training, health, and social change.

Because this definition is too broad, Ian Bogost (2010) uses the term "persuasive games," since he believes they can bring attention to issues and stimulate players to think critically about their values and beliefs. By using the term "persuasive games," Bogost emphasizes that these games can be used as a tool for persuasion in the same way as advertising or propaganda, therefore making them suitable to enable players to understand complex issues, challenge their assumptions and biases, and encourage them to take action. In this way, he sees games as a powerful medium for social and political change. According to Michael and Chen (2006), serious games are a tool for promoting learning and are potential promoters of behavioral change, as they can engage players in interactive and immersive experiences that enhance their motivation and interest in the topic. Wouters et al. (2009) also suggested that serious games can be used to promote the mobilization and/or development of different dimensions of various competencies (e.g., knowledge, skills, attitudes, values, dispositions). Furthermore, serious games can positively impact learners' motivation and engagement. Boyle et al. (2012) found that digital entertainment games, including serious games, are associated with high levels of engagement, which is a crucial factor in promoting learning and attitude change.

This article aims to present and describe the methodology used to develop the DER "Sustainability at Play" game (Sá et al. 2021), a serious game aimed at primary education. This DER is part of the project Digital Educational Resources for Primary Education (POCH-04-5267-FSE-000124), coordinated by the Directorate-General for Education (Ministry of Education of Portugal) and of which DER_Sciences is a part. The development of DER_Sciences was founded in the didactic guidelines designed under the Training Program in Experimental Teaching of Sciences for Primary School Teachers (PFEEC) (Despacho No. 2143/2007, 9 February and Despacho No. 701/2009, 9 January) that took place over four school years, between 2006 and 2010, with the purpose of, through the development of professional skills of primary school teachers, increasing the scientific literacy levels of Portuguese students.

DER_Sciences was developed by a multidisciplinary team of researchers from the University of Aveiro (UA) and the New University (UN) of Lisbon. This multidisciplinary team constituted 11 specialists in science teaching and 20 members of the multimedia team responsible for different specialties (e.g., digital creation project management, illustration, visualization and management of website content, design, video game production, programming, sound design, digital communication). The main objectives of this project were (i) to develop and evaluate multimedia resources on science topics for primary school students 6–10 years old that promote autonomous learning and (ii) to develop a website where DER_Sciences was made available with free access, promoting the integration of digital technologies into teaching and learning processes.

Within the dedicated domain for natural sciences on the developed website (https://redge.dge.mec.pt/ilha/ accessed on 29 June 2023), a section containing didactic proposals for exploring sustainability-related issues with children is available. These proposals encompass topics such as human demography and the conservation of the planet's resources.

2. Materials and Methods

As previously mentioned, this paper aims to present and describe the methodology used to develop the DER "Sustainability at Play" game. The research question guiding the study was the following: How can a DER for education for sustainability (EduS) in primary education be developed? Given its nature, the characteristics that define it, and its purposes, the EDR methodology emerged as a suitable methodology since it intends to support in research the development of solutions to complex educational problems

through a reasoned, iterative, collaborative process involving a multidisciplinary team for this purpose.

2.1. Design and Development of the Digital Educational Resource "Sustainability at Play"

The "Sustainability at Play" game is a digital educational resource developed by a multidisciplinary team based on the EDR approach. EDR is one of the approaches integrated into the design research perspective, which emerged at the end of the 20th century/beginning of the 21st century as an alternative to the methodologies that had been used in the field of educational research (and that were being pointed out by several authors as limiting the potential of educational research). Design research has been referred to in the literature not so much as an approach per se but rather as a set of approaches " ... with the intent of producing new theories, artefacts, and practices that account for and potentially impact learning and teaching in a naturalistic setting" (Barab and Squire 2004, p. 2). Although different designations can be found for the various DR approaches—e.g., design-based research (Kelly 2003), development research (Van den Akker 1999), formative research (Newman 1990), and educational design research (McKenney and Reeves 2019, 2021; Plomp and Nieveen 2013)—they are very similar in their characteristics, aims, and proposed implementation models. According to McKenney and Reeves (2013, 2021), EDR can be defined as a "genre" of research emphasizing the iterative construction of solutions/proposals to complex educational problems. These solutions can be educational products, processes, programs, or even policies.

Concerning its main characteristics, several authors have described EDR as pragmatic (focused on the production of usable know-how and valuable solutions to complex and real-world problems), evidence-based (based on theoretical frameworks of reference), interventionist (aimed at promoting changes in a particular educational context), iterative (developed through different cycles of design, development, testing, and reformulation), and collaborative (involving multiple partners in multidisciplinary teams) (McKenney and Reeves 2013, 2021).

In addition, with regard to the process, different proposals for the EDR approach can be found, with variations in terms of the terminology used and even the models presented. However, within this diversity, there are some common aspects that several authors have identified in the reference literature. Plomp (2013) systematized the following aspects:

1. EDR relies on scientific knowledge to support the work developed;
2. The process of implementing the approach results in the construction/production of scientific knowledge (contributing to a broader understanding of the problem under study/to be addressed);
3. EDR considers different phases for its implementation. Although the phases considered and their designations present some differences (depending on the author), no matter the considered proposal, EDR entails an analysis/guidance phase, a design/development phase, and an evaluation/retrospective phase. Some authors have proposed models with four phases (e.g., Gravemeijer and Cobb 2006), and others have proposed four-phase EDR organization models (Reeves 2000, 2006). All of these phases can be cyclically repeated throughout the process.

In the present study, the model proposed by Reeves (2000, 2006) and McKenney and Reeves (2021) was adopted, considering four phases for implementing the EDR approach: Phase I—Problem Analysis, Phase II—Exploration of Possible Solutions, Phase III—Design, and Phase IV—Reflection. The following table (Table 1) systematizes the phases followed throughout the EDR development process, explaining the main tasks performed in each phase, as well as the two iterative cycles implemented from problem identification and characterization to the proposed solution—the final version of the resource.

Table 1. Phases followed throughout the EDR development process.

EDR Phases	Tasks	Participants
Phase I—(February 2019) Problem Analysis (Reeves 2000, 2006; McKenney and Reeves 2019, 2021)	Problem identification and analysis Preliminary research Literature review	Multidisciplinary research team
Phase II—Exploration of Possible Solutions	Searching for solutions and design proposals for the development of the intended resource Exploring ideas and defining the structure of the game and the sequence of activities to be included (design skeleton) Setting up the database with the ecological footprint (EP) values needed for the game	Multidisciplinary research team
Phase III— Design/Construction of Iterative Testing and Reformulation Cycles (Reeves 2000, 2006; McKenney and Reeves 2019, 2021)	*Cycle 1—Prototype 1* - Prototype 1 Construction Definition of the navigability characteristics Elaboration of the first proposals for the illustrations (creation of prototypes for various game scenarios) - Prototype 1 Validation Definition of strategies, methods, and instruments for the validation Identification of experts and end-users to participate in the intended validation Validation of the contents of the EP database Validation of the proposed illustrations Validation of the navigability Analysis of the results of the validations performed and identification of the changes to be made *Cycle 2—Prototype 2* - Prototype 2 Construction Review and reformulation of the game structure and initial prototypes (considering the aspects pointed out/discussed in the validation process and in the meetings of the extended multidisciplinary team) Reformulation of the illustrations of the game's basic scenarios Building the first complete version of the resource (with the new illustrations and the complete scenarios) - Evaluation—Prototype 2 Pilot Definition of methods, strategies, and instruments for data collection and analysis to be used in the pilot study to be carried out Pilot study of the first complete version of the resource with primary school students Analysis of the results of the validations performed and identification of the changes to be made	Researchers (large multidisciplinary team) Web designers Illustrators Specialists Primary school students
Phase IV—(February 2021) Reflection (Reeves 2000, 2006; McKenney and Reeves 2019, 2021)	Final evaluation/reflection on the process and the resulting resource	

2.2. Phase I—Problem Analysis

The first phase of the ERD involves defining and analyzing the problem to be tackled. In this case, the research question that guided the whole process was the following: How can digital educational resources (DER) for education for sustainability (EduS) in primary education be developed?

This phase was mainly an exploratory approach to the issue, which relied on preliminary research on DER and education for sustainability (aimed at children between 6 and 10/12 years old). To this end, there was a literature review and identification/mapping of existing national DER in EduS.

It was also the moment of constitution and organization of the multidisciplinary team that collaborated throughout the whole process, which allowed a network of "critical friends" with diverse expertise to be created. Researchers from different universities and research centers collaborated on this team, bringing together researchers in education,

researchers in science didactics, researchers in digital media, web designers, video game designers, programmers, sound designers, and illustrators. A transdisciplinary approach allowed the development team to achieve a holistic perspective of the problem to be solved, considering multiple factors and perspectives in the design and implementation of the game. Furthermore, a multidisciplinary approach can lead to innovative and creative solutions that would not be possible with a disciplinary approach. Combining different perspectives and knowledge generates new ideas and approaches for game design and development (Lang et al. 2012; Polk 2015). In addition, according to the aforementioned authors, this is an appropriate approach in the context of serious games. Developing serious games requires expertise in various fields, including game design, education, and technology. Therefore, a multidisciplinary approach allows for the creation of more effective, engaging, and entertaining games. This approach also allows for a holistic perspective, which is essential when games address complex issues and challenges (such as EduS).

2.3. Phase II—Exploring Possible Solutions

The work carried out in Phase II was based on the identified theoretical frameworks and the knowledge and experience of the various elements of the constituted team. Therefore, this was a privileged moment for discussion and brainstorming in an extended multidisciplinary team, making it possible to explore different ideas for defining the themes, objectives, dynamics, type, and sequence of activities to be included in the DER (in particular, in the "Sustainability at Play" game, the first DER to be developed). This process was dynamic and highly participatory, with an understanding between the various team members and an understanding of the complementarity of their knowledge and experience for the common objective being essential. This participatory design approach among the development team fostered collaboration and co-creation among team members.

In this phase, it was decided that one of the EDRs in EduS would be a serious game that allowed children to explore the ecological footprints associated with the various tasks of their day-to-day—the game "Sustainability at Play," the conception and development process of which is presented in this article. This decision implied, on the one hand, the pursuit of solutions and design proposals for the development of the intended resource and, on the other hand, the constitution of a database with the EF values necessary for the various daily activities that would be considered in the game.

In this conceptualization phase, the team focused on developing the game concept, mechanics, and narrative. During this stage, the team created a game design document that outlined the game's objectives, rules, gameplay mechanics, and requirements. For the team to envision the path that the game would take, creating a flowchart (see Figure 1) was an essential step, as it helped to visualize the game's mechanics, objectives, and progression. In addition, this visualization helped the team identify potential game mechanics issues and ensure that the game was balanced and challenging. A study by Nacke et al. (2009) found that flowcharts effectively surface potential usability issues with games during the design process, which can be addressed through iterative testing and refinement. The flowchart also helped communicate the ideas more effectively to other stakeholders, such as programmers and artists. A study by Lankoski and Björk (2007) found that flowcharts were an effective way of communicating game design concepts to all stakeholders. Using a flowchart ensured that all stakeholders clearly understood the game's objectives and gameplay.
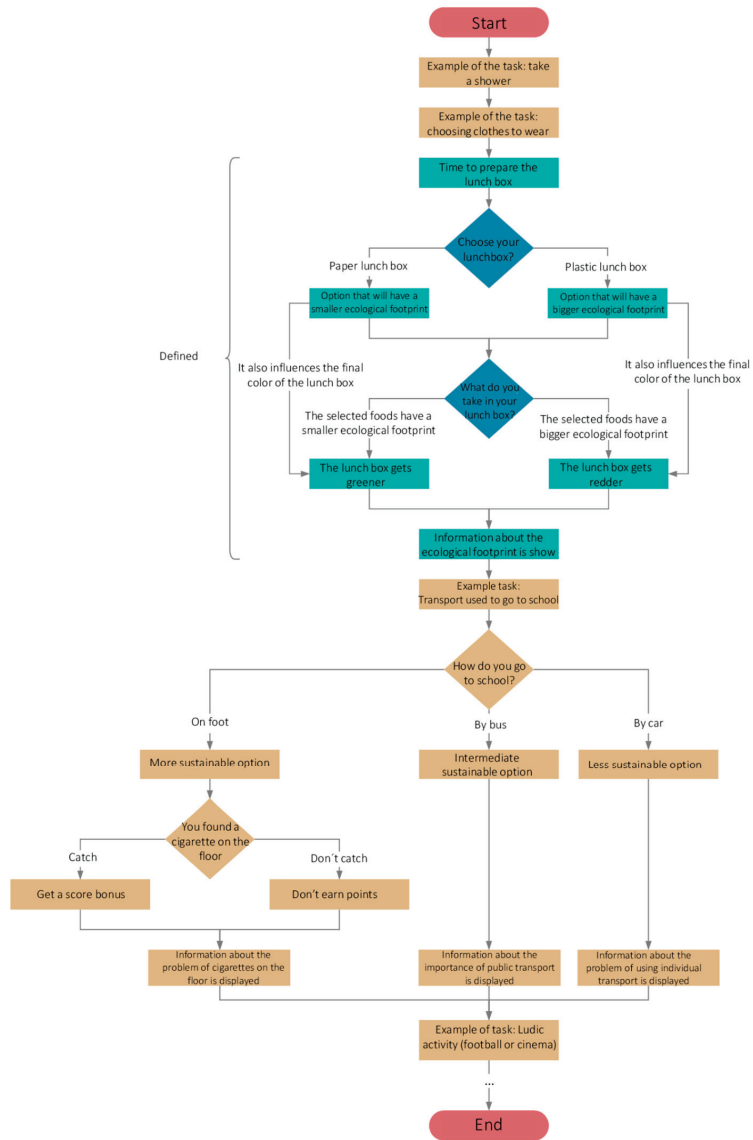
Figure 1. Initial gameplay flowchart.

2.4. Phase III—Designing and Constructing the DER "Sustainability at Play" Game through Iterative Cycles of Testing and Refinement

The process of the design and construction of the DER "Sustainability at Play" game was, on the one hand, systematic and intentional, following the iterative cycles defined. However, it was also a moment of great creativity and openness for the various team members. In this phase, the ideas generated in the previous moments, generally still vague and not very concrete, gradually become more evident, detailed, and operationalizable. This is the time to consider each of the ideas generated previously and discuss their potential for realization. The team then reduces the initial options to a limited number of possible solutions and collaboratively builds the design skeleton. This phase allows the team to

progressively refine the design while ensuring that the game effectively addresses the educational objectives and the needs of the target audience.

This is often also a prototyping phase. Generally, prototypes are used to try to operationalize the possible solutions, and several prototypes can be tested in the same project. In this project, two prototypes for the DER "Sustainability at Play" game were built and validated. During the design and construction phase of this DER, ideas for the activities were also discussed, with the objectives of the game and the learning it allows being defined. The products to be included in each moment of daily life were identified, and the main navigability characteristics were defined.

The two iterative cycles considered in this study, the main tasks performed in each cycle, and the participants are described below.

2.4.1. Cycle 1—Construction and Validation of Prototype 1

During Cycle 1, we proceeded to the construction of Prototype 1. This construction involved defining the navigability characteristics of the DER "Sustainability at Play" game (for example, it was intended that this resource be easy and predictable to navigate, that there should be no navigation failures, and that help mechanisms should be available and strategically located to facilitate access to information).

It also consisted of the elaboration of the initial proposals for the illustrations of each of the scenarios to be considered in the game. At this stage, it was determined that two of the main contexts in which children move in their daily life would be considered: the home and the school. In each of these contexts, it is possible to go through different scenarios, such as the bedroom, the bathroom, the kitchen, and the classroom. Furthermore, in the various scenarios also considered, different products necessary for the children's daily activities were available (for example, clothes, toothpaste, books, and food products). In this cycle, all of these elements were identified, listed, and illustrated, and prototypes were created for the various scenarios included in the game (and all the elements they would have to include).

In this phase, the first version of the database with the EF values of the products to be used in the various scenarios of the DER "Sustainability at Play" game was concluded. This database was built based on several studies on the life cycles and EF of various products, which was a complex and lengthy process of research and literature review and information systematization. The main difficulty in constructing a database useful for the DER "Sustainability at Play" game was finding studies with EF values that would allow for product comparison. The EF is calculated for each product according to a set of variables (e.g., origin, transport, processing, packaging), and it was challenging to obtain comparable EF values (e.g., 1 L of milk in a tetra pack and 1 L of milk in a glass bottle) for the same product (considering the same place of consumption and the same quantity of product).

Still, during this cycle, Prototype 1 was validated. This validation focused on two elements: (i) the database with the EF values and (ii) the initial illustrations made for the several scenarios of the game. To that end, it was necessary to define strategies and methods for the validation and to identify and contact the possible validators.

An expert carried out the validation of the content of the database on PE. This validation occurred in three moments: (i) a first moment, in which the two researchers of the team responsible for the database and the invited expert participated, and the DER "Sustainability at Play" game that was being developed and the structure and purpose of the EF database (the target of validation) were presented; (ii) a second moment of analysis work by the expert; and (iii) a third moment of a new meeting between the researchers and the expert, in which feedback was provided and some suggestions for changes that the expert considered necessary were made.

The illustrations were also validated. The illustrators created the illustrations based on the ideas and information that emerged during the meetings and brainstorming sessions held by the larger multidisciplinary team. The extended multidisciplinary team validated the initial proposals for the illustrations in a joint face-to-face session. This validation

focused on aspects such as the appropriateness of the images to the target audience and the proposed activities, the presence of stereotypes, gender equality, the colors used, and the aesthetics of the game scenarios.

At the end of the validations performed, it was possible to identify the changes to be made to Prototype 1 and to start Cycle 2 and the construction and validation of Prototype 2.

2.4.2. Cycle 2—Construction and Validation of Prototype 2

Cycle 2 consisted of the construction and validation of Prototype 2. This construction started based on the previous cycle, considering the aspects pointed out and discussed in the validation processes and subsequent meetings of the extended multidisciplinary team. Cycle 2 made possible:

- The revision and reformulation of the game structure and the initial prototypes according to the feedback from the various intervening parties (extended multidisciplinary team, specialists, and primary students).;
- The reformulation of part of the illustrations of the basic scenarios of the game;
- The construction of the first complete version of the DER "Sustainability at Play" game, with the new illustrations and the complete scenarios (Figure 2).
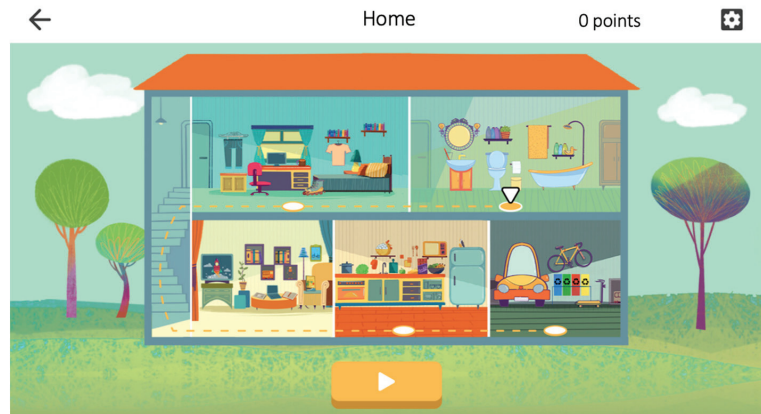

Figure 2. DER "Sustainability at Play" game house scenarios.

In the evaluation phase of Cycle 2, the team chose to conduct a pilot study with Prototype 2 and with the collaboration of the game's final users—primary school students. The planning of the pilot study involved defining the methods, strategies, and instruments for data collection and analysis and identifying the participants for the study.

The pilot study of the DER "Sustainability at Play" game was carried out in two sessions, on 5 and 6 April 2022, with two classes in the third year of primary school from the same grouping of schools (designated as Class A and Class B). A total of 20 children was involved—8 children from class A and 12 children from class B. Each session took place in a formal classroom context, occupying a teaching time of 60 min.

These piloting sessions aimed to collect data on the following (attached data collection instrument—Appendix A):

1. The children's understanding of the dynamics of the game itself;
2. The children's perceptions of the layout, navigability, and readability of the game;
3. The knowledge covered during gameplay;
4. The children's emotional state throughout the gameplay.

For items 1 and 2, the data collection instrument presented a three-level agreement scale (totally agree, partially agree, do not agree) for children to position themselves in relation to each of the proposed statements. For item 3, the presented scale had two levels

(agree, do not agree) and for item 4, the children selected, from a previous list, the feelings that best described what they felt while they were playing the game. The scales used were simple given the age of the children who participated in the pilot.

The piloting session was organized into five distinct moments: (1) previous preparation with the teacher responsible for the class in order to explain the dynamics and purposes of the piloting sessions; (2) a brief presentation of the purposes of the piloting session to the children; (3) distribution and explanation to the children of the data collection form about the game; (4) distribution of the tablets by each group, composed of two to three children; and (5) free exploration of the game and, simultaneously, filling in the form by the children.

These sessions took place under the supervision of the teacher responsible for the class to clarify the children's possible doubts. During these sessions, a member of the DER_Sciences team was present online. It should be noted that, for these two sessions with children, informed consent of the parents and of the children themselves was obtained.

After the children had explored the game, the data were analyzed and the following results were obtained.

With regard to the analysis of the data collected during the pilot carried out with the children, almost all the children who participated in the pilot (90%) showed positive values, and more than half of them (55%) showed values higher than 70 points out of 100 in the learning announcements (Table 2).

Table 2. Game points achieved by the children.

Score	Percentage of Children	Number of Children
70 to 100 points	55%	11
50 to 69 points	35%	7
0 to 49 points	10%	2

In all learning statements, more than half of the children responded appropriately (Table 3). The learning statements "Recognizes that the value of the ecological footprint relates to various categories of consumption (e.g., hygiene, clothing, and food)," "Recognizes that the ecological footprint of each product is related to various aspects, such as the material it is made of, its packaging, its provenance . . . ," and "The choices I make in my daily life contribute to increasing or decreasing my ecological footprint" were the learning statements for which children demonstrated the highest scores, reaching values equal to or higher than 90%. The learnings "Everyday choices I make contribute to increasing or decreasing my ecological footprint" and "All products, even 'green' products, have an ecological footprint" were those with which the children demonstrated the most difficulty.

In general, as shown in Table 4, the children showed satisfaction with the game (around 75% of the children indicated being satisfied and very satisfied with the game). In addition, they showed positive feelings/emotions towards this resource, namely, 45% of the children felt excited when playing, 20% were curious, 15% were surprised, and another 15% were bored.

In general, children liked the front end of the game in terms of colors and illustrations, as well as the musical elements (Table 5). We can also verify that the game was adequate for the age group it was aimed at, insofar as the children revealed having understood the proposed tasks. The navigability of the game was also positively evaluated, in terms of both the ease of reading the information on the screen, entering, and exiting the quizzes and returning to the main game.

Table 3. Knowledge promoted by the game.

Apprenticeships in Assessment		Percentage of Children		Number of Children	
		Agree	Disagree	Agree	Disagree
It recognizes that . . .	My ecological footprint is a measure of my lifestyle on the planet.	85%	15%	17	3
	The ecological footprint value focuses on several consumption categories (e.g., hygiene, clothing, and food).	95%	5%	19	1
	All products, even "green" products, have an ecological footprint.	55%	45%	11	9
	Only "yellow" and "red" products have an ecological footprint.	30%	70%	6	14
	To reduce my ecological footprint, I should always buy smaller products.	90%	10%	18	2
	If I choose the products I like, I contribute to the reduction of my ecological footprint.	45%	55%	9	11
	The ecological footprint of each product is related to several aspects, such as the material it is made of, its packaging, its origin . . .	95%	5%	19	1
	The same object/product made of different materials (e.g., toothbrushes) can have different effects on the environment.	75%	25%	15	5
	The choices I make in my daily life contribute to increasing or decreasing my ecological footprint.	90%	10%	18	2
	The ecological footprint is only related to the products we buy in shops.	40%	60%	8	12

Table 4. Children's emotions during the game.

Feelings about Playing the Game	Percentage of Children	Number of Children
Surprised	15%	3
Curious	20%	4
Enthused	45%	9
Bored	15%	3
Inattentive	0%	0
Dissatisfied	0%	0
Other	5%	1

Most of the children said that they understood the relationship between the products they chose, the points they earned, and the size of the green bar. Most children (80%) indicated that they fully understood why products have a frame on them; however, a high percentage (70%) of those did not understand that the green frame of a product also implied that they have an ecological footprint and/or that it was not only products with yellow and red frames that have an ecological footprint. Those who understood the purpose of the bonus quizzes were the ones who used them most often.

This validation found that the game fulfils its entertainment functions, is adequate and easy to navigate, and allows EP content to be explored with children.

Table 5. Children's considerations about the game.

Aspects under Consideration	Percentage of Children			Number of Children		
	Agree	Partly Agree	Disagree	Agree	Partly Agree	Disagree
I liked the colors and settings (e.g., bedroom, kitchen, school) of the game.	85%	15%	0%	17	3	0
I could easily read what was on the screen.	55%	40%	5%	11	8	1
The information that appeared on the screen (e.g., the name of the products, the summary, the icons) helped me to advance in the game.	80%	20%	0%	16	4	0
I liked the music that came with the game.	60%	25%	15%	12	5	3
The instructions given to me were helpful for playing.	85%	15%	0%	17	3	0
It was easy to enter and exit the bonus quizzes and go back to where I was.	65%	30%	5%	13	6	1
I realized that the green bar that accompanies every scenario represents the credit points I have for playing.	90%	10%	0%	18	2	0
I understood why a color (green, orange or red) appears to frame each product I choose.	80%	15%	5%	16	3	1
I understood the relationship between the products I choose, the points I earn, and the size of the green bar.	70%	30%	0%	14	6	0
I read and understood the summary at the end of each scenario.	70%	20%	10%	14	4	2
I understood what the bonus quizzes were for.	65%	20%	15%	13	4	3
I took advantage of all the bonus quizzes to earn extra points.	55%	35%	10%	11	7	2
I understood that when the green bar runs out the game ends.	85%	10%	5%	17	2	1
After completing all the scenarios or after I had used up the green bar, I replayed the game to try and improve my score.	60%	30%	10%	12	6	2

2.5. Phase IV—Reflection

The last phase of the EDR approach is a phase of reflection on the process and the resulting product. During this phase, the team reflects on the entire process, analyzing what worked well and what could have been improved. This reflection allows for continuous improvement and learning.

As regards the path, the research methodology followed proved to be appropriate for the objective set and allowed the original research question to be answered. The use of the EDR approach enabled the design and development of a DER in EduS for the early years of schooling, within a multidisciplinary team and through a collaborative and iterative process open to the participation of different partners (researchers, experts, and primary school students). This was a process based on reference literature, but it was also built on the experience and competence of the team members.

The construction and use of prototypes allowed for the realization of the initial ideas and their improvement, as well as the collaboration of different partners throughout the process. The two cycles implemented allowed for the collection of data and the reformulation of the DER according to the feedback obtained, making the final result more founded and adequate for both the initial objectives of the team and the interests and needs of its end users.

The final result, the DER "Sustainability at Play" game, is briefly described in the Results section, resulting from the process and the various reformulations that were carried out.

3. Results

The result of the implemented EDR approach is the DER "Sustainability at Play" game. In this game, children are asked to go through a narrative of a day in six different scenarios at home (bathroom, bedroom, kitchen, garage, living room) and at school (classroom). There is a total of nine everyday situations in the different scenarios, with a total of 20 situations to choose from. The player is challenged, in the different scenarios, to choose products and goods (toothpaste, jeans, milk, books), which they consume at different times of their day (dressing, hygiene, meals, traveling). As initial support, hints are provided to help players understand the dynamics and the objective of the game in question, as illustrated in Figure 3. These hints are provided in the form of textual and visual cues and are carefully designed to guide players through the gameplay and ensure that they are able to engage with the educational content in an effective manner. By providing these hints, the team aimed to create a positive user experience and increase the likelihood of players successfully completing the game and retaining its takeaway messages.
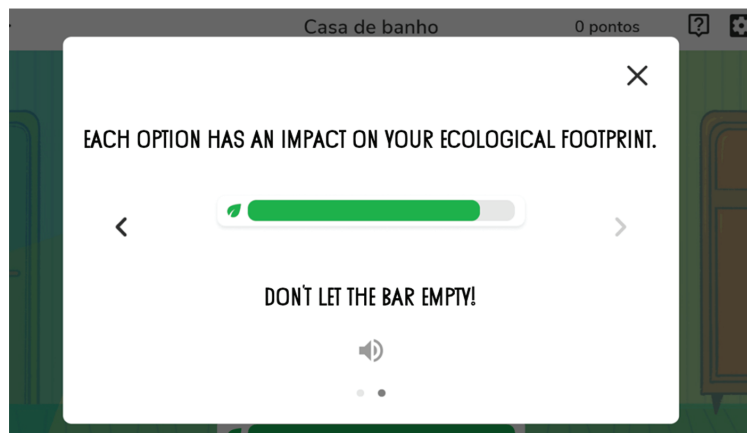

Figure 3. Game situation: Choose a toothpaste.

These naturally had different impacts on the bar associated with the EF the player has available (Figure 4). Depending on the player's choices and the smaller or larger the ecological footprint, the player accumulates points and the EF bar decreases. The game is interrupted and ends if the player exhausts the EF bar.

Three alternatives are presented for each good and product proposed, each with a different associated PE value represented through a color system (green—low EF, orange—medium EF, and red—high EF). After the player's choice, the alternative appears with the outline corresponding to the PE value (Figure 5). Thus, depending on the choice of product and goods the player makes in each game scenario, the bar associated with the PE decreases more slowly or more quickly.

Figure 4. Game situation: Choose a toothpaste.

Figure 5. Game situation: Choose an object with a medium ecological footprint.

In the end, the player is presented with a summary of their choices in each scenario (Figure 6), where, through the information provided to them about each of the products and goods they choose, the player can identify how everyday choices contribute to managing the EF in order to have as little impact as possible (e.g., the material and shape of the packaging, the place of origin, whether the food is in season or not).
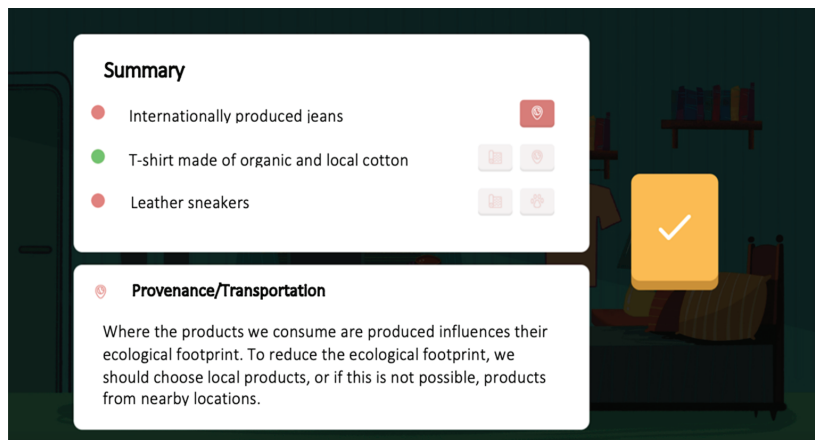

Figure 6. Game situation: final summary of a scenario.

In order to increase their score, at the end of each scenario the player is challenged to answer the bonus quiz, which they can accept or decline. The bonus quiz explores extra information (e.g., water footprint, household solid waste separation, the life cycle of a particular product) about certain objects/goods available in that scenario (Figure 7).
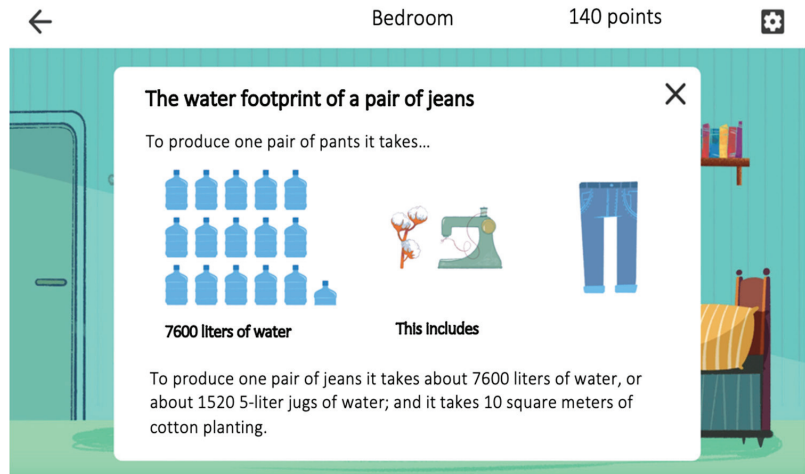

Figure 7. Game situation: bonus quiz information.

At the end of the game, a summary of the score of the player's choices, the bonus quizzes, and the final score appears (Figure 8).
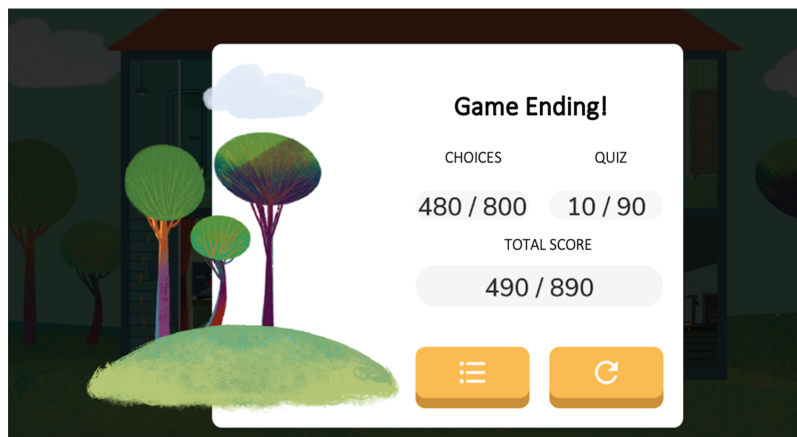

Figure 8. Game situation: end game screen.

4. Discussion

The discussion about the work developed and presented here is essentially based on two structuring aspects of this article: the development process of the presented DER, using a DBR methodology, and the game "Sustainability at Play," which is the final result.

The option for a DBR methodology for the design and development of a digital educational resource to address EduS issues in the early years of schooling was based on the reference literature. After a careful literature review, the team realized that this would be the most appropriate development methodology. In fact, the literature consulted suggested that the education design research methodology can be effective in the development of

digital educational resources, providing a viable alternative to traditional educational research approaches (Lehtonen 2021; Liu and Yang 2010; McKenney and Reeves 2019; Reeves 2006; Rozo and Real 2019; Turucz et al. 2021; Xie et al. 2018).

Some of the main characteristics of this methodology were decisive for the success of the process developed and the resource obtained, highlighting:

(i) Iterativeness. Since iterativeness is one of the main characteristics of EDR, the iterative cycles considered in the development of the "Sustainability at Play" game were fundamental to gradually designing and developing an innovative educational resource, based on research results and suitable for its real context of use (classroom). The sequence of these cycles made it possible to conceive, test, and improve the resource that was intended to be developed, showing the adequacy of the chosen methodology to the task that the team had at hand. Several authors, through the results obtained in their studies, showed that this methodology is one of the most suitable for the development of educational resources. For example, Lehtonen (2021) proposed a design framework and guidelines for conducting educational design research that can assist in developing educational technologies that ensure their educational benefits, feasibility, and successful real-world utilization and adoption.

(ii) Multiple participants and different validations. The involvement of several participants in the different phases of the EDR also proved to be an added value for the development of the resource and for its adequacy for the context of use. Different participants (researchers, experts, teachers, students) may be involved in different stages of the process, based on the needs and difficulties that arise (McKenney and Reeves 2019; Herrington et al. 2007). Reeves (2006) even talked about the social responsibility present in the whole process. We emphasized, in this regard, the participation of experts and primary school students. The experts, based on their knowledge, validated scientific content and ways of operationalizing it, and students acted as the end users and provided feedback regarding the attractiveness of the interface, navigability, interest, and appropriateness of the activities. Campo and Rodríguez-Abitia (2018), in their study, found that digital educational resources with high levels of intuitiveness and attractiveness can lead to more effective learning.

(iii) Multidisciplinary collaboration. The multidisciplinary collaboration was, from the outset, an asset to the entire process. Regular meetings with various team members (both face-to-face and online) allowed close communication to be maintained between the researchers and boosted the development of the work, always from a perspective of broad multidisciplinary interaction. It was this collaborative and deeply participative dynamic that allowed the challenges that emerged throughout the process to be overcome, both in the design of the resource and in its operationalization.

Overall, and regarding the development process, our results seem to confirm what the literature suggests: that the EDR methodology can lead to the development of high-quality DERs that are innovative and appropriate for different contexts based on the relevance and effectiveness of the methodology (followed for the development of the DER "Sustainability at Play" game). At the methodological level, the use of a pre- and post-test, as in other studies (Veronica and Calvano 2020; Oliveira et al. 2021), could assess the contribution of the game in a more effective way. This is, methodologically speaking, one of the limitations of this study.

As regards the DER "Sustainability at Play" game, and as found in other studies (e.g., Chappin et al. 2017; Jesus et al. 2021; Leal et al. 2022; Oliveira et al. 2021; Vestena and Bem 2020), this particular game seems to meet its didactic and entertainment purposes. The validation of the game with the target audience through the data collection instrument allowed us to verify that its design is adequate for the defined objectives and that its gameplay is appreciated by the users (e.g., the children revealed to understand the game's objective and had positive feelings towards its gameplay). The use of similar data collection tools allowed, in other studies, criteria to be verified under evaluations such as graphics, content, language, and interaction, as well (Leal et al. 2022; Oliveira et al. 2021). The DER

"Sustainability at Play" game can be considered a digital educational resource because it meets pedagogical–didactic principles, namely, those stated by Cardoso et al. (2022):

1. Creating meaningful contexts for learning. The game places the player in a scenario similar to what their daily life could be like, involving them in a real and immersive learning context.

2. Curricular integration. The game fits into the 4th grade Essential Learning in Environmental Studies (Portuguese curriculum guidelines for the teaching of science in the early years of schooling—http://www.dge.mec.pt/estudo-do-meio, accessed on 29 June 2023), namely, in the learning statement "Relate the increase in world population and consumption of goods with changes in the quality of the environment (destruction of forests, pollution, resource depletion, extinction of species, etc.), recognizing the need to adopt individual and collective measures to minimize the negative impact" (p. 10). This aspect was also verified in the development of other games of this nature (Oliveira et al. 2021).

3. Implementation of a constructivist-based design. The game design contemplates challenges that involve the student in the learning process.

4. Promotion of the student's autonomy. The instructions that appear throughout the game ensure that the child can play autonomously. This does not mean that the game cannot be explored with strategic guidance from the teacher or another adult.

5. Promoting the involvement and motivation of the pupil in the teaching and learning process. The playful character of the game and the nature of the activities proposed in it foster the active involvement and motivation of the students.

According to Oliveira et al. (2021), the game's ability to address complex topics such as sustainability while remaining relatable to children's reality and context is highly appreciated. By placing the child as the protagonist, the game becomes meaningful and possesses the potential to raise awareness and encourage the adoption of effective attitudes towards consumption.

The score system, EP bar, and audio were identified as limitations of the game despite the possibility of accumulating points with additional quizzes, as in other game examples (Veronica and Calvano 2020; Leal et al. 2022). Providing significance to the accumulated score was paramount, and one approach to achieving this was by offering players the opportunity to purchase and plant trees. This action allowed players to witness the direct impact of their EP as the number of trees increased. Players were encouraged to reflect on their EP and its positive contribution to the environment by connecting the score to tangible actions like tree planting, such as in the game "Produtos Perigosos ou Sustentáveis" (Oliveira et al. 2021), which allows the use of the points earned in hints or the possibility of several answer attempts. In this game, the EP bar determines the player's life, and there is no possibility of increasing it. On the other hand, all the statements should be accompanied by an audio to ensure that potential difficulty with reading for the player does not prevent them from playing, an aspect that Souza et al. (2020) also pointed out as a limitation to the game "Universal Machine Ecological: U.M.E." (Souza et al. 2020).

Despite these limitations, in a global way, the results point to the fact that this is a digital game with enough educational potential to promote education for sustainability in the early years of schooling.

5. Conclusions

This paper intended to present and describe the methodology used to develop the DER "Sustainability at Play" game, an educational resource aimed at primary education.

For the development of this educational resource, a multidisciplinary team was organized and the EDR approach was followed. The implementation of this approach was organized in four phases: Phase I—Problem Analysis, Phase II—Exploration of possible Solutions, Phase III—Design, and Phase IV—Reflection. During Phase III, two iterative cycles were implemented, enabling the prototyping of the DER and the collaboration of several participants (e.g., researchers, illustrators, web designers, experts, primary school

students) in the development, validation, piloting, and restructuring of this educational resource. Some of the main features of this methodology—iterativeness, multiple participants, different validations, and multidisciplinary collaboration—were absolutely essential to the final result, evidencing the relevance, suitability, and effectiveness of the EDR approach for the development of these kinds of educational resources. Thus, the procedures followed and the results obtained seem to be aligned with the reference literature: EDR can lead to the development of high-quality DERs that are innovative and appropriate to different contexts, which proves it to be a privileged methodology for the development of DERs such as the "Sustainability at Play" game.

Additionally, the DER "Sustainability at Play" game allows us to explore with children ways of intervening to reduce the EF inherent in daily choices and, consequently, their impact. It also helps raise awareness of the fact that all choices have an impact—some more than others—and that it is important to balance our consumption without giving anything up.

It would be interesting, in a future investigation, to have the opportunity to evaluate the implementation of the DER "Sustainability at Play" game with broader and more diversified groups of participants involving, for example, students from other levels of education and teachers from different areas, and extend this assessment to non-formal teaching and learning contexts (e.g., the family context). The use of this methodology for the development of new DERs, following the steps and procedures presented, would also be a privileged research opportunity, making it possible to add knowledge about the adequacy of the EDR for the development of this type of resource. Nevertheless, the development of a DER for education for sustainability in primary education, made available by the Ministry of Education on an open platform and that resulted from the collaboration between different research centers and multiple participants, is an added value of the presented resource, allowing for the union of collaboration, research, and innovation.

In summary, due to the privileged characteristics of the development process (cyclical and iterative process, involvement of different partner institutions, multidisciplinary team, available development period, expert validations, piloting, and availability of the resource on an open-access platform); the proposed activities, which are considered innovative both from the point of view of the themes to be addressed and from the didactic point of view; and the intended audience (primary school children), this is undoubtedly an important contribution to the promotion of the SDGs in Portugal, especially SDG4.

Institutional Review Board Statement: The study was conducted in accordance with the procedures required to guarantee the confidentiality and anonymization of the children who participated in this study. It is not possible, at any time, to identify any of the children. The required authorizations for the children's participation during the validation phase were granted by their parents, who gave their written informed consent.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

"MY Day: SuSTainability aT PlaY"

Hello! On Periscope Island, the little monsters that live there have created a game, but this one cannot be complete without your collaboration!
Help them complete it by giving your honest opinion about the game! So let's go!

I mark with an x my degree of agreement with the following statements:	Totally agree 😊	Partially agree 😐	Do not agee 🙁
I liked the colours and settings (e.g. bedroom, kitchen, school) of the game			
I could easily read what was on the screen			
The information that appeared on the screen (e.g. the name of the products, the summary, the icons) helped me to advance in the game			
I liked the music that came with the game			
The instructions given to me were helpful to play			
It was easy to get in and out of the bonus quizzes and back to where I was			
I realised that the green bar that accompanies every scenario represents the credit points I have for playing			
I understood why a colour (green, orange or red) appears to frame each product I chose			
I understood the relationship between the products I choose, the points I earn and the size of the green bar			
I read and understood the summary at the end of each scenario			
I understood what the bonus quizzes were for			
I took advantage of all the bonus quizzes to earn extra points			
I understood that when the green bar runs out the game ends			
After completing all the scenarios or after I had used up the green bar, I replayed the game to try and improve my score			

I mark with an x my degree of agreement with the following statements, taking into account what I learned from the game.	Agree 😊	Do not agree 🙁
My ecological footprint is a measure of my lifestyle on the planet		
The ecological footprint value focuses on several consumption categories (e.g. hygiene, clothing and food)		
All products, even "green" products, have an ecological footprint		
Only 'yellow' and 'red' products have an ecological footprint		
To reduce my ecological footprint, I should always buy smaller products		
If I choose the products I like, I contribute to the reduction of my ecological footprint		
The ecological footprint of each product is related to several aspects, such as: the material it is made of, its packaging, its origin…		
The same object/product made of different materials (e.g. toothbrushes) can have different effects on the environment		
The choices I make in my daily life contribute to increase or decrease my ecological footprint		
TheS ecological footprint is only related to the products we buy in the shops		

I mark with an x how I felt while playing.

- 😮 Surprised
- 🙂 Curious
- 😄 Enthused
- 😐 Other _____
- 😒 Bored
- 😒 Inattentive
- 🙁 Dissatisfied

I paint the stars according to my degree of overall satisfaction with the game.

- Not satisfied ☆
- Little satisfied ☆ ☆
- Satisfied ☆ ☆ ☆
- Very satisfied ☆ ☆ ☆ ☆
- Completely satisfied ☆ ☆ ☆ ☆ ☆

References

Abt, Clark C. 1987. *Serious Games*. New York: University Press of America.

Barab, Sasha, and Kurt Squire. 2004. Design-based research: Putting a stake in the ground. *The Journal of the Learning Sciences* 13: 1–14. [CrossRef]

Bogost, Ian. 2010. *Persuasive Games: The Expressive Power of Videogames*. Cambridge: MIT Press.

Boyle, Elizabeth, Thomas Connolly, Thomas Hainey, and James Boyle. 2012. Engagement in digital entertainment games: A systematic review. *Computers in Human Behavior* 28: 771–80. [CrossRef]

Campo, Luis Alberto Gómez del, and Guillermo Rodríguez-Abitia. 2018. Evaluación de Efectividad de Recursos Educativos Digitales— Evaluation of Effectiveness of Digital Educational Resources. Paper present at 24th Americas Conference on Information Systems, August 16–18, New Orleans, LA, USA.

Cardoso, Adriana, António Almeida, Carolina Gonçalves, Susana Pereira, Margarida Rodrigues, and Encarnação Silva. 2022. Princípios pedagógico-didáticos para a conceção de recursos educativos digitais: Análise do recurso cozinhar a aprender. In *Práticas de Integração Curricular nos 1º e 2º Ciclos do Ensino Básico*. Edited by Alfredo Dias and Cristina Loureiro. Lisboa: Escola Superior de Educação de Lisboa, Instituto Politécnico de Lisboa, pp. 60–82. [CrossRef]

Chappin, Emile J. L., Xanna Bijvoet, and Alexander Oei. 2017. Teaching sustainability to a broad audience through an entertainment game e the effect of Catan: Oil Springs. *Journal of Cleaner Production* 156: 556–68. [CrossRef]

Gravemeijer, Koeno, and Paul Cobb. 2006. Design research from a learning design perspective. In *Educational Design Research*. Edited by Jan Van den Akker, Koeno Gravemeijer, Susan McKenney and Nienke Nieveen. London: Routledge, pp. 45–85. [CrossRef]

Hallinger, Philip, Ray Wang, Chatchai Chatpinyakoop, Vien-Thong Nguyen, and Uyen-Phuong Nguyen. 2020. A bibliometric review of research on simulations and serious games used in educating for sustainability, 1997–2019. *Journal of Cleaner Production* 256: 120358. [CrossRef]

Herrington, Janice, Susan McKeneey, Thomas Reeves, and Ron Oliver. 2007. Design-based research and doctoral students: Guidelines for preparing a dissertation proposal. In *Proceeding of World Conference on Educational, Multimedia, Hypermidia and Telecommunication*. Edited by Craig Montgomerie and Jane Seale. Chesapeake: AACE, pp. 4089–4097. Available online: https://ro.uow.edu.au/edupapers/627 (accessed on 29 June 2023).

Jesus, Angelo, Ismar Silveira, Mauro Araújo, and Pedro Xavier da Penha. 2021. SIMSUSTENTABILIDADE: Um jogo digital de estratégia para educação ambiental. *Ensino de Ciências e Tecnologia em Revista-ENCITEC* 11: 132–51. [CrossRef]

Kelly, Anthony. 2003. Research as design. *Educational Researcher* 32: 3–4. Available online: https://www.jstor.org/stable/3699926 (accessed on 29 June 2023). [CrossRef]

Lang, Daniel, Arnim Wiek, Mathias Bergmann, Michael Stauffacher, Pim Martens, Peter Moll, Mark Swilling, and Cristopher Thomas. 2012. Transdisciplinary research in sustainability science: Practice, principles, and challenges. *Sustainability Science* 7: 25–43. [CrossRef]

Lankoski, Petri, and Staffan Björk. 2007. Gameplay Design Patterns for Believable Non-Player Characters. In *DiGRA '07 Proceeding of the 2007 DiGRA International Conference: Situated Play*. Tokyo: University of Tokyo, pp. 416–23. Available online: http://www.digra.org/wp-content/uploads/digital-library/07315.46085.pdf (accessed on 29 June 2023).

Leal, Verônica de Castro, Ricardo Argenton Ramos, and Paulo Roberto Ramos. 2022. O jogo "BioSolo" para a Educação Ambiental de crianças. *Revista Brasileira de Educação Ambiental* 15: 224–38. [CrossRef]

Lehtonen, Daranee. 2021. Constructing a design framework and design methodology from educational design research on real-world educational technology development. *EDeR. Educational Design Research* 5: 1–29. [CrossRef]

Leicht, Alexander, Julia Heiss, and Wong Jung Byun. 2018. *Issues and Trends in Education for Sustainable Development*. Paris: UNESCO.

Liu, Yijun, and Lin Yang. 2010. The digital learning resource design art and its evaluation. *2010 International Conference on Networking and Digital Society* 2: 331–34.

McKenney, Susan, and Thomas Reeves. 2013. Educational design research. In *Handbook of Research on Educational Communications and Technology*. Edited by J. Michael Spector, M. David Merril, Jani Elen and M. J. Bishop. New York: Springer, pp. 131–40. [CrossRef]

McKenney, Susan, and Thomas Reeves. 2019. *Conducting Educational Design Research*, 2nd ed. London: Routledge.

McKenney, Susan, and Thomas Reeves. 2021. Educational design research: Portraying, conducting, and enhancing productive scholarship. *Medical Education* 55: 82–92. [CrossRef]

Michael, David, and Sande Chen. 2006. *Serious Games: Games That Educate, Train, and Inform*. Boston: Thomson Course Technology PTR.

Nacke, Lennart, Chris Bateman, and Regan Mandryk. 2009. BrainHex: A neurobiological gamer typology survey. *Entertainment Computing* 1: 55–62. [CrossRef]

Napal, María, Ana María Mendióroz-Lacambra, and Alicia Peñalva. 2020. Sustainability Teaching Tools in the Digital Age. *Sustainability* 12: 3366. [CrossRef]

Neset, Tina-Simone, Lotta Andersson, Ola Uhrqvist, and Carlo Navarra. 2020. Serious Gaming for Climate Adaptation—Assessing the Potential and Challenges of a Digital Serious Game for Urban Climate Adaptation. *Sustainability* 12: 1789. [CrossRef]

Newman, Fred. 1990. Higher order thinking in teaching Social Studies: A rationale for the assessment of classroom thoughtfulness. *Journal of Curriculum Studies* 22: 41–56. [CrossRef]

Oliveira, Ketelen Michele Guilherme de, Ronaldo dos Santos Filho, Alberto de Almeida Guilherme, and Daniela Morais Leme. 2021. Produtos perigosos ou sustentáveis: Elaboração e avaliação de um jogo digital como ferramenta de educação científica. *Revista Eletrônica udus Cientiae* 5: 223–39. [CrossRef]

Ouariachi, Tania, Marïa Dolores Olvera-Lobo, and José Gutiérrez-Pérez. 2019. Serious Games and Sustainability. In *Encyclopedia of Sustainability in Higher Education*. Edited by W. Leal Filho. Cham: Springer, pp. 1–10. [CrossRef]

Plomp, Tjeerd. 2013. Educational design research: An introduction. In *Educational Design Research*. Edited by Tjeerd Plomp and Nienke Nieveen. Enschede: SLO, pp. 10–51.

Plomp, Tjeerd, and Nienke Nieveen. 2013. References and Sources on Educational Design Research. In *Educational Design Research*. Edited by Tjeerd Plomp and Nienke Nieveen. Enschede: SLO, pp. 170–99.

Polk, Merritt. 2015. Transdisciplinary co-production: Designing and testing a transdisciplinary research framework for societal problem solving. *Futures* 65: 110–22. [CrossRef]

Reeves, Thomas. 2000. Socially responsible educational technology research. *Educational Technology* 40: 19–28. Available online: https://www.jstor.org/stable/44428634 (accessed on 29 June 2023).

Reeves, Thomas. 2006. Design research from a technology perspective. In *Educational Design Research*. Edited by Jan Van den Akker, Koeno Gravemeijer, Susan McKenney and Nienke Nieveen. London: Routledge, pp. 52–66.

Rozo, Hugo, and Miguel Real. 2019. Pedagogical guidelines for the creation of adaptive digital educational resources: A review of the literature. *Journal of Technology and Science Education* 9: 308–25. [CrossRef]

Sá, Patrícia, Ana Valente Rodrigues, Joana Peixinho, and Isabel Pinheiro Martins. 2021. A Pegada Ecológica em Jogo: Uma Exploração Didática para os Primeiros Anos. In *Actas electrónicas del XI Congreso Internacional en Investigación en Didáctica de las Ciencias 2021. Aportaciones de la educación científica para un mundo sostenible, Lisboa, Enseñanza de las Ciencias*. Edited by F. Cañada and P. Reis. Enseñanza de las Ciencias. pp. 1133–36. ISBN 978-84-123113-4-1. Available online: https://congresoenseciencias.org/wp-content/uploads/2021/10/Actas-Electronicas-del-XI-Congreso-FINAL_compressed.pdf (accessed on 29 June 2023).

Sá, Patrícia, Cecília Guerra, António Pedro Costa, Maria João Loureiro, and Rui Marques Vieira. 2013. Courseware SeRe®- um recurso digital para a Educação para o Desenvolvimento Sustentável. Da conceção do recurso à formação de professores. *Revista Indagatio Didática* 5: 96–120. [CrossRef]

Souza, Bruna Mariana Ferreira de, Neila Batista Xavier, Emmerson Santa Rita da Silva, and Miguel Vanderlei de Oliveira. 2020. "U.M.E: Um Jogo Para Despertar a conscientização Ambiental em crianças do 2.° ao 5.° Ano. *Brazilian Journal of Development* 6: 43823–28. [CrossRef]

Stanitsas, Marios, Konstantinos Kirytopoulos, and Elise Vareilles. 2019. Facilitating sustainability transition through serious games: A systematic literature review. *Journal of Cleaner Production* 208: 924–36. [CrossRef]

Turucz, Emilia, Sorana Teodora Truta, Maria Dorina Pașca, Ernő Jerzicska, Cristian Marius Boeriu, János Szederjesi, and Leonard Azamfirei. 2021. Educational design research, an innovative method to investigate virtual reality applications in disaster management training programs. *Acta Marisiensis—Seria Medica* 67: 47–54. [CrossRef]

UNESCO. 2015. *Transforming Our World: The 2030 Agenda for Sustainable Development*. Paris: UNESCO.

UNESCO. 2017a. *Education for Sustainable Development Goals: Learning Objectives*. Paris: UNESCO.

UNESCO. 2017b. *Unpacking Sustainable Development Goal 4. Education 2030.* Paris: UNESCO.

Van den Akker, Jan. 1999. Principles and methods of development research. In *Design Approaches and Tools in Education and Training.*. Edited by Jan van den Akker, Robert Maribe Branch, Kent Gustafson, Nienke Nieveen and Tjeerd Plomp. Dordrecht: Springer, pp. 1–14. [CrossRef]

Veronica, Rossano, and Gabriella Calvano. 2020. Promoting Sustainable Behavior Using Serious Games: SeAdventure for Ocean Literacy. *IEEE Access* 8: 196931. [CrossRef]

Vestena, de Fátima Rosemar, and Rodrigo Marques Bem. 2020. O jogo digital 'reciclappsm' na educação ambiental e tecnológica das crianças. *Revista de Produtos Educacionais e Pesquisas em Ensino* 4: 34–48. Available online: http://educapes.capes.gov.br/handle/capes/568624 (accessed on 29 June 2023).

Wouters, Pieter, Erik van der Spek, and Herre van Oostendorp. 2009. Current practices in serious game research: A review from a learning outcomes perspective. *Games and Culture* 4: 202–27. [CrossRef]

Xie, Kui, Gennaro Di Tosto, Sheng-Bo Chen, and Vanessa Vongkulluksn. 2018. A systematic review of design and technology components of educational digital resources. *Computers & Education* 127: 90–106. [CrossRef]

Article

Phenomenon-Based Learning in Teaching a Foreign Language: Experiences of Lithuanian Teachers

Nijole Ciuciulkiene *, Ilona Tandzegolskiene-Bielaglove and Martyna Culadiene

Education Academy, Vytautas Magnus University, 44244 Kaunas, Lithuania;
ilona.tandzegolskiene-bielaglove@vdu.lt (I.T.-B.); martyna.culadiene@stud.vdu.lt (M.C.)
* Correspondence: nijole.ciuciulkiene@vdu.lt

Abstract: Phenomenon-based learning (hereinafter PhenoBL) is widely studied in the majority of European countries, especially given that research data indicate that PhenoBL is more successful in providing effective learning, better student achievement, a stronger interest in science, and even a higher happiness index. However, there are sparse data on the educational practice of this method in Lithuania, particularly in foreign language teaching (FLT). Thus, teachers' professional preparation for the effective implementation of PhenoBL remains one of the most relevant research problems. For this reason, this study aims to analyse the experiences of Lithuanian foreign language teachers in incorporating PhenoBL into FLT. Fifteen individual semi-structured interviews were conducted, and the obtained data were analysed by applying qualitative inductive content analysis. An inductive content analysis of the interview reports revealed six themes and related categories: the perception of student-centred teaching, the development of subject integration competencies, teamwork development competencies, research-planning skills, the positioning of personal responsibilities and duties, and foreign language usage emancipation, i.e. setting free from personal fears (fear to make grammar, vocabulary mistakes, while speaking in public) to speak a foreign languages. The content of the revealed themes indicated that teachers highlighted the flexibility of PhenoBL from the perspective of its application to different language learning levels within one group. The majority of the respondents underlined the necessity for the development of an active didactic competence. Other respondents mentioned the importance of the correlation between personal creativity competence development and success in PhenoBL. It was also stressed that if a teacher wants to be successful while using PhenoB, they must to be prepared to work with integration-based and communication-emancipatory methods, must be student-centred, must have competencies in teaching several subjects, must be good at teamwork, and must be good at managing learning time.

Keywords: phenomenon-based learning (PhenoBL); teaching a foreign language; didactic competencies of foreign language teachers

1. Introduction

The new requirements and approaches for the future standards and competencies that students should demonstrate are changing the attitudes about the basic skills and knowledge expectations that dominated in the past. More and more research is being directed towards the investigation of key soft-skill competencies, known as the "4Cs": creativity, critical thinking, collaboration, and communication (Thornhill-Miller et al. 2023). For this reason, schools must be transformed in a way that will enable students to acquire multitasking skills, become multiliterate, demonstrate the ability to think sophisticatedly, flexibly solve emerging problems, and collaborate and communicate in a way that promotes their success in work and life.

The majority of scientists agree that PhenoBL is directed towards the development of the "4Cs" while investigating certain real-world phenomena from different perspectives (Meriläinen and Piispanen 2012; Symeonidis and Schwarz 2016; Makarova et al. 2020;

Akkas and Eker 2021). The researchers mentioned here highlight the idea that PhenoBL truly stands for relevant, innovative, substantive, and timely learning. This concept introduces PhenoBL not only as a teaching method, but also as a new way of thinking (Roiha and Polso 2021).

This new vision arose from students' curiosity, self-motivation, autonomy, and individual efforts to pursue and explain the holistic, real-world phenomena around them. In this context, holistic, real-world phenomena relate to practical and realistic life topics (not simulated, but real-life situations), such as human relations, media and technology, natural resources, and other related socio-cultural issues that could provide and enliven teaching and learning objectives in the pedagogical environment so that they become accessible, concrete, and meaningful to learners (Roiha and Sommier 2018; Akkas and Eker 2021; Silander et al. 2022).

This concept also refers to redesigning teaching so that learning can take place in problem-solving contexts. Such contexts provide learners with the possibility of plunging into language usage while being constantly encouraged to actively participate in investigating and analysing specific academic information, reflecting on emerging challenges with peers and groups, debating and negotiating, obtaining results, making conclusions, and reflecting on their experiences throughout the learning process (Roiha and Polso 2021).

The introduction of phenomenon-based learning (PhenoBL) might help to solve this task in a positive way (Binkley et al. 2011; Randolph et al. 2009). PhenoBL is widely studied in European countries, especially in Finland. In 2014, the Finnish education system made a progressive decision; starting from 2016, it would include PhenoBL in the curricula of comprehensive schools. The essence of the Finnish education reform was to change the "what?" and "why?" of learning into one simple "how". This may be regarded as a response to critical statements proposing that traditional schools present too much theoretical and fragmented learning instead of linking it to real-world issues and problems (Kangas and Rasi 2021).

PhenoBL, like other learning processes—i.e., problem-based learning, inquiry-based learning, and project-based learning, different from content-based and task-based learning—is designed to transform the goal of learning into a process, not just a result. This means not only learning facts but being able to apply them (Kangas and Rasi 2021; Bărbuleţ 2022). While implementing this princip, teachers turn towards active learning. The whole learning process is based on investigating real-life phenomena. Teachers plan and compile learning tasks that enable students to create their individual approaches and answers as students have a possibility to relate them to their personal experiences. When the content of the lesson is connected to real life, the students are able to participate more actively in learning as the whole process becomes more close and clear to them (Johnson 2021).

During classes, PhenoBL proved to be an effective and reliable strategy for responding to pupils' needs, promoting their motivation to learn (particularly in the teaching of foreign languages, as it encourages verbal communication) since the topics were presented according to their interests, and stimulating their language skill development and cultural awareness developed their communicative skills, improved the level of language acquisition the evidence of which is students' personally formed active linguistic and communicative thesauri, which might be regarded as compendiums of relevant bodies of knowledge with the structured relationship of concepts within an application of given thematic area(Meriläinen and Piispanen 2012; Symeonidis and Schwarz 2016; Lonka et al. 2018). PhenoBL is based on questioning and problem-solving skills (Akkas and Eker 2021; Kangas and Rasi 2021).

At present, English is accepted as the leading lingua franca in the world. More and more people around the world are choosing to learn English as their main foreign language. Alongside the dominant communicative function of English, initiatives for learning other foreign languages are being developed. Thus, current foreign language teachers are facing the task of finding the most effective strategies to ensure success in every student's foreign language acquisition, ensuring that a foreign language might become a tool and helping them to be successful in the global socialisation process (Protassova 2018; Johnson 2021).

The combining of language learning with phenomenon-based learning is rather common. Instead of organising separate classes for each subject, students take part in cooperative project-based learning units/activities that include content standards and objectives from all main curriculum subject areas. These projects not only enable students to learn about specific topics in their own way but also make learning more meaningful. Instead of students being asked to memorise facts for the sole purpose of completing an exam, students learn how to solve problems in a multifaceted way (Johnson 2021), realising all four language domains: listening, reading, speaking, and writing. In other words, during PhenoBL sessions, the students are engaged in active communication in a foreign language process, both in written and oral forms.

The varieties of foreign language usage are organised through six stages of PhenoBL: (1) Establishing the Phenomena Goals; (2) Engaging and Immersing the Learners; (3) Personalised Learning; (4) Establishing Evidence-Based Inquiry to Knowledge; (5) Questioning for Reflection; and (6) Documenting a Portfolio and Sharing the Project (Varzari 2022). PhenoBL class teachers should discuss the project design and tasks with the students. The learning process design should highlight the fluent stages: designing, choosing different learning tasks, selecting practical activities, and considering ways of guiding and assessing (Varzari 2022).

The essential crux of PhenoBL is the opportunity for each participant to become actively involved in communication regarding the content studied, performance, and results, as well as what happens around them. A teacher's main concern is to monitor the discovery–learning process by facilitating students' independent decoding of meanings by asking purposeful questions and providing commentaries, and providing explanations concerning content and language quality (Varzari 2022).

Active communication during PhenoBL classes supports the communicative method of learning a foreign language. While analysing the phenomena, students not only focus on the grammatical and lexical quality of language usage but also on some relevant issues. In other words, learning activities are more focused on the message than on the form. Students and teachers collaborate in creating investigations, communicating, and creating new knowledge (Bobrowsky 2018; Fields 2018; Fields and Kennedy 2020; Johnson 2021; Bercasio and Adornado 2023).

While collaborating with their teachers, students overcome the spoken communication barriers, which are still determined by the deeply rooted, indoctrinated educational tradition, whereby a student is supposed to present the exact answer without making grammatical and stylistic language mistakes. Thus, the communicative activities of PhenoBL scaffold and further emancipate the development of spoken communicative skills in a foreign language (Ciuciulkiene and Stankeviciene 2014; Marsh et al. 2019).

These data complement the major experiential findings of teachers that highlight the increase in students' metacognitive awareness while applying the PhenoBL. Students with high metacognitive awareness know where and when to use knowledge (Wilson and Conyers 2016). Thus, it is only natural that PhenoBL is among the didactic priorities for those countries that are engaged in educational reform.

The topic of the implementation of phenomenon-based learning has hardly been studied in the context of educational practice in Lithuania. In individual studies, information has been presented on the few practices of several schools that have tried to integrate this method.

In 2021, a project took place in which the "School of Creativity", in cooperation with Tallinn University, who were invited to study 10 phenomena. However, this is more reminiscent of the first steps in trying to apply innovative methods rather than systematic practice. The same project identified 29 different disciplines integrating PhenoBL, but none of them was a foreign language. Presumably, the aim is not to teach a foreign language using PhenoBL. Although there is no unified and most effective way of teaching foreign languages, it is certainly known that, in order to learn a foreign language as best and as quickly as possible, it is important to be in an environment that speaks that language. It is

important, too, to not only listen but also speak that language and use it actively. Such a real-life, efficient simulation can be built using the PhenoBL paradigm.

The PhenoBL experience of Lithuanian foreign language teachers is analysed here in the context of the theoretical ideas and practical insights of PhenoBL teachers in foreign countries. PhenoBL has been applied as a new approach to learning (Tagunova et al. 2019), especially in teaching Russian as a foreign language (Makarova et al. 2020) and teaching English as a foreign language in Finland and Vietnam (Nguyen 2018), with PhenoBL also being implemented in Abu Dhabi (Valanne et al. 2017). Students learn together while forming a vocabulary relevant to their topic, develop it relying on each other's experiences. In this way, they actively teach each other and at the same time learn from each other, expanding their relevant vocabulary more intensively and polishing grammatical models.

The lack of research and experiential data on integrating PhenoBL in teaching foreign languages in Lithuanian schools makes this research relevant and innovative. The shortage of objective data presupposes the following series of research questions: Do teachers in Lithuania know what phenomenon-based education is? What is foreign language teachers' experience ofPhenoBL? What specific preparation do foreign language teachers need? These research questions model the further content of the research parameters.

The research itself is centred around the role of PhenoBL in teaching a foreign language. The main goal of this study is to analyse the experience of Lithuanian foreign language teachers in incorporating PhenoBL. Research data were collected while conducting semi-structured interviews. Semi-structured interviews allowed us to collect more detailed information about the investigation of PhenoBL in foreign language teaching. The data analysis method employed was qualitative inductive content analysis.

2. Materials and Methods

2.1. Research Design

The main aim of this research was to analyse the experience of Lithuanian foreign language teachers in incorporating PhenoBL. The concept of "experience" suggests the idea of a qualitative research paradigm (Mulisa 2022), allowing the researchers more space for data interpretation. The research data were collected while conducting semi-structured interviews. The data were analysed according to the model of inductive content analysis. The research was performed while following the ethical principles of qualitative research. The participants of the research were invited to share their experiences on a voluntary basis.

2.2. Materials and Procedures

To collect the main data, semi-structured interviews were organised. Semi-structured interviews were chosen due to the flexibility of this method and the possibility of collecting data from a group of 15 informants, inviting volunteer teachers from all Lithuanian schools that use PhenoBL. Semi-structured interviews also allowed the researchers to use more informative research questions that provided a clearer vision and understanding of the informants' experiences and individual approaches to the research situation. In this particular case, this situation constitutes the experience of foreign language teachers while implementing PhenoBL in their classes.

For the implementation of the semi-structured interviews, 23 main questions were prepared relying on an inductive approach (the operationalisation of the main theoretical concepts, relying on scientific analysis and lesson observation). This was based on the relevant theoretical and practical insights, which served as a premise for formulating the interview questions. The list of interview questions is presented in Table 1 below.

The theoretical analysis suggested three leading conceptual ideas concentrated around the experience of Lithuanian foreign language teachers who implemented PhenoBL in their curriculum. These ideas revealed the major meaning of PhenoBL, defining PhenoBL not only as a relevant, innovative, and timely learning strategy but also as a new way of thinking; its specification in teaching a foreign language frees up language usage and turns the foreign language into a successful tool for global socialisation, aligning with the special

didactic requirements for a foreign language teaching and combining language acquisition process domains (see Table 1). The general conceptual ideas served as a pretext for the research questions, which, in turn, were tied to the interview questionnaire.

Table 1. Operationalizsation of research and interview questions.

Concept Content	Research Question	Interview Questions
The theoretically based PhenoBL concept states that PhenoBL stands for relevant, innovative, substantive, and timely learning. This method is not only a method but also a new way of thinking (Binkley et al. 2011; Symeonidis and Schwarz 2016; Lonka et al. 2018; Randolph et al. 2009; Akkas and Eker 2021; Roiha and Polso 2021; Bărbuleţ 2022).	Do foreign language teachers in Lithuania know what phenomenon-based learning is?	Did you have enough information about PhenoBL before implementing it into your language classes?
The relevant task of the foreign language teacher: to find the most effective strategies to ensure that a foreign language might become a tool, helping students to be successful in the global socialisation process (Bobrowsky 2018; Fields 2018; Protassova 2018; Fields and Kennedy 2020; Johnson 2021; Varzari 2022; Bercasio and Adornado 2023).	What is foreign language teachers' experience while facing PhenoBL?	What challenges do you face while using the PhenoBL method? What educational subjects are the easiest to integrate into the PhenoBL method? What academic subjects are the most challenging for the implementation of PhenoBL? What do you, as a teacher, lack in order to more smoothly incorporate PhenoBL into the curriculum for TFL? Do you notice a positive/negative impact on students' learning outcomes after starting to include this method? Comment your answer. What do you expect students to do before starting to explore the phenomenon? What is the attitude/mood of the students before/during/after investigating the phenomenon? How was the preparation process? How much time did you spend planning and how long did it take to successfully plan your investigation of the phenomenon? Is a 45 min lesson enough to apply PhenoBL? If not, how do you organise your class time? Do the students willingly engage in the study of the phenomenon? How did the learning process differ between less motivated and more motivated students? Did you involve parents in the process of researching the phenomenon? What basic knowledge did the students need to acquire before starting to study the phenomenon? Were students able to successfully integrate the necessary knowledge into the inquiry process? What are your recommendations for teachers who would like to try incorporating PhenoBL into their curriculum? Will you continue using this method?
Specific foreign language teachers' didacticskills, CLIL competencies (Ciuciulkiene and Stankeviciene 2014; Valanne et al. 2017; Nguyen 2018; Marsh et al. 2019; Tagunova et al. 2019; Makarova et al. 2020; Johnson 2021; Bercasio and Adornado 2023).	What specific preparation do foreign language teachers need?	Is collaboration between teachers an important part of the PhenoBL? Why? Do you think the inclusion of foreign languages in PhenoBL is important? Why? Do you include only the first foreign language or others as well? What methods and strategies does the language teacher apply while conducting PhenoBL?

During the interview, the main interview questions were supported with clarifying questions. The research participants were allowed to develop their answers freely, i.e., if they wanted to speak further about certain issues. The questions were almost always asked in the pre-prepared order but adapted to the flow of the interview; if the respondent had already answered the question he wanted to ask, the question was not repeated. Sometimes, the researcher had to slightly clarify or rephrase the prepared questions. The duration of respondents' answers to the questions asked varied. The duration of a single semi-structured interview lasted about 1.5 h.

The interview was conducted by one researcher. The responses were recorded and later transcribed. The transcriptions were analysed by two independent researchers with the purpose of generating the main ideas and regularities. The main categories and subcategories were revealed. A validating consensus on the leading categories and subcategories was reached.

The semi-structured interview sample is based on purposive sampling: those teachers who are best able to answer the research questions based on their personal experience participate in the study. The chosen target group is teachers who are experts in education.

The research participants were selected according to two criteria: teachers who have already applied the phenomenon-based education method in their work; and those who teach not only in their native language but also include in the process a foreign language or languages. A total of 15 education experts were interviewed (n-15). Interviews were coded with a letter (M) and a number from M1 to M15.

The interviews were conducted until the researchers obtained "rich and thick" (Dibley 2011) data. Thick data means a lot of data; rich data are many-layered, intricate, detailed, nuanced, and more. One can have a lot of thick data that are not rich; conversely, one can have rich data that are sparse. For research validity, it is important to have both richness and thickness (Fusch and Ness 2015). This means that the interview texts (from 6 to 8 pages) were extensive and allowed for inductive content analysis.

The respondents participated in the survey while following the major principles of research ethics. The teaching experts participated in the survey voluntarily and their anonymity was ensured. During the interview, the teachers did not have to indicate their name, surname, or the name of their school. If the teachers gave the name of the school at which they worked, this was coded in the study. It is thus not possible to identify the respondents.

The received data were analysed using qualitative inductive content analysis according to Elo and Kyngäs (2008), while also relying on the insights of Lochmiller (2021). Qualitative inductive content analysis was performed, which is an inductive process involving iterative coding. By inductive process, we mean that the codes used to label the data are developed during the process of coding, based on the actual content of the data set. The codes were identified by the researcher within the data or, as is often said, as they "arise" within the data.

The received answers were analysed by three researchers using the MaxQda software. Finally, the received categories were validated by comparing the received results of the three researchers.

The major limitation of this study was the existing limited experiences of PhenoBl implementation in TFL. As it is still an innovation, the number of respondents who met the research requirements for active PhenoBL usage was quite low.

3. Results

After the analysis was performed, five leading major themes emerged: the competencies of student-centred teaching, the development of subject integration competencies, teamwork development competencies, major teacher achievements and challenges, and foreign language usage emancipation. It is worth noting that the teachers that participated in the research expressed more positive attitudes towards their experience of PhenoBL than negative. The revealed themes demonstrate that teachers paid major attention to the didactic possibilities of PhenoBL. Less attention was paid to the separate issues of evaluation systems.

The first theme was clarified from the answers to one of the semi-structured interview questions dealing with the foreign language teachers' primary knowledge of PhenoBL and their experience while applying it (see Table 1). The teachers highlighted the importance of student-centred teaching (see Table 2).

Table 2. Content of categories and subcategories of the first theme, "Competencies of student-centred teaching".

Subcategory	Category
Good knowledge of students' interests, abilities, skills Planning of students' experiences	Student-centred activity management
Independent choice of the phenomenon Teacher as advisor and consultant	Student is the main path finder

The evidence for the coding of this category coding can be illustrated by one of the responses: "<. . .> *Those who are more involved in this innovation often encourage other friends, set an example, etc. . .Teacher is not such a leader any more. There are students in the classroom who are different leaders than teachers. They know what they want. They have a different effect on those who are, say, quieter, than the teacher. The teacher has his own methods of encouragement, management and they have different methods of approach and encouragement among themselves*" *(M3).* Key ideas such as "*students are different leaders*" and "*they have different methods of approach and encouragement among themselves*" help to highlight teachers' understanding of the group, their study needs, and their ability to be their own learning leaders. This is why it is possible to speak about student-centredness in PhenoBL.

The second theme revealed the importance of subject integration competencies (see Table 3).

Table 3. Content of categories and subcategories of the first theme, "Development of subject integration competencies".

Subcategory	Category
Holistic, integrative approach towards teaching Knowledge about colleagues' interests	Collaboration among teachers
Good knowledge of curriculum Creativity development Time management	Phenomenon-compiling skills

The evidence for category coding emerged from the following typical answers: "<. . .> *It is difficult to understand that my subject is not the most important. There is also no teaching of individual subjects, and the chosen phenomenon is studied, analysed, and produced through the prisms of many disciplines. Many educational subjects can be combined into one phenomenon, for example, when deciding to restore an old painting, mathematics, chemistry, art, a foreign language are included*" *(M1);* "*It is necessary to have good planning skills, to be willing to cooperate with colleagues—it is necessary to coordinate activities with other teachers, to search for additional information if the phenomenon involves disciplines that the teacher does not teach, to be creative*" *(M4; M7;* and *M14).* The categories were clarified while relying on the expressed didactic, collegial ideas of support, which allowed us to crystallise the major aspects of collaboration and a good knowledge of the phenomena curriculum.

The third theme stressed the relevance of the teamwork development competencies of teachers in enhancing the development of students' group-work competencies (see Table 4).

Table 4. Content of categories and subcategories of the third theme, "Teamwork development competencies".

Subcategory	Category
Preparation of the phenomenon design in teaching groups Flexibility of PhenoBL planning and organising	Team teaching
Dynamics of sharing responsibilities in the group Collaboration of teachers and students	Development of students' group-work skills

The presented answers "*Just as students preparing for research will work in a group, teachers could prepare and research in teams—this way they will have an even better understanding of the challenges that the students will have to face*" *(M7)*. "*There can be a study of 2–3 lessons, when the lessons of several teachers are combined, which are placed one after the other*" *(M4)* And

"*In the learning process, teachers are facilitators of learning, using their knowledge not necessarily to convey facts, but more importantly to encourage and guide students to solve problems that the students themselves have identified*" *(M13)*, allowed us to highlight one of the specific dimensions of PhenoBL—learning processuality—which is fulfilled with the help of team teaching.

Team teaching allows educators to turn ordinary class teaching into an authentic, problem-solving-based process, which is realised by turning groups of students into learning teams as well (Meriläinen and Piispanen 2012; Symeonidis and Schwarz 2016; Makarova et al. 2020). Becoming a learning team encourages inclusion and the development of communication and social skills.

The fourth theme was derived from answers to questions related to teachers' achievements and the challenges they faced while implementing PhenoBL (see Table 5).

Table 5. Content of categories and subcategories of the fourth theme, "Teachers' major achievements and challenges".

Subcategory	Category
Children's enthusiasm and engagement in investigation Feeling like a team member Engagement in discussion in a foreign language Range of didactic activities	Teaching achievements
Teachers' fears about making mistakes and misleading students Discomfort of changing traditional teaching roles Lack of administrative flexibility	Teaching challenges

While speaking about their achievements, teachers once more highlighted a student-centred approach. An additional opinion was devoted to parents. The latter attitude supported innovative teaching and parental positiveness towards school. "*It's great fun when parents get involved. They are happy to see children's independent work. This is probably the greatest success, when the children's motivation grows, competencies improve. . . to see that even after the bell for a break, they are still discussing*" *(M12)*. "*I was happy to use my CLIL*" *(M9)*. "*That challenge is the same fear of saying something wrong. I myself feel like a student, because I learn together with the students, <. . .> This phenomenon is also a challenge, because the teachers do not know everything, and they are also researching something*" *(M10)*. As can be seen from the first citation, teachers are also mindful of their professional growth, reflect on emerging challenges, and evaluate the development of their competencies (Akkas and Eker 2021).

The last theme was derived from answers to questions dealing with the foreign language teaching methodical specification while using PhenoBL (see Table 6).

Table 6. Content of categories and subcategories of the fifth theme, "Foreign language usage emancipation".

Subcategory	Category
Expansion of vocabulary Usage of terms	Development of lexical competencies
Better usage of interrogative sentences Better usage of negative sentences	Polishing of grammar models
Value-based speaking (speaking the truth) Presenting arguments Courage for public speaking	Development of oral communication skills

While talking about foreign language learning from the perspective of PhenoBL research, participants stressed the importance of the development of creativity, collaboration, and communication: "*Public speaking skills are very important. After completing the research, it needs to be presented, so students must not only be original and creative, but also accurate, good time managers. It means that they have to make a speaking plan, prepare a presentation text, also be able to follow that plan. Especially if the presentation is carried out in a foreign language, in front of an audience, children learn to overcome their fears and clarify areas in which they could do some extra work. Especially amazing to see them emotionally involved in their friends' speaking, becoming supportive, collaborative fans*" *(M5).* This attitude almost coincides with researchers' attitudes that learners are constantly encouraged to actively participate in researching and analysing specific academic information, in reflecting on emerging challenges with peers and groups, in debating and negotiating, in drawing conclusions, obtaining results, and reflecting on their experiences throughout the learning process (Roiha and Polso 2021).

After carrying out a qualitative study and interviewing teachers already using this method, it became clear that no special preparation is needed for this method to be applied; the most important thing is that teachers are theoretically familiar with the application of this method, are interested in examples and good practices, have the know-how, and are willing to cooperate with colleagues in order to share their acquired experiences. It is important that the school administration tend toward being more flexible regarding temporary changes in the educational process, but for the method to be successfully applied, this condition is not mandatory; teachers are able to apply the PhenoBL method while adapting to the existing norms in the school.

4. Discussion and Conclusions

The success of the PhenoBL method is greatly influenced by the preparation of teachers for the implementation of this innovation, by the possibility of involving experts, and by the school's flexibility in temporarily adapting the schedule, providing the opportunity to change the learning space. This can be supported by the scientific research data highlighting the importance of the pedagogical environment becoming accessible, concrete, and meaningful to learners (Lonka et al. 2018; Roiha and Sommier 2018; Akkas and Eker 2021; Silander et al. 2022). The research participants (Lithuanian teachers) also highlighted the importance of didactic contexts that develop students' metacognitive awareness and stimulate their curiosity and creativity.

As Lithuanian teachers state, the uniqueness of the phenomenon method is that it goes beyond the boundaries of one educational subject—the research aims to create the conditions of a real-life problem and teach students to solve real problems. The ability to integrate this with other acquired skills (public speaking, global perspectives, etc.) will benefit students after school, as they can (and probably must) be used outside of school. The latter approach supports the attitude about the holistic nature of PhenoBL, linking practical and realistic life topics into a unique whole, forming a new way of thinking about learning (Roiha and Sommier 2018; Akkas and Eker 2021; Silander et al. 2022).

The phenomenon-based approach brings students closer to the real world and enables them to solve real-world problems while communicating in a foreign language in a safe and error-promoting environment. Teachers who use PhenoBL in their classes are positive, highlighting the benefits it brings to both teachers and students.

All teachers tend to recommend this method to colleagues who have not yet tried it, encouraging them to not be afraid to make mistakes and learn from them. However, this method also has challenges that can scare educators; it is important to cooperate with each other regardless of teaching subject by dividing the workload and saving time, sharing knowledge, reading a lot, and being interested before applying PhenoBL. The most widely discussed topic is how teachers and students incorporate foreign languages into the study of the phenomenon or teaching a foreign language using PhenoBL.

The intensity of language activities improves the understanding of a foreign language and reduces the fear of public speaking. In addition, the teachers distinguished that the

way students use foreign languages is related to their age and experience—older students who know foreign languages better prefer to communicate in a foreign language.

References

Akkas, Esref, and Cevet Eker. 2021. The Effect of Phenomenon-Based Learning Approach on Students' Metacognitive Awareness. *Educational Research and Reviews* 16: 181–88.

Bărbuleţ, Gabriel. 2022. Content based learning-Task based learning-Problem based learning in Teaching Romanian Language to Foreign Students. *Swedish Journal of Romanian Studies* 5: 241–50. [CrossRef]

Bercasio, Rosario O. Rebecca, and Rutesa A. Adornado. 2023. Enriching High School English Lessons with Global Citizenship Education Using Phenomenon-based Learning. *Randwick International of Education and Linguistics Science Journal* 4: 216–32. [CrossRef]

Binkley, Marilyn, Ola Erstad, Joan Herman, Senta Raizen, Martin Ripley, May Miller-Ricci, and Mike Rumble. 2011. *Defining Twenty-First Century Skills. Assessment and Teaching of 21st Century Skills*. Dordrecht: Springer, pp. 17–66.

Bobrowsky, Matt. 2018. How Can I Make Science Fun and Have Students Learn More By Using Phenomenon-Based Learning? Background boosters for elementary teachers. *Science&Children* 56: 70–73.

Ciuciulkiene, Nijole, and Edita Stankeviciene. 2014. Probleminis mokymasis kaip prielaida kolegijos studentų kalbėjimą angliškai emancipuojantis procesas/PBL as a premise for the emancipation of students 'speaking english skills in the university of applied sciences. In *Challanges and Social Responsibility in Business, International Applied Research Conference Proceedings*. Kaunas: Kolpingo Kolegija, pp. 19–27.

Dibley, Lesley. 2011. Analysing narrative data using McCormack's Lenses. *National Library of Medicine* 3: 13–19. [CrossRef] [PubMed]

Elo, Satu, and Helvi Kyngäs. 2008. The qualitative content analysis process. *Journal of Advanced Nursing* 62: 107–15. [CrossRef]

Fields, Donna Lee. 2018. *101 Scaffolding Techniques for the Language and Content Teaching*. Barcelona: Editorial Octaedro.

Fields, Donna L., and Teresa J. Kennedy. 2020. What if Phenomenon-Based Learning Projects: Augmenting Upper and Early Learning Stem Lessons. In *INTED2020 Proceedings, Proceedings of the 14th International Technology, Education and Development Conference, Valencia, Spain, 2–4 March 2020*. Valencia: IATED, pp. 88–95.

Fusch, Patricia I., and Lawrence R. Ness. 2015. Are We There Yet? Data Saturation an Qualitative Research. *The Qualitative Report* 20: 1408–16. [CrossRef]

Johnson, Makenzie. 2021. *Implementing Phenomenon Based Learning into English Language Development Curriculum*. School of Education and Leadership Student Capstone Projects. Saint Paul: Hamline University, School of Education, pp. 17–21.

Kangas, Marjaana, and Pävi Rasi. 2021. Phenomenon-Based learning of multiliteracy in a Finnish upper secondary school. *Media Practice and Education* 22: 342–59. [CrossRef]

Lochmiller, Chard R. 2021. Conducting Thematic Analysis with Qualitative Data. *Qualitative Report* 26: 2029–44. [CrossRef]

Lonka, Kirsti, Juho Makkonen, Minni Berg, Markus Talvio, Erika Maksniemi, Mulla Kruskopf, Heidi Lammassaari, Lauri Hietajärvi, and Suvi Krista Westling. 2018. *Phenomenal Learning from Finland*. Helsinki: Edita.

Makarova, Tatiana S., Evgenia E. Matveeva, Maria A. Molchanova, and Elena A. Morozova. 2020. Phenomenon-based approach to teaching Russian as a foreign language in the cultural context. *European Proceedings of Social and Behavioural Sciences* 95: 541–52.

Marsh, David, Wendy Diaz Pérez, and Mariana Escarzaga Morales. 2019. Enhancing language awareness and competence-building through a fusion of phenomenon-based learning and content and language integration. *Journal of E-Learning and Knowledge Society* 15: 1–11. [CrossRef]

Meriläinen, Merja, and Maarika Piispanen. 2012. Learning as a phenomenon–Manuscript of phenomenon-based learning. In *EDULEARN12 Proceedings, Proceedings of the 4th International Conference on Education and New Learning Technologies, Barcelona, Spain, 2–4 July 2012*. Barcelona: IATED, pp. 5447–54.

Mulisa, Feyisa. 2022. When Does a Researcher Choose a Quantitative, Qualitative, or Mixed Research Approach? *Interchange* 53: 113–31. [CrossRef]

Nguyen, Hung Phi. 2018. Phenomenon-Based Learning in Finnish and Vietnamese Upper Secondary School Curriculum for English as a Foreign Language. Master dissertation, University of Jyväskylä, Jyväskylä, Finland.

Protassova, Ekaterina. 2018. Multilingual education and family language policy. *International Journal of Multilingual Education* 11: 102–11. [CrossRef]

Randolph, Justus J., Marjaana Kangas, and Heli Ruokamo. 2009. The Preliminary Development of the Children's OverallSatisfaction with Schooling Scale (COSSS). *Child Indicators Research* 2: 79–93. [CrossRef]

Roiha, Ansii, and Mélodine Sommier. 2018. Viewing CLIL through the eyes of former pupils: Insights into foreign language and intercultural attitudes. *Language and Intercultural Communication* 18: 631–47. [CrossRef]

Roiha, Anssi, and Jerker Polso. 2021. The 5-dimensional model: A tangible framework for differentiation. *Practical Assessment, Research, and Evaluation* 26: 20.

Silander, Pasi, Sini Riikonen, Pirita Seitamaa-Hakkarainen, and Kai Hakkarainen. 2022. Learning computational thinking in phenomenon-based co-creation projects: Perspectives from Finland. In *Computational Thinking Education in K-12*. Cambridge, MA: The MIT Press.

Symeonidis, Vasileios, and Johanna F. Schwarz. 2016. Phenomenon-based teaching and learning through the pedagogical lenses of phenomenology: The recent curriculum reform in Finland. *Forum Oświatowe* 28: 31–47.

Tagunova, Irina A., Oxana I. Dolgaya, Tatiana D. Shaposhnikova, Igor G. Sukhin, and Irina S. Naydenova. 2019. Education development trends in global dimension. In *The European Proceedings of Social & Behavioural Sciences EpSBS*. London: Future Academy, pp. 908–15.

Thornhill-Miller, Branden, Anaëlle Camarda, Maxence Mercier, Jean-Marie Burkhardt, Tiffany Morisseau, Samira Bourgeois-Bougrine, Florent Vinchon, Stephanie El Hayek, Myriam Augereau-Landais, Florence Mourey, and et al. 2023. Assessment, Certification, and Promotion of 21st Century Skills for the Future of Work and Education. *Journal of Intelligence* 11: 54. [CrossRef] [PubMed]

Valanne, Eija, Rafaeea Al Dhaheri, Riina Kylmalahti, and Heidi Sandholm-Rangell. 2017. Phenomenon based learning implemented in Abu Dhabi school model. *International Journal of Humanities and Social Sciences* 9: 1–17.

Varzari, Elena. 2022. *Teaching the Speech Act of Praise via the Phenomenon-Based Approach [Articol]*. Bălți: Universitatea de Stat, pp. 137–43.

Wilson, Dona, and Marcus Conyers. 2016. *Teaching Students to Drive Their Brains: Metacognitive Strategies, Activities, and Lesson Ideas*. Minneapolis: ASCD.

Article

The Empirical Phenomenological Method: Theoretical Foundation and Research Applications

Luigina Mortari *, Federica Valbusa, Marco Ubbiali and Rosi Bombieri

Department of Human Sciences, University of Verona, 37129 Verona, Italy; federica.valbusa@univr.it (F.V.); marco.ubbiali@univr.it (M.U.); rosi.bombieri@univr.it (R.B.)
* Correspondence: luigina.mortari@univr.it

Abstract: Phenomenological philosophy was developed by Husserl for the eidetic sciences, which are interested in the general essences or persistent characteristics of things. By contrast, the empirical sciences are sciences of facts, interested in the concrete, singular, contextual and accidental qualities of phenomena. We do not encounter general, pure essences in concrete reality; instead, we meet phenomena, which present themselves as the particular actualisations of the essences. For this reason, it is legitimate to distinguish between the eidetic essence, which is constituted by a set of essential predicates that necessarily belong to the thing, and the essence of the concrete, which is constituted by a set of predicates that characterises that unique and singular thing in the space and time in which it manifests itself. Starting from these considerations, this article presents an original interpretation of Husserl's phenomenological method to develop an empirical phenomenological theory. The 'empirical phenomenological method' (EPM) grounded in this theory will first be described, and two examples of its application, in healthcare and educational research, will then be presented.

Keywords: empirical phenomenological method; qualitative research; healthcare; education; care

1. Introduction

Among qualitative methods, the phenomenological method occupies an important place (Barritt et al. 1983; Giorgi 1985; Van Manen 1990; Anderson 1991; Angus et al. 1991; Karlsson 1993; Moustakas 1994; Ray 1994; Creswell 1998; Cohen et al. 2000; Dahlberg 2006; Bengtsson 2013b; Zahavi and Martiny 2019). In the human and social sciences, no discipline has neglected phenomenology, including anthropology, pedagogy, psychology, sociology, the organisational sciences and the health sciences. The relevance of phenomenology can be explained by the following facts: (i) phenomenology takes, as its object of investigation, lived experiences, which are essential to comprehend human experience; (ii) phenomenology is guided by the effort to establish itself as a rigorous science, and this is an essential goal of research dealing with experience that is engaged in achieving clear, scientific reliability; and (iii) phenomenology is characterised as a philosophical method (Heidegger 2010, p. 26; Lévinas 1969, p. 28) and, since research that deals with human experience is in search of a rigorous method, phenomenology can be taken as a valid reference point. Nevertheless, the transposition of the principles of phenomenology, founded by Husserl as a philosophical method, to the empirical field requires further thought.

The establishment of phenomenology as a research philosophy in the empirical field occurred in the North American context as a consequence of the spread of the thought of Alfred Schütz (1899–1959). However, precisely in this context, phenomenology has often revealed, especially in the past, a lack of a direct connection to the original sources of phenomenological philosophy. Indeed, through a careful screening of the phenomenological literature, Cohen and Omery (1994) found that several researchers quote secondary sources, such as the representatives of the various schools ("Duquesne School", "Heideggerian Hermeneutics School" and "Dutch School"), instead of directly referring to the original texts by the founders of phenomenology.

The method of phenomenological philosophy was developed by Husserl (2012) for the eidetic sciences, which are interested in the general essences or persistent characteristics of things. By contrast, the empirical sciences are "sciences of 'fact'" (Husserl 2012, p. 10), interested in the concrete, singular, contextual and accidental qualities of phenomena. This raises the following questions: If the interest of empirical science differs from that of phenomenology, is it legitimate to apply the phenomenological method, which was founded as a philosophical method, to the empirical human sciences? Moreover, can the empirical sciences, although they are interested in situational qualities, integrate the research on essence to provide a rigorous basis for their research? And if they can, what kind of essence would it be? Is it possible to hypothesise two different concepts of essence?

To address these questions means to search for the form of application of the phenomenological method in the sciences of experience, and this is precisely the purpose of our contribution. Giving reference to the first period of Husserl's production, in particular, through the rediscovery and analysis of some key concepts, which are highlighted in the *Ideas* and until now have been little explored and deepened by the phenomenologists engaged in empirical research, we aim to present an original theory of empirical phenomenology. The empirical phenomenological method (EPM) (Mortari 2022) grounded in this theory will first be described, and examples of its application in healthcare and educational research will then be presented.

2. Phenomenology and Empirical Research

In recent years, a debate has arisen about how to interpret phenomenology in its original sense and develop an authentic phenomenological method for use in empirical research (Van Manen 2017b, 2017a; Zahavi 2019; Zahavi and Martiny 2019). Before briefly discussing some different positions, it is critical to point out that there are many approaches of phenomenology that have both commonalities and distinct features (Spiegelberg 1982; Dowling 2007). Many empirical research methods based on phenomenology have been developed, and they reference different phenomenologists and interpretations of their key concepts. Indeed, even if phenomenological philosophers did not develop empirical research methods, their epistemological theories have been often used to fortify qualitative research approaches (Fleming et al. 2003; Dowling 2007). In this paragraph, we briefly present some of the main approaches to phenomenological empirical research to highlight the main phenomenological concepts upon which they are based.

The main distinguishing feature of the so-called 'new' (Crotty 1996) or 'scientific' (Giorgi 2000) phenomenology, i.e., the phenomenology applied to empirical research, from the traditional philosophical phenomenology is to consider other people's experiences of phenomena instead of intending the phenomenological investigation as a solitary endeavour of the researcher. Giorgi (2000), for example, states: 'Since a situation does not exist "in itself" as a chair or a pen might, what is "shameful" or "good listening" [...] requires descriptions about situations from persons who experienced them in the manner they did' (p. 14). Giorgi (2000) does not agree with the idea that the purpose of scientific phenomenology is to study the 'subjective experience of the people' while the purpose of philosophical phenomenology is to study 'the *objects* of human experience' (Crotty 1996, p. 3). To avoid this error, Giorgi (2000) refers to the phenomenological idea of intentionality; in fact, the situations about which other people's descriptions are collected should be considered 'the intentional objects of a series of conscious acts on the part of the subjects' (p. 14).

Giorgi (2000) considers his descriptive phenomenological method, which is based on the work of Husserl and Merleau-Ponty, to be authentically phenomenological—but scientifically rather than philosophically. According to this method, participants' descriptions, which are often obtained through an interview, should be analysed as follows: (1) read for a sense of the whole, (2) establish meaning units within the texts, (3) transform the established meaning units into psychologically sensitive expressions, (4) practice imaginative variation on the transformed meaning units 'to see what is truly essential about them', and then

carefully describe 'the most invariant connected meanings belonging to the experience, and that is the general structure' (Giorgi and Giorgi 2003, pp. 251–53).

Karlsson developed an empirical phenomenological psychological method (Karlsson 1993) based on the Husserlian notion of the intentionality of consciousness. According to this method, the phenomenological researcher aims to describe the 'meaning structure' of the consciousness of a specific phenomenon, i.e., the characteristic traits forming people's understanding of it. These traits may consist of prejudices, attitudes, notions, thoughts and feelings that give form to the way in which people experience a phenomenon. Karlsson (1996) emphasises that a phenomenological analysis is not a mere phenomenal description because it aims to describe 'the logos of the phenomenon, that is to say those necessary constituents (structure) which are needed in order for just that particular phenomenon to be what it is' (p. 307). The researcher's role is to collect as concrete a set of descriptions as possible, reflect upon those descriptions and carry out an interpretative analysis (Hellström et al. 1999; Karlsson and Sjöberg 2009; Leiviskä et al. 2011). When analysing a text, the researchers must use epoché, i.e., remain attentive towards their tendency to interpret phenomena through familiar meanings, and identify both the typological structures, i.e., the different constellations of meaning that can be found in the data, and the general meaning structure of a phenomenon, i.e., the set of constituents common to all the collected data.

Moustakas (1990), who developed a phenomenological approach known as 'heuristic research', refers to Husserl's concepts of intentionality of consciousness, epoché, phenomenological reduction and imaginative variation. In this approach, researchers must be attentive to participants' experiences of phenomena while also reflecting on their own experiences of the phenomena. In fact, meaning is grasped when the object, as it appears in our consciousness, mingles with the object in the world: 'What appears in consciousness is an absolute reality while what appears to the world is a product of learning' (Moustakas 1994, p. 27). According to Moustakas (1994, p. 59), the phenomenological method is characterised by an autobiographic value because the researcher has to feel the investigated phenomenon as involving him/herself. However, the researcher is also required to be disciplined, and this equilibrium between personal involvement and discipline is reached through continuous reflection, which takes the form of a 'self-dialogue'. As for data-gathering instruments, Moustakas refers to not only descriptions but also narrations, journals, personal documents and artistic products that help participants express their personal experience. A specific aspect of Moustakas's approach is that it does not require a general structural description but a creative synthesis of the different singular descriptions collected from participants (Douglass and Moustakas 1985).

Van Manen (1990) is known for developing a hermeneutic phenomenological approach to human science research. According to Van Manen (1984), phenomenology is the study of the lived experience or the 'lifeworld'—that is, 'the world as we immediately experience it rather than as we conceptualise, categorise, or theorize about it' (p. 37). Typical phenomenological research questions are formulated as follows: 'What is this lived experience like?', 'What is it like to experience this phenomenon or event?' or 'How do we understand or become aware of the primal meaning(s) of this experience?' (Van Manen 2017a, p. 776). The purpose of a phenomenological inquiry is to reach 'meaningful insights', which are gained through the engagement in reduction 'practiced as a constant questioning', and which are characterised as 'inceptual' rather than conceptual (Van Manen 2017b, p. 819). Van Manen presents the notion of 'inceptuality', referencing Heidegger (Heidegger 1999, p. 45; Heidegger 2012, pp. 70–71), and clarifies that it may come to the researcher 'as a gift, a grace'—or in other words, an event that he could 'neither plan nor foresee' (Van Manen 2017b, p. 823). According to Van Manen (1984), using personal experience is the starting point of a phenomenological investigation; however, other kinds of material can be considered, including other people's experiences, biographies or reconstructed life stories, as well as artistic and literary sources containing experiential descriptions. Analysing such material requires thematic analysis, which consists of determining the

'experiential structures that make up' the investigated experience (Van Manen 1984, p. 59). The researcher is required to produce a descriptive text where a phenomenon is described 'through the art of writing and rewriting' (Van Manen 1990, p. 30), which is crucial because 'the more profound phenomenological insights may only come' by engaging in these activities (Van Manen 2017b, p. 823).

Dahlberg, who developed the reflective lifeworld research approach (Dahlberg et al. 2001, 2007; Dahlberg and Dahlberg 2003, 2004; Dahlberg 2006), refers to Husserl's claim that the phenomenon has an essential meaning, and that 'if the essential meaning changes in a certain way, it is a different phenomenon' (Dahlberg 2006, p. 13). However, she observes how, following Husserl, one might think that essences are opposed to particularities and, therefore, integrates his view with that of Merleau-Ponty, who underlines how the meaning of a phenomenon is revealed to us in its totality and in its relationship with its particulars (Dahlberg 2006, p. 13). Dahlberg conceives the research report as a description of the essence of the phenomenon and its constituents, which she connects to the Husserlian concept of 'individualisations of essence'. Her intent is to arrive at a complete description that includes both the essential structure and the constituents of the phenomenon, thus keeping all aspects together, from the most abstract to the most concrete ones. When using a phenomenological approach, the researcher must endeavour to search for meaning while maintaining an 'open and bridled' attitude (Dahlberg 2006; Dahlberg and Dahlberg 2019): Dahlberg chooses the term 'bridling' rather than 'reduction' arguing that it 'covers an understanding that not only takes care of the particular pre-understanding, but the understanding as a whole', and she specifies that this attitude is characterised by 'actively waiting' for the phenomenon (Dahlberg 2006, p. 16).

Bengtsson's (1984) approach considers the concept of the lifeworld, one of the most fruitful phenomenological concepts, and notes its presence not only in the latest of Husserl's productions but also in an early manuscript dated 1916–17. He also refers to Merleau-Ponty (1945) when arguing that the subject experiences the lifeworld as an embodied being (Bengtsson 2013a), an assumption that is especially appropriate in pedagogical practice because the subject is characterised as an agent rather than merely a spectator, as in Husserl's transcendental phenomenology. He also refers to Schutz (1962), who asserts that it is in face-to-face situations that the possibility of understanding the other's lifeworld is to be found. According to Bengtsson (2013b), phenomenological concepts 'must be adapted to the particular research question', and 'their purpose is to enable the researcher to identify and understand phenomena in a lifeworld sensitive way' (p. 8). Therefore, the 'lifeworld approach' does not present a rigid procedure but 'stimulates creativity of methods' (Bengtsson 2013b, p. 10). Bengtsson recognises that 'both the people who are studied and the researchers are inseparably embedded in their different lifeworlds' (Bengtsson 2013b, p. 9). Therefore, bridges 'must be built between the lifeworld of the researcher and the lifeworld of the participants of the study' (Bengtsson 2013b, p. 9).

Concerning the term 'phenomenology', Zahavi agrees with Van Manen in believing that an overly arbitrary use of it 'will lead to an erosion of the reputation of phenomenology' itself (Zahavi 2019, p. 900). However, Zahavi and Martiny (2019) strongly criticised 'hyperphilosophical', phenomenological research; in particular, they argue that epoché and reduction are fundamental, transcendental philosophical ideas but that they need not always be present in the application of phenomenology in non-philosophical fields (Zahavi and Martiny 2019; Zahavi 2021). Instead, other more relevant aspects should be considered, such as 'phenomenology's criticism of scientism and its recognition of the importance of the lifeworld', as well as 'its insistence on developing an open-minded and non-biased attitude' and 'its careful analysis of human existence, where the subject is understood as an embodied and socially and culturally embedded being-in-the-world' (Zahavi and Martiny 2019, p. 161). Basically, it is argued that it is necessary to shift from focusing on the orthodoxy of the method to its potential to produce certain results. In particular, various examples of applications of phenomenology that demonstrate its usefulness, can be appreciated, especially concerning interviews in the health field (Zahavi and Martiny 2019).

This overview, without presuming to be exhaustive, shows how phenomenology can fruitfully inspire empirical research approaches, which differ in their specificities even if they often share some common theoretical references. What is problematic is that most existing empirical phenomenological approaches have been drawn on concepts thought up by Husserl for phenomenology as an eidetic research method. Instead, our proposal aims to found a theory of an empirical phenomenology and, consequently, a method of empirical research, which is drawn on two concepts specifically used by Husserl to describe the ways of knowledge of concrete experience. These concepts, which have not yet been adequately explored in the phenomenological empirical literature, are those of concrete essence and subsequent adumbrations.

3. The Theory of Empirical Phenomenology

According to Husserl (2012), phenomenology 'has to do with "consciousness", with all types of experience, with acts and their correlates' (p. 2). So, the focus of phenomenology, as 'a science of "phenomena"' (Husserl 2012, p. 1), is the lived experiences [*Erlebnisse*] of the consciousness. One of the criticisms of the Husserlian phenomenology is that it does not consider the bodily dimension of reality enough; thanks to the reflection of Merleau-Ponty (1945), it is possible to answer this critique by arguing that, in the consciousness, all that is essential, including the bodily experience, remains.

However, eidetic phenomenology does not consider lived experiences in their concreteness but explores them to grasp their pure essences; by contrast, empirical phenomenology needs to remain bound to the concretely lived data. Indeed, a science of experience has as its object the flow of mental processes of consciousness '*in the concrete fullness and entirety* with which they figure in their concrete context' (Husserl 2012, p. 64).

Once it is established that the object is the same—i.e., the lived experiences of the mind—but considered in different ways, there are two further basic questions to be addressed: Is it possible to found empirical knowledge on the principle of searching for essences? If it is possible, what operation can be implemented to search for essences in the field of empirical research? To answer these questions means to take into account two concepts of phenomenological philosophy, i.e., those of eidetic essence and immediate intuition, which are problematic to apply in empirical research, and consequently to present the concepts of concrete essence and subsequent adumbrations, which are consistent with the application of the phenomenological method to empirical research.

3.1. The Eidetic Essence and the Concrete Essence

The eidetic, or invariant, essence of a thing is what is valid for everything to which the same nominal label can be attributed. However, since we do not encounter general, pure essences in the concrete reality but only phenomena that present themselves as the particular actualisations of essences, it is legitimate to distinguish between the eidetic essence, which is constituted by a set of essential predicates that necessarily belong to the thing, and the material essence or essence of the concrete, which is constituted by a set of predicates that characterise that unique and singular thing in the space and time in which it manifests itself. In this regard, Husserl (2012) states, 'On the one side stand the material, which in a certain sense are the *essences "properly so-called"*. But on the other side stands what is still eidetic but none the less fundamentally and essentially different: a *mere essential form*, which is indeed an essence, but a completely "*empty*" one, an essence which *in the fashion of an empty form fits all possible essences*' (p. 22).

As opposed to eidetic phenomenology, which searches for the eidetic essence—the general predicates—of a lived experience, the science of experience searches for its contingent qualities—the essence of the concrete—to build knowledge that embraces as many forms as possible of the concrete differentiations of the real. To collect many lived experiences, describe them and capture their concrete essence is the first step, but it is not sufficient to build science because to remain lost in the extreme differentiation of the real is not yet science. Therefore, the methodological proposal presented in this contribution hypothesises that a

science of experience is built by first acquiring knowledge of singular concrete essences and then providing a formulation of the extended essence of the concrete. The extended concrete essence is built by starting from the analysis of singular, concrete essences. It summarises the qualities common to the different elements of experience identified during an investigation.

3.2. Immediate Intuition and Subsequent Adumbrations

Eidetic science is grounded on eidetic intuition, a cognitive act that understands invariant essences by immediately grasping them. In this process of apprehending the pure essence of a lived experience, there is neither analysis nor a slow construction of knowledge; instead, the mind is alone in front of the object and immediately receives its essential shape. Conceived in this way, intuition is not suitable for empirical research, because in the world of experience, understanding a phenomenon requires observing it repeatedly to carefully analyse data about it and construct knowledge step by step. The cognitive act that guides the empirical phenomenological investigation—which has as its object the concrete, and not the eidetic, essence of a lived experience—is not immediate intuition but the continuous attention required to engage in the method of 'subsequent adumbrations'. In this regard, Husserl (2012) states that everything '*can* be given "*one-sidedly*", whilst in succession more "sides", though never "all sides", can be given' (p. 12). The empirical knowledge of a phenomenon must be constructed gradually, and the method of subsequent adumbrations is useful for this purpose because it requires us to 'turn around' the phenomenon. The action of 'turning around' was conceived as a fundamental epistemic action already in Platonic epistemology, where the soul lets herself be carried around the things to contemplate them (Plato 1997, Phaedrus, 247c).

Given that attention, implied by the method of subsequent adumbrations, is the essential cognitive act of empirical phenomenology, it is now necessary to present the epistemic principles needed to orient attention during the heuristic process:

- The principle of evidence, which requires that the process of inquiry remains faithful to the qualities that appear, and only to what appears, and therefore imposes on the researcher the need to speak of a thing '*only within the limits in which it then presents itself*' (Husserl 2012, p. 43);
- The principle of ulteriority, which requires us to search for the modes of the real that remain shadowed or veiled, since every being has a proper original way of transcending its appearance.

To put into action effective attention, which is able to explore the evident and hidden aspects of a phenomenon to understand it in a faithful manner, it is important to engage in the epistemic posture of *epoché* (Husserl 2012, p. 59), that is, in bracketing all pre-given theories, beliefs and assumptions about the investigated phenomenon—more precisely, all the contents of consciousness that could affect our knowledge of it. This does not mean aspiring to an empty mind, because it is not possible to void the mind from the cognitive contents that structure it; rather, *epoché* should be conceived as an epistemic imperative, an idea that, requiring intellectual discipline, has a regulative function without demanding to be completely realised.

4. The Empirical Phenomenological Method

The theory of empirical phenomenology presented above provides a foundation for the empirical phenomenological method (EPM), which can be applied to understand the lived experiences collected through empirical research in the human sciences.

First, it is important to point out that the distinction between eidetic sciences and empirical sciences does not imply a disconnect in the investigative process because research on general essences is necessary to orient research towards concretely experienced essences. Indeed, the first act of an inquiry is to identify its object, which implies a clear definition of its eidetic essence. This requires answering the question, 'What is the phenomenon we intend to deal with?' To answer this question means to search for an essential, formal

definition that expresses the invariant qualities that structure the general quid of the investigated phenomenon. After this preliminary eidetic investigation, it is possible to carry out the heuristic actions and follow the methodological principles of the EPM, which are presented in Table 1. While heuristic actions are typically phenomenological, namely directly derived from the application in the empirical domain of certain Husserlian concepts, methodological principles—as well as the use of the terms of 'labels' and 'categories' to identify the products of the analysis—are common to other empirical research approaches, such as content analysis (Neuendorf 2017), grounded theory (Glaser and Strauss 1967; Charmaz 2014) and thematic analysis (Clarke and Braun 2021).

Table 1. The heuristic actions and methodological principles of the EPM.

Heuristic Actions and Methodological Principles of EPM		
Heuristic actions	(a) Gain access to concrete singular data	Determine how to collect data about the phenomenon whose essence is searched for, i.e., choose the most adequate instruments for recording participants' lived experiences.
	(b) Collect a plurality of lived experiences	Involve a plurality of participants with experiences of the investigated phenomenon to collect different actualisations of it.
	(c) Define the concrete singular essence of each lived experience	Describe the specific concrete qualities of each collected lived experience by creating a descriptive label for each collected datum. Make a list of the descriptive labels expressing the concrete singular essences of the collected lived experiences.
	(d) Build classes of similar data	Start from the list of the descriptive labels and cluster the similar ones (each class includes descriptive labels expressing similar concrete singular essences).
	(e) Formulate the first level of extended essences	Define with a concept (category label) the essence of each class of concrete singular essences, i.e., of each identified cluster of descriptive labels; this essence is defined as extended because it expresses qualities that belong to several collected lived experiences, i.e., to several variations of the investigated phenomenon.
	(f) Build a hierarchy of essences	Search for similarities between the first level of extended essences, build classes of them—i.e., cluster the previously elaborated category labels—and define with a concept the essence of each class (macrocategory label). Repeat this operation until achieving the most general level of essence that can be attained through an empirical process. In this way, a hierarchy of essences—or "a graded series of essences" (Husserl 2012, p. 25)—is built, which includes the most concretely dense to the most extensively abstract essences found during the analysis process. Elaborate the final coding system, which—by including the labels, categories and macrocategories formulated—puts into evidence the hierarchical relationships among the individuated essences, ranging from the absolutely individual and concrete to the most shared and abstract.
	(g) Recover and describe the absolutely unique data	Since not all data can be codified within a coding system, it is necessary to give value to the protruding (or outlying) data by commenting them in the final research report.
	(h) Elaborate the descriptive theory	Describe the qualities of the investigated phenomenon, starting with the most extensive to the most concrete essences, and then also considering the absolutely unique data.
	(i) Implement the principle of recursiveness	Continually return to the collected data and descriptive and conceptual labels formulated during heuristic actions c, e and f to verify the essential knowledge that is being built.
Methodological principles	First methodological principle (α)	Identify quantitatively significant variations of the phenomenon.
	Second methodological principle (β)	Carry out a detailed analysis of each lived experience to bring to light its concrete singular essence.
	Third methodological principle (γ)	Reflectively supervise the cognitive processes underlying the heuristic actions.

The product of a data analysis process carried out according to EPM is a "bunch" of essences, that can be traversed either in ascending order (from the most concrete to

the most extensive essences) or in descending order (from the most extensive to the most concrete essences). The "bunch" of essences, which is the fundamental outcome of the EPM, is graphically represented in Figure 1, which also shows that the eidetic essence, whose acquirement is the purpose of philosophical investigation, cannot be reached by empirical research and that some singular essences remain as unique data, as they cannot be categorized because of their particularities.
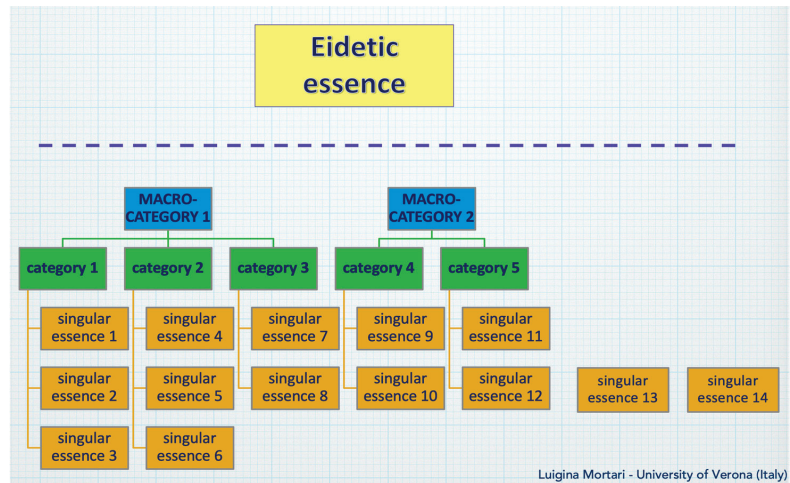

Figure 1. Graphic synthesis of the product of a data analysis process carried out according to the EPM.

In this inductively elaborated formulation of essences in a hierarchical structure, the difference between empirical phenomenology and eidetic phenomenology is evident. Indeed, Husserl, in defining the eidetic method, states that 'we cannot insist [. . .] on a systematic inductive procedure, on a gradual ascent, rung by rung, up the step-ladder of generality', and this is because 'it belongs to the very nature of a general apprehension of essences and of general analysis and description that there is no corresponding dependence of what is done at higher grades on what is done at the lower' (Husserl 2012, p. 144).

The application of the EPM has as its result a descriptive theory of the investigated phenomenon. This descriptive theory does not claim any absolute value because it is faithfully grounded in the collected lived experiences. This grounding in the investigated phenomena makes the descriptive theory seem to lack something, i.e., to fail to achieve that level of abstraction and generalisation that would guarantee it a scientific value. By contrast, it is precisely in this act of staying faithful to the datum that lies the evidence of the scientific rigor of the EPM.

5. Applications in Empirical Research

Following the theoretical foundation and explanation of the EPM, it is important to describe how it can be concretely applied in empirical research. For this purpose, we will present examples of its application in the fields of healthcare (Mortari and Saiani 2014) and educational research (Mortari and Ubbiali 2017; Mortari et al. 2017). These studies investigated the phenomenon of care as it is conceived by nurses, whose work consists in the everyday care of their patients, and by children involved in an educational project that required them to reflect on ethical concepts.

Since, as explained above, engagement in an empirical process requires a preliminary eidetic analysis of the phenomenon that the researcher intends to examine, the investigation was carried out on two levels: that of a theoretical inquiry, which for both of the studies took the form of a conceptual analysis of care, and that of qualitative empirical research, which in the first study considered concrete applications of care as they were described

by nurses working in healthcare structures and, in the second case, considered the ideas of care as they were expressed, in the form of descriptions and narrations, by children in kindergarten. The first level of the phenomenological investigation is the level of 'deskwork', which searches for the eidetic essence of the investigated phenomenon by taking into account its general and invariant qualities, i.e., the qualities shared by all its concrete actualisations; the second is that of 'fieldwork', which searches for the concrete essence of the investigated phenomenon by collecting individual lived experiences of it and analysing their specific qualities. Explaining how the EPM was applied in the two studies taken into consideration means focusing on the second level of investigation, i.e., on the empirical qualitative research, by giving a voice to nurses in the healthcare field and to children in the educational field.

5.1. The EPM in Healthcare Research

The first application of the EPM we would like to examine concerns qualitative research in the healthcare field, whose purpose was to identify what good care in nursing consists of. Below, the heuristic actions explained above will be exemplified with reference to the research method followed in this study.

a. *Gain access to concrete singular data*

At first, we chose to use eidetic interviews, asking participants the following question: 'According to you, *what is* a good way of caring for a patient?'*.* Nevertheless, the answers collected turned out to be poor, being characterised by simplistic language, overly brief sentences and banal words; the participants used the knowledge learned in their formal training, only rarely reflecting on their own experiences. For this reason, we decided to change the research instrument, using narrative interviews and, accordingly, asking the participants new questions: 'Can you *narrate* an event, that occurred in your experience, in which you did a good action of care?' and 'Can you *narrate* an event, that occurred in your experience, in which you did a bad action of care?'. Even if phenomenology is a descriptive science and, in its original and traditional form, the phenomenological method required a collection of descriptions, collecting narrations should be considered epistemically legitimate because the essential quality of experience is temporality, as experience develops over time, and the cognitive form that seems to be most consistent with this characteristic of experience is narration. This choice is grounded in the literature: Bruner (1990) writes about a 'narrative truth', Muller (1999) highlights that narration contributes to creating meaning and Bateson (1979) suggests that all people think in terms of stories; also, phenomenological authors underline the importance of collecting data through narrations (Van Manen 1984; Moustakas 1990; Dahlberg 2006; Bengtsson 2013b). Moreover, research experience suggests that people involved in qualitative research generally find the task of narrating simpler than the task of describing, and a rich narration generally also includes detailed descriptions. Asking nurses for both positive and negative experiences of care, allows researchers to collect contrasting information, which enables them to construct clearer theories of the phenomenon of care in healthcare.

b. *Collect a plurality of lived experiences*

The number of participants was not decided before the beginning of the research; instead, according to the principle of naturalistic inquiry, which recommends purposeful sampling (Merriam 2002), we decided 'in the field' when the number of participants with experiences of the investigated phenomenon was considered adequate based on the level of data saturation. The choice of the involved participants was made among people who had 'practical understanding' of the phenomenon, as recommended by Bengtsson (2013b). In the end, 120 male and female nurses working in different clinical areas in hospitals in Northern Italy were recruited. According to the research team's evaluation, this sample responded to the methodological principle (α) of identifying quantitatively significant variations of the phenomenon.

c.   *Define the concrete singular essence of each lived experience*

The stories of good and bad caring experiences were recorded, transcribed verbatim and carefully read by the researchers. In carrying out the analysis, the research team worked in pairs, which were changed over time to allow a continuous exchange of perspectives. At the beginning, each pair worked autonomously to identify meaningful units within the text and label them, and then the two researchers worked together to compare labels until they agreed on a consensus version of them. This procedure responded to the methodological principle of carrying out a detailed analysis of each lived experience of nursing care to bring to light its concrete singular essence (β). An example of this heuristic action is presented in Table 2, where the meaningful units individuated by the researchers are highlighted in italics.

Table 2. An example of heuristic action c in healthcare research.

Meaningful Unit	Descriptive Label (Researcher 1)	Descriptive Label (Researcher 2)	Descriptive Label Agreed on
Rose came to the delivery room at two in the morning, not worried about disturbing anyone. With her German accent, which made her demands sound even more peremptory, she asked to be helped to give birth in the way she wanted. *I think to myself how every case is different and, for this reason, hard to understand.* [...]	She questions/reflects on her actions: the sign of a 'thinking presence'.		She questions/reflects on her actions: the sign of a 'thinking presence'.
I took her to the delivery room I thought most suitable for her. [...]		She tries to find the most suitable environment.	She tries to find the most suitable environment.
I wanted to isolate her as much as possible, or rather, I wanted to isolate myself as much as possible so as to assist her with the least possible interference. Rose wanted to be the absolute protagonist of the birth and did not want to be disturbed. She described the welcoming ritual she wanted for her baby: [...] *She would wrap him in a red cloth (so the baby wouldn't notice the difference in the color of the new environment), and she would be the only one to touch him.*	Accepting a paradox, acting 'outside the box/norms'. She is receptive to the requests of the patient. She questions/reflects on her action: the sign of a 'thinking presence'.		Accepting a paradox, acting 'outside the box/norms'.

d.   *Build classes of similar data and*
e.   *Formulate the first level of the extended essences*

Starting from a list of descriptive labels, which express singular concrete essences of different actualisations of the phenomenon of nursing care, classes of these actualisations were elaborated. Each class, or category, refers to the concrete extended essence, which is shared by the singular lived experiences of nursing care grouped within it. Each extended essence is expressed by a concept or category label. While descriptive labels name the content of a meaningful unit of text, category labels name a cluster of descriptive labels grouped together based on analogy. An example of these actions is presented in Table 3.

Table 3. An example of heuristic actions d and e in healthcare research.

Descriptive Label (Singular Concrete Essence)	Category Label (First-Level Extended Essence)
Keeping an eye on the patient	Paying attention
Listening	
Taking time to be with the patient	Dedicating time
Taking time to offer a caring word	
Being there in silence	
Using time for unforeseen actions	
Being capable of empathy	Understanding the other person
Interpreting the patient's experience	

An effective way to put into action the third methodological principle (γ), which requires reflective supervision of the cognitive processes underlying the heuristic actions, is to keep a research diary in which the researcher's "life of the mind" (Arendt 1978) finds space to be described. Thanks to the reflective introspective writing, the researcher can give form to an inner dialogue, with a self-critical value (Lukinsky 1990; Taylor 1998). Moreover, in periodic supervision meetings with the team, not only the findings but also the pages of the diary dedicated to the most critical moments of the research process, became the object of a shared reflection (Johns and Hardy 1998; Knights 1985).

Below, we present an example of a diary entry that describes the cognitive supervision of heuristic actions c, d and e.

One way to order data is to categorise them, to elaborate concepts within which we can arrange data. Elaborating concepts is an essential epistemic action. This, however, carries the risk that the concept neutralises the other's singularity. Conceptualising can exert a form of violence on the data, which, to be inserted in the concept, must abandon part of their singular givenness.

When I formulate descriptive and then conceptual labels, can I find words that do not strip the other's saying of its otherness? Can I encounter their saying outside any a priori, any pre-structured hermeneutic asset? When I identify my excerpts, am I dismembering texts, grinding them inside pre-available hermeneutic grills? Or perhaps, by assigning labels to the quid of the text, do I manage not to lack respect for it?

f.   *Build a hierarchy of essences*

While descriptive labels are strictly grounded in data, the conceptual ones, category labels, represent a level of progressive abstraction that increases when we search for the second-level extended essences (macrocategories), i.e., when classes of the first-level extended essences are elaborated. The coding system presented below, which includes the elaborated descriptive, category and macrocategory labels, offers a synthetic description of what care is conceived to be by the nurses involved in the research, with an example of data for each label listed. The presentation of sample data is designed to highlight the adherence of the coding process to the concrete experiences recorded (Table 4).

Table 4. Coding system for the results of heuristic action f in healthcare research.

Example of Data	Descriptive Label (Singular Concrete Essence)	Category Label (First-Level Extended Essence)	Macrocategory Label (Second-Level Extended Essence)
'While carrying out my duties, I would now and then stop and look at her. Her look was always lost in space; she was curled up in bed under the sheets, as if she was in need of protection and tranquillity at such a difficult time . . . '.	Keeping an eye on the patient	Paying attention	Actions addressed to the patient
'Antonietta had just been transferred from General Medicine to the coronary unit . . . I went to administer her treatment to her and felt she needed to talk. I had left her till the end of my 10 p.m. rounds so that I could sit and listen to her more carefully and without being interrupted'.	Listening		
'It was a frenetic day, and I was afraid I wouldn't find a way of going to see her . . . but eventually, I made it. I found some time, entered the room, opened the windows and smiled. She smiled back'.	Taking time to be with the patient	Dedicating time	
'I found her on the bed by her mother; she was crying. I stayed there chatting with her for a long time, holding her hand'.	Taking time to offer a caring word		
'Returning to the ward after a two-day break, I entered the room. She asked me to close the door and immediately burst into tears. She was desperate. I got closer, and she hugged me. I returned the hug and sat on the bed waiting for her to stop crying'.	Being there in silence		
'One morning, she told me how she hated being without her make-up and nail polish; she felt uncomfortable being so scruffy. That afternoon, I went to a perfume shop and got her red polish, her favourite. I got her some nail varnish remover, too, just in case. Unfortunately, I never had a chance to give it to her, since during the night she went into a coma . . . '.	Spending time on unforeseen actions		
'I feel her pain, this woman, this mother; she is trembling both in body and soul. I feel she'd like an answer that would relieve her anguish . . . '.	Being capable of empathy	Understanding the other person	
'Monica is a tracheotomised patient [. . .] I feel challenged by her. What can I, as a nurse, do in circumstances that I cannot change? . . . I [tried to] think of an alternative that doesn't pose a risk for Monica and at the same time meets her needs'.	Interpreting the patient's experience		
'Jacopo had fallen asleep. I put him in his crib and sat on the bed by his mother, searching for physical contact. I rested my hand on hers and spoke to her, trying to meet her red, swollen eyes . . . '.	Building a relationship with the patient through physical gestures	Trying to establish a relationship with the patient	
'One morning, I found her in tears. I sat on her bed, put down the drip I had in my hand and asked her to tell me what was troubling her . . . She started telling me her story'.	Building a relationship with the other through verbal gestures		
'There's a patient who needs to sleep with his pillow turned in a certain way. The other one has to be put behind his back, and since he wasn't self-sufficient, we had to arrange his pillow for him at night. [. . .] To understand the real needs of others, you have to stop and listen, and then try again and again until you see an improvement. Eventually, he told me, "Now I'm fine. I can sleep, thanks".￼	Being receptive to the patient's personal requests	Satisfying the patient's needs	
'The patient had been subjected to palliative cures for two days. She wanted to wash her hair, but she was afraid of feeling pain, so I volunteered to help . . . and to my surprise, she accepted'.	Helping the patients care for their body		
'The patient, treated for neoformation of the pharynx, expressed the need to go back to her habits after the operation—to wear a chador. I asked the doctor whether it would be possible for her to wear it on the recent surgery wounds. The doctor agreed, provided the rules of hygiene were complied with, and the patient started wearing her chador a few days after the operation'.	Helping the patients maintain their lifestyle		

Table 4. *Cont.*

Example of Data	Descriptive Label (Singular Concrete Essence)	Category Label (First-Level Extended Essence)	Macrocategory Label (Second-Level Extended Essence)
'You realise the pillow is warm, and you turn it over for her; the tissue that's just been placed by her mouth is already wet with saliva, so you change it'.	Soothing pain	Satisfying the patient's needs	
'While waiting for the cardiologists, I went to his room and calmed him down, explaining the procedure'.	Calming	Being concerned with the emotional dimension	
'I reassure her that all the nurses will be briefed on her case history and that, in the case of any doubt and/or misunderstandings, she can contact me at any time, even after being discharged'.	Reassuring		
'I was present at other crucial moments in her rehabilitation, such as the first time she got her legs out of bed or took her first steps. I comforted and encouraged her'.	Encouraging		
'During my first home visit, I thought Rosario looked neglected, just like the first time we met . . . I tried to put him at his ease. I didn't want to force him to care for his appearance. I had to gain his trust first'.	Building confidence		Actions addressed to the patient
' . . . I asked the patient to undress. She was embarrassed and replied that she was shy, so I offered to accompany her to the bathroom . . . '.	Preserving the patient's dignity	Respecting the other person	
'Eventually, I tried to take off the medication delicately with cod liver oil—not a centimetre, not half a centimetre, but a millimetre at a time'.	Acting with delicacy		
'When it was time to administer the infusion therapy to that patient, before entering his room, I would stand at the door for a fraction of a second, and that hiatus, however small, allowed his relatives to make room for me—an emotional space enabling the presence of another person to be accepted'.	Being present in a non-intrusive way		
'So, on a number of occasions [. . .] whenever I felt the timing was right (when Gabriella was alone or even when her daughter was there . . . .), I started talking a little about this stoma'.	Adapting to the patient's pace		
'We decide to call the son of an intensive care patient whose condition was worsening. I let him sit down, and help him put on the gown and overshoes, and inform him that he's been called specifically on his father's request. He is anxious and worried and asks me to take him to his father's bedside. I ask him if he wishes to call the chaplain and whether he wants to accompany his father in the most difficult moment of his life: death. [. . .] I offer my support. Whatever his decision, I try to pose my questions in a discrete way. He stares at me and says, "Betty, I trust you, take me to him"'.	Impacting the relational context: improving the nurse–family relationship	Impacting the context to facilitate the act of caring	Attention to context
'Despite the inflexibility of visiting times, we had decided that his wife and children could enter whenever possible, and sometimes we even allowed them to watch a film together'.	Impacting the organisational context		
'I expressed very clearly to the medical team what we thought about the way to manage a patient's pain, speaking passionately about the many moments we had spent by that patient's bed, and I asked for an anaesthesiology team to tackle the complexity of that pain'.	Building good relationships with colleagues and the medical team		
'I didn't know what to do. I seemed to have forgotten all my basic emergency and pharmacology knowledge learnt at school. [. . .] I prepared it with shaking hands, in the hurry to stop a pain that I felt was excruciating, but also because I was making an important decision, since from that moment F. would never be lucid and conscious again. [. . .] I heard my own voice talking to me, saying, "Come on, Chiara, go to him. Don't behave like this, nothing bad will happen"'.	Thinking about what to do	Thinking	Invisible caring

Table 4. *Cont.*

Example of Data	Descriptive Label (Singular Concrete Essence)	Category Label (First-Level Extended Essence)	Macrocategory Label (Second-Level Extended Essence)
'I had never had this experience before, and I was a bit worried about how to deal with her. It turned out that she was my age. I knew her by sight, and I'd never have imagined I would see her like that. Reading her file, I saw what they wrote about her in A&E [Accident and Emergency Department] and I formed a rather harsh opinion, which I instantly tried to remove, concentrating on her need to be understood at that moment'.	Examining predetermined ideas	Thinking	
'Immediately after the described event, I asked myself how it was it possible that a lung embolism hadn't been taken into consideration [. . .] I tried to work out what it was that had tipped me off, and it wasn't easy to find the answer'.	Questioning one's own actions	Reflecting on the experience	
'His head was under the pillow, but I heard him sobbing . . . Then, I don't know what happened to me. I got scared. I didn't know how to approach him. I was afraid the patient would react negatively, that he would send me away or perhaps I was afraid he would ask me for help that I could not offer him. He would ask for hope . . . and I couldn't give him that, either. So, I didn't do anything, I literally ran away. I pretended not to see, as if he'd been sleeping'.	Assessing one's own actions		Invisible caring
'I keep looking at Roberto and tell myself that I shouldn't worry, that it is not professional to feel involved or moved by a patient. During my three years at university, I was taught to maintain detached empathy, which enables me to understand the patient's needs, but no more than that. The truth is that I keep looking at Roberto. and I feel afraid'.	Listening to one's own emotions	Dealing with one's own emotional experience	
'What can I say now about the emptiness I felt at the news of her death? About the tears I shed on the day of her funeral? About how I hated myself and at the same time appreciated the fact of having strong feelings for a patient? I continuously wondered whether it was right for a nurse to get so close to a patient and asked myself, in my innermost thoughts, those that come and smother you suddenly at night, whether I had been a good nurse'.	Trying to handle one's own emotions		

The coding system highlights the hierarchy of essences identified through the analysis process; ranging from the most singular and concrete essences, defined by the descriptive labels, to the most extended and abstract ones, defined by the macrocategory labels.

g.   *Recover and describe the absolutely unique data*

In the case of this research, we codified the individuated meaningful units by elaborating descriptive labels for each one, which were then clustered into categories and macrocategories. Thus, no outlying data were found to be separately described and commented on in the research report as unique.

h.   *Elaborate the descriptive theory*

Finally, the application of the EPM in this research allowed the elaboration of a descriptive theory of the phenomenon of nursing care that emphasises the actions directed toward the patient, the actions carried out in the relational and physical contexts, and the invisible actions, i.e., the thinking and reflecting underlying the practice of caring. In the writing down of the theory, every macrocategory (i.e., second-level extended concrete essences), was presented with reference to the corresponding categories (i.e., first-level extended concrete essences) and descriptive labels (i.e., individual concrete essences), also highlighting the connection with the collected original data.

i. *Implement the principle of recursiveness*

During the heuristic process, the correspondence between the individuated meaningful units and the descriptive labels, category labels and macrocategory labels formulated was continuously checked with the aim of maintaining a theory of nursing care as faithful as possible to the collected data. This action, which guarantees the rigour of the qualitative research, benefits from the comparison of perspectives made possible by working in teams.

5.2. The EPM in Educational Research

The second example of applying the EPM concerns qualitative research in the educational field. Its purpose was to understand what care means according to kindergarten children. As with the study on care in the healthcare field, we exemplify the EPM heuristic actions below.

a. *Gain access to concrete singular data*

The instrument we chose to collect the data was the Socratic conversation, introduced by the following question: 'The word "'care'" is another beautiful word. What comes to your mind when you hear this word?' A Socratic conversation is known for being introduced by a question concerning the essential meaning of a phenomenon and conducted in a dialogical style inspired by the Socratic maieutic method: the researcher acts as a facilitator, stimulating children to express, clarify and deepen their thoughts. The question about care posed to children during this study was an open question formulated as such to make it possible to collect both eidetic, i.e., descriptive, and narrative data. Indeed, the children answered in two different ways: by directly describing what they meant by the word 'care' or by narrating experiences they conceived to be experiences of care, from which the researchers could indirectly infer what they meant by this concept. Often, the research diary kept by the researchers—an instrument that, as we explained above, effectively responds to the third methodological principle (γ)—included reflections about their ways of conducting the conversation in class, their dialogical posture and actions, and their ability to stimulate children's thinking without suggesting their own ideas about care.

b. *Collect a plurality of lived experiences*

Educational research can take the form of 'service research', i.e., research designed to respond to a concrete educative need individuated in an educational context. Consistent with this idea, this study was carried out in kindergartens that requested the involvement of the university to design and implement an intervention on ethical education. Qualitative research was then carried out to evaluate the intervention's effectiveness. The participants were 116 4–5-year-old children from kindergartens situated in North and Central Italy. According to the research team, this number of children responded to the first methodological principle (α), which requires obtaining a quantitatively significant variation of the phenomenon, which, in this case, was the children's idea of care.

c. *Define the concrete singular essence of each lived experience*

The conversational exchanges were audio-recorded, faithfully transcribed and carefully read by the researchers. The initial process of data analysis, responding to the second methodological principle (β) and consisting in individuating the singular essences of care expressed by the children's answers and describing them with synthetic descriptive labels, was first carried out by the researchers in pairs. The ambiguous cases were then discussed in teams. An example of this descriptive labeling action is presented in Table 5.

Table 5. An example of heuristic action c in educational research.

Conversation Excerpt	Descriptive Label (Singular Concrete Essence)
'When I am ill, mum gives me a medicine that I always like'.	Medicating people
'I care for my cats as well. I hold them in my arms; I protect them'.	Protecting others

The descriptive labels were finally quantified (see the column N. in the Tables 6–8) to understand the children's main avenues of thought.

Table 6. An example of heuristic actions d and e in educational research.

Descriptive Label (Singular Concrete Essence)	N.	Category Label (First-Level Extended Essence)
Medicating people	26	Healing injuries
Recalling a condition of discomfort	12	Healing injuries
Allowing the other to do what they like	5	Making others feel well
Promoting happiness	4	Making others feel well
Offering reassurance	2	Making others feel well

Table 7. Coding system of results for heuristic action f in educational research.

Example of Data	Descriptive Label (Singular Concrete Essence)	N.	Category Label (First-Level Extended Essence)
'Someone got injured ... to care means that he went to the medical doctor'.	Medicating people	26	Healing injuries
'When I [sprained] my finger and my foot'.	Recalling a condition of discomfort	12	Healing injuries
'Care is ... when I feed the fishes with Mariella'.	Feeding others	18	Preserving life
'I also care for my cats. I hold them in my arms; I shelter them'.	Protecting others	5	Preserving life
'Because my dad always lets me play [with the Xbox], and then [if I waste the batteries] he lends them to me'.	Allowing the other to do what they like	5	Making others feel well
'He has made him happy'.	Promoting happiness	4	Making others feel well
'It is when I go to bed because my mum holds my hand until I get asleep'.	Offering reassurance	2	Making others feel well
'When there is a child who is a kid and thinks that toys get broken ... and ... they ... they ... he must take care with them and when they break ... he repairs them'.	Respecting others	14	Practicing solicitude
'To care is when I care for my puppy, Bianca. I take her out with my dad or with uncle Vale'.	Paying attention to the needs of the other	14	Practicing solicitude
'I care for my dad. I give him many kisses'.	Making gestures of affection	10	Manifesting affection
'Care means "I love you"'.	Loving others	2	Manifesting affection

    d.   *Build classes of similar data and*
    e.   *Formulate the first level of the extended essences*

Starting from a list of descriptive labels that expressed the singular concrete essences of the lived experiences of care reported in the children's answers, classes were elaborated. Each class, or category, groups descriptive labels referring to similar meanings of 'care' and expresses the extended concrete essence shared by them. Each extended essence is expressed with a concept or category label. An example of this clustering and conceptual labeling action is presented in Table 6.

Table 8. Final coding system of educational research, integrated in accordance with heuristic action i.

Descriptive Labels (Singular Concrete Essences)	N.	Category Label (First-Level Extended Essence)
Feeding others: - Feed others; - Provide water.	18	Preserve life
Protecting others: - Provide shelter; - Defend others; - Alert others to danger.	5	
Respect others: - Treat toys well; - Repair toys; - Treat animals well; - Care for plants.	14	Show solicitude
Pay attention to the needs of the other: - Help those in trouble; - Play together with one's younger sister; - Be very patient with one's younger brother; - Walk the puppy; - Pay attention when choosing food to feed animals; - To care is to feel the heart of the other.	14	

f.   *Build a hierarchy of essences*

In this study, no second-level extended essences were found: indeed, the goal of achieving the most general level of the concrete essence of care disclosed by the children's answers was reached through the elaboration of the categories. In light of this, the final coding system, which shows the hierarchy of essences emerged in this research, includes only descriptive and category labels; it does not include any macrocategory labels because second-level clusters, i.e., classes of categories, were not elaborated (Table 7).

g.   *Recover and describe the absolutely unique data*

Some of the children's ideas about care were outliers; because of the richness and deepness of their contents, to codify these data would inevitably reduce their expressive potential. Since these outlying data express an indivisible semantic synthesis, they can be considered complex thoughts that were not included in the coding system. Instead, they were classified in the research report as unique data, i.e., data that revealed essential content not shared by anyone else.

Below, we present examples of such outlying data, briefly focusing on the reasons for their uniqueness:

'It is me and Sofi who play. I with the toy car, and she with the doll. If she does not scratch me, we feel very good'.

In this answer, care is described by the child as a way of feeling good that takes place at the moment when one does not get injured. The complexity of the idea expressed by this datum is created by the combination of the concept of care with that of feeling well, which occurs thanks to forms of protection—feeling preserved and safe inside a relationship.

'If you find some sees, do not go there because if you find some thorns and crocodiles and they eat you, and otherwise I come and care for you very much, and I love you so much'.

In this answer, the child expresses, in a complex way, the dimension of having the other at heart. The first described action is a warning about danger that tries to preserve the other

from the injuries that they could get ('do not go there'); the child then continues with a declaration of a therapeutic action in case of pain ('and otherwise I will come and care for you very much'); finally, he ends with a concise declaration of what motivates this sort of actions: affection ('I love you so much'). What makes this datum a unicum, and thus not codifiable into the elaborated coding system, is the idea that care consists in a form of loving the other that is aimed to preserve them or heal their injuries.

h.   *Elaborate the descriptive theory*

Finally, the application of the EPM in this research allowed the elaboration of a descriptive theory about how care is conceived and lived by the involved kindergarten's children. The coding system which emerged from the data analysis, addressed the writing of a text which described the phenomenon of care as healing injuries, preserving life, making others feel well, practicing solicitude and manifesting affection. In writing down the theory, these categories, which express the extended concrete essences found through data analysis, have been deepened with reference to the labels, i.e., the individual concrete essences, clustered in them, and with reference to the collected data, i.e., the original ideas of children, in order to make the connection evident between the level of conceptualization and the level of experiential evidence. Furthermore, the absolutely unique data were presented and commented, as highlighted above (see above, heuristic action g).

i.   *Implement the principle of recursiveness*

The continuous return to the data collected and the descriptive and conceptual labels formed, designed to verify the researchers' capacity to faithfully express in the coding system the singular and extended concrete essences of care individuated in the children's answers, suggested for some of the elaborated descriptive labels the possibility of extracting a further level of singular essences more concrete than the ones expressed through the first labeling process (see heuristic action c).

Below, we present the pieces of the coding system, which have been integrated with the specifications of the descriptive labels expressing this further level of concrete singular essences found by applying the principle of recursiveness (Table 8).

6. Discussion

This research has highlighted that the application of the EPM is not simple because the goal of defining the essence of the concrete in a rigorous way is difficult to achieve. For this aim, a series of research procedures and analysis techniques support researchers in giving form to a phenomenologically based descriptive theory. However, the heuristic actions and the methodological principles identified and exemplified above, should be conceived as flexible "guidelines" for the researcher. Differently from the tendency to codify procedures to conduct phenomenological empirical research as an answer to the request for strict methodological scientific principles, as in Moustakas (1994), (Giorgi 1997; Giorgi and Giorgi 2003) and Ashworth's (Ashworth 2003; Ashworth et al. 2003) proposals, we agree with the position of Van Manen (1990), Bengtsson (2013b), Dahlberg (Dahlberg 2006; Dahlberg and Dahlberg 2019) and Zahavi and Martiny (2019) who invoke for a less systematic and more creative approach to the method. In fact, if the motto of the Husserlian approach is to 'go back to the "things themselves"' (Husserl 2001, p. 168) this means that the researcher has to follow things as they appear and not a particular method, conceived as a series of strictly codified research procedures and analysis techniques.

In order to found an empirical phenomenological theory, it is important to deeply know the phenomenological philosophy by being familiar with the original sources of phenomenology. This is because as Zahavi (2019) states, 'phenomenologically informed qualitative research has different aims than phenomenological philosophy, but it is questionable whether the former can qualify as phenomenological if it either ignores or misinterprets the latter' (p. 900). Therefore, as with some of the most influential scholars quoted in the introduction of this article, in order to provide a rigorous foundation to our phenomenological empirical method we refer directly to the original Husserlian production, and not to

secondary sources. However, we recognise that the eidetic concepts, which found philosophical phenomenology, are not simply adaptable to the empirical field. Indeed, we refer to some concepts, i.e., the ones of the essence of concrete and the subsequent adumbrations, highlighted in the first of Husserl's production that the author himself suggests for the knowledge of concrete lived experience. With regards to other qualitative research approaches, even if not strictly phenomenologically grounded, we can find some similarities in the procedures suggested to analyse, conceptualize and cluster data. This happens, for example, in comparison with the thematic (Clarke and Braun 2021; Terry et al. 2017) and grounded theory (Glaser and Strauss 1967; Strauss and Corbin 1998; Charmaz 2014) analysis approaches. However, the specificity of the EPM lies in the concern of rooting the research practices in a rigorous theoretical framework, which includes ontological, gnoseological and epistemological assumptions.

Giving a critical glance to the work requested to a researcher following the EPM, we can highlight some difficulties that can hardly be overcome. In the processes of labeling, the greatest difficulty consists in finding the words to faithfully express the individual and extended qualities of the collected lived experiences; indeed, the concrete flow of an experience does not lend itself to be grasped in an utterance with well-defined contours. The purpose is to 'bring to the normal distance, to complete clearness, what at any time floats before us shifting and unclear' (Husserl 2012, p. 131). The labels must be clearly distinguished from one another in order to exclude possible confusion in the interpretations of the final findings. The formulation of a concrete essence can be considered adequate when it allows precise reference to the collected lived experiences. This implies that researchers should be guided by the principle of faithfulness, which requires them to patiently ensure the adherence of the words to the data. The epistemic effort to find faithful words, i.e., the words that express the concrete essence of the investigated phenomenon in the most appropriate manner with regard to the collected data, is also an ethical effort, because it is an action of respect towards the research participants. In order to fulfil the task of achieving the highest possible faithfulness to the data, it is important to carry out the epistemic act of 'epochè' as well as to discuss the labels formulated within the research group so that each individual perspective can be enriched by the perspective of the others.

The outcome of a research project carried out according to the EPM is the description of the investigated phenomenon using a concretely rich concept that includes all the qualities found through the analysis of experience. The achievement of this outcome cannot be conditioned by a predefined timeline because the principle of keeping the thought connected to reality in its concrete occurrence leads the researcher to work on a continuous and repeated definition of the descriptive theory. Only general truths, and thus eidetic essences, which impose themselves as evident, have a definitive value, while the statements about the world of experience remain open to the possibility of continuous reformulation.

The insuperable limitation of the EPM is its focus on the particular qualities of the investigated phenomena, which makes it difficult, if not impossible, to achieve knowledge of general value. The truth that can be reached is a local and situated truth, but if it is achieved through a rigorous method, it can nonetheless meet the need to deeply understand the human lived experience, which cannot be enlightened by general and abstract knowledge. Even if the EPM does not allow us to reach general knowledge—indeed, this is the purpose of an eidetic science and not an empirical one—rigorous phenomenological empirical research can yield concepts able to describe not only the investigated lived experiences but also crucial aspects of new lived experiences of the same phenomenon that have not yet been subjected to examination.

7. Conclusions

Starting from the consideration that the application of phenomenology, which was founded as a philosophical method, to the empirical field needs to be furtherly thought out, this study circles back to some of Husserl's original concepts in order to explore the possibility of rigorously founding an empirical phenomenology. This goal has been fulfilled thanks

to a discussion of some fundamental concepts of phenomenological philosophy, i.e., the concepts of essence and intuition. The EPM that has been consequently grounded, focuses on the Husserlian concepts of concrete essence and subsequent adumbrations—respectively, the object and the method of an empirical phenomenological investigation. Indeed, the human and social sciences, as sciences of facts, do not search for the eidetic essences of phenomena, i.e., their general and necessary predicates, but are interested in their concrete, singular, contextual and accidental qualities. Therefore, intuition, conceived by Husserl as the immediate apprehension of a phenomenon's eidetic essence, cannot be the fundamental cognitive act of an empirical phenomenological investigation; instead, the concrete essence of a phenomenon can be reached gradually, by subsequent adumbrations, which put into action a continuous attention to the phenomenon so it can be faithfully understood.

Since the theoretical foundation of an empirical method is not enough to make possible a discussion of its effectiveness, this article discussed the application of the EPM in two different fields, education and healthcare. The different steps of this application were carefully presented to make evident how the previously described heuristic actions and epistemic principles take form in a concrete research process. The application of the EPM to the presented studies showed its effectiveness with respect to the purpose of carrying out scientific research, which can be useful to the improvement of nursing and educational practices. Indeed, the conceptualisation of good care in nursing outlined in the first example can effectively contribute to the development of good caring practices in healthcare structures. On the other hand, the findings about the richness of children's ethical thinking that emerged from the second inquiry demonstrate the educational effectiveness of carrying out Socratic conversations with children. In conclusion, the EPM can be conceived as a rigorous method in the empirical research field as well as an effective way to carry out research with useful practical implications.

Author Contributions: Conceptualization of the EPM, L.M.; application of the EPM in the healthcare field, L.M. and R.B.; application of the EPM in the educational field, L.M., M.U. and F.V.; writing— original draft, L.M., R.B., M.U. and F.V.; writing—review and editing, R.B., M.U. and F.V.; supervision, L.M. All authors have read and agreed to the published version of the manuscript.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the studies presented in the Sections 5.1 and 5.2 as examples of application of the EPM in the healthcare and educational fields.

Conflicts of Interest: The authors declare no conflict of interest.

References

Anderson, Joan M. 1991. The Phenomenological Perspective. In *Qualitative Nursing Research*. Edited by Janice M. Morse. Newbury Park: Sage, pp. 25–38.

Angus, Nanna M., John W. Osborne, and Paul W. Koziey. 1991. Window to the Soul: A Phenomenological Investigation of Mutual Gaze. *Journal of Phenomenological Psychology* 22: 142–62. [CrossRef]

Arendt, Hannah. 1978. *The Life of the Mind*. New York: Harcourt Brace Jovanovich.

Ashworth, Peter. 2003. An approach to phenomenological psychology: The contingencies of the lifeworld. *Journal of Phenomenological Psychology* 34: 257–78. [CrossRef]

Ashworth, Peter, Madeleine Freewood, and Ranald Macdonald. 2003. The student lifeworld and the meanings of plagiarism. *Journal of Phenomenological Psychology* 34: 145–56. [CrossRef]

Barritt, Loren, Ton Beekman, Hans Bleeker, and Karel Mulderij. 1983. *A Handbook for Phenomenological Research in Education*. Ann Arbor: University of Michigan, School of Education.

Bateson, Gregory. 1979. *Mind and Nature*. New York: Dutton.

Bengtsson, Jan. 1984. *Husserls Erfarenhetsbegrepp och Kunskapsideal. Den Teoretiska Erfarenhetens Begränsningar och den Praktiska Erfarenhetens primat [Husserl's Concept of Experience and Ideal of Knowledge. The Limits of Theoretical Experience and the Primacy of Practical Experience]*. Gothenburg: Fenomenografiska Notiser 1.

Bengtsson, Jan. 2013a. Embodied Experience in Educational Practice and Research. *Studies in Philosophy and Education* 32: 39–53. [CrossRef]

Bengtsson, Jan. 2013b. With the Lifeworld as Ground: Introduction to the Special Issue. An Outline of the Gothenburg Tradition of the Lifeworld Approach. *Indo-Pacific Journal of Phenomenology* 13: 1–9. [CrossRef]

Bruner, Jerome. 1990. *Acts of Meanings*. Cambridge: Harvard University Press.

Charmaz, Kathy. 2014. *Constructing Grounded Theory*. London: Sage.

Clarke, Victoria, and Virginia Braun. 2021. *Thematic Analysis: A Practical Guide*. Thousand Oaks: Sage.

Cohen, Marlene Z., and Anna Omery. 1994. Schools of Phenomenology: Implications for Research. In *Critical Issues in Qualitative Research*. Edited by Janice M. Morse. Thousand Oaks: Sage, pp. 136–56.

Cohen, Marlene Z., David L. Kahan, and Richard H. Steeves. 2000. *Hermeneutic Phenomenological Research*. Thousand Oaks: Sage.

Creswell, John W. 1998. *Qualitative Inquiry and Research Design*. Thousand Oaks: Sage.

Crotty, Michael. 1996. *Phenomenology and Nursing Research*. Melbourne: Churchill Livingstone.

Dahlberg, Helena, and Karin Dahlberg. 2003. To not make definite what is indefinite. A phenomenological analysis of perception and its epistemological consequences. *Journal of the Humanistic Psychologist* 31: 34–50. [CrossRef]

Dahlberg, Helena, and Karin Dahlberg. 2019. The question of meaning—A momentous issue for qualitative research. *International Journal of Qualitative Studies on Health and Well-Being* 14: 1598723. [CrossRef]

Dahlberg, Karin. 2006. The essence of essences-the search for meaning structures in phenomenological analysis of lifeworld phenomena. *International Journal of Qualitative Studies on Health and Well-Being* 1: 11–19. [CrossRef]

Dahlberg, Karin, and Helena Dahlberg. 2004. Description vs. interpretation, a new understanding of an old dilemma in human science research. *Journal of Nursing Philosophy* 5: 268–73. [CrossRef]

Dahlberg, Karin, Helena Dahlberg, and Maria Nystrom. 2007. *Reflective Lifeworld Research*, 2nd ed. Lund: Studentlitteratur.

Dahlberg, Karin, Nancy Drew, and Maria Nystrom. 2001. *Reflective Life World Research*. Lund: Studentlitteratur.

Douglass, Bruce G., and Clark Moustakas. 1985. Heuristic inquiry: The internal search to know. *Journal of Humanistic Psychology* 25: 39–55. [CrossRef]

Dowling, Maura. 2007. From Husserl to van Manen. A review of different phenomenological approaches. *International Journal of Nursing Studies* 44: 131–42. [CrossRef] [PubMed]

Fleming, Valerie, Uta Gaidy, and Yvonne Robb. 2003. Hermeneutic research in nursing: Developing a Gadamerian-based research method. *Nursing Inquiry* 10: 113–20. [CrossRef] [PubMed]

Giorgi, Amedeo. 1985. *Phenomenological and Psychological Research*. Pittsburgh: Duquesne University Press.

Giorgi, Amedeo. 1997. The theory, practice, and evaluation of the phenomenological method as a qualitative research procedure. *Journal of Phenomenological Psychology* 28: 235–60. [CrossRef]

Giorgi, Amedeo P. 2000. Concerning the application of phenomenology to caring research. *Scandinavian Journal of Caring Sciences* 14: 11–15. [CrossRef]

Giorgi, Amedeo P., and Barbro M. Giorgi. 2003. The descriptive phenomenological psychological method. In *Qualitative Research in Psychology: Expanding Perspectives in Methodology and Design*. Edited by Paul M. Camic, Jean E. Rhodes and Lucy Yardley. Washington, DC: American Psychological Association, pp. 243–73.

Glaser, Barney G., and Anselm L. Strauss. 1967. *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Chicago: Aldine.

Heidegger, Martin. 1999. *Contributions to Philosophy (from Enowning)*. Bloomington: Indiana University Press.

Heidegger, Martin. 2010. *Being and Time*. Albany: State University of New York Press.

Heidegger, Martin. 2012. *Bremen and Freiburg Lectures: Insights into That Which Is and Basic Principles of Thinking*. Bloomington: Indiana University Press.

Hellström, Olle, Jennifer Bullington, Gunnar Karlsson, Per Lindqvist, and Bengt Mattsson. 1999. A phenomenological study of fibromyalgia. Patient perspectives. *Scandinavian Journal of Primary Health Care* 17: 11–16.

Husserl, Edmund. 2001. *Logical Investigation*. London and New York: Routledge, vol. 1.

Husserl, Edmund. 2012. *Ideas*. London and New York: Routledge.

Johns, Christopher, and Helen Hardy. 1998. Voice as a metaphor for transformation through reflection. In *Transforming Nursing Through Reflective Practice*. Edited by Christopher Johns and Dawn Freshwater. London: Blackwell Science, pp. 51–61.

Karlsson, Gunnar. 1993. *Psychological Qualitative Research from a Phenomenological Perspective*. Stockholm: Almqvist & Wiksell International.

Karlsson, Gunnar. 1996. The Experience of Spatiality for Congenitally Blind People: A Phenomenological-Psychological Study. *Human Studies* 19: 303–30. [CrossRef]

Karlsson, Gunnar, and Lennart Gustav Sjöberg. 2009. The Experiences of Guilt and Shame: A Phenomenological—Psychological Study. *Human Studies* 32: 335–55. [CrossRef]

Knights, Susan. 1985. Reflection and learning: The importance of a listener. In *Reflection: Turning Experience into Learning*. Edited by David Boud, Rosemary Keogh and David Walker. New York: Nichols Publishing Company, pp. 85–90.

Lévinas, Emmanuel. 1969. *Totality and Infinity*. Pittsburgh: Duquesne University Press.

Leiviskä, Deland Anniina C., Gunnar Karlsson, and Helena Fatouros-Bergman. 2011. A Phenomenological Analysis of the Psychotic Experience. *Human Studies* 34: 23–42. [CrossRef]

Lukinsky, Joseph. 1990. Reflective withdrawal through journal writing. In *Fostering Critical Reflection in Adulthood*. Edited by Jack Mezirow and Associates. San Francisco: Jossey-Bass, pp. 213–34.

Merleau-Ponty, Maurice. 1945. *Phénoménologie de la Perception*. Paris: Gallimard.

Merriam, Sharan B., ed. 2002. *Qualitative Research in Practice*. San Francisco: Jossey-Bass.

Mortari, Luigina, and Luisa Saiani, eds. 2014. *Gestures and Thoughts of Caring*. New York-Boston: McGraw-Hill Education.

Mortari, Luigina, and Marco Ubbiali. 2017. The 'MelArete' Project: Educating Children to the Ethics of Virtue and of Care. *European Journal of Educational Research* 6: 269–78. [CrossRef]

Mortari, Luigina, Marco Ubbiali, and Federica Valbusa. 2017. Children's Ethical Thinking: The 'MelArete' Project. *The Turkish Online Journal of Educational Technology* 2017: 529–39.

Mortari, Luigina. 2022. *Fenomenologia Empirica*. Genova: Il Melangolo.

Moustakas, Clarck. 1990. *Heuristic Research: Design, Methodology, and Applications*. Newbury Park: Sage.

Moustakas, Clark. 1994. *Phenomenological Research Methods*. Thousand Oaks: Sage Publications.

Muller, Jessica H. 1999. Narrative Approaches to Qualitative Research in Primary Care. In *Doing Qualitative Research*. Edited by Benjamin F. Crabtree and William L. Miller. Thousand Oaks: Sage, pp. 221–38.

Neuendorf, Kimberley. 2017. *The Content Analysis Guidebook*. Thousand Oaks: Sage.

Plato. 1997. *Complete Works*. Indianapolis and Cambridge: Hackett Company.

Ray, Marilyn A. 1994. The Richness of Phenomenology: Philosophic, Theoretic, and Methodological Concerns. In *Critical Issues in Qualitative Research Methods*. Edited by Janice M. Morse. Thousand Oaks: Sage, pp. 117–33.

Schutz, Alfred. 1962. *Collected Papers (Volume I)*. The Hague: Martinus Nijhoff.

Spiegelberg, Herbert. 1982. *The Phenomenological Movement*. Dordrecht: Martinus Nijhoff.

Strauss, Anselm L., and Juliet Corbin. 1998. *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. Thousand Oaks: Sage.

Taylor, Beverly. 1998. Locating a phenomenological perspective of reflective nursing and midwifery practice by contrasting interpretive and critical reflection. In *Transforming Nursing through Reflective Practice*. Edited by Christopher Johns and Dawn Freshwater. London: Blackwell Science, pp. 134–50.

Terry, Gareth, Hayfield Nikki, Clarke Victoria, and Braun Virginia. 2017. Thematic analysis. *The SAGE Handbook of Qualitative Research in Psychology* 2: 17–37.

Van Manen, Max. 1984. Practicing phenomenological writing. *Phenomenology+ Pedagogy* 2: 36–69. [CrossRef]

Van Manen, Max. 1990. *Researching Lived Experiences. Human Sciences for an Action Sensitive Pedagogy*. Albany: State University of New York Press.

Van Manen, Max. 2017a. But is it phenomenology? *Qualitative Health Research* 27: 775–79. [CrossRef]

Van Manen, Max. 2017b. Phenomenology in its original sense. *Qualitative Health Research* 27: 810–25. [CrossRef] [PubMed]

Zahavi, Dan. 2019. Getting it quite wrong: Van Manen and Smith on phenomenology. *Qualitative Health Research* 29: 900–7. [CrossRef] [PubMed]

Zahavi, Dan. 2021. Applied phenomenology: Why it is safe to ignore the epoché. *Continental Philosophy Review* 54: 259–73. [CrossRef]

Zahavi, Dan, and Kristian M. M. Martiny. 2019. Phenomenology in nursing studies: New perspectives. *International Journal of Nursing Studies* 93: 155–62. [CrossRef]

Article

Crafting a Foucauldian Archaeology Method: A Critical Analysis of Occupational Therapy Curriculum-as-Discourse, South Africa

Tania Rauch van der Merwe [1,2,*], **Elelwani L. Ramugondo** [3] **and André Keet** [4]

1 Department of Occupational Therapy, School of Therapeutic Sciences University of the Witwatersrand, Johannesburg 2193, South Africa
2 Occupational Therapy Department, University of the Free State, Bloemfontein 9300, South Africa
3 Transformation, Student Affairs and Social Responsiveness, University of Cape Town, Cape Town 7701, South Africa; elelwani.ramugondo@uct.ac.za
4 Rectorate: Engagement and Transformation, Centre for Critical Studies, Nelson Mandela University, Port Elizabeth 6001, South Africa; andre.keet@mandela.ac.za
* Correspondence: tania.vandermerwe@wits.ac.za

Abstract: South Africa has a colonial and apartheid past of social injustice, epistemological oppression, and exclusion. These mechanisms are historically inscribed in the designs, practices, and content of higher education—including in occupational therapy curriculum. If these historical markers are not consciously interrogated, patterns of reproduction are reified along the fault lines that already exist in society. The focus of this article is to demonstrate how an archaeological Foucauldian method was crafted from foundational Foucauldian archaeology analytics and existing approaches of Foucauldian discourse analysis to unearth the rules of the formation of the occupational therapy profession. These rules pertain to the formation of (a) the 'ideal occupational therapist'; (b) who had a say about the profession; (c) the ways of preferred reasoning; and (d) underlying theoretical themes and perspectives about the future. Data sources for this archaeology analytics included commemorative documents of universities on the origin of their programmes; historical regulatory documents; and the South African Journal of Occupational Therapy archive from the period 1953–1994. The analysis rendered two subthemes for each of the rules of formation including 'white exceptionalism', white male national, and international, regulatory bodies, the profession's know-how practical knowledge, and its need for recognition within a bio-medical paradigm. Unearthing the historical markers of a curriculum and viewing it as discourse may enable a conscious reconfiguration thereof.

Keywords: critical discourse analysis; Foucauldian archaeology; occupational therapy curriculum

1. Introduction

> *What I am trying to do is grasp the implicit systems which determine our most familiar behavior without our knowing it. I am trying to find their origin, to show their formation, the constraint they impose upon us; I am therefore trying to place myself at a distance from them and to show how one could escape.* (Foucault in Simon 1971, p. 201)

South Africa (SA) has a colonial and apartheid past of social injustice, epistemological oppression, and exclusion. Universities were largely instrumental in reifying apartheid ideologies and of the 36 higher education institutions, more than half were historically reserved for white people, who were a demographic minority (Badat 2007; Bunting 2006). After SA attained democracy in 1994, radical shifts in higher education were accomplished with a significantly increased number of students that are demographically representative of the country's population accessing higher education, as well as some excellence in areas of teaching and learning, and research (Webbstock 2016; Department of Higher Education, Republic of South Africa 2019). The White Paper on Higher Education and

Training of 1997 (Department of Education, Republic of South Africa 1997) put forward key principles for transformation: equity and redress; democratization; development; quality; effectiveness and efficiency; academic freedom; institutional autonomy; and public accountability. However, almost 30 years after democracy, it appears that Badat's (2007, p. 12) cautioning proved ominous: " . . . while institutional restructuring is a necessary condition of the transformation in South African higher education it is not a sufficient condition". Student drop-out rates are still over 30% (Statistics South Africa 2017) and white academics constitute 50% of the country's employed academic cohort, regardless of this racial group representing 8% of the country's total population (Wild 2019). The 2015 #Fees Must Fall student movements and protests emerged with force, not only calling for students' financial inclusion but also the decolonization of higher education in South Africa: " . . . decentering Western epistemologies in higher education curriculum, troubling the alienating nature of university curricula, and the need to transform teaching and learning practices" (Hlatshwayo et al. 2022, p. 2). In a survey conducted by Meyer and Mncayi (2021), 45% of South African graduates are 35 years old and younger, and reported being unemployed against the backdrop of a continuity of previous problems.

It seems then, despite political and structural changes, mechanisms of past social injustice, epistemological oppression, discrimination, and exclusion are historically inscribed in the designs, practices, and content of higher education. Occupational therapy as a profession came into existence in North America and Britain because of the health needs resulting from World War I (Duncan 2017; Friedland 2012; Wilcock 2002), and in South Africa in 1943, at the height of WWII, in the same decade when apartheid was formalized by the Afrikaner Nationalist movement. This historical context begs the following questions: Do current forms of knowledge practices such as the occupational therapy curriculum carry the inscriptions for strengthening the reproductive machineries of departments, and by extension the universities they are part of? To which extent are continuous patterns of unjust inclusion and exclusion part of the function of the curriculum (van der Merwe 2019)?

The occupational therapy profession "came into being because of a basic need and an underlying belief that there is a connection between what people do and their health" (Wilcock 2002, p. 1). Occupational science, a foundational science that emerged from the profession's body of knowledge in the 1980s, also theorized the concept of occupational justice, which is an extension of social justice. Occupational justice underscores the promotion and advocacy for all human beings to choose and engage in daily occupations that enable human dignity, health, and well-being (Duncan and Watson 2004; Hocking 2017; Smith 2017). Townsend (2003, p. 6), one of the founding theorists of occupational justice, explains that occupational injustice occurs when: "participation in daily life occupations is barred, trapped, confined, restricted, prohibited, undeveloped, disrupted, alienated, imbalanced, exploited, deprived, marginalized, or segregated".

However, almost 30 years after SA's democracy, and despite many regulatory imperatives undertaken to break the pattern, in 2018, 66% of occupational therapists who are registered at the Health Professions Council of SA (HPCSA) remain white and mostly female, and the profession continues to be perceived as relatively unknown (Ned et al. 2020). Much critical scholarly work has been performed within a Global South occupational therapy context. Guajardo et al. (2015) urged the profession to critically interrogate its normative assumptions about Global North epistemologies and paradigmatic biases. This critical interrogation is important to move toward contextually responsive reasoning about how people view meaningful and purposeful occupational engagement among a majority of collective-orientated worldviews. Ramugondo (2015, p. 488) argues the imperative concept of occupational consciousness as an "ongoing awareness of the dynamics of hegemony and recognition that dominant practices are sustained through what people do every day, with implications for personal and collective health". Another example of critical theoretical work in Global South occupational therapy is the textbook published by a group of critical occupational therapy scholars titled: "Concepts in Occupational Therapy,

Understanding Southern Perspectives" (Dsouza and Galvaan 2017). On a Global North front, the discourse of prevalent racism and an awareness of its colonial underpinnings in occupational therapy has come to the fore with urgent and renewed calls for more research about the mechanisms of 'discreet' oppressive practices, as well as their historical development and consequences; ongoing and robust critical debate and reflexivity; and problematizing Global North epistemologies and taken-for-granted ways of being (Beagan 2021; Beagan et al. 2022; Emery-Whittington 2021; Johnson et al. 2022; Laliberte Rudman 2013; Lerner and Kim 2022; Sterman and Njelesani 2021).

As an attempted measure of critical deconstruction of historical markers of unjust patterns of inclusion and exclusion, this research was conducted by employing a Foucauldian theoretical toolbox that made a deep understanding of the complex and intricate workings between power, knowledge, and regimes of truth possible. Foucauldian archaeological analytics explain that, when a formal body of knowledge attains the status of science, as occupational therapy did when it was formalized as a programme at universities, it carries with it the markers of the historical discriminators, in terms of, e.g., race, gender, and class. This archaeology analysis was part of a larger study with the overarching question: "How and why does the occupational therapy curriculum, as a politically constructed discourse, create and sustain various patterns of inclusion and exclusion?" (van der Merwe 2019, p. 8). Archaeology aimed to excavate the rules of formation of the occupational therapy profession's implicit knowledge, and therefore its conditions of possibility for the manifestation of a curriculum at a South African university that historically accepted only white students during apartheid. In order to expose, dismantle and transform historical markers of unjust inclusion and exclusion, in-depth archaeology needed to be crafted to excavate the implicit rules of a profession's knowledge formation. Viewing both implicit (savoir) and explicit/formal knowledge (connaissance) in the form of a curriculum, as discourse, offers a critical gaze to identify patterns that must be transformed.

2. Materials and Methods

The Foucauldian approach used in this study is situated both as a theoretical approach and crafted method, which is anchored in a critical theory paradigm, including post-structuralist discourse theory. Discourse theory views all social ways of thinking, speaking, doing, and being as meaningful with the premise that these meanings, often tacit, taken-for-granted, and dominant, are constructed from historically situated system/s of rules (Foucault [1970] 1981; Hook 2001; Howarth 2002; Torfing 2005). One example is the way in which madness was constructed between the thirteenth and nineteenth centuries as a social classification and a body of knowledge to be studied. This formation of knowledge was partly because of how any individual or group of people who were deemed as 'unreasonable', or economically unproductive, were sociologically categorized and subsequently confined. However, people who were classified as 'mad' were not only the mentally ill, but also included prostitutes, heretics, or unemployed immigrants unable to speak the local language (Foucault [1961] 1989; O'Farrell 2005; Gregory 2014).

The method of archaeology is understood as a metaphor for excavating the rules of implicit knowledge (Savoir) that created the conditions of possibility for the formal, visible, and explicit knowledge (Connaissance) (Foucault [1969] 2011; Foucault 1998; Schreurich and McKenzie 2006)—in this case, the occupational therapy curriculum (Figure 1). Archaeology is also about making visible the relationships between knowledge and power as "[t]here couldn't be any knowledge without power, and there couldn't be any political power without the possession of a certain special knowledge" (Foucault 2000, p. 31). The purpose of this study was not to "reveal hidden truths" (van der Merwe 2019, p. 40) but rather to show how uninterrogated historical markers may continue to contour and systematically repeat (often unconscious) patterns of inclusion and exclusion as well as its unjust consequences.
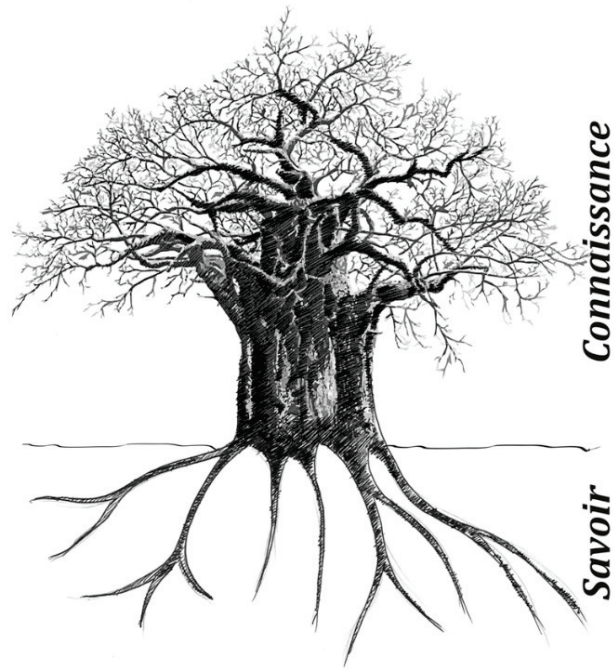
Figure 1. Savoir (implicit knowledge) and Connaissance (explicit knowledge) analogically depicted as a Baobab tree.

The first author wanted to stay close to Foucault's original conceptualization of archaeology and wanted to demonstrate a clear distinction, first between the historical knowledge formation of the profession, and then explore how the historical markers thereof may manifest/repeat themselves in a contemporary curriculum. She, therefore, did not want to combine archaeology and genealogy from the outset, as illustrated by the very helpful FDA method put forward by Arribas-Ayllon and Walkerdine (2017). The archaeology method was therefore mainly crafted from Foucault's work (Foucault [1969] 2011) as well as several works of discourse–theory by Foucauldian scholars. Four overarching steps, or rather phases in a process, were followed for the development of the method (Figure 2): (i) First, to understand the theory and concepts of archaeology and their relationships; (ii) Second, identifying and selecting the data, i.e., important speech acts (Dreyfus and Rabinow 1982) which will contain the rules of formation, as well grouping the various sets of data based on shared characteristics (e.g., Sawyer 2002); (iii) Third, analysing the data in terms of their origin, context, and appearance (Jäger and Maier 2009); as well as (iv) Finally, analysing the data in terms of the rules of formation. While the phases of this process are chronologically outlined, they were not necessarily linear but quite re-iterative.

Archaeology

Understanding the concepts of *Archaeology of Knowledge*

Data collection: selection of and organising statements

Data analysis: i.t.o. data source and context, and structural surface of text
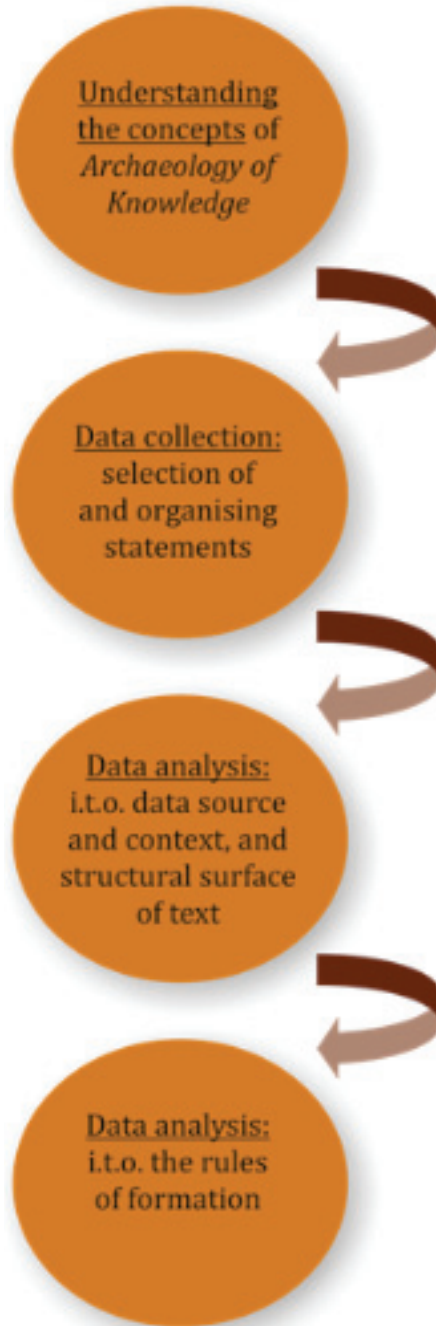
Data analysis: i.t.o. the rules of formation

Figure 2. An illustration of the process followed in crafting an archaeology FDA.

The first author did extensive reading to fulfil phase (i) and simultaneously conducted multiple literature reviews informed by Foucauldian literature across several disciplines, staying closest to Foucault's Archaeology of Knowledge (Foucault [1969] 2011)[1] with augmented reading for the operationalization of the data collection and analysis. Howarth's (2002) astute analogical outline of Foucauldian concepts as "conceptual machinery" (p. 52) was a main point of departure in this phase, along with Keller's (2013) and Gutting's (1995) clear illuminations of the aspects of Foucauldian archaeology. Jäger and Maier's (2009) interpretation of the practical application of the identification of concepts (ways of preferred reasoning about the profession's knowledge), and strategies (underlying theoretical themes, and perspectives about the future), was also used.

Phase two's (ii) data collection comprised three categories of data. The first set of data was historical documents about how the first occupational therapy students/therapists in South Africa experienced and described the inception of occupational therapy in SA. This set of documents included commemorative texts about the beginning of occupational therapy at universities and the South African Occupational Therapy professional association (SAOT); lecture material that was originally given to students at the specific historically exclusive university about the profession's origin and workings in SA; as well as the transcriptions of two interviews with retired staff members who were part of the beginning of the department at this university.

The second set of data was governing documents formalizing occupational therapy knowledge (a definitive point in legitimizing a fledgling profession to a recognized discursive formation), which included SA government-published documents about the scope and inclusion of the occupational therapy profession as part of the South African Medical and Dental Council; the World Federation of Occupational Therapists (WFOT) "Minimum Educational Standards" (Spackman 1969) as well as its prescribed code of ethics for occupational therapists; and finally, WFOT's chronicle account of the profession from 1952 to 1992.

The third set of data was categorized as historical documents written by academic experts which consisted of the South African Journal of Occupational Therapy archive from 1953 to 1994 (when SA attained democracy), and with an additional focus on the Vona du Toit memorial lectures—a prestige award delivered during the profession's conference, initially annually and later biannually.

Phase (iii) entailed the analysis of the data sources and context, e.g., why the text was important, who the author was, and its historical context. In terms of the appearance (structural surface of the text), an analysis was performed on, e.g., how the content was organized and what symbols or pictures were present in the documents.

Phase (iv) entailed a detailed analysis of the rules of formation, also known as discursive regularities, through thematic induction. The first layer of coding was in relation to the four rules of formation. The second layer of coding was based on several sub-questions under each of the rules of formation as outlined by Foucault ([1969] 2011) and explicated by Gutting (1995). Subcategories and categories were induced from the codes under each of the rules of formation, which in turn constituted the four main themes.

While all four aspects and epistemological standards (e.g., Botma et al. [2010] 2016) of trustworthiness were ensured, an additional reflection on quality criteria in social justice work is to, on the one hand, grapple with the standard of objectivity, and on the other, also constantly wrestle with one's subjectivities and positionality as a researcher. The researcher's (main author) subjectivity formed the foundational drive for doing the research, hopefully appealing to readers to "rethink and reimagine current arrangements" (Fine 2006, p. 98) toward critical praxis.

3. Results

Ensuing the four rules of formation as themes, two subthemes emerged from each of the rules of knowledge formation with eight categories rendered from the subthemes.

For this article, illustrated below, is an example of the subthemes from each of the rules of formation/discursive regularities situated in the savoir plane of Figure 1.

3.1. Formation of the Ideal Occupational Therapist: White Exceptionalism

The occupational therapy profession was implemented as the first university programme of its kind in South Africa in 1943—five years before apartheid was formalized by the state. Universities were initially grouped according to their implicit political orientation, which manifested firstly by language, but also by race. The Extension of University Act No. 45 of 1959—at the height of the apartheid regime—rendered it illegal to register as a person of colour at certain South African Universities without explicit permission from the Minister of Internal Affairs. An analysis of the appearance (structural surface) of a commemorative document of a university that was historically inclusive of white students only found that white females were hyper-prevalent in historical pictures. In historical lecture material from this university (where the occupational therapy programme was implemented in 1976), an outline, as an orientation lecture, was given to students about the available universities in South Africa offering an occupational therapy degree, as well as their language and race exclusions/inclusion, for example:

> *[Name of Historically Political Conservative University], 1976 offers a four-year degree in B Occupational Therapy. Facilities are offered for white students. The annual intake of students . . . is 20 and the medium of study is Afrikaans.* (Unknown 1977, p. 1)

White exceptionalism was coupled with the selection criteria for occupational therapy students, initially put forward by the World Federation of Occupational Therapists (WFOT) (Spackman 1969) and entrenched as a national pre-requisite for the 'high standards of excellence'. These criteria were furthered at some conservative universities with the imperative of virtue, as one of the interviewees recalls at the historically inclusive university for white people only:

> *The selection criteria [for occupational therapy students] were based on academic achievement [in school] and the students were selected by a panel of male medical academia . . . [These selected students] were very good people, moral and tough . . . they cried if they failed but picked themselves up and went on.* (Interviewee 2 2016, p. 2)

3.2. Formation of Legitimate Speakers about the Profession: White Male National, and International, Regulatory Bodies

The analysis of the archive revealed four clusters of legitimate speakers (enunciative modalities) who had a say about the profession. The first was white medical specialists and academics who either advocated for, ensured, and/or regulated the implementation of an occupational therapy curriculum at a university as well as its quality.

The second group of important speakers was two female occupational therapists delegated by the Red Cross from Britain to establish the first occupational therapy programme in 1943 at a historically more politically liberal university with English as the medium of instruction, to meet the needs of injured soldiers as well as increasingly large groups of people being hospitalized because of endemic tuberculosis outbreaks. These two women are described in many historical narrative accounts as stalwarts, known for their tenacity, expert knowledge, and commitment to the profession. For example, the ship they travelled underway to South Africa with textbooks and equipment was torpedoed off the coast of Siera Leone and sunk. Despite having lost all equipment and materials, these women continued making their way to Johannesburg in South Africa, arriving approximately a year later than expected (see, e.g., Wilcock (2002)). An example of how they were described in the lecture material about the history of occupational therapy is provided below:

> *The first qualified occupational therapists came to South Africa from Britain in 1942. They recognized the value of activities currently in use but brought knowledge and discipline to refine their application so that the patients received the treatment specifically designed for their particular needs.* (Unknown 1977, p. 2)

A third group of legitimate speakers about the profession was the World Federation of Occupational Therapists which was founded in 1953 by 10 countries, including South Africa. As an international regulatory body, they established the minimum standards for the education of occupational therapists, which were also later applied as international accreditation criteria for occupational therapy programmes.

The fourth and final group of important speakers having legitimate enunciation about the profession was the South African Medical and Dental Council. This council (breaking up for sentences) vigorously regulated the implementation of occupational therapy programmes in South African universities, requiring, for example, an Education Committee at faculty level to review the content and structure of a proposed programme and curriculum. One of the interviewees participating in such a programme recalled:

> *The [content and form] of the curriculum was very much determined by whether occupational therapy [i.e., the programme] was 'registrable' at the Medical and Dental Council. This council consisted of medical practitioners, specialists, dentists and psychiatrists who were males and who were white at that time.* (Interviewee 2 2016, p. 4)

3.3. Formation of Modes of Argumentation and Reasoning about the Knowledge that Is Applied: Know-How Practical Knowledge

Occupational therapy's ontology is situated both in the bio-medical and social theoretical knowledge paradigms. It, therefore, has an ontologically plural epistemological base. However, historically, it was thrusted into the status of a profession because of its holistic, solution-focused, and practical approach to injured soldiers during the World Wars but without a properly developed scientific base. It only started to develop its research base from the 1960s onward (Wilcock 2002). The South African Journal of Occupational Therapy archive from 1953 until the late 1960s is stringed with publications of innovative and visual depictions of aids for physical disabilities, e.g., a device with detailed sketches on how to enable a person with an upper limb amputation to wash dishes (Swain 1974); an adapted tool for a woman with severe arthritis to insert a bobbin into a sewing machine; and a complex wooden toy adapted to enable a child who had polio to ambulate, facilitating childhood development and play (Best and Peart 1978).

3.4. Formation of Underlying Theoretical Themes, and Perspectives about the Future: Need for Recognition Withing a Biomedical Paradigm

Occupational therapy was a new profession that is, on the one hand, revered for its practical wisdom and problem-solving, and on the other, viewed at odds with significant scientific evidence and epistemological standing. As a mostly white female profession, it was continuously seeking validation from the mostly white medical fraternity. A recipient of the prestigious Vona du Toit Memorial Lecture, after returning from a visit to the USA, made the following appeal:

> *We should be confident and proud of what we have to offer . . . Occupational therapy is an exciting career, an essential service, and a career of the future . . . OTs in South Africa seem to have accepted a humbly subordinate position in the medical field... Our skills and knowledge have improved but our attitude seems to have remained the same. We accept inferior working conditions and low salaries. We struggle to treat 500 patients on a budget for 50, and our feeble protests subside quickly; we cope somehow . . . We have much to be proud of, to talk about. to write and to share . . . Let us look toward the future with enthusiasm and courage and do the thing in style.* (Meyer 1979, p. 7)

4. Discussion

Universities in South Africa were a systemic tool for the reification of apartheid and white supremacy ideologies as universities were organized according to political orientation, language, and race. While standards for excellence were an important measure for the legitimization of the profession, it was situated in the rationale of Western exceptionalism and white supremacy (Santos 2014). South Africa was a British colony from 1806 until its

declaration as an independent republic in 1961. However, apartheid was formalized in 1948 until 1994. The organization and distribution of occupational therapy's implicit (savoir) and explicit (connaissance) knowledge, were built on Mignolo's (2009) four pillars of the power matrix: race (authority of white exceptionalism); femaleness supported by patriarchy (gender and sexuality); an emerging healthcare profession (knowledge/subjectivity); and the fact that occupational therapy students selected were supported by parents from a certain class (economy). Virtue ethics, and arguably postures of docility (Foucault 1984), are deeply associated with Calvinist and Puritan values of moralism and perfectionism (van der Westhuizen 2007). However, the individualism associated with virtue ethics (Sherman 2016) as well as the posture of charitability implicit to offering care to people who are perceived as morally deserving, are seldom critically interrogated (van der Merwe 2019).

It can be argued on the one hand that, against the backdrop of patriarchy as the norm at that time, the two women from Britain in their tenacious commitment to the expansion of the profession at the height of WWII, is illustrative of the nature of possibility and restrictions of power relations (Foucault 1978). However, the formation of the occupational therapy profession was also intertwined with the pedagogical nature of institutions such as universities and hospitals (Foucault 1984). This was an important disciplinary strategy (Foucault 1984; Lenoir 1993) to attain legitimacy as a fledgling profession, and to cross the threshold from a discursive practice (a collective notion of ideas) to a discursive formation (Foucault [1969] 2011), i.e., a profession. However, it was implicated that, now, at the time of occupational therapy attaining professional legitimacy, it was also assimilated as part of an established epistemological hierarchy. The analogy of the Victorian trinity came to the fore: the medical doctor as the stern father, the female para-medical occupational therapist as the caring mother, and the child-like patient (Andrews 1999; van der Merwe 2019).

Know-how knowledge is often recognized as a physical product to meet a real-world practical problem and is underscored by the art and skill of innovation and ingenuity (Aristotle[349BC] 1962; Foucault 1998). The early occupational therapy profession's knowledge was situated in a coherentist mode of reasoning that relied on the coherence between the various sets of beliefs situated in both bio-medical and social sciences, as well as an "instrumental efficacy" (Gordon 2000, p. xviii) of its problem-solving approach. This mode of reasoning was at odds with the medical fraternity's foundationalist reasoning, which is discipline-bound and linear (Dancy 2005; Lehrer 2000; Sosa 2011), creating an epistemological inferior view of the profession within a bio-medical paradigm. Lack of critical engagement with the homogeneous forces of one or another epistemology may lead to the reification of historically dominant patterns of thinking and speaking (Foucault 1984), and thwart epistemic freedom and liberation (Ndlovu-Gatsheni 2018; van der Merwe 2019).

One of the paradigmatic roots of occupational therapy knowledge is pragmatism. It implicates a strong association with social virtue: " . . . our edifying construct—occupation—may be understood as a social phenomenon, capable of changing the way that society constructs and reconstructs itself" (Morrison 2016, p. 301). While pragmatism can also be concomitant with an open system of knowledge as a way of reasoning, its origin as adopted by the profession is Eurocentric and therefore individualistically slanted (Sherman 2016). It is also not sufficiently critically interrogated. Pragmatism's shadow side is that it does not necessarily want to deal with theory as an a priori consideration, as its first recourse is the axiom of 'what-works-best', practically. Together with occupational therapists' subverted identity, resulting in docility (Foucault 1984; van der Merwe 2019), this may have resulted in an ongoing struggle of the profession not producing adequate evidence of its efficacy; therefore, its struggle for recognition within the bio-medical paradigm.

5. Conclusions

Foucault's (e.g., Foucault ([1969] 2011)) archaeological analytics explain that, at the point where a body of knowledge crosses the threshold from a discursive practice to a discursive formation, meaning when occupational therapy was formalized as a profession by being implemented on the university level as a degree, the historical markers, which were

part of its rules of formation, are inserted into its formal knowledge (Connaissance)—as shown in Figure 1. These historical markers are constructed on the level of the profession's a priori, implicit formation of knowledge (savoir) and were constituted by four groups of rules. These rules of formation are about: (a) how the ideal type of occupational therapist was politically and socio-economically configured; (b) who the legitimate speakers were who had the socio-political power and say about the development and standing of the profession; (c) the preferred ways of reasoning for the profession-in-the-becoming about the application of its knowledge; (d) and how it viewed and negotiated tensions about theoretical themes in its knowledge formation, as well as its future perspectives.

While these rules of the formation of implicit knowledge (savoir) were constituted on an a priori level, they become the conditions of possibility, and therefore constitutive of how formal knowledge is organized, presented, and circulated (Howarth 2002). In this case, the occupational therapy curriculum—carries with it the historical codes for the reification of repeating patterns of (unjust) inclusion and exclusion.

Foucault's archaeology analytics (e.g., Foucault ([1969] 2011)) are very valuable qualitative methodical tools for unearthing historical markers at the level of the initial formation of implicit knowledge. This is, however, not where the analysis should end. The next step would be to look at how taken-for-granted ways of thinking, speaking, doing, and being are often normalized and rationalized at the levels of formalized knowledge, in a curriculum, for example. These ways of rationalization are what Foucault would refer to as technologies of power and are situated in the genealogy of the theoretical toolbox for analysis (e.g., Foucault ([1975] 1977)).

Viewing both a profession and its curriculum as discourse can enable a critical historical deconstruction of curriculum to identify how and why patterns of unjust inclusion and exclusion are reproduced—bringing it to the surface for interrogation, critical dialogue, and change.

Note

1   Bearing in mind that many mistranslations of Foucault's work from French to English exist (O'Farrell 2005), the main author also read widely on contestations of his work, e.g., Sawyer's (2002) argument about the commonly decontextualized interpretation of the concept 'discourse' in a much broader sense as what Foucault meant when taking into account the surrounding text in the paragraph, as well as later references about this term in "Archaeology of Knowledge" (Foucault [1969] 2011; van der Merwe 2019).

References and Notes

Andrews, Gillian. 1999. Apartheid in Nursing: The Politics of Knowledge, Power and Control. In *Knowledge in Black and White*. Edited by Kwesi K. Prah. Cape Town: Centre for Advanced Studies of African Society, pp. 191–210.

Aristotle. 1962. *Nicomachean Ethics*. New York: Bobbs-Merrill, Frist published 349BC.

Arribas-Ayllon, Michael, and Vallery Walkerdine. 2017. Foucauldian Discourse Analysis. In *The Sage Handbook of Qualitative Research in Psychology*. Edited by Carla Willig and Wendy Stainton-Rogers. Los Angeles: SAGE Publications, pp. 110–23.

Badat, Saleem. 2007. *Higher Education Transformation in South Africa Post-1994: Towards a Critical Assessment*. Johannesburg: Centre for Education Policy Development (CEPD).

Beagan, Brenda. 2021. Commentary on racism in occupational science. *Journal of Occupational Science* 28: 410–13. [CrossRef]

Beagan, Brenda, Kaitlin R. Sibbald, Stephanie R. Bizzeth, and Tara M. Pride. 2022. Systemic Racism in Canadian Occupational Therapy: A Qualitative Study with Therapists. *Canadian Journal of Occupational Therapy* 89: 51–61. [CrossRef]

Best, Anne, and Marie Peart. 1978. A Therapeutic Engine. *The South African Journal of Occupational Therapy/Die Suid-Afrikaanse Joernaal van Arbeidsterapie* 8: 10–12.

Botma, Yvonne, Minrie Greeff, Mavis Mulaudsi, and Susan Wright. 2016. *Research in Health Sciences*. Cape Town: Pearson Holdings Southern Africa (Pty) Ltd. First published 2010.

Bunting, Ian. 2006. The higher education landscape under apartheid. In *Transformation in Higher Education: Global Pressures and Local Realities*. Edited by Nico Cloete, Peter Maassen, Richard Rehnel, Teboho Moja, Trish Gibbon and Helene Perold. Dutch: Springer, pp. 35–52.

Dancy, Jonathan. 2005. Problems of Epistemology. In *The Oxford Companion to Philosophy*. Edited by Ted Honderich. Oxford: Oxford University Press, pp. 263–65.

Department of Education, Republic of South Africa. 1997. White Paper 3: A Programme for the Transformation of Higher Education. *Government Gazette* 390: 18515.

Department of Higher Education, Republic of South Africa. 2019. *Statistics on Post-School Education and Training in South Africa: 2017*. Pretoria: Department of Higher Education.

Dreyfus, Herbert L., and Paul Rabinow. 1982. *Michel Foucault: Beyond Structuralism and Hermeneutics*. Chicago: The University of Chicago Press.

Dsouza, Sebestina A., and Roshan Galvaan. 2017. *Concepts in Occupational Therapy: Understanding Southern Perspectives*. Edited by Elelwani L. Ramugondo. Manipal: University Press.

Duncan, Edward A. S. 2017. *Foundations for Practice in Occupational Therapy*, 6th ed. Edinburgh: Elsevier Ltd.

Duncan, Maddie, and Ruth Watson. 2004. Transformation Through Occupation: Towards a Prototype. In *Transformation Through Occupation*. Edited by Ruth Watson and Lesley Swartz. London: Whurr Publishers, pp. 301–18.

Emery-Whittington, Isal G. 2021. Occupational Justice—Colonial Business as Usual? Indigenous Observations from Aotearoa New Zealand. *Canadian Journal of Occupational Therapy* 88: 153–62. [CrossRef] [PubMed]

Fine, Michelle. 2006. Bearing Witness: Methods for Researching Oppression and Resistance—A Textbook for Critical Research. *Social Justice Research* 19: 83–108. [CrossRef]

Foucault, Michel. 1989. *Madness and Civilization: A History of Insanity in the Age of Reason*. Abingdon: Routledge. First published 1961.

Foucault, Michel. 2011. *The Archaeology of Knowledge*. London: Routledge. First published 1969.

Foucault, Michel. 1981. The Order of Discourse. In *Untying the Text: A Post-Structuralist Reader*. Edited by Robert Young. Boston: Routledge & Kegan Paul, pp. 48–78. First published 1970.

Foucault, Michel. 1977. *Discipline and Punish: The Birth of the Prison*. New York: Random House Inc. First published 1975.

Foucault, Michel. 1978. Volume 1: An Introduction. In *The History of Sexuality*. New York: Random House, Inc.

Foucault, Michel. 1984. *The Foucault Reader. An Introduction to Foucault's Thought*. Edited by Paul Rabinow. New York: Random House Inc., pp. 51–75, 179–205, 214–25.

Foucault, Michel. 1998. *Aesthetics, Method, and Epistemology*. Essential Works of Foucault 1954–1984. Edited by James D. Faubion. London: The New Press, vol. II, pp. 11–16, 465–78.

Foucault, Michel. 2000. *Power*. Essential Works of Foucault 1954–1984. Edited by James D. Faubion. New York: The New Press, vol. III, pp. 1–80.

Friedland, Judith. 2012. *Restoring the Spirit, the Beginnings of Occupational Therapy in Canada 1890–1930*. Montreal: McGill-Queen's University Press.

Gordon, Colin. 2000. Introduction. In *Power: Essential Works of Foucault 1954–1984*. Edited by James D. Faubion. London: New Press, pp. xi–xli.

Gregory, Alice. 2014. Nellie Bly's Lessons. In *Writing What You Want to*. The New Yorker Website Page. Available online: https://www.newyorker.com/books/page-turner/nellie-blys-lessons-in-writing-what-you-want-to (accessed on 1 May 2023).

Guajardo, Alejandro, Frank Kronenberg, and Elelwani L. Ramugondo. 2015. Southern occupational therapies: Emerging identities, epistemologies and practices. *South African Journal of Occupational Therapy* 45: 3–10. [CrossRef]

Gutting, Gary. 1995. *Michel Foucault's Archaeology of Scientific Reason*. Cambridge: Cambridge University Press.

Hlatshwayo, Mlamuli Nkosingphile, Hanelie Adendorff, Margaret A. L. Blackie, Aslam Fataar, and Paul Maluleka, eds. 2022. Introducing 'decolonising knowledge and knowers'. In *Decolonising Knowledge and Knowers: Struggles for University Transformation in South Africa*. London and New York: Routledge, pp. 1–9. [CrossRef]

Hocking, Clare. 2017. Occupational Justice as Social Justice: The Moral Claim for Inclusion. *Journal of Occupational Science* 24: 29–42. [CrossRef]

Hook, Derrick. 2001. Discourse, Knowledge, Materiality, History: Foucault and Discourse Analysis. *Theory and Psychology* 11: 521–47. [CrossRef]

Howarth, David. 2002. *Discourse*. Balmoor: Open University Press.

Interviewee 2. 2016. Interview on the History of Occupational Therapy in South Africa, Including at the University of the Orange Free State [Interview with a previous faculty member, from 1976–1980, from an historically political-conservative university, Durban, KwaZulu Natal Province, South Africa] (23 May 2016).

Jäger, Siegfried, and Florentine Maier. 2009. Theoretical and Methodological Aspects of Foucauldian Critical Discourse Analysis and Dispositive Analysis. In *Methods of Critical Discourse Analysis*, 2nd ed. Edited by Ruth Wodak and Michael Meyer. London: SAGE Publications, pp. 109–36.

Johnson, Khalilah R., Anne Kirby, Selena Washington, Ryan Lavalley, and Faison Tomeico. 2022. Linking Antiracist Action from the Classroom to Practice. *American Journal of Occupational Therapy* 76: 1–5. [CrossRef] [PubMed]

Keller, Reiner. 2013. *Doing Discourse Research: An Introduction for Social Scientists*. London: SAGE Publications.

Laliberte Rudman, Debbie. 2013. Enacting the Critical Potential of Occupational Science: Problematizing the Individualizing of Occupation. *Journal of Occupational Science* 20: 298–313. [CrossRef]

Lehrer, Keith. 2000. *Theory of Knowledge*, 2nd ed. London: Westview Press, Inc.

Lenoir, Timothy. 1993. The Discipline of Nature and the Nature of Discipline. In *Knowledges: Historical and Critical Studies in Disciplinarity*. Edited by Ellen Messer-Davidow, David R. Shumway and David J. Sylvan. Charlottesville: University Press of Virginia, pp. 70–102.

Lerner, Justin E., and Angie Kim. 2022. Developing an Anti-Racist Practice in Occupational Therapy: Guidance for the Occupational Therapist. *The Open Journal of Occupational Therapy* 10: 10. [CrossRef]

Meyer, Christa. 1979. The Third Vona du Toit Lecture: Let Us Do the Thing in... Style. *The South African Journal of Occupational Therapy* 9: 2–5.

Meyer, Daniel Francois, and Precious Mncayi. 2021. An Analysis of Underemployment among Young Graduates: The Case of a Higher Education Institution in South Africa. *Economies* 9: 196. [CrossRef]

Mignolo, Walter D. 2009. Epistemic Disobedience, Independent Thought and De-Colonial Freedom. *Theory, Culture & Society* 26: 1–23.

Morrison, Rodolfo. 2016. Pragmatist Epistemology and Jane Addams: Fundamental Concepts for the Social Paradigm of Occupational Therapy. *Occupational Therapy International* 23: 1373–409. [CrossRef]

Ndlovu-Gatsheni, Sabelp J. 2018. *Epistemic Freedom in Africa—Deprovincialization and Decolonization: Rethinking Development*. London: Routledge Taylor and Francis Group.

Ned, Liektseng, Ritika Tiwari, Helen Buchanan, Lana van Niekerk, Kate Sherry, and Usuf Chikte. 2020. Changing demographic trends among South African occupational therapists: 2002 to 2018. *Human Resources for Health* 18: 22. [CrossRef]

O'Farrell, Clare. 2005. *Michel Foucault*. London: SAGE Publications Ltd.

Ramugondo, Elelwani L. 2015. Occupational Consciousness. *Journal of Occupational Science* 22: 488–501. [CrossRef]

Santos, Boaventura de Sousa. 2014. *Epistemologies of the South: Justice Against Epistemicide*. New York: Taylor & Francis.

Sawyer, Keith R. 2002. A Discourse on Discourse: An Archaeological History of an Intellectual Concept. *Cultural Studies* 16: 433–56. [CrossRef]

Schreurich, James J., and Kathryn B. McKenzie. 2006. Foucault's Methodologies. In *Handbook of Qualitative Research*. Edited by Norman K. Denzin and Yvonna S. Lincoln. Thousand Oakes: SAGE Publications, pp. 841–868.

Sherman, Benjamin R. 2016. There's No (Testimonial) Justice: Why Pursuit of a Virtue is Not the Solution to Epistemic Injustice. *Social Epistemology* 30: 229–50. [CrossRef]

Simon, John K. 1971. A Conversation with Michel Foucault. *Partisan Review* 38: 192–201.

Smith, Yda. 2017. Occupational Justice and Advocacy: Working with Refugees and Asylum Seekers at Personal and Community Levels. In *Occupational Therapies Without Borders: Integrating Justice with Practice*. Edited by Dikaios Sakkellariou and Nick Pollard. Edinburgh: Eslevier Ltd., pp. 433–40.

Sosa, Ernest. 2011. *Epistemology*. Oxford: Oxford University Press, Inc.

Spackman, Clare S. 1969. The World Federation of Occupational Therapists: 1952–1967. *Australian Occupational Therapy Journal* 16: 35–47. [CrossRef]

Statistics South Africa. 2017. *Education Series Volume V, Higher Education and Skills in South Africa, 2017*. Report No. 92-01-05. Pretoria: Statistics South Africa.

Sterman, Julia, and Janet Njelesani. 2021. Becoming Anti-Racist Occupational Therapy Practitioners: A Scoping Study. *OTJR: Occupation, Participation and Health* 41: 232–42. [CrossRef] [PubMed]

Swain, Denise L. 1974. Let's Learn: Aid for Washing Dishes. *The South African Journal for Occupational Therapy* 4: 7–11.

Torfing, Jacob. 2005. Discourse Theory: Achievements, Arguments, and Challenges. In *Discourse Theory in European Politics: Identity, Policy and Governance*. Edited by David Howarth and Jacob Torfing. Hampshire: Palgrave Macmillan, pp. 1–32.

Townsend, Elizabeth. 2003. Occupational Justice: Ethical, Moral and Civic Principles for an Inclusive World. Paper presented at the European NETWORK of Occupational Therapy Lecturers in Higher Education (ENOTHE)Annual Meeting, Prague, Czech Republic, October 31.

Unknown. 1977. Description of Occupational Therapy as Health Care Service. A Short History of the Establishment and Development of the Profession in South Africa, archival material—An orientation lecture presented to new occupational therapy students. Bloemfontein, South Africa, s.n.

van der Merwe, Tania Rauch. 2019. The Political Construction of Occupational Therapy in South Africa: Critical Analysis of Curriculum as Discourse. Ph.D. Thesis, University of the Free State, Bloemfontein, South Africa. Available online: https://scholar.ufs.ac.za/handle/11660/10424 (accessed on 21 April 2023).

van der Westhuizen, Christie. 2007. *White Power & the Rise and Fall of the National Party*. Cape Town: Zebra Press.

Webbstock, Denyse. 2016. Overview. In *South African Higher Education Reviewed: Two Decades of Democracy*. Pretoria: Council of Higher Education in South Africa (CHE), pp. 5–62.

Wilcock, Anne A. 2002. *Occupation for Health: A Journey from Prescription to Self Health*. London: British College of Occupational Therapists.

Wild, Sarah. 2019. Black academics publish one-fifth of South Africa's research. *Nature* 7: 1–2. Available online: https://0-dx-doi-org.innopac.wits.ac.za/10.1038/d41586-019-01446-6 (accessed on 27 April 2023).

Article

Female Academics in Higher Education: Conducting Qualitative Research against All Odds

Pamela Zapata-Sepúlveda [1,*], Carmen Araneda-Guirriman [2], Magdalena Suárez-Ortega [3], Mirliana Ramírez-Pereira [4] and Michelle Espinoza-Lobos [5]

[1] Escuela de Psicología y Filosofía, Universidad de Tarapacá, 1020000 Arica, Chile
[2] Departamento de Ingeniería industrial y de Sistemas, Universidad de Tarapacá, 1020000 Arica, Chile; caraneda@academicos.uta.cl
[3] Departamento de Métodos de Investigación y Diagnóstico en Educación, Universidad de Sevilla, 41013 Sevilla, Spain; msuarez@us.es
[4] Departamento de Enfermería, Universidad de Chile, 8330015 Santiago, Chile; mirliana@uchile.cl
[5] Facultad de Ciencias Humanas, Universidad Arturo Prat, 1110939 Iquique, Chile; miespy@gmail.com
[*] Correspondence: pzapatas@academicos.uta.cl; Tel.: +56-58-2205658

Abstract: This piece brings together the experiences of four Chilean researchers and one Spanish researcher with different professional backgrounds (psychology, sociology, nursing, and education), who conduct qualitative inquiry from other approaches, moments, and gender-sensitive topics of interest in the border regions of Arica and Parinacota, and Tarapacá, both in northern Chile; the capital Santiago; and in Andalucía, southern Spain. In this paper, the authors problematize their research experiences by focusing on their condition as academics conducting qualitative research in the context of neoliberal higher education and with a pandemic affecting all spheres of life. Finally, they explore what their experiences have been like in leading government-funded research projects and representing the voices of underrepresented people in different spheres of life in the field of education and health. Voices are shared to identify challenges and assess implications for qualitative research in these difficult times in the academy.

Keywords: gender; academic life; female experiences; qualitative research; collaborative [auto]ethnography

1. Introduction

For decades, various women in universities have tried to overcome the complex barriers they face and have pointed out the absence of the gender agenda in academic fields, denouncing the presence of discrimination, gender gaps, and androcentrism in the sciences as well as the persistence of universities as spaces that structure and reproduce gender inequalities (Ponce 2020). Although the movements between Chile and Spain for the incorporation of the gender perspective in higher education are distinct, the same challenges are present in both.

By 2012, significant differences were observed in terms of the number of academics in Chilean universities; males dominated the field. It only became equitable when comparing the number of young academics; as women advance in age, their presence in academia begins to decrease (González et al. 2013). Regarding their presence, vertical and horizontal segregation is observed in academic work because women tend to obtain lower hierarchical positions and receive lower salaries (Duarte and Rodriguez 2019).

Seven years after a similar protest in 2011, in 2018 a feminist student protest occurred in which feminist demands became stronger during the student marches because the student political involvement joined the activism of women who rebelled against harassment in different universities, demanding an education free of sexism (Ponce 2020).

Consecutively, various gender policies began to be created around the country, thanks to the creation of Law 21369, which aims to promote the creation of comprehensive policies

to prevent, investigate, punish, and eradicate sexual harassment, violence, and gender discrimination in all higher education institutions in the country to create safe environments, free of harassment and gender discrimination (Mineduc n.d.). Because academics perform functions in teaching and research, universities were updated about gender issues. These were also reflected in the various institutions offering competitive funds within the country, such as the Development Fund and National Fund for Science and Technology, and Bicentennial Projects (Espinoza 2013). An example of this is the Gender Equity Policy in Science and Technology for the period 2017–2025 of the National Commission for Scientific and Technological Research (CONICYT), which promotes gender equality in science, technology, and innovation, generating actions against gender gaps (CONICYT 2017).

Both Spain and Chile created institutions for protecting women against gender discrimination as far back as 40 years. In 1983, Spain created the Women's Institute while Chile created an organization oriented to women in 1991 through the National Women's Service (Instituto de las Mujeres n.d.; Servicio Nacional de la Mujer y la Equidad de Género 2021). Among the advances in gender and education is the creation of the Organic Law 3/2007, of March 22. It advocates for the equality of women and men, increasing the equality of men and women in human dignity, rights, and duties through the elimination of any type of discrimination against women in any area where they develop in the university and requesting to add the gender perspective to different areas of work and study (Boletín Oficial del Estado 2007). Moreover, the Strategic Plan for the Effective Equality of Women and Men 2022–2025 emerged due to the law mentioned above with the function of being able to guide institutional and social changes to generate gender equality through training, collaboration, and participation with other entities (Instituto de las Mujeres 2022). Furthermore, and specifically, at a structural level, Gender Units have been created and have been operating for some years now in universities in Spain, as is the case of the Equality Unit of the University of Seville (Unidad para la Igualdad 2018). This Unit aims to foster and promote equality at the University through different training, dissemination, and research actions and some structural actions that promote the development of a regulatory framework in this regard.

Specifically, regarding the field of research, Law 14/2011 was created to establish a reference framework for the promotion and regulation of research, technology, and innovation in the country; in this sense, Title IV indicates the need to incorporate the gender perspective into research, requesting institutions to include gender clauses in their documents as well as to encourage the entry of women into leadership positions (Boletín Oficial del Estado 2011).

Although progress has been made in terms of laws in both countries, it is vital not to forget the reflections of García (2006), who states that there could be a mirage of equality between men and women, where although women can be seen occupying spaces considered masculine or policies concerning gender, equality cannot be assured. In the same way, Lagarde (2003) proposed the "veil of equality," referring to the fact that despite the existence of laws and regulations regarding gender equality, it is not socially guaranteed because there may still be experiences that occur silently in women's lives, which requires being constant in terms of rights. This existing inequality is evident in situations of abuse and violence against women, although sometimes this inequality manifests itself in more dangerous ways, if possible, due to its subtlety, apparent normality, and silences (Rebollo-Catalán et al. 2018; Delegación del Gobierno contra la Violencia de Género (DGVG) 2020).

Our voices as qualitative researchers investigating our countries.

Our collective experience as qualitative researchers show our gender sensitivity when defining research problems. However, in the current research, little is said, even for qualitative researchers who recognize biases as contributing to research (Vázquez 2014). It seems that despite the current momentum of qualitative research, according to Denzin and Lincoln (2018) and Jennings (2018), it is taken for granted that research questions and projects are gender-neutral for their researchers. We propose that we are not concerned with the same issues as men are and that our sensitivity to research is mediated by our

life experiences (daughters, mothers, granddaughters, wives, sisters, aunts, students, professionals, and colleagues) and the roles that are socially imposed on us in these gender constructs that are so universal when it comes to the role of women in academia.

An example of this is the gap that exists in the case of women in research since even obtaining the position of an academic is complex; in the case of Chile, only 33% of researchers in universities are women, while in Spain, the corresponding staff of women is only 24.1%. (Ministerio de Ciencia, Tecnología, Conocimiento e Innovación 2022).

Specifically, according to data from the University of Seville (2022) concerning the situation of its Teaching and Research Staff [PDI], 61% of the PDI are men compared to 39% of women, i.e., there is a gender gap in favor of men of 21%. However, this has indeed decreased since the previous analysis. Although the differences in the male/female distribution are evening out and there are still slightly more female than male students entering the university system and more female than male graduates in the doctorate program, the percentages follow the same patterns, and in the stable figures of academia, the percentage of men exceeds that of women, although within parity and with a decrease in this difference in the last courses represented.

It should be noted that the gap between genders is most notable, although with a marked decrease, in the top tier of university professors. This gap consists of the performance of positions of responsibility, management of centers and departments, research groups, project management, and institutional positions. Therefore, we find fewer difficulties in entering the academic sphere than previously, but difficulties persist for performance and professional promotion on equal footing.

The above reflects that there is still a "glass ceiling" for women, indicating the difficulties that women frequently encounter in their ascent in their academic careers, measuring the relative opportunities of women (compared to men) to reach the highest position in the academic hierarchy. Sometimes these reasons are motivated without apparent cause, which is connected to the different development of women's lives, citizens and responsibilities in everyday life, the difficulties in conciliation, and other intricacies of mercantilist and sexist labor dynamics. In contrast, at the University of Seville in Spain, progress is being made toward the reconciliation of personal and professional lives for women, fair treatment, and the prevention of harassment.

In this context, we must be alert because every day, in our classrooms, tutorials, research groups, departments, corridors, or even outside these environments, situations occur that contribute toward an unequal vision of the world, academia, and relationships, which in some cases maintain sexist stereotypes and even generate new toxic practices, biased and marked by gender roles.

In contrast to neoliberalism is the everyday ideology that brings us together as female academics and qualitative researchers and challenges us to think and research with gender sensitivity (e.g., Zapata-Sepúlveda 2020; Saura and Bolívar 2019). It is not an easy task, given the complexity and deep-rootedness of gender inequalities and segregation in universities, expressed in a male organizational culture that permeates all their spaces (Rosa and Clavero 2020).

Thinking qualitatively about the research problems that interest us allows us to account for our standpoint. Indeed, as qualitative researchers and female academics, we are part of an epistemic community through which a point of view is generated based on our socially situated academic and research experiences (Intemann 2019).

In this context, this paper brings together the voices of five female academics who, in the collaborative support of writing as a form of research (e.g., Richardson and St. Pierre 2005), create spaces in which they seek to identify and make visible points in common through their narratives about their reflections and work experiences as academics and qualitative researchers. Thus, disparities and gender-mediated injustices are identified, which have led the authors to subsist in academic contexts in which it is normal and predominant for these difficulties and even violent practices to exist as a result of the social constructions of gender and the role of women in today's academia. Thus, collaborative

work through academic writing allows its practitioners to develop ideas and approaches that are often silenced in the academic community of female qualitative researchers, but which deal with elements common to women despite the different contexts in which the authors work. It is a form of identifying and making these issues visible for women working as qualitative researchers to have their perspectives validated and their voices heard.

Based on the above observations and our own life experiences, this paper seeks to develop reflections on how gender and the role expected of female academic researchers determine the development of their lines of research. To this end, each author will identify how they perceive that their gender informs their research questions in the context of current higher education, both in public universities in northern Chile and Andalusia, Spain. All this allows us to strengthen our voices as women in academia in a discourse that is validated by developing our ideas, concerns, and definitions of roles and positions as female qualitative researchers in the academic field.

For this purpose, the authors problematize their research experiences by focusing on three critical methodological questions: How the Chilean and Spanish contexts of public higher education can or cannot underpin and determine their lines of research; how gender is perceived in the development of qualitative research questions and about the challenges and opportunities that Chilean and Spanish institutions of higher education offer or deny to their mid-career academics; and finally, what have their experiences been like in leading government-funded research projects and representing voices of underrepresented people in different spheres of life in the field of education and health?

According to the above objectives, Pamela will develop the ideas that led her to develop a line of research in collaborative interpretive autoethnography with her co-authors on gender and academic life, presenting excerpts and reflections in order to respond to how the method she used allows her to generate situated knowledge through collaborative writing and autoethnography (Uta-Major Cod. 5792-21, and Cod. 3787-23). She will also reflect on how this process, including her inclusion in scientific publications, validates the voices in recognizing gender as a mediator of the challenges, contradictions, and dilemmas in academic careers.

Carmen will reflect on her experience as a researcher using the constructivist grounded theory to approach the study of the trajectories of female academics from a gender perspective (Fondecyt N° 1201517). In particular, she will focus on how this method allows the involvement of her own voice in the construction of knowledge jointly with the participants of the study from the moment the interviews are conducted until the analysis of the results, with a view that highlights the shared and situated experiences of being academics in a Latin American country with the performance requirements of the current neoliberal academy.

Magdalena will reflect on her experience as a researcher in academia, focusing specifically on a research project based on applying a qualitative and critical approach, with a mixed design. This project allows for promoting personal and collective management of the professional career of citizens, especially groups at risk of exclusion, such as women, migrants, and people with disabilities, among others, thus favoring social change, labor improvement, and entrepreneurship in a complex world mediated by various crises and war conflicts. Additionally, this will be accomplished by establishing a network of support and dynamization in virtual and mixed learning environments and guidance for personal and professional development. Specifically, it will be based on a direct action aimed at working people, young and adults, especially at risk of exclusion, planned vis an integral model for the construction of the professional career.

Mirliana will move between her politically active and feminist role, her involvement in representative positions regarding the defense and fight for gender equality in Public Universities, and also through associations of Chilean female researchers, which she will exemplify through the projects in which she participated during the COVID-19 pandemic. All of this will highlight the different roles, challenges, and demands associated with gender, as is the case of women who were overburdened in relation to their compensation,

as well as the unpaid care work they do and their understanding of caring, being cared for, and self-care as a social right.

Michelle will reflect on the results of her research of a qualitative nature with a phenomenological design on the conciliation of productive and reproductive roles of female academics involved in initial teacher education during the two years of teleworking in Chile, as a consequence of the COVID-19 pandemic from a gender studies perspective. She will identify/explore how it is precisely our female gender that permeates every space of our lives, be it at home, at work, or in that blurry separation line that took place during the times of emergency remote teaching.

2. Materials and Methods

The article uses collaborative autoethnography to delve into the motivations that guided the researchers to develop their lines of research interest through their own research contexts. Collaborative autoethnography is defined as a methodology that is developed with the analysis and ability to describe one's own experience that accounts for the collective cultural experience (Ellis et al. 2011).

The writing of these experiences by the researchers is collaborative, which, according to Chang et al. (2013), offers a collaborative exploration of individual questioning and allows the multiplicity of voices to enrich the inner research process, strengthening not only the knowledge of themselves but also the knowledge of the collective experience. Through collaboration and reflection, researchers and research participants work together to deconstruct hierarchies in knowledge construction and generate more helpful knowledge for society (Hesse-Biber and Piatelli 2012; Chang et al. 2013).

This methodology, which seeks to reflect collaboratively on issues that concern us and affect our lives, has been used especially in complex social situations, such as when we lived through the COVID-19 pandemic. In this regard, Roy and Uekusa (2020) emphasize its value and implications as a methodology that encourages self-reflection and describe it as a necessary research approach to diagnose situations and solve problems of everyday life. This is even more important because of the resulting social impact, making visible the value of ethics in the process and the usefulness of scientific research for citizenship (Lapadat 2017).

For their part, the authors develop a particular text with interpretive autoethnography as a perspective methodology, which allows us to create introspective and protective virtual spaces through specific academic writing and builds on the limitations and challenges faced in everyday academic life (Richardson and St. Pierre 2005).

We use 'writing as inquiry' (Richardson and St. Pierre 2005) as a viable way to learn more about ourselves and our research topics. Therefore, we create an approach to our study topic by linking our research project to our biography.

Interpretive collaborative autoethnography allows us to live the process of connecting our experiences of everyday life as women in science with our emotions behind the act of storytelling. This practice and type of research allows us to insert personal experience into the particular context of the present. It works by empowering the voices of other women going through experiences similar to ours. This article is based on interpretive autoethnography as a research methodology. According to Chang (2016), autoethnography is a qualitative method in which researchers use their experiences as primary data to interpret and understand them in a sociocultural context.

Furthermore, Bochner and Ellis (2002) argue that this methodology enables us to look at new horizons in a more human, collaborative, and participatory way. Denzin (2013) argues that researchers must learn to relate autobiography and lived experience to groups and social relationships. Finally, Stacy Holman Jones (in Denzin 2013) considers autoethnography to be a combination of personal experiences and personal texts for critical cultural practices to contribute to research and connect with others. Collaborative autoethnography was used for this part. According to Diversi and Moreira, this type of autoethnography is "the collaborative production of autoethnographic texts by two or more authors, often

separated by time and distance" (Denzin 2013, p. 23). Following this methodology, we used personal stories to connect with our audience by evoking embodied human experiences. Performative writing allows freedom to write about scientific experiences in various life roles relevant to the biography; this is a sentiment in the writing practice that each of us does on our own (Pelias 2004).

First, we wrote our own stories and then continued to build on the stories of others associated with these voices, presented in this text as a process of co-construction and assembly (Chang et al. 2013). Thus, our "us" was connected in each of the shared stories formed in different layers according to the order of writing the stories presented in this paper. Each story represents an essential experience of our lives, allowing us to draw a line between science and the sentences we use.

As Pelias (2004) says, experimental writing as a form of autoethnography breaks the traditional academic discourse to humanize and understand the academic experience of researchers. In this sense, our prose relates to aspects of our lives as academic women that are usually unspoken and "often oppressively silenced" (Chang 2016, p. 446).

This collaborative autoethnography was initiated from conversations between colleagues and friends, several of whom regularly attend the International Congress of Qualitative Inquiry, in the group "A Day in Spanish and Portuguese (ADISP)."

In our reflections as women and academics, in the diverse spaces where we have encountered each other, our role in academia and the changing circumstances and challenges have been highlighted constantly while conducting qualitative research in our university contexts.

We are relatively young academics (between 40 and 50 years of age) that have achieved distinct management responsibilities in our institutions. Without a doubt, this presumed stability was shaken in our institutions during the COVID-19 pandemic as expectations and demands, considered "normal" given our gender and age group, became more apparent in our lives; we all experienced similar concerns, while our role, or the role expected of us, became a challenge to maintain while also working and researching.

According to this, we held conversations via messenger and in person at diverse conferences and the university in the case of the two authors that work at the same institution in the north of Chile.

On another occasion, we responded to an invitation issued by the organizers of the World Conference on Qualitative Research (WCQR) to the first author to present the work of our research group. She invited her co-authors to write about the questions that are included in this manuscript; they worked individually on their stories, which we incorporated into a file on her drive. Subsequently, we presented our individual texts at the WCQR, and this opportunity allowed transversal elements of autoethnographies to be developed in the collective parts of the manuscript, thus using this file as a platform for the online storage of information.

For the analysis, the authors referred to commonalities between their stories, which they developed collaboratively in a file in Google Drive. In this section, the first author reviewed the circular manner of each story in regard to the questions that this work generated as mentioned in the abstract of this work, and in this way, this section was created. Granted, this section could be improved on; however, this exercise was circular and repetitive regarding the initial questions, the presentation, the conversations held by the authors, and their texts.

Our story illustrates the process of developing our voice as key researchers in contemporary qualitative research. Morse (2002) and Gergen (2014) regard them as external criteria, considering multiple levels of critical analysis as quality criteria when incorporating them into individual texts.

A problematization of the authors' research experiences was carried out through this methodology. Voices were shared, identifying challenges and assessing implications for qualitative research in these difficult times in academia.

3. Results

Pamela's Voice

Writing as an act of examination of our gender roles in academia

I started writing through interpretive autoethnography about my role as a woman in academia long before the arrival of the boom of the #metoo movement in recent years, a movement to which we owe a substantial change in the discourse of university authorities, which has censored sexist practices in academic contexts, creating discrepancies, contradictions, and challenges in our behavior at the University. At the same time, it has favorably influenced the visibility of our role as women in academia, a role characterized by the existing disparities between men and women and the expectations for each gender, including those called minorities.

However, the road for female researchers, and especially for qualitative researchers, has been uphill in many cases and moments of our academic trajectories, and especially the battles we have had to fight to obtain the "permission" to develop in research, an area of development still led and facilitated for men.

In the Chilean context and especially in the region of Arica and Parinacota in the north of the country, women are constantly making an effort in all areas of our lives to prove and demonstrate that we are capable of developing quality research and that we can fulfill the different roles that society imposes on us. However, it is inevitable to do so. At the same time, we attend to more family and work tasks and commitments than our male peers within our families, with whom we often feel in contradiction to promote gender equality in our students and research and attend to family issues that assign differentiated roles according to our genders, especially around the care of our families and ways to link us to students.

Although today we find ourselves with the enactment of public policies (law) that seek to promote equality and respect for female academics, which gives us hope, in practice, these measures have not been properly implemented in all academic activities and internalized in the thinking and organizational culture that defines our gender roles in academia. In Chile, the Comisión Nacional de Investigación Científica y Tecnológica [National Commission for Scientific and Technological Research] (CONICYT 2017), which develops research in all areas of knowledge with national policies established by the Ministry of Science, presented a document of Institutional Policy on Gender Equity in Science and Technology to achieve greater gender equity in the national science, technology, and innovation system through actions that address gaps, barriers, and inequities. However, the distribution of projects awarded according to gender indicates that 62.5% are awarded to men and only 37.5% to women (Agencia Nacional de Investigación y Desarrollo 2020).

On the other hand, in my case, I have had the opportunity and the joy of dedicating myself to researching the topics that have interested me and in which I have believed that I have been able to contribute to the knowledge of my region and my country and to the communities studied. First, I studied the long-term effects of politically motivated violence and torture in Chile, which led me to understand the current Chilean context as being a result of the most violent period in Chile, while at the same time, interpreting the history of my country from the particular forms of violence exercised towards women in Chile, which for me speaks of a society that is especially violent towards women. For example, unlike other contexts of state violence, in the case of Chile, almost all of the women detained reported having been subjected to sexual violence (Instituto Nacional de Derechos Humanos 2004).

Subsequently, we studied the massive arrival of Colombian women to Chile, and with it the resulting racism, discrimination, and violence towards them; because of their nationality and skin color, they were violated during the international journey to Chile, treated as women dedicated to the sex trade by Chilean men, for the mere fact of being Colombian (Silva et al. 2018).

Additionally, we came to study migratory processes in the school context because the school became the best observatory to study the arrival of students coming primarily from rural areas of Peru and Bolivia. In this line of research, funded since 2016 by the National Agency for Research and Development of the Chilean government (where gender does not tend to be studied), we saw that conducting this type of research that included multimethod strategies of approaching the different educational communities generated emotions, feelings, and research questions that in many cases emerged from various sources: Observation in the classrooms and during recess, as well as attendance at cultural commemorative activities and through conversations with the children, students, and teachers present who approached education in a differentiated way according to their gender, their motivation and commitment to education and their work, and their knowledge of the native peoples. In my case and that of the female participants of the project, it differentiated us from the focus of interest of the male researchers participating in the project (Zapata-Sepúlveda 2022).

Thus, while men focus on connectivity, internet signal, school infrastructure, and demographic data, we women focus on students' accents, the dynamics of interaction according to their genders, the children's appearance/expressions, and the way they relate to us, all invisible aspects if they are not interpreted from a gendered perspective. For example, our attention is drawn to when students tell us their family stories, how much they miss their grandmothers, their meals, and their homes of origin, the time they would like to share with their parents who work in agriculture; or is the case of rural school teachers who approach us to tell us about their concerns with migrant children and the maternal role they assume with some students, which goes beyond the teaching role and covers the affective, emotional and basic needs of their students in an important way. Thus, aspects of the field emerge that seem to be invisible to researchers if they are not seen from a gendered perspective. We see, then, that the student's daily life experiences are mediated by gender. We see that in schools located in so-called vulnerable areas of the city, female students dream of finishing compulsory secondary education in order to get married and not continue studying, while for male students in the same conditions, the best plan is to finish high school in order to enter the military and become military personnel.

All of this has made us see and recognize our perspective within the research process and that we can develop new knowledge in academic writing that allows us to reflect and write what we cannot see with the thematic content analysis that we carry out in the interviews of our participants with the use of CAQDAS such as Nvivo.

At the same time, writing is a form of research (Richardson and St. Pierre 2005) in interpretive autoethnography (Denzin 2013). This research and writing method aims to examine personal experience to comprehend cultural experience through a systematic analysis. It challenges traditional research and representation methods and views research as a socially conscious and politically important activity (Ellis et al. 2011). This form of research has supported my career and that of other colleagues and friends similar to us in this text, which has allowed us to develop in a strengthened and collaborative way.

Writing on a second topic, along with research projects on former Chilean political prisoners and Colombian migrants, led me to reflect on my context of higher education, in which doing qualitative research was considered in a negative light, both because it was associated with being unproductive and because it dealt with topics and issues that were of little interest. Additionally, it dealt with sensitive political issues (Cornejo et al. 2019) in a country and an academic context that perceives the existing polarized/divided politics in a bad light, as a result of the history of political violence in a country where there is still impunity for crimes against humanity and where truth, justice, and reparation have not been successfully implemented by the governments after Pinochet's military dictatorship.

Thus, in the neoliberal context of Chilean higher education, we female researchers are required to pass many more tests to validate our voices; we also need to work much more than our male colleagues to be respected as researchers, and some of us opt for lifestyles without the worries of motherhood or childcare, which would undoubtedly

further complicate the efforts. At the same time, our choices are criticized by peers and seen as selfish, without a "life," or contribution to optimal human development, rather than accepting that not all roles are compatible when it comes to dealing with a masculine and macho culture that hardly facilitates the operational and intellectual work involved in research for women who also face the challenges of balancing gender roles and participation in academia, prioritizing their family duties over continuing education, facing difficulties in attending events outside of work due to their commitments, and other related factors (Upegui and Cervera 2018).

From the contemporary qualitative methodologies that I use, the collaboration with colleagues and friends such as those who share this text allows us to identify, recognize, and validate through academic writing our voices as women in academia. Thus, we have been able to visualize that the problems and issues of interest are not so different in the contexts in which we work, and our concerns are repeated in our research experiences, even though our research topics differ and our biographies, ages, life histories, and professional training differ as well.

According to the above, the recognition of gender as a mediator of our challenges, contradictions, and dilemmas allows us to twist the established, the normal, and the invisible in the eyes of many members of the higher education system and learn to respect ourselves so that we can assume our own and different role and ensure that our academic career is not limited by our gender, as is the local, national, and international trend nowadays. Furthermore, seeking efforts to strengthen and promote opportunities for women in the research area is extremely necessary, which is why the presence of the Red de Investigadoras [Network of female researchers], a feminist organization that seeks gender equity in research and academia by focusing on issues of knowledge, science, innovation, and gender and offering solutions to these difficulties, demonstrates the need to continue in search of unity in favor of equity (Red de Mujeres Investigadoras 2023).

Personally, writing in autoethnography in a second language, English, has allowed me to write collaboratively from the heart, recognizing my feelings, my emotions, my gender, my corporeality, my generation, and my vision of life, inherited and revised to break into and challenge my own academic training in undergraduate psychology in Chile and the doctoral program in clinical and health psychology in Spain. In those programs, quantitative, conventional, non-indigenous, and standardized training prevailed or pretended to do so. Thus, writing emerges as a form of self-exploration to understand our problems and occupations in the pandemic, and how our times have changed now from home, worried about taking care of our elderly parents in every possible way, because of the fear of losing them, because of the affection we have for them, and because historically we are the female daughters who take care of our parents and other older adults in our families.

During the pandemic, my mother had two falls. I would send fruits and vegetables at home, but she would become nervous with the use of a mask when the delivery person arrived. During the first semester of 2021, she had an accident at home as did many older adults. This time it was a fall that caused her to break ligaments in one of her knees. Her life has been affected by this, and although she has attended kinesiological therapy, the functioning of her knee changed. A few months after the accident, in 2022, I sent her some lamps as a gift to her house; they were very nice lamps that would look beautiful in her living room. That day she had another fall and hit her face on a stair railing; this time we feared the worst. Fortunately, she recovered, but what to do with these experiences that afflict us and inform our actions, which also have consequences in our academic work in relation to productivity, topics of interest, and gender roles? Writing about our roles and life experiences at different levels in a collaborative way, including our apprehensions and fears in pandemic times, as well as our contradictions as advocates of gender equality while also fulfilling family roles marked by the patriarchy inherited by all previous generations, certainly defines a new context. This context is now determined by virtuality and social

distancing that act as mirror from which we work collaboratively and support each other to continue developing our academic trajectories.

Carmen's Voice

My experience is a source of inspiration for my research on female academics

The gender inequalities experienced by women have been a constant concern in my research projects. This concern comes from my undergraduate and graduate training, where I had a solid background in gender sociology, which has been vital to observing the situations of gender inequality that are naturalized and made invisible in society and organizations.

Before proceeding, it is relevant to show my positionality (Holmes 2020) in this research process. My life experience marks my view of social reality as a woman and an academic. I am in my forties, married, and have a 3-year-old daughter. I am a sociologist doctorate in education and an associate professor at a state university in the north of Chile. Therefore, I am privileged to investigate what happens in academia. As a female academic, I am interested in deepening my knowledge about women's careers.

In my personal experience, the challenges of gender issues were revealed to me in different instances, but most significantly when I had the opportunity to occupy, for a limited period, a university management position at the same time I became pregnant with my daughter, which made everything more challenging. It was a good and enlightening experience. I could see the reduced number of women in positions of power and prestigious jobs. In the beginning, I was mansplained by older men or called "young lady" when I was over 35 years old. It was unusual for a young woman because I had to boss around older men and give my opinion on relevant issues, i.e., I had a voice that was heard in the space of power. I realized that very few of us were in these positions, a reality that occurs in all universities worldwide. Nevertheless, this reflection had me thinking about the following research question: What happened to the women who made it to the top in the universities? How have tenured female professors experienced their trajectory?

Undoubtedly, the experience of being in a management position marked me deeply, in a positive way, not only because of the learning and professional growth I experienced but also because it awakened my research interests. I felt a compelling need to investigate what happens to women in the upper echelons of management and academia. Therefore, I formulated a research project to answer this question and competed in a national research fund (Fondecyt Regular). This process was also challenging because I was pregnant and felt my brain was not working as fast as expected. Finally, in early 2020, along with the beginning of the COVID-19 pandemic, my project won the funding competition. I was able to conduct my qualitative research on women in higher university hierarchies: Perceptions of their academic trajectory and experience from their voices. I conducted qualitative research using Charmaz's (2014) Constructivist Grounded Theory Method to explore the trajectories of female full professors and those who occupied important university management positions.

The Constructivist Grounded Theory Method considers that the research reality is found within a situation that involves both the researchers and the researched. This method wholly adjusted my view and experience of the research process, i.e., it allowed me to be part of it, which is very important in gender studies. Therefore, it rests on the idea that the research is constructed, that is to say, it is not given. Accordingly, this method assumes no such thing as a neutral and value-free researcher (Charmaz 2014), so my subjectivity and my background as a woman in academia can be part of the research process. It considers the researcher's current and active role in the study. It explores the implications of a women's situation (Clarke 2012). The constructivist perspective of grounded theory recognizes the active role played by the researcher in collecting data to be analyzed (Charmaz 2021). Therefore, this method allows me to be an active part of the data collection, and with all my background and experience in academia, I can actively interpret the information collected. Consequently, I chose the grounded theory method because it is well suited to research

conducted by women as it recognizes the situation, the diversity of realities, the perspective of individual women, and includes the consideration of analysis as partial, situated, and contextualized.

Likewise, the intensive interview fits into research with a gender perspective as it allows me to delve into the diversity of realities that female academics live. In addition, as a feminist researcher, it enables me to be aware of the nature of the relationship with those I investigate. Then, as Hesse-Biber (2013) points out, it allows me to understand my role in power and authority over the interview situation.

In the constructive grounded theory method, how the information is collected is vital. Thus, I use interviews formatted to the template of Charmaz (2014) and Charmaz and Belgrave (2012). The guidelines of these authors allow me to learn about the world, as the utterances and silences I pick up during an interview can theoretically guide my emerging ideas.

In-depth interviews focus on the topic while providing interactive space and time to allow the views and perceptions of research participants to emerge. My experience with the intensive interview was great because it fits so well with grounded theory methods, as authors such as Charmaz (2014) point out. As Charmaz suggests, the interview is powerful because it involves relatively direct exchanges of ideas and perspectives between me as a researcher, participants, and readers. For example, in the in-depth interviews, the women interviewed and I were able to share our experiences as women, academics, and mothers in the context of the pandemic. We talked about how challenging it was to work and be mothers in the same space due to the confinements and to recognize that this reality differed from our male colleagues.

As a feminist researcher, I am interested in creating knowledge for women rather than about women. When I interview, I am an active listener. As the "world" traveler Maria Lugones (1987) imagined, the active listener must question her assumptions, ingrained beliefs, and perceptions about others. Active listening is the most critical element of data collection (Leavy and Harris 2018). It is a means of getting to know people living in other contexts or situations without abusing them.

Through the intensive interview, I connected with the reality and experience of the women interviewed on a deep level.

In some cases, they shared with me in their stories some challenging moments of their lives. I identified the difficulties experienced by female academics who are now professionally successful in universities. These difficulties are gender stereotypes and roles and academic housework.

At times, during the interviews, I could identify with parts of these senior women's narratives about situations experienced in academia because, as an academic woman, I have experienced similar events.

Listening to the female academics' stories made me reflect on my challenges, the impact of my motherhood on my academic career, the feelings of guilt that arise from working at home, and the difficulty of managing time between teaching and research, among other aspects. However, despite how challenging academia can be at times, recognizing the factors contributing to overcoming these challenges, such as academic networks and family support, can guide the path to follow in the academic career. The knowledge constructed in this research is partial and does not represent the trajectories of senior women professors in other Latin American contexts. It is limited to the Chilean context, where academic courses must be understood in a context where neoliberalism and academic capitalism prevail in higher education. However, I emphasize the importance of rescuing the experience of these women, and the lessons learned, which can also be helpful for women in similar situations.

Magdalena's Voice

When "the personal is political": challenges for women in the current academic context

I reflect on my own experience as a researcher in academia, focusing specifically on the research project promoting the self-management of the professional career in contexts of socio-labor change: Dynamization, guidance, and support networks in integrated virtual environments. I+D+i Projects—«Retos Investigación» Modalities 2019–2020 Funded by the Ministry of Science and Innovation (MCIN)/State Research Agency (AEI) Spain/PID2020-114833RB-I00, 2021–2025.

This project is developed in the context of Spain. In my country, the Ministry of Science and Innovation and the State Research Agency promote scientific and technical research in all areas by distributing research funds in competitive calls. They are guided by European guidelines and the establishment of priority axes of action according to the demands of society. Therefore, it can be said that, to a certain extent, certain lines of research are promoted or activated depending on the moment and social needs.

In our case, we work on guidance for developing a professional career. In a world in crisis, which has led to a historical, social, and economic turnaround, especially after the pandemic we are experiencing due to COVID-19, needs are becoming more acute and social problems are increasing. Many workers have lost their jobs or have become impoverished; companies (especially SMEs, small and medium-sized companies) have closed or need to reinvent themselves, while many people have difficulties making ends meet, live on social benefits, and do not see a clear path in life.

In general, employment has dropped considerably, jobs are increasingly precarious, unemployment has increased, and many jobs have been destroyed (Banco Mundial 2023). However, without a doubt, this situation affects the most disadvantaged people or those at risk of social and labor exclusion to a greater extent, groups that are expanding in society. Among them are currently poor working people, those who have several precarious jobs to make ends meet, or family nuclei in which, despite several members working, given the precariousness of jobs, are characterized as impoverished households (Instituto Nacional de Estadística 2022). In the same way, having dependent children or dependents, or being a single-parent family, also increases the risk of poverty. Women, especially in situations of vulnerability, such as victims of gender violence, rural adult women with few qualifications and or who are unemployed, migrants, people with disabilities, non-traditional university students and individuals from family/social backgrounds at risk of exclusion (for example, people of Roma ethnicity, the elderly), and workers and entrepreneurs whose employability depends on the creation and maintenance of SMEs, especially small businesses and local commerce (Zeb and Ihsan 2020), have all become particularly vulnerable groups.

Faced with this situation, the Sustainable Development Goal 8 (SDG) of the United Nations 2030 Agenda (Ministerio de Derechos Sociales y Agenda 2030 2018), related to decent work and economic growth, places before us the need to promote employability and favor productive factories and ethical employers that guarantee safe living conditions in order to promote opportunities for employability and professional development for all people (European Commission 2020), with special attention to high-risk groups and disadvantaged people who, on the other hand, are increasingly widespread groups.

In this complex and changing context, it is more necessary than ever to promote the self-management of the professional career and the development of personal and professional skills. This must be achieved to guarantee decent jobs and resource networks that make life more sustainable (International Association for Educational and Vocational Guidance [IAEVG] 2019; Cohen-Scali et al. 2018; Massoudi et al. 2020).

The personal, narrative, and qualitative dimension becomes relevant (McMahon 2020) in the sense of a necessary strengthening and empowerment in connection with the variables and axes of situations where the person is inserted as a social being. To do this, emerging theoretical trends, particularly the life design model, offer a powerful framework for people to adapt their careers in a work context characterized by uncertainty and permanent change. This model focuses the guiding action on using narrative and identifying milestones and critical issues in people's lives as a co-construction of their identity (Patton and McMahon 2014; Irving et al. 2020).

People are trained to build, rebuild, and manage their life and professional career (as a sequence of decisions) and can critically engage with their own decisions and the sociocultural realities surrounding them (Savickas 2013). From this approach, the guiding intervention emphasizes the significance and sense to clarify the purposes that determine the own perception of the possibilities. Through guiding action, the person comes to give meaning to her life by articulating her purposes, forming her intentions, and committing to herself, which determines the action projects in social and work life.

In this research project, guidance tools and environments through current technologies must be consolidated, which represents a challenge to the field of professional guidance. Virtual media are becoming necessary spaces after the pandemic, the widespread use of which has accelerated. In this sense, it is necessary to support training and guidance with dynamic and interactive models and technological tools that allow access to people to respond to their needs. For this, without a doubt, it is necessary to involve citizens in science, and for them to be an active part of the research projects that we generate in a collaborative-action-research model, including diffusion in society and the generation of permanent workspaces that derive valid solutions to real problems, both the current ones and those that are to come.

Based on the above, the reference project has the purpose of promoting the personal and collective management of the professional careers of citizens, especially of groups at risk of exclusion, favoring social change and labor improvement and entrepreneurship. All of this is accomplished through the establishment of support systems and dynamization in virtual and mixed environments of learning, as well as guidance for personal and professional development. Specifically, the project is based on the application of a qualitative and critical approach with a mixed design and is intended for a target audience of working people of all ages at risk of exclusion; it is planned from a comprehensive model for the construction of a professional career. It is intended to involve citizens and establish support and collaboration networks in virtual environments that will lead us to promote guidance practices for career development, consequently improving the living conditions of people through the promotion of employability and entrepreneurship.

In the research process, gender intersects with many variables that have to do with the career, with those of the people participating in the project, and also with my own as a researcher, both personally and professionally. In relation to the participants, a critical work process, primarily reflective and narrative, on their own career allows them to identify and become aware of their own identity and the aspects that can condition it. Here, much discrimination due to gender is detected, whether due to biased decision-making, the assumption of stereotyped life roles, unequal access to resources, or difficulties in reconciling personal, family, and work lives, which can lead to unequal career trajectories between partners.

Regarding its specific trajectory, Spanish academia poses challenges as well as difficulties sometimes felt as oppressions, due to the multitude of tasks, especially management, that academic work currently entails and that sometimes the time available for reading, writing, or research extends into the personal sphere. It would be worth rethinking to what extent academic women's management differs from that of men or if they feel these same oppressions to reconcile personal and work life at the level required by the latter.

Considering the previous, my experiences in leading projects have been very positive, although not at zero cost precisely because of the high dedication that research requires. At the same time, we have teaching demands at the same level and management demands on a multitude of levels, at a constantly increasing rate. Having government funds gives access to resources for research at a certain level, which provides scientific benefits to the research team and strengthens curricula and promotion in academia. However, above all, it allows the work we do every day in academia to make sense and have an impact on people's lives. Not only do resources allow women in academia to represent themselves, or give them a voice, but in our case, by directly working on our professional and life projects, it gives us direct benefits derived from the development of career management skills. Increased

access to resources allows us to increase personal and professional security, clarify goals, work on decision-making, plan actions, and manage our processes, as well as acquire a process that is usually useful for future moments of personal and professional transit.

I have been developing this line of research since my pre-doctoral stage; my thesis focused on specific work with women, and I have continued to subsequently develop it, expanding key ideas to other groups. It is very satisfying to see how projects become resources that can improve people's lives, and there are shared motivations in the interdisciplinary teams that are generated, from which a network is woven between academics, professionals, and citizens—such as the contributing academics in this piece—which has the intention of serving society. However, all this work also becomes a boomerang that exposes us as researchers while having an impact on our own personal and professional life, while also developing as female academics.

In this sense, one of the most important challenges that I perceive is the need to work directly with people, putting them at the center of the processes that we develop in academia, especially in action-research projects, which provide a qualitative, reflective, critical look at the person, from themselves and from others, allowing the generation of new opportunities and weaving spaces of otherness and collaboration.

Mirliana's Voice

Building dreams by hand and without permission in the academic world

I am a woman, a nurse, and an academic, so I have a historical, social, and political burden of hundreds of years. Women have been subordinated to a system that privileges being a man and being macho in the Latin American context. In this patriarchal, hegemonic context, it is a "rarity" for a woman to assume leadership positions, and faced with the call and invitation to be an edge runner, many ideas, reflections, and self-interpellations came to me: Am I fulfilling my role as an academic in a public university, if academia is performed sitting at a desk designing classes and teaching and researching? Is it enough to feel I am contributing to society and the country? Is it enough to respond to the ethical and moral imperative I have to work in a public university as a progressive woman?

The great Chilean poet Pablo Neruda in his work 'The Frontier' (Neruda 1955) refers to the physical and geographical borders of Chile, full of colors, flavors, and textures: But the frontiers, borders, and boundaries are many, especially for a Latin woman and a nurse.

Do limits 'limit' us? Do they destroy us? Are they real? Are they out there? Or are they within us? What is my responsibility for the limits that society imposes on me? While I write this reflection, I think about having to prepare lunch myself for tomorrow, iron my son's shirt, and plan out the rest of the interviews for my research.

I think. I remember. Since when do I have this pace of work? It has been this way my whole life; the super multifunctional woman-mom has been present since my daughter was a child. I, the caregiver, the housewife, and the nurse, married a typical Latino man, who, although we both arrived home from work simultaneously, had to be "served" because he was the man. How difficult it is to come out of the process of enculturation in which I, a woman, must give without receiving anything in return. Because it is my duty, it is my duty as a woman, mother, nurse, academic, space for wife—I reopen it, and I am not sure if I listed them according to my priorities—I investigate it in the words of Gergen and Gergen (2002, p. 13) from "new methods that are more human, collaborative and participatory." In this process, I have been constructing and deconstructing boundaries with ease.

Sometimes with satisfaction, it is through my research that I gather the discourse of those who are small or not listened to and help the voice of the people with kidney disease to be heard.

I also ask myself: Must we not strengthen the public sector, be it health, education, housing, or social security, from service, commitment, and the idea of social transformation in a context of a dismembered, atomized university in which the civil-military dictatorship in Chile destroyed the university as it was known, in which citizens were formed with a free and quality education.

The COVID-19 pandemic is overshadowing the entire planet, and anguish is growing in me, in the ordinary people, and in us, the health personnel. I see serious communication management problems, risk communication is inaccurate, and I am deeply distressed by the feeling of being unable to provide support in hospitals. My experience before being an academic is that as a specialist nurse in nephrology and I can contribute from that area, but as a woman, I have the obligation of reciprocity of care; I take care of an older adult and my children, who are still studying. I keep questioning; I need to help in more than just education and undergraduate teaching. My area of research is qualitative, the lived experience, every day, the feeling of the disease, but at this moment, it is imperative to work to create the vaccine.

With some fear, because we still did not know the problems and routes of infection of the SARSCOV2 virus, I began to support clinical research in immunology from care. The fear was present, both in me and the people suffering from the infection, and I made home visits, educated my patients, gave tests, and as it has always been, I take care of my patients.

The government at that time (early 2020) announced that the pandemic was comparable to "a cold," which did not produce significant complications. Apart from the fear of getting infected, I found frightening the possibility that the criterion of maintaining productivity took precedence over people's lives. Jobs are precarious in Chile; most of the population needs labor contracts and works informally. If we added to this the lack of clarity and imprecision of the Ministry of Health, the panorama still needed to be determined. I had to denounce what was happening; I needed to have a voice in this environment, and my ethics prevented me from remaining silent. Ethics and being part of a public institution, at the service of the country, prevented us academics from looking the other way, and we had to assume what it meant to have a voice in the chaos amid uncertainty.

The paths of life were crossing, and destiny was showing outcomes/results one had never thought of; was it possible to be part of the macro-level decisions? Who was making the decisions? Were they the best-prepared people? The most committed? Those who had given their lives to contribute, transform, have mutual power, and move forward together? How were we to unite science, knowledge, and qualitative epiphanies, without being present in those spaces? Did I have the "right" to lead? If I had no space because I am a woman and a caregiver at the decision-making table, I took my chair and demanded space. I questioned myself and breathed, and my whole body ached at the thought of exposing myself, of making a mistake. Was I an imposter? I had the distressing feeling of needing to be sufficiently prepared to assume these leadership roles. Again, I was invaded by doubts: If I was wrong, if I was questioned, if I did not do it well enough, and if I needed to be sufficiently trained. Back to the repetitive ideas: I was afraid to expose myself, I did not want to be seen by anyone, and I did not want to explain why I made my decisions.

Furthermore, again, the "duty to be," the coherence and values, overcome me. I postulated in democratic elections to the director of the department and then to the University Senator, defining strategies and regulations that guide the destiny of the university and the country; we were opening doors, opening windows, opening spaces where before there were no women and fewer nurses. I have always felt that being a woman and nurse determines me to a certain extent. The social imaginary turns us into angels or sex symbols, but not into sentient beings who can lead by caring.

Despite the fear, I move forward. I do not know how far; I only know that I move forward to open roads for the women to come, be they academics, settlers, girls, women, or adolescents, because the dream is made by hand and without permission.

Michelle's Voice

Female academics conciliating roles in pandemic times: transitioning between blurred lines

I am a teacher. I studied to become one and then continued studying to become a better one for the sake of my students and because I wanted to contribute to Chile's educational system.

Looking back to when I first worked as a teacher in a highly vulnerable school in the city of Alto Hospicio, I remember being extremely motivated by the socially, emotionally, and physically deprived students I needed to teach. How was I supposed to expect my students to learn English as a foreign language, force them to pay attention, follow my lead, look at me, listen to me, and repeat after me when most of them had not had anything to eat for breakfast? It was also highly likely they would have nothing for lunch, either. It was this experience that triggered in me the need to train further and become a better teacher for them. However, after finishing my master's degree, I returned to that same school feeling ready and excited to work with my students again. However, the school principal told me I was overqualified for that school and that I should look for a different educational establishment because he could not risk me getting married, pregnant, or having any other 'female' situation that could affect the regular workload at the school.

I was disappointed and frustrated because I wanted to work with my students again. I just was too much for them to handle. This was when I turned to my mentor, Mr. Watson, who had been my professor at university. He asked me to teach the first-year undergraduates of the English language teaching program at my alma mater. Twenty-one years have passed since then. I have been part of the educational trajectories of many teachers of English who now work in many places around the world. In academia, I found my path, passion, and windmill, too . . . yes, because it has never been a path covered in roses, although I have always tried to see this path with a rose-colored lens. Often, I have felt like a Quixote fighting against the windmills. Once again, it is my students who have underpinned the work I do. I work with them on different levels but have found an extraordinary place in teaching them how to conduct research. I may be biased but the work I do with my students more often than not has led us to work with Qualitative Methodologies. Most of the time, they come to me after they have finished their practicums and are always looking for ways of understanding how and why certain things happen in the school sites and what they can do to improve their teaching practices.

During the pandemic, we continued working online. Teachers around the world became the 'second front-line.' Moreover, it was not just in schools in which most of us needed to learn new ways of doing our jobs. It was a really hard time, particularly because teaching is such a social job. We need to be in touch with people. We need to construct knowledge with our students. It was in this scenario in which I began to wonder how this pandemic had affected the lives of academics such as myself, who needed to continue working as if nothing different was happening out there when everything was happening everywhere.

In addition to learning to teach through a platform, we needed to pay attention to our homes as well, and likely the less we paid attention to was ourselves. I started by reading about the conciliation of roles: Productive and reproductive. Then, I decided I would interview some of my colleagues in depth so they could share some of their daily life experiences of being female academics during the pandemic times. I thought it would be difficult for me to find female academics willing to share their experiences with me, but to my surprise, there was a need for female academics to tell their stories, to feel they were being listened to, for someone else to have time for them, and to even cry with them if it were necessary.

This is the way this research came to life. I ended up being someone who could become the voice of those who remained unheard.

Therefore, I set myself out to analyze the conciliation that exists between the productive and reproductive roles of female academics from three different universities in Chile while teleworking during the COVID-19 pandemic (2020–2021). This investigation was conducted from the perspective of gender studies, looking for the conceptualization of different terms (such as the pandemic, telework, gender, productive and reproductive roles,

and conciliation) to describe the process of conciliating the previously mentioned roles that female academics, in the two areas under study, performed on a daily basis. At the same time, the challenges faced by these academics at the moment of conciliating both roles were identified and described. Furthermore, it determined female academics' adaptation process to the teleworking modality. This investigation disclosed the feelings and experiences lived by the female academics during their process, conciliating the productive and reproductive roles in the context of the COVID-19 pandemic.

From the data collected, five themes emerged: Work life, personal life, adaptation process, difficulties and challenges, and feelings and experiences.

With respect to work–life balance, female academics expressed that it had been tougher to conciliate the productive and reproductive roles while teleworking than before the pandemic because of different factors such as the administrative work overload, negative experiences at the moment of sharing the same space (home) for both roles and the complex scenario of coexisting with members of their nuclear or extended family members. In the case of the last two factors, the female academics had to reorganize their home spaces and discuss agreements with their families to telework from home. Moreover, some of their institutions needed to provide settled schedules apart from the classes. They caused an overload of administrative work and constant meetings, which made working even harder for them.

Regarding their personal lives, the participants explained how their routines were affected by the pandemic and the transition from a dedicated teaching spot or a research/study room to an improvised one. Moreover, some of them compared their pre-pandemic lives with their pandemic lives. The female academics described how they used to have spare time when they finished their working hours at university before the pandemic. However, due to the change in modality (teleworking), there was a reduction or absence of time for their self-care and personal interests.

As for the adaptation process, in terms of the personal processes experienced by the female academics, they manifested that this new modality was a significant alteration to their lives as it meant a radical change in their working routines, which provoked uncertainty primarily at the beginning of the implementation of telework due to the pandemic. Moreover, the participants indicated that there was an increase in economic expenses to ease the implementation and enhance the performance of telework at home to be able to teach in optimum conditions.

Likewise, in the matter of the use of information and communication technologies, the participants mentioned that they received late or insufficient training leading them to learn autonomously, training themselves on different online platforms. As a consequence of this, the female academics interviewed informed that they relied on peer collaboration to share tips, knowledge, and experiences.

Concerning the experiences, the participants conveyed that during this period, there were several difficulties and challenges. These were primarily related to the conciliation and organization of their productive tasks (such as time management, lack of organization, and unsettled working schedule), and their maternal tasks, resulting in negligence of family obligations (limited time to look after and share with the family), and how being a working woman affected their conciliation process of productive and reproductive roles while facing the pandemic and new modality.

In terms of feelings and experiences, particularly about the adaptation process experiences and reflections from teleworking during the pandemic, female academics shared different points of view on their own processes, realities, and how this working modality affected them. They even defined this entire process as complex, exhausting, challenging, overwhelming, chaotic, and uncertain. These feelings and experiences triggered considerable repercussions on physical and mental health as this new working modality represented a challenge, causing the development of different psychological or physical responses such as stress and anxiety.

Most of the academics who participated in this research had children to look after, parents to care for, lived without a partner, or all of the above. As one of them stated:

As a woman, you work, you get home (although, when we were locked up, you were already at home) and you still have to do the housework. I helped my daughter because her father was doing great in his own house (referring to the fact that he is an absentee father). I had to take care of my daughter's schoolwork, I had to do the cooking, the ironing, the washing, etc., plus doing my own work; it was a lot. As women, I think we have more responsibility.

There were many important findings, but I wanted to finish with the message that if we work harder than our male counterparts on a daily basis in order to become visible in a field such as this one, the work we were thrown into due to the pandemic was extreme. Consider that we need to be 'productive' in academia to be acknowledged as a 'proper' academic. However, in these uncertain times we have been going through, not only did we have a harder time than ever conducting our research, but many other unexpected life situations took place as well. Nevertheless, the fact that we are working together today is proof that, once again, we have exceeded our own expectations of ourselves.

4. Discussion

In this piece, we as female researchers have shared our research experiences and contributions to qualitative inquiry by presenting creative and innovative ideas that emerged from our own experiences through and with our qualitative research projects in the times of a pandemic.

This work aims to contribute to the body of qualitative work with a gender perspective generated by knowledge from the educational context of the Ibero-American cultures the authors' represent and to promote the development of women's voices in academia. Agreeing with Chang (2013), this methodology allows us to focus on the process and products of our collaborative research, and to weave commonalities of our life experiences as scholars in times of a pandemic, in different broader social, political, and cultural settings as posited by Bochner and Ellis (2002). This type of research allows us to be in community with one another, act in solidarity, and elevate our experiences (Montiel et al. 2022). Everything we can identify in the act of collaborative writing and highlight for ourselves and other researchers can be reflected in our voices.

This reflection is made from our experiences which were generated by the current neoliberal academic environment, which supports and incentivizes hegemonic masculinities through its policies (Martinez 2023); this is particularly true in the case of Chile, which is highly commodified (Guzmán-Valenzuela et al. 2022). Indeed, today's academia is changing as academic work becomes increasingly quantified (Osbaldiston et al. 2019). Therefore, we make no small effort to reflect on this joint space, given that the neoliberal tone that prevails in academia has neglected to make space for reflection to promote those more quantifiable and parameterizable in performance logic.

The connection of our voices and our mutual interests in qualitative research centered in scholarly places both inside and outside of academia are reflected in this writing process. Research is also a step in the academic writing process. By communicating from various locations and ending our isolation, the experience of writing collectively allowed us to "pause" and temporarily cease running, which we often do during an eternally busy period.

Our voices demonstrate the stages of reflection motivated by various experiences, including ours and the experiences of the other sisters in the academy during the pandemic. At the same time, as our voices converge in our work, pushing us to be aware of it, the writing process enabled us to envisage our place as women in academia. This experience is also written, to quote Lugones (1987), from outside the dominant currents (white/Anglo-Saxon/hard sciences), highlighting the experiences of female qualitative researchers in academia from the margins, i.e., from Chile and southern Spain.

It also demonstrates the boundaries of quiet, which can be viewed as deference to a hierarchically formed social order that prizes masculinity above femininity as a fundamental

value, as well as occupations associated with the "hard sciences", which are very dissimilar from those of the authors of this text. Indeed, our aim is also to create a more complete and less systematically biased mainstream knowledge based on a worldview from which dialogue from different social positions is created and encouraged (Sprague 2017).

This position does not fit the pre-established subordinate position that women would be expected to occupy in higher education and is frequently viewed as subversive, controversial, and surprising in our society. By identifying our voices, making them appear in academic work, and honoring our thought processes, collaborative interpretive autoethnography created a procedure that allowed scholarly women to articulate our voices in academia as legitimate speech and to reflect on our experiences in a context as challenging for women as the Covid-19 pandemic, which intensified our workloads disproportionately to our male peers, leaving us in a state of complete exhaustion (Ronksley-Pavia et al. 2023).

To evoke, connect, and transmit knowledge and reflect, deconstruct, and create new realities, this article recovers and underlines the significance of our experiences and the people with whom we share our stories. This work of collaborative autoethnography allows us to appropriate the discourse and recover our collective voice, which is often silenced since, as women, we are defined generically from obedience as Lagarde (2016) establishes; therefore, writing for ourselves is also an act of transgression that allows us to reveal our point of view as female qualitative researchers in academia.

Only in this way can even the world's driest desert be covered in flowers; only in this way can we take pleasure in our work and dream of greater equality and justice, encouraging a democratic and respectful academic environment every day in our universities for the training of future ethical professionals based on gender justice.

5. Conclusions

At present, gender research in Chile is becoming increasingly relevant, given the reforms and legislation that have been implemented in the last five years. Undoubtedly, qualitative research, through its different epistemological approaches and techniques, allows us, as women, to position ourselves as an active part of the phenomena we are studying.

In the case of Spain, it is concluded that governments can support scientific research by providing tools and resources for funding through state and regional research plans. In the same way, it is concluded how their policies and calls for proposals determine the priority lines of research aligned with international policies and agendas. An example is the latest research plans that are aligned with the 2030 Agenda of the United Nations, prioritizing the SDGs (Sustainable Development Goals). It is concluded that gender is a priority line, which intersects with other variables such as academia, employment, digitalization, groups at risk of social exclusion, and inclusion, among others.

In the same way, this work makes clear the importance of research approaches and designs. In this sense, critical qualitative research, conducted through reflexive and collaborative autoethnographic processes, allows the diagnosis of social problems and analysis of possible answers and challenges to advance in society. Thus, it can be seen how, in spite of advances in gender issues, to a greater or lesser extent, discriminatory situations that oppress us are still maintained. This work reveals difficulties in reconciling personal and family life, situations of harassment, sexual discrimination, difficulties in professional promotion, other difficulties in professional performance under equal conditions and privileges, the glass ceiling, etc. All of this was exacerbated by the COVID-19 pandemic.

The women represented here are, to a certain extent, leaders in their contexts; women capable of generating possibilities through their scientific research, obtaining funds through competitive calls at international, national, and regional levels, thus generating space for other generations to come through a different symbolic practice, forms of relationships between women that allow the creation of networks of support and otherness.

The women represented here express their position before the academy, a different way of performing academia in spite of the circumstances, according to their desires, pro-

fessional and personal values, and the vocational aspect of their professional performance. All of this has been integrated to generate possibilities and represent the voices of other underrepresented people in different spheres of life. Thus, we investigate to review realities, improve them, and make visible discriminatory situations that oppress or have oppressed us.

References

Agencia Nacional de Investigación y Desarrollo. 2020. Área y Género [Area and Gender]. Available online: https://www.anid.cl/area-y-genero/ (accessed on 4 April 2023).

Banco Mundial. 2023. La economía mundial se encuentra en una situación precaria en un contexto de tasas de interés elevadas. Comunicado de prensa [Global Economy on Precarious Footing Amid High Interest Rates]. Available online: https://www.worldbank.org/en/publication/global-economic-prospects (accessed on 6 June 2023).

Bochner, Arthur P., and Carolyn Ellis. 2002. *Ethnographically Speaking: Autoethnography, Literature and Aesthetics*. Walnut Creek: Altamira Press.

Boletin Oficial del Estado. 2011. Ley 14/2011, de 1 de junio, de la Ciencia, la Tecnología y la Innovación. Available online: https://www.boe.es/buscar/act.php?id=BOE-A-2011-9617 (accessed on 3 April 2023).

Boletin Oficial del Estado. 2007. Ley Orgánica 3/2007, de 22 de Marzo, Para la Igualdad Efectiva de Mujeres y Hombres [Organic Law 3/2007, of March 22, 2007, for the Effective Equality of Women and Men]. Available online: https://www.boe.es/buscar/act.php?id=BOE-A-2007-6115&tn=1&p=20220907 (accessed on 3 April 2023).

Chang, Heewon. 2013. Individual and collaborative autoethnography as method. In *Handbook of Autoethnography*. Edited by Stacy Holman Jones, Tony E. Adams and Carolyn Ellis. New York: Routledge, pp. 107–22.

Chang, Heewon. 2016. Autoethnography in Health Research: Growing Pains? *Qualitative Health Research* 26: 443–51. [CrossRef] [PubMed]

Chang, Heewon, Faith Ngunjiri, and Kathy-Ann C. Hernandez. 2013. *Collaborative Autoethnography*. New York: Routledge. [CrossRef]

Charmaz, Kathy. 2014. *Constructing Grounded Theory*. Thousand Oaks: SAGE.

Charmaz, Kathy. 2021. The Genesis, Grounds, and Growth of Constructivist Grounded Theory. In *Developing Grounded Theory*, 2nd ed. Edited by Janice M. Morse, Barbara J. Bowers, Kathy Charmaz, Adele E. Clarke, Juliet Corbin, Caroline Jane Porr and Phyllis Noerager Stern. New York: Routledge.

Charmaz, Kathy, and Linda Liska Belgrave. 2012. *The SAGE Handbook of Interview Research: The Complexity of the Craft*. Thousand Oaks: SAGE Publications, Inc. [CrossRef]

Clarke, Adele E. 2012. *Handbook of Feminist Research: Theory and Praxis*. Thousand Oaks: SAGE Publications, Inc. [CrossRef]

Cohen-Scali, Valérie, Jerome Rossier, and Laura Nota. 2018. *New Perspectives on Career Counseling and Guidance in Europe: Building Careers in Changing and Diverse Societies*, 1st ed. New York: Springer.

CONICYT. 2017. Política Institucional Equidad de Género en Ciencia y Tecnología Período 2017–2025 [Institutional Policy on Gender Equity in Science and Technology Period 2017–2025]. Available online: https://s3.amazonaws.com/documentos.anid.cl/documentos-y-servicios/equidaden-ctci/politica-institucional-de-equidad-de-genero/Politica-Institucional-Equidad-de-Genero-enCyT-Periodo-2017_2025.pdf (accessed on 3 April 2023).

Cornejo, Marcela, Gabriela Rubilar, and Pamela Zapata. 2019. Researching Sensitive Topics in Sensitive Zones: Exploring Silences, "The Normal," and Tolerance in Chile. *International Journal of Qualitative Methods* 18: 1609406919849355. [CrossRef]

Delegación del Gobierno contra la Violencia de Género (DGVG). 2020. Macroencuesta de violencia contra la mujer 2019 [Violence against Women Macro-Survey 2019]. Ministerio de Igualdad. Available online: https://bit.ly/379RYy (accessed on 20 April 2023).

Denzin, Norman K. 2013. *Interpretive Autoethnography*, 2nd ed. Thousand Oaks: SAGE Publications.

Denzin, Norman, and Yvonna Lincoln. 2018. *Handbook of Qualitative Research*. Thousand Oaks: SAGE Publications, Inc.

Duarte, Cory, and Viviana Rodriguez. 2019. Políticas de igualdad de género en la educación superior chilena/Policies of gender equality in Chilean higher education. *Rumbos TS* 19: 41–72.

Ellis, Carolyn, Tony E. Adams, and Arthur P. Bochner. 2011. Autoethnography: An Overview. *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research* 36: 273–90. [CrossRef]

Espinoza, Oscar. 2013. Equidad e inclusividad en el sistema de educación superior en Chile [Equity and inclusiveness in Chile's higher education system]. In *Equidad e Inclusividad en la Educación Superior en los Países Andinos: Los Casos de Bolivia, Chile, Colombia y Perú*. Edited by Oscar Espinoza. Chile: Ediciones Universidad UCINF, pp. 93–133.

European Commission. 2020. Lifelong Guidance Policy and Practice in the EU: Trends, Challenges and Opportunities. Available online: https://cutt.ly/hFLr8sQ (accessed on 5 April 2023).

García, Evangelina. 2006. El espejismo de la igualdad: El peso de las mujeres y de lo femenino en las iniciativas de cambio institucional. *Otras Miradas* 6: 24–30.

Gergen, Kenneth J. 2014. Pursuing Excellence in Qualitative Inquiry. *Qualitative Psychology* 1: 49–60. [CrossRef]

Gergen, Mary, and Kenneth Gergen. 2002. Ethnographic representations as relationships. In *Ethnographically Speaking*. Edited by de Arthur P. Bochner and Carolyn Ellis. Walnut Creek: Altamira.

González, Soledad, José Joaquín Brunner, and Jamil Salmi. 2013. International comparison about academic salaries: An exploratory study. *Calidad en la educación* 39: 21–42. [CrossRef]

Guzmán-Valenzuela, Carolina, Ronald Barnett, Zavala Ricardo, and Karimme Morales. 2022. The State, Public Universities and Public Goods: Time for a New Settlement—The Case of Chile. *Higher Education Policy* 1: 375–96. [CrossRef]

Hesse-Biber, Sharlene Nagy. 2013. *Feminist Research Practice: A Primer*, 2nd ed. Thousand Oaks: SAGE Publications.

Hesse-Biber, Sharlene Nagy, and Deborah Piatelli. 2012. The Synergistic Practice of Theory and Method. In *Handbook of Feminist Research: Theory and Praxis*. Edited by Sharlene Nagy Hesse-Biber. Thousand Oaks: SAGE Publications, Inc., pp. 176–86.

Holmes, Andrew Gary Darwin. 2020. Researcher Positionality—A Consideration of Its Influence and Place in Qualitative Research—A New Researcher Guide. *Shanlax International Journal of Education* 8: 1–10. [CrossRef]

Instituto de las Mujeres. 2022. Plan Estratégico para la Igualdad Efectiva de Mujeres y Hombres 2022–2025 [Strategic Plan for the Effective Equality of Women and Men 2022–2025]. Available online: https://www.inmujeres.gob.es/elInstituto/PlanesEstrategicos/docs/Plan_Estrategico_2022_2025.pdf (accessed on 13 March 2023).

Instituto de las Mujeres. n.d. Conócenos. [Meet Us]. Available online: https://www.inmujeres.gob.es/elInstituto/conocenos/home.htm (accessed on 7 April 2023).

Instituto Nacional de Derechos Humanos. 2004. Informe de la Comisión Nacional sobre Prisión Política y Tortura (Valech I) [Report of the National Commission on Political Imprisonment and Torture (Valech I)]. Available online: https://bibliotecadigital.indh.cl/handle/123456789/455 (accessed on 15 April 2023).

Instituto Nacional de Estadística. 2022. Encuesta de Condiciones de Vida (ECV) Año 2021 Resultados Definitivos [Living Conditions Survey (LCS). Year 2021 Final Results]. Available online: https://www.ine.es/prensa/ecv_2021.pdf (accessed on 13 April 2023).

Intemann, Kristen. 2019. *Feminist Standpoint Theory*. Thousand Oaks: SAGE Publications Ltd. [CrossRef]

International Association for Educational and Vocational Guidance [IAEVG]. 2019. Communiqué on Inclusive Societies Investing in Their People. Available online: https://iaevg.com/resources/Documents/2019-Communiqur-on-Inclusive-Societies-EN.cleaned.pdf (accessed on 14 April 2023).

Irving, Barrie A., William Borgen, and Lisbeth Hoejdal. 2020. Challenging Perspectives on the Life-Design Career Paradigm: Critical Reflections and Re/Constructions. In *International Perspectives on Research in Educational and Career Guidance: Promoting Equity Through Guidance*. Edited by Beatriz Malik-Liévano, Beatriz Álvarez-González, María Fe Sánchez-García and Barrie A. Irving. Cham: Springer International Publishing, pp. 3–17. [CrossRef]

Jennings, Gayle R. 2018. Qualitative Research and Tourism Studies. In *The SAGE Handbook of Tourism Management: Theories, Concepts and Disciplinary Approaches to Tourism*. Edited by Chris Cooper, Serena Volo, William C. Gartner and Noel Scott. Thousand Oaks: SAGE Publications Ltd. [CrossRef]

Lagarde, Marcela. 2003. El feminismo y la mirada entre mujeres [Feminism and the gaze among women]. Paper Presented at Seminario Internacional Sobre Liderazgo y Dirección para Mujeres "Poder y Empoderamiento de las Mujeres", Valencia, Spain, April 2–3.

Lagarde, Marcela. 2016. *Los Cautiverios de las Mujeres: Madresposas, Monjas, Putas, Presas y Locas*. Ciudad de México: Siglo XXI Editores.

Lapadat, Judith C. 2017. Ethics in Autoethnography and Collaborative Autoethnography. *Qualitative Inquiry* 23: 589–603. [CrossRef]

Leavy, Patricia, and Daniel X. Harris. 2018. *Contemporary Feminist Research from Theory to Practice*. New York: Guilford Publications.

Lugones, María. 1987. Playfulness, "World"-Travelling, and Loving Perception. *Hypatia* 2: 3–19. [CrossRef]

Martinez, César Augusto Ferrari. 2023. University, neoliberalism and hegemonic bodies: Narratives of international students in Chile. *Gender and Education* 35: 89–103. [CrossRef]

Massoudi, Koorosh, Jonas Masdonati, and Jérôme Rossier. 2020. *Repères pour l'orientation [Reference Points for Orientation]*. Lausanne: Editions Antipodes. [CrossRef]

McMahon, Mary. 2020. Systems Thinking, Identity and Story: Applications in Career Development. Webinar from Canal UNED, November 30. Available online: https://canal.uned.es/video/magic/oer26g0t4a8so4wkcogsowwogkk8kgs (accessed on 14 April 2023).

Mineduc. n.d. Información sobre la Ley 21.369 [Information on Law 21.369]. Available online: https://educacionsuperior.mineduc.cl/informacion-sobre-la-ley-21-369/ (accessed on 14 April 2023).

Ministerio de Ciencia, Tecnología, Conocimiento e Innovación. 2022. Radiografía de Género en Ciencia, Tecnología, Conocimiento e Innovación [Gender Radiography in Science, Technology, Knowledge and Innovation]. Available online: https://www.minciencia.gob.cl/uploads/filer_public/9a/c4/9ac46c03-ecb0-473c-a070-34e3f6488df5/radiografia_genero_2022.pdf (accessed on 12 April 2023).

Ministerio de Derechos Sociales y Agenda 2030. 2018. Sustainable Development Goal 8 (SDG) of the United Nations 2030 Agenda. Available online: https://www.mdsocialesa2030.gob.cl/agenda2030/index.htm (accessed on 7 April 2023).

Montiel, Gloria Itzel, Tatiana Torres-Hernandez, Rosa Vazquez, Adelin Tiburcio, and Fatima Zavala. 2022. It Wasn't Only the Pandemic: A Collaborative Autoethnography of Latinx Women in Higher Education Navigating the COVID-19 Pandemic in Rapidly Shifting Immigration Contexts. *Journal of Latinos and Education* 21: 266–76. [CrossRef]

Morse, Janice M. 2002. Writing My Own Experience. *Qualitative Health Research* 12: 1159–60. [CrossRef]

Neruda, Pablo. 1955. *Canto General [General Song]*. Argentina: Losada.

Osbaldiston, Nick, Fabian Cannizzo, and Christian Mauri. 2019. 'I love my work but I hate my job'—Early career academic perspective on academic times in Australia. *Time & Society* 28: 743–62.

Patton, Wendy, and Mary McMahon. 2014. *Career Development and Systems Theory*. Rotterdam: Sense Publishers.

Pelias, Ronald J. 2004. *A Methodology of the Heart: Evoking Academic and Daily Life*. Walnut Creek: Rowman Altamira.

Ponce, Camila. 2020. El movimiento feminista estudiantil chileno de 2018: Continuidades y rupturas entre feminismos y olas globales. *Izquierdas* 49: 1554–70. [CrossRef]

Rebollo-Catalán, Ángeles, Virginia Mayor, and Alba Vico-Bosch. 2018. La otra cara de la luna: La violencia invisible contra las mujeres en las redes sociales. In *Violencias de Género en Entornos Virtuales*. Edited by Trinidad Donoso and Ángeles Rebollo-Catalán. Barcelona: Octaedro, pp. 105–20.

Red de Mujeres Investigadoras. 2023. Quiénes Somos [About us]. Available online: https://redinvestigadoras.cl/quienes-somos/ (accessed on 12 April 2023).

Richardson, Laurel, and Elizabeth Adams St. Pierre. 2005. Writing: A Method of Inquiry. In *The Sage Handbook of Qualitative Research*, 3rd ed. Edited by Norman K. Denzin and Yvonna S. Lincoln. Thousand Oaks: Sage Publications Ltd., pp. 959–78.

Ronksley-Pavia, Michelle, Jane Manakil Neumann, and Kelly Pickard-Smith. 2023. Concepts and Perceptions of Gendered Women's Experiences in Academia. In *Academic Women: Voicing Narratives of Gendered Experiences*. Edited by Michelle Ronksley-Pavia. London: Bloomsbury Academic, pp. 1–22.

Rosa, Rodrigo, and Sara Clavero. 2020. The challenge of neoliberalism and precarity for gender sensitivity in academia. In *The Gender-Sensitive University A Contradiction in Terms?* 1st ed. Edited by Eileen Drew and Siobhán Canavan. London: Routledge.

Roy, Rituparna Sinha, and Shinya Uekusa. 2020. Collaborative Autoethnography: 'Self-Reflection' as a Timely Alternative Research Approach during the Global Pandemic. *Qualitative Research Journal* 20: 383–92. [CrossRef]

Saura, Geo, and Antonio Bolívar. 2019. Sujeto Académico Neoliberal: Cuantificado, Digitalizado y Bibliometrificado [Neoliberal Academic Subject: Quantified, Digitized and Bibliometricified]. *REICE. Revista Iberoamericana sobre Calidad, Eficacia y Cambio en Educación* 17: 9–26. [CrossRef]

Savickas, Mark L. 2013. The theory and practice of career construction. In *Career Development and Counseling: Putting Theory and Research to Work*, 2nd ed. Edited by Steven D. Brown and Robert W. Lent. Hoboken: John Wiley & Sons, pp. 147–83.

Servicio Nacional de la Mujer y la Equidad de Género. 2021. SernamEG Cumple 30 años Trabajando por la Reivindicación de los Derechos de las Mujeres [SernamEG Celebrates 30 Years Working for the Vindication of Women's Rights]. Available online: https://www.sernameg.gob.cl/?p=34288 (accessed on 2 April 2023).

Silva, Jimena, Francis Ramirez, and Pamela Zapata. 2018. Experiencias Laborales De Mujeres Migrantes Afrocolombianas En El Norte De Chile [Labor Experiences of Afro-Colombian Migrant Women in Northern Chile]. *Interciencia* 43: 544–51.

Sprague, Joey. 2017. *Feminist Methodologies for Critical Researchers: Bridging Differences*. Lanham: Rowman & Littlefield.

Unidad para la Igualdad. 2018. Funciones [Functions]. Available online: https://igualdad.us.es/?page_id=459 (accessed on 20 April 2023).

University of Seville. 2022. Radiando Igualdad. Estudio de discriminación de género [Radiating Equality. Gender Discrimination Study]. Unidad para la igualdad. Universidad de Sevilla. Available online: https://igualdad.us.es/ (accessed on 14 April 2023).

Upegui, Anlly Marcela, and Cirila Cervera. 2018. Techo de cristal y suelo pegajoso: Estudios de genero en la academia [Glass ceiling and sticky floor: Gender studies in academia]. *Jóvenes en la Ciencia* 4: 1844–48.

Vázquez, Rosa. 2014. Investigación, género y ética: Una triada necesaria para el cambio [Research, gender and ethics: A necessary triad for change]. *Forum Qualitative Sozialforschung* 15. Available online: http://nbn-resolving.de/urn:nbn:de:0114-fqs1402104 (accessed on 1 April 2023).

Zapata-Sepúlveda, Pamela. 2020. Qualitative Inquiry in the Neoliberal Public Sphere: Contesting Accountability Metrics. *Qualitative Inquiry* 27: 1246–249. [CrossRef]

Zapata-Sepúlveda, Pamela. 2022. Distance Education, Intercultural Curriculum and ICTs in Times of COVID-19 in Primary and Secondary Rural Schools in Border Northern Chile (FONDECYT N.° 1221330). Available online: https://dgii.uta.cl/events/vii-escuela-de-verano-de-metodologias-cualitativas-para-la-transformacion-social-en-zona-fronteriza/ (accessed on 14 April 2023).

Zeb, Arooj, and Anjum Ihsan. 2020. Innovation and the Entrepreneurial Performance in Women-Owned Small and Medium-Sized Enterprises in Pakistan. *Women's Studies International Forum* 79: 102342. [CrossRef]

Article

Exploring School Bullying: Designing the Research Question with Young Co-Researchers

Niamh O'Brien [1,*] and Audrey Doyle [2]

[1]   Faculty of Health, Education, Medicine and Social Care, Anglia Ruskin University, Chelmsford CM1 1SQ, UK
[2]   School of Policy and Practice, Dublin City University, D09 NA55 Dublin, Ireland
[*]   Correspondence: niamh.obrien@aru.ac.uk

Abstract: Participatory Action Research (PAR) empowers young people to work alongside adult researchers to determine the purpose/scope of research projects. By naming the purpose of the research, young people have the potential to transform it. Beginning with a broad question, we worked in collaboration with secondary school students (co-researchers) and staff to decide on the focal research question. Prior to recruiting the co-researchers, we conducted an 'exploration study' using a qualitative online questionnaire distributed to the wider school population, to ascertain the core bullying issues. Although the questionnaire highlighted complexities in recognising bullying, misogynistic behaviour was stressed as a particular concern. In-depth discussions with the co-researchers and reflections on the questionnaire findings over several months gave us further insight into this issue, as well as the complexities of determining bullying/banter. Our research question was determined as: "Does gender bullying happen at this school?" Two distinct methodological and process-related insights arose from this work: power dynamics and the construct of time as duration and a non-linear process. This paper contributes to the literature on hearing stakeholder views as well as on actively including students in designing and developing research foundations, that is the research question, an under-explored topic in the wider literature.

Keywords: Participatory Action Research; developing the research question; young people as co-researchers; secondary school; power; time as duration

1. Introduction

This current study is located in a co-educational fee-paying day and boarding secondary school with approximately 800 national and international students (O'Brien and Doyle 2023). One-third of the students are boarders, and the gender divide is evenly distributed. In November 2020, during the first year of the COVID-19 pandemic, we were invited, by the headmaster, to conduct a study on the core bullying issue(s) in the school from the perspectives of staff and students and to work with both groups to determine an 'Action' in response to the research. This paper sets out the beginning of a larger Participatory Action Research (PAR) project that is still underway. Here we focus specifically on the initial exploration phase and the first cycle of research where the core research question emerged. We begin by discussing the rationale for using Participatory Action Research (PAR) and offer the underpinning definition of bullying used in the study. The paper then maps out how the research question was co-constructed and how it emerged through the PAR process. Before concluding, we discuss two distinct methodological and process-related insights arising from this work with young people as co-researchers: power dynamics and the construct of time as duration and a non-linear process.

1.1. Participatory Action Research

Paulo Freire was a core advocate for Participatory Action Research as it emerged in the 1960s and, in his work with illiterate children, Freire advocated that changes in education

should be based on "actual experiences of students and on continual shared investigation" (Koch and Kralik 2009). PAR falls under the paradigm of 'critical research' underpinning the idea that research does not have to be conducted by professional researchers but should involve those at the centre in all aspects of the process (Webb 1989). Also referred to as 'Action Research' and 'Community-based Participatory Research' when working with young people, Chabot et al. (2012, p. 424) argue that despite the variety of 'action approaches', all hold a "*commitment to general goals and assumptions*". Herr and Anderson (2005) suggest that participatory forms of research have grown from many different disciplines and research traditions and will, therefore, evidence themselves differently within the various disciplines of study. Our study utilised a Participatory Action Research (PAR) framework. Cahill (2007b, p. 268) in her work with young women in New York suggests that PAR:

> *"is a collaborative approach in which those typically 'studied' are involved as decision makers and co-researchers in some or all stages of the research".*

Consequently, an underlying principle of PAR is that it engages those who are not necessarily trained in research but represent the interests of their wider community who are the focus of the research (Vaughn and Jacquez 2020). These people are often referred to as 'co-researchers' or 'peer researchers' and they work alongside academic researchers to explore the issues at play (Vaughn and Jacquez 2020). Although there is a paucity of literature about whether to include young people in research, there is considerable discussion about how they can be actively included in the research process (see, for example, Camino 2005; Chabot et al. 2012). Indeed, young people are consistently recognised as the experts on issues affecting their lives (Bergström et al. 2010) and Brady et al. (2018) propose that they should be involved in youth-centred research that leads to change that better reflects their priorities and concerns. Certainly, Article 12 of the United Nations Convention on the Rights of the Child (1989) stipulates that the opinions and interests of children and young people must be taken seriously. The UNCRC, therefore, includes 'participation' as children and young people's central right in conjunction with 'protection' and 'provision' (Hinton and Fischer 2008; Reynaert et al. 2009). A PAR framework, within the context of this study, allowed for the full involvement of a group of student co-researchers in determining the overall research question and inputting into data collection methods and analysis[1]. Staff were also involved through a steering group. This approach enabled relationships to develop between adults and young researchers in the sharing and generation of new knowledge. This paper contributes to the literature with regards to the initial phases of PAR and highlights the importance of navigating and hearing the voices of students to name the research question.

1.2. Understanding and Recognising Bullying

The absence of a universally recognised definition of bullying is noted in the research literature (Migliaccio and Raskauskas 2016; Slattery 2019) and this has implications for study outcomes as well as for some bullying intervention work (Younan 2019). However, researchers tend to agree that bullying involves aggressive repeated intentional behaviour, underpinned by a power imbalance, and is aimed toward an individual or group who cannot easily defend themselves (Olweus 2013 Vaillancourt et al. 2008). Bullying takes two forms: a traditional face-to-face form and a cyberbullying form. Cyberbullying involves using online tools, particularly mobile phones (instant messaging, social networks, and emails) to target victims.

Drawing on recent research, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) and the World Anti-Bullying Forum (WABF) (O'Higgins Norman et al. 2021, p. 2) propose a revision to the generally accepted definition of school bullying which adopts a more sociological approach:

> *School bullying is in-person and online behaviour between students within a social network that causes physical, emotional or social harm to targeted students. It is characterized by an imbalance of power that is enabled or inhibited by the social and institutional norms*

and context of schools and the education system. School bullying implies an absence of effective responses and care towards the target by peers and adults.

This definition recognises that bullying is not just about personal harm but that through dominance (Evans and Smokowski 2016) it has an impact on the social relationships of the victim and the wider peer group. Social networks contain the bully, the victim, and the bystanders, regardless of their role in assisting the bullying or defending the victim (Hart Barnett et al. 2019). These networks connect to the rest of the school community, so imbalances are enabled or inhibited by the institutional and social context of the school, the education system, and more broadly by the social norms of society. The proposed definition shifts the focus from the deliberateness of '*aggressive behaviour*' (Olweus 2013) to also emphasise the '*harm*' experienced by an individual or group. Repetition is a key feature in understanding what bullying is, but the new proposed definition takes a holistic understanding of this where the physical, emotional, and social harm experienced by the victim is highlighted rather than the repetition of the incident. This takes into consideration the effects of one instance of cyberbullying, for example, whereby a message or photo can have devastating harmful effects (Slonje and Smith 2008).

Much of the research conducted in the bullying field is based on adult-imposed categories, which often negate the views of young people. Differences have been found in how children and young people define bullying and how researchers define it. In Spain, Cuadrado-Gordillo (2012) found that repetition was not important for young people regardless of the role they played in a bullying episode (bully, victim, or bystander). Vaillancourt et al. (2008) in the USA found that children's definitions were often spontaneous, and did not always encompass the elements of repetition, power imbalance, and intent. In Australia, Jeffrey and Stuart (2020) explored the views of bullying held by twenty 14–17-year-olds and suggested that young people's understandings of bullying are diverse. They found that participants focused predominantly on the reaction of the victim and the wider friendship group as well as the publicity of the episode as factors influencing their bullying definitions. Research in Sweden (Hellström and Lundberg 2020) involving twenty-nine 11 and 13-year-olds found that the 11-year-olds perceived bullying in private settings as more severe while the 13-year-olds perceived repetitive bullying in a public setting as more severe. The lived experiences of young people need to be generated and explored to add to our knowledge of what bullying is and how it is experienced by those at the centre. One way to do this is to actively involve young people in studying bullying at their school.

The next section details the process we followed to develop the research question about what the core bullying issue(s) in the school were, alongside student co-researchers and staff steering group members.

1.3. The Present Study

One intention of the larger PAR study is to add to the knowledge regarding bullying, particularly in private day and boarding schools where understanding is limited[2] (O'Brien 2021), and began with the idea that bullying is a social construct involving ordinary children in particular situations (Horton 2011, p. 269). We were also interested in the power relationships between individual students and student groups in relation to bullying. Indeed, the UNESCO and WABF's (O'Higgins Norman et al. 2021) proposed bullying definition highlights how social networks are often catalysts to enabling school bullying. Our study used this proposed definition as a foundation to help us navigate how bullying can be understood within this school context.

Despite conflicts in understanding what bullying is and how it is recognised, research regarding defining and identifying bullying in schools from the perspective of young people has not been a priority (Thornberg and Delby 2019). Therefore, the second intention of this work is to encourage debate about involving young people in research and about how they can become agents of change in their community (Percy-Smith 2012). A preliminary literature review revealed limited publications specifically within the focus of this study;

although, some research involving students as co-researchers to address bullying in similar contexts has taken place (see, for example, Stoudt et al. 2010; O'Brien et al. 2018).

2. The Research Process

This study began with a broad research question: What do students and staff of this private day and boarding school view as the core bullying issue(s) and how do they want to address this? Our intention was to work with staff and students to determine this issue and implement 'Action' from what we found. This process is taking place over three distinct phases. The first (exploratory) phase between March and May 2021 was to find out from staff and students what they regarded as the core bullying issue(s) at the school. These findings led to the first PAR cycle (November 2021 until May 2022) focusing on the '*core bullying issue(s)*'. The final phase is the implementation of the 'Action', which is taking place at the time of writing. The research question that was developed relating to the 'core bullying issue(s)' was decided in the first PAR cycle and was underpinned by the exploratory phase and detailed discussions with the co-researchers and staff steering group members.

2.1. The Exploratory Phase

Before embarking on our first PAR cycle, we conducted an 'exploratory phase' using a qualitative online questionnaire to understand more about the core bullying issue(s) from the perspective of staff and students. Braun and Clarke (2022) discuss the value of using online qualitative questionnaires and suggest that methodological discussions about this method are lacking in the research literature. However, they suggest that online questionnaires offer several advantages including flexibility for both researchers and participants. This method was particularly useful at this time as COVID-19 restrictions meant most students were returning to school after the second national lockdown and visitors were restricted in the school limiting the data collection options available to us. Due to its online nature, staff and students could complete it at their own convenience.

The questionnaire (see Supplementary Materials Files S1 and S2) was designed based on the research literature, contextual data from the school, and discussions with the head-master. The intention was to determine the core bullying issue(s) from the perspectives of staff and students to provide us with the multiplicity of these perspectives. The benefits of using an anonymous questionnaire, at this stage before relationships were formed through the PAR process, included providing respondents with an opportunity to provide honest responses, as well as the freedom to respond without fear of reprisal or embarrassment, which may not be possible through other research methods (Patten 2016).

The questionnaire questions were similar for students and staff. Each questionnaire contained four sections for students and five for staff and focused on demographic data, safety at school, bullying experiences, and a section for additional comments. The staff questionnaire also included staff professional development. Participants were asked to respond to some questions using their own words to add to the authenticity of the data and to capture contextual issues and language used to describe and discuss bullying behaviour and attitudes in the school. Using this approach helped the research team with the second phase of the study because it enabled us to use the language and terminology of the students and staff in developing the wording for the chosen data collection methods (Lushey and Munro 2015). A total of 36 students and 34 staff members completed the questionnaire.

Thematic analysis (Braun and Clarke 2006) was used to analyse the data. Initially, both authors coded the data separately and then discussed and agreed on the codes and subsequent themes. Four dominant themes emerged from the data.

The first related to the importance of a safe environment and the need for belonging:

> *"There is a strong sense of the school being more than simply a place to receive academic education. There appears to be a degree of pride among students as part of being in the school"*. (Staff Participant SP, Female)

Data also suggests that this school offered an environment that encouraged a space of belonging and inclusivity:

"We have an LGBTQ+ committee and an anti-racism group", (Student Participant (Stu, Female))

"a multi-cultural day, anti-racism club etc.", (Stu, Female)

"Have students from all over the world". (Stu, Female)

However, the physical spaces of the locker rooms, corridor areas, and dormitories were reported as spaces where bullying takes place. The school environment encompasses both the physical environment, including safety and security, and the psychological environment, including the school climate, classroom management and discipline, and the relationships between teachers and students and between students themselves (Attawell 2019). Literature suggests that reports of bullying and victimisation are lower when the school climate is positive (Schwartz et al. 2016; Hamada et al. 2018).

The second theme was the multifaceted perceptions of staff and students regarding bullying. This was particularly evident in relation to 'banter' among students, which at times was misinterpreted by staff.

"The staff are oblivious and just let the one person get away with it Every Single Time. It's like he gets a slap on the wrist and gets on with life. I don't want a big scene about it I just want that person to stop it. He sexualises 14-year-old girls and it's not okay.". (Stu, Female)

Consequently, intervention is prevented, a finding which is consistent with the literature (Vaillancourt et al. 2008; Eriksen et al. 2018).

The third theme highlighted the recognition of the inclusion of a wider socio-cultural context and community in dealing with bullying:

"It's the society that we're living in right now in that people are just acting out more and people are like not really caring what's going on. And not really caring about other people". (Stu, Male)

The recognition that the school is an open system (Scott 2008) and interacts and nests (Resnick 2010) in the surrounding domain of the family, community, and society was noted and, therefore, any intervention required the inclusion of this wider domain. The key and heart of the education system are the relationships and collaborative interactions between all its elements. Fenwick (2012, p. 145) explains that these systems are:

" . . . nested within one another, co-implicating and cohabitating. Yet each retains its own distinct identity, organising logic and emerging patterns".

The final theme related to the challenges of reporting and responding to bullying. Data evidenced the presence of a strong cultural understanding of the need to report and tell when bullying had taken place, but this was stymied by a more powerful cultural fear of "ratting" or "snitching". Both staff and students underscored this cultural challenge:

"Stitches for snitches is still a popular phrase. We are finding it difficult to become a telling school". (SP, Female)

"You would get slagged by students if they become aware". (Stu, Female)

O'Brien et al. (2018) note that, due to perceived implications associated with reporting bullying, students often have to navigate a 'complex web' in their decision about reporting it. The Ditch the Label (2020) annual survey of 13,387 UK school and college students reported that of those who had been bullied 21% did not tell anybody because they were fearful, embarrassed, or did not have any trust in the offered support systems. Other studies found that students are less willing to report threats (physical or otherwise) if they do not perceive the threat as serious, and if they expect that reporting a threat will lead to being labelled 'a snitch' (Brank et al. 2007; O'Brien et al. 2018).

Although the response rate was low, the findings from the exploratory phase provided us with a broad understanding of how bullying is recognised and responded to at the school. These findings support the UNESCO and WABF's (O'Higgins Norman et al. 2021) proposed definition of bullying with regard to the wider social networks and the perceived responses from adults towards reporting bullying. This exploration phase brought us into the midst of the perspectives of real-life bullying issues in the school.

A presentation of these findings by the two authors was given to students who represented the various student fora including the school council, mental health awareness group, LGBTQ+ group, and the Diversity and Inclusion group. Staff members supporting these groups as well as those with responsibility for pastoral care and well-being also attended. COVID-19 restrictions were still in force at this point (November 2021) so a whole school assembly presenting the findings could not take place. This is consistent with other research carried out during the pandemic (Meinck et al. 2022; Mohan et al. 2020). We asked the staff and students to work together in small groups to discuss the findings and feed their thoughts back to the wider group. We explained that this session was the start of narrowing down the 'core bullying issue(s)' underpinning the questionnaire data and, consequently, what we would research going forward.

Overall, this discussion suggested that problems were apparent around normalising misogynistic behavior. Whilst the questionnaire uncovered this concern, we were surprised by the trajectory of the discussion. Teachers highlighted how in the junior years there was an acceptance by the male students of viewing female students as objects to be "physically categorised", "touched", "named in a derogatory manner" and regularly "tripped and pushed" (Field notes October 2021). Students told us about the different expectations for girls and boys on the sports fields and in the classrooms. While boys were expected to be competitive, gentlemen, and good at sports, girls were expected to be academic, sensitive, and the role of women in sports was not taken seriously:

> "Most of the girls I think just kind of sit and kind of be quiet.". (Stu, Female)

> "And like if they're asked a question, they answer.". (Stu, Female)

> "Yeah, but you don't really like . . . Not that you don't engage in the class but it's mostly like, if a girl tries to be funny, it's not funny. If a boy is funny, it is funny.". (Stu, Female)

The discussion also mapped the difficulty of a lack of upstanding or calling out witnessed bullying behaviour. This was confirmed by a teacher who explained that students are often hesitant to report bullying because:

> "There's a huge culture of not being a rat around here . . . . I mean, it goes way back you know.". (SP, Female)

2.2. Recruiting the Co-Researchers and Steering Group

Involving the students and staff in determining the direction of the study and in contributing to research decisions throughout was paramount. Therefore, following this initial meeting and before we began the first PAR cycle, we recruited two groups who are integral to the development of the study. These groups, alongside us, are currently working on the research 'Action':

(1) *The Research Team*: Responsible for conducting the research, comprises seven self-selecting students (co-researchers), four females, and two males aged 13 to 18 years, and us as the university researchers. These students were recruited from those who attended the meeting on the questionnaire findings. Although the student co-researchers were self-selecting, we recruited them through already-existing groups where they were active in student-voice work. It is acknowledged that this is a limitation in participatory work and can add to the marginalisation of other students who did not have an opportunity to be involved. Horgan (2017) found that schools were more likely to select articulate students and those who would represent their schools well. Our initial intention was to open the recruitment process to any interested students in the school and to reflect diversity.

However, COVID-19 impacted this intention so we agreed with the headmaster that we would recruit from the various student groups. Similar to the work of Livingstone et al. (2014), students from these groups volunteered to participate on the research team and were not enticed or forced to be involved.

(2) *The Steering Group*: Responsible for guiding and shaping the project, sits alongside the research team. They comprise members of the school staff team, a co-researcher representative, and us. Like the work of Manchester and Pett (2015), we acknowledge the value that young people bring to the study as co-researchers and as social actors in their own right. However, we agree with these authors that the young person's views, in this case of bullying and school life, must be considered in line with the wider social networks around them. As a result, recruiting school staff to the steering group enabled the incorporation of adult views in navigating the 'core bullying issue(s)'. Through the development of both groups, the co-researchers were provided with opportunities to have their voices heard on two distinct levels. Through the co-researcher representative who sits on the steering group and feeds back to the research team, opportunities are provided to challenge the school status quo that staff have possibly not considered (Mitra 2009). In addition, it enables a safe space for these conversations to take place away from the usual adult–child meeting points and potential power imbalances.

Once these groups were established the research training commenced. We delivered several sessions about the research process including ethics, methods, and dissemination. This iterative training programme was developed to ensure the co-researchers were equipped to understand the research process. Bradbury-Jones and Taylor (2015) highlight that, regardless of how the training programme is established, young people should be given opportunities to practice their skills. They further emphasise that, if the research is to benefit from the involvement of young people, then it would be unethical for them to be unprepared to undertake this role. However, a greater number of sessions than we had planned focused on co-constructing the research question.

2.3. Deciding the Research Question

The PAR process provided opportunities for constant reflection on the findings from the questionnaire as well as the individual views and lived experiences of the research team and steering group. This reflective dialogue allowed for a plethora of discussions about what the area of research should and should not focus on. For example, several bullying issues were identified through these discussions and reflections including racism, misogyny, and homophobia. As we discussed each issue in turn, the co-researchers agreed that the school was working on reducing racism and had recruited a Diversity and Inclusion Manager to address this. A staff member advocated:

"In recent years a great deal has been done to address this issue and will be continued to do so, which is very positive". (SP, Male)

Homophobia was not viewed as a main concern, as students felt:

"the LGBTQ+ group are working very hard to encourage inclusion". (Co-researcher CR, female)

Misogyny as related to bullying was evident in the data and the lived experiences of the co-researcher team, and further agreed by the steering group as the area of concern:

"I think we should focus on Misogyny or/and Sexism in the school because these issues are very prevalent across the entire school. There are sexism issues concerning both the teachers in the school and the students and I believe that they need to be addressed" (CR, Female)

The authors explored the literature around misogyny and its link with school bullying. For the purposes of training and encouraging critical discussion, the following definition of misogyny, from Wikipedia (2022) was presented to the co-researchers to begin the dialogue:

" . . . dislike of, contempt for, or prejudice against women".

In research team discussions, it became clear that this definition was a narrow understanding of what the co-researchers and steering group members were describing. Contextual conversations emerged and as the school is co-educational, it was possible that boys were also feeling negatively targeted due to their gender/perceived gender norms. Our role as researchers and facilitators and contributors to these discussions was not just about listening but also about making sense of the complex story that the students were trying to tell us. This involved unpacking their experiences, taking the risk of asking sensitive questions, and at times challenging contradictions and double standards. A narrative was emerging about the workings of the relationships between the sexes, as illustrated below:

> "I've experienced some gender bullying in the school . . . . It's more sort of like how you sort of dress and how you look . . . . Sometimes they can say very nasty sort of names. Or like they just call you stuff, or maybe talk about you". (CR, Female)

During these discussions, we entered a space with the co-researchers that was highly personal and sensitive. As the group began to trust each other and the walls and barriers of age, power, and gender began to tumble, our journey took us through the sharing of bullying encounters and the deep emotions that accompanied them. It was in the wake of these conversations that our ground rules (please see Figure 1), pledged at the beginning, were highly important.

These rules were discussed and agreed upon by all research team members. All members signed this document:
- a. No judgement – come from a good place.
- b. Confidentiality – everything discussed here stays here.
- c. Focus is on the whole school issues of bullying and not just our own experiences.
- d. Importance of language – jargon and contextual language needs to be explained.
- e. There are no silly questions.
- f. Always ask for help if needed.
- g. Do not interrupt others when they are speaking.
- h. Be punctual.
- i. Be honest, if something upsets you reach out and speak about it.

Figure 1. Research Team Ground Rules.

There were times when we reminded the group about confidentiality. After the exchange of some very personal stories, we sent an email to the co-researchers:

> "At yesterday's meeting, a few of you shared some personal viewpoints and stories so just a reminder of the importance of confidentiality in our sessions (ground rules [Figure 1] that we set at our first meeting) and not sharing other people's stories outside of our discussions". (Email 1 March 2022)

We also reminded them about the support available in school.

After a further two sessions of intense discussion on gender equity at the school, the broader area of sexism and gender was suggested by us to the co-researchers:

> " . . . prejudice or discrimination based on one's sex or gender. Sexism can affect anyone, but it primarily affects women and girls. It has been linked to stereotypes and gender roles and may include the belief that one's sex or gender is intrinsically superior to another". (European Institute for Gender Equality 2021)

The research team agreed that the core bullying concern was about *gender* and bullying and that there was a question about where the line is drawn with banter and bullying in relation to gender:

"And I don't know, I think that it might be hard for especially some of the boys in our year to decide if it's like stop as in a joking stop, or stop as in like just stop". (CR, Female)

The co-researchers highlighted that bullying happens in all schools, but reflected that sexism is normalised at their school and questioned how the school deals with this issue.

"I don't play rugby anymore but the boy's rugby team would get new jerseys every year and the girls just don't ever get rugby jerseys. But then for hockey, it's similar but like not as bad, not as noticeable as the rugby I think between like boy's hockey and girl's hockey". (CR, Male)

They noted that a transparent approach to reporting bullying was needed so students know that their complaints and concerns are taken seriously.

" . . . . if a school wants to prevent bullying to certain people, vulnerable people. If they want to remove misogynist sayings about women, or even males, they have to push their protocol they have to do every single step. What . . . is actually getting done? How is it being done? What are the repercussions of this? How are we going to help the bully? How are we going to help the victim?". (CR, Male)

This search for transparency is a view supported in the literature (see, for example, Wójcik and Rzeńca 2021). The core bullying issue and research question was decided as: Does gender bullying happen at this school? The following sub-questions also emerged: How does the school deal with gender bullying? and Where is the line between banter and gender bullying? Consequently, the determined research question focused on an area the school community wanted to explore while the co-researchers were pivotal in its design.

3. Discussion

As well as drawing on our past experiences of working with young people in participatory research projects (see, for example, O'Brien and Moules 2007; O'Brien and Moules 2012; O'Brien 2016; Dadswell and O'Brien 2021), before we entered the school, we also amassed important insights from the wider literature (Kellett 2010; Åkerström and Brunnberg 2012; Anyon et al. 2018). We knew that building relationships comprising trust, listening, and ensuring that the co-researchers had a sense of ownership over the process (Cahill 2007a) were imperative for success. The empowerment of the co-researchers in the process meant that for any meaningful development of agency the capacity of the young people as researchers had to be built (Skelton 2008). The following discussion argues that the development of the research question with young people as partners is paramount to the research process, in finding answers and developing worthwhile 'Action' from a study. Indeed, working with young people in this way in the early stages of the process is novel. Shamrova and Cummings (2017) note that researchers are less likely to involve young people in the early stages of a PAR project. Actively including young people in designing and developing research foundations, particularly the research question, is under-explored in the wider literature. Two distinct methodological and process-related insights emerged during this phase of the research:

a.   Acknowledging the complexities of power dynamics.
b.   Understanding time as duration and non-linear.

3.1. Acknowledging the Complexities of Power Dynamics

In this PAR study, those with academic and local knowledge and expertise came together to develop a research question grounded in what the school community wanted us to explore, but power imbalances were inevitable. To mitigate these, it was the responsibility of the adults to ensure that all young people were respected throughout the process, felt their voices were heard, and that their viewpoints were acknowledged (Mayall 2000). In the initial meetings of this first PAR cycle, we established ground rules for collaborative working (please see Figure 1 above). We did not want to impose these on the co-researchers

but rather develop them together to demonstrate how adults and young people could make decisions collectively (Merves et al. 2015). During our first meeting, we discussed the ways we can work together in a fair and respectful way. Each member of the team (adults and young people) signed a co-developed document containing the ground rules, demonstrating a sense of ownership over the process that all team members were mindful to work within during the process. As we worked through determining the research question, we returned to the ground rules as needed.

Indeed, power imbalances were presented early in the study regarding the recruitment process. Recruiting the co-researchers was intended to address the power imbalances reflected in the wider literature where young people can be excluded from having their voices heard because schools and other organisations often 'hand-pick' those deemed most articulate to participate (Spyrou 2011; Horgan 2017). In our study, access to the wider student group was impacted as a result of COVID-19 restrictions. This meant that recruitment needed to come from already-existing groups. Attempts to reflect diversity in terms of gender, ethnicity, and ability levels were provided by opening recruitment to all members of these wider fora and not just those deemed most articulate or most able. However, we acknowledge this as a limitation of the study.

Although hearing from the co-researchers, as those with lived experiences at the school, was paramount for ensuring the research question was focused on a significant bullying issue, it was also important to give voice to the adults. In developing the research question, the steering group and wider management needed to be kept informed about the decisions made by the research team and needed input on some of these decisions. Additional meetings with these adults ensured this happened and the co-researchers had opportunities to feed into these conversations through a volunteer co-researcher to the steering group. Lundy (2018) suggests that feedback is pivotal for meaningful participation. Feedback loops were important, so the co-researchers, steering group, and school management were aware of how the research was developing and how the wider decisions about the research, in particular the research question, were being made. These loops also mitigated the question being developed from an entirely adult perspective.

At times, the adults had to guide the research meetings when the co-researchers went off-topic or to remind them of rules around confidentiality, while at other times the conversation was left uninterrupted to see where it would take us. Based on earlier discussions with the headmaster and initial coding of the questionnaire data, we perceived that the 'core bullying issue(s)' would relate to bullying definitions or focus on homophobic or racist issues. However, because the co-researchers are current students with lived experiences that the adult researchers do not have, how they conceptualised the bullying issues in their school was different to how we, the adult 'outside' researchers, viewed them. Through the PAR process of planning, acting, observing, and reflecting (Lewin 1946) the co-researchers were able to shed light on the bullying issues from an insider perspective. This knowledge and insight coupled with the questionnaire findings enabled the adult researchers to understand the wider issues at play. Kellett (2010, p. 195) suggests that participatory research with children:

> " . . . generates different data from adult-to-child enquiry because children observe with different eyes, ask different questions and communicate in fundamentally different ways".

3.2. Understanding Time as Duration and Non-Linear in the PAR Process 779

Academics rarely discuss how 'time' is utilised in research studies. They outline the time needed to conduct aspects of the study (Nyman et al. 2022), thus focusing on the longevity of a project and reducing time to measurement, segments, and numbers (Linstead and Tharem 2007). In our study, although consideration is given to how long aspects of the study should take, time is also viewed as a process whereby past, present, and future are integrated and time is viewed cyclically rather than as a linear process. In setting the research question and determining the 'Action' needed, narratives from

the school's past, brought into the present dialogue, activated a future response from the school community to bring about future change. Indeed, McNiff and Whitehead (2011) in discussing the principles and practices associated with PAR acknowledge that previous historical interests act as drivers for current social practices. Past, present, and future become one so there is a concentration on the becoming and emergence of knowledge and understanding rather than on clocks, minutes, and hours (Deleuze and Guattari 1987). Time, therefore, is about the duration of the experience of dialogue and exploration that is needed to generate new knowledge and, consequently, change was embedded in what the school community wanted.

Traditionally, engaging in research requires the development of a research question (Bryman 2004; Mason 2002). The question directs the process and is central to the design and methodology of the study (Ozer and Douglas 2015). In this PAR study, we entered the process with a broad research question centred around what the school community identified as the 'core bullying issue(s)' with the central research question designed alongside the co-researchers and not set entirely by adults (Cooke and Kothari 2001). The exploration phase, which generated data that served as a springboard for the many discussions with the co-researchers and, consequently, informed the 'Action', happened by default due to the COVID-19 restrictions (Meinck et al. 2022). We had no access to the school or the students at this time and we had to re-imagine the early design of the study. We argue that the duration of time spent on this early holistic exploration of the core bullying issues enabled the development of a research question embedded in what the wider school community wanted. This question was not focused solely on an adult agenda or the perspectives of the co-researchers. Indeed, in planning the first PAR cycle, we intended a specific timeline to develop the research question. However, it soon became apparent that time became the duration that was needed for the required dialogue (Deleuze and Guattari 1987; Colebrook 2002) including revisiting the process to plan, act, observe, and reflect (Lewin 1946) to ensure the research question was underpinned by the perspectives of the wider school community.

PAR studies are usually long studies (Nyman et al. 2022), but this initial stage on naming the research question with the co-researchers was unexpectedly long and initially presented as a limitation as it was preventing us from moving forward with the project. We had a planned agenda to build the co-researchers' capacity (Bradbury-Jones and Taylor 2015), but we were stalled on the complexity of what the core bullying issue for the school was. Tofteng and Bladt (2020) suggest that authentic participation is achieved by aspiring from the start to engage community members as full partners throughout the research process. From the beginning, the research team needed time and space to unpack the contradictions, emotions, and diversity of their perspectives and sought to see how these aligned with the wider school community perspectives. The co-researchers narrated past and present bullying stories and wider experiences and applied them to the exploration data. This helped us as outside adult researchers to make sense of the core bullying issue(s) and, consequently, a relationship developed between the research team that could not be segmented into minutes, hours, or weeks. According to Brydon-Miller et al. (2020), PAR offers researchers new challenges and opportunities to engage in caring relationships with others to explore democratic ways of working together to achieve positive change. Viewing time as the duration of the experience needed ensures that a PAR study is focused on building relationships centred on trust rather than keeping to a time schedule.

4. Conclusions

This research began from the idea that bullying is a social construct (Horton 2011, p. 269) and the construction of a response to bullying demands a social process of engagement and dialogue (Thornberg and Delby 2019). The PAR process highlighted the importance of the knowledge, perspectives, and insights of students and staff in a school in the search for the core bullying issue. Recognising the importance of the intricate process involved in the recruitment of the co-researchers (Spyrou 2011; Horgan 2017), developing

feedback loops across the school (Lundy 2018), and acknowledging the multiplicity of knowledge, both local and academic (Kellett 2010), assisted in navigating the complexity of the different power dynamics in the study. This was evidenced in the data provided by staff, students, and our fieldnotes. Through the PAR process, power differentials between adults and students were continually interrupted and challenged. We appreciate this is a continuing process as we move further into the next cycle of the study. The recognition of time as non-linear and the duration of the experience needed (Deleuze and Guattari 1987) ensured that the co-constructed research question was rooted in what the staff and students saw as the core bullying concern of the school. Going forward, it is important that the students and staff continue to be involved in the development and implementation of the research 'Action'; as Lewin suggests, "*Research that produces nothing but books will not suffice*" (1946, p. 35).

Notes

1   The latter two to be discussed elsewhere.
2   The findings from this study will be presented in a future publication.

References

Åkerström, Jeanette, and Elinor Brunnberg. 2012. Young people as partners in research: Experiences from an interactive research circle with adolescent girls. *Qualitative Research* 13: 528–45. [CrossRef]

Anyon, Yolanda, Bender H. Kennedy, and Jonah Dechants. 2018. A systematic review of Youth Participatory Action Research (YPAR) in the United States: Methodologies, youth osutcomes, and Future Directions. *Health Education & Behavior* 45: 865–78. [CrossRef]

Attawell, Kathy. 2019. *Behind the Numbers: Ending School Violence and Bullying*. Paris: United Nations Educational, Scientific and Cultural Organization.

Bergström, Jan, Gerhard Andersson, Brjánn Ljótsson, Christian Rück, Sergej Andréewitch, Andreas Karlsson, Per Carlbring, Erik Andersson, and Nils Lindefors. 2010. Internet-versus group-administered cognitive behaviour therapy for panic disorder in a psychiatric setting: A randomised trial. *BMC Psychiatry* 10: 54. [CrossRef] [PubMed]

Bradbury-Jones, Caroline, and Julie Taylor. 2015. Engaging with children as co-researchers: Challenges, counter-challenges and solutions. *International Journal of Social Research Methodology* 18: 161–73. [CrossRef]

Brady, Louca-Mai, Lorna Templeton, Paul Toner, Judith Watson, David Evans, Barry Percy-Smith, and Alex Copello. 2018. Involving young people in drug and alcohol research. *Drugs and Alcohol Today* 18: 28–38. [CrossRef]

Brank, Eve M., Jennifer L. Woolard, Veda E. Brown, Mark Fondacaro, Jennifer L. Luescher, Ramona G. Chinn, and Scott A. Miller. 2007. Will they tell? Weapons reporting by middle-school youth. *Youth Violence and Juvenile Justice* 5: 125–46. [CrossRef]

Braun, Virginia, and Victoria Clarke. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology* 3: 77–101. [CrossRef]

Braun, Virginia, and Victoria Clarke. 2022. Toward good practice in thematic analysis: Avoiding common problems and be (com) ing a knowing researcher. *International Journal of Transgender Health* 24: 1–6. [CrossRef]

Brydon-Miller, Mary, Michael Kral, and Alfredo Ortiz Aragón. 2020. Participatory Action Research: International Perspectives and Practices. *International Review of Qualitative Research* 13: 103–11. [CrossRef]

Bryman, Alan. 2004. *Social Research Methods*, 2nd ed. New York: Oxford University Press, p. 592.

Cahill, Caitlin. 2007a. Doing research with young people: Participatory research and the rituals of collective work. *Children's Geographies* 5: 297–312. [CrossRef]

Cahill, Caitlin. 2007b. The personal is political: Developing new subjectivities through Participatory Action Research. *Gender, Place & Culture* 14: 267–92. [CrossRef]

Camino, Linda. 2005. Pitfalls and promising practices of youth–adult partnerships: An evaluator's reflections. *Journal of Community Psychology* 33: 75–85. [CrossRef]

Chabot, Cathy, Jean A. Shoveller, Grace Spencer, and Joy L. Johnson. 2012. Ethical and Epistemological Insights: A Case Study of Participatory Action Research with Young People. *Journal of Empirical Research on Human Research Ethics* 7: 20–33. [CrossRef]

Colebrook, Claire. 2002. *Understanding Deleuze*. Crows Nest: Allen & Unwin.

Cooke, Bill, and Uma Kothari, eds. 2001. *Participation: The New Tyranny?* London: Zed Books.

Cuadrado-Gordillo, Isabel. 2012. Repetition, power imbalance, and intentionality: Do these criteria conform to teenagers' perception of bullying? A role-based analysis. *Journal of Interpersonal Violence* 27: 1889–910. [CrossRef] [PubMed]

Dadswell, Anna, and Niamh O'Brien. 2021. Working with Adolescents to Understand Bullying and Self-Exclusion from School. *International Journal of Developmental Sciences* 14: 63–72. [CrossRef]

Deleuze, Gilles, and Felix Guattari. 1987. *A Thousand Plateaus*. Mineapolis and London: University of Minnesota Press.

Ditch the Label. 2020. The Annual Bullying Survey 2020. Available online: https://www.ditchthelabel.org/research-papers/the-annual-bullying-survey-2020/ (accessed on 16 February 2023).

Eriksen, Tine L. M., Helena S. Nielsen, and Marianne Simonsen. 2018. Bullying in Elementary School. *The Journal of Human Resources* 49: 839–71. [CrossRef]

European Institute for Gender Equality. 2021. *What Is Sexism?* Available online: https://eige.europa.eu/publications/sexism-at-work-handbook/part-1-understand/what-sexism (accessed on 30 January 2022).

Evans, Caroline B., and Paul R. Smokowski. 2016. Theoretical explanations for bullying in school: How ecological processes propagate perpetration and victimization. *Child and Adolescent Social Work Journal* 33: 365–75. [CrossRef]

Fenwick, Tara. 2012. Complexity science and professional learning for collaboration: A critical reconsideration of possibilities and limitations. *Journal of Education and Work* 25: 141–62. [CrossRef]

Hamada, Shoko, Hitoshi Kaneko, Masayoshi Ogura, Aya Yamawaki, Junko Maezono, Lauri Sillanmäki, and Shuji Honjo. 2018. Association between bullying behavior, perceived school safety, and self-cutting: A Japanese population-based school survey. *Child and Adolescent Mental Health* 23: 141–47. [CrossRef]

Hart Barnett, Juliet E., Kim W. Fisher, Natasha O'Connell, and Kimberlee Franco. 2019. Promoting upstander behavior to address bullying in schools. *Middle School Journal* 50: 6–11. [CrossRef]

Hellström, Lisa, and Adrian Lundberg. 2020. Understanding bullying from young people's perspectives: An exploratory study. *Educational Research* 62: 414–33. [CrossRef]

Herr, Kathryn, and Gary L. Anderson. 2005. *The Action Research Dissertation: A Guide for Students and Faculty*. Thousand Oaks: Sage Publications, Inc.

Hinton, Christina, and Kurt W. Fischer. 2008. Research schools: Grounding research in educational practice. *Mind, Brain, and Education* 2: 157–60. [CrossRef]

Horgan, Deirdre. 2017. Child Participatory research methods: Attempts to go 'deeper'. *Childhood* 24: 245–59. [CrossRef]

Horton, Paul. 2011. School Bullying and Social and Moral Orders. *Children & Society* 25: 268–77. [CrossRef]

Jeffrey, Jenny, and Jaimee Stuart. 2020. Do research definitions of bullying capture the experiences and understandings of young people? A qualitative investigation into the characteristics of bullying behaviour. *International Journal of Bullying Prevention* 2: 180–89. [CrossRef]

Kellett, Mary. 2010. Small Shoes, Big Steps! Empowering Children as Active Researchers. *American Journal of Community Psychology* 46: 195–203. [CrossRef] [PubMed]

Koch, Tina, and Debbie Kralik. 2009. *Participatory Action Research in Health Care*. Hoboken: John Wiley & Sons.

Lewin, Kurt. 1946. Action Research and Minority Problems. *Journal of Social Issues* 2: 34–46. [CrossRef]

Linstead, Stephen, and Torkild Tharem. 2007. Multiplicity, Virtuality & Organization: The Contribution of Gilles Deleuze. *Organizational Studies* 28: 1483–501.

Livingstone, Anne M., Jacqueline Celemencki, and Melissa Calixte. 2014. Youth participatory action research and school improvement: The missing voices of black youth in Montreal. *Canadian Journal of Education* 37: 283–307.

Lundy, Laura. 2018. In defence of tokenism? Implementing children's right to participate in collective decision-making. *Childhood* 25: 340–54. [CrossRef]

Lushey, Clare J., and Emily R. Munro. 2015. Participatory peer research methodology: An effective method for obtaining young people's perspectives on transitions from care to adulthood? *Qualitative Social Work* 14: 522–37. [CrossRef]

Manchester, Helen, and Emma Pett. 2015. Teenage Kicks: Exploring cultural value from a youth perspective. *Cultural Trends* 24: 223–31. [CrossRef]

Mason, Jennifer. 2002. *Qualitative Researching*, 2nd ed. London: Sage Publications.

Mayall, Berry. 2000. The Sociology of Childhood in Relation to Children's Rights. *The International Journal of Children's Rights* 8: 243–59. [CrossRef]

McNiff, Jean, and Jack Whitehead. 2011. *All You Need to Know about Action Research*, 2nd ed. London: SAGE Publications.

Meinck, Sabine, Julian Fraillon, and Rolf Strietholt. 2022. *The Impact of the COVID-19 Pandemic on Education: International Evidence from the Responses to Educational Disruption Survey (REDS)*. Paris: UNESCO.

Merves, Marni L., Caryn R. Rodgers, Ellen J. Silver, Jamie H. Sclafane, and Laurie J. Bauman. 2015. Engaging and sustaining adolescents in Community-Based Participatory Research: Structuring a youth-friendly CBPR environment. *Family & Community Health* 38: 22.

Migliaccio, Todd, and Juliana Raskauskas. 2016. *Bullying as a Social Experience: Social Factors, Prevention and Intervention*. New York: Routledge.

Mitra, Dana L. 2009. Collaborating with students: Building youth-adult partnerships in schools. *American Journal of Education* 115: 407–36. [CrossRef]

Mohan, Greta, Selina McCoy, Eamonn Carroll, Georgiana Mihut, Seán Lyons, and Ciarán Mac Domhnaill. 2020. *Learning for All? Second-Level Education in Ireland During COVID-19*. Survey and Statistical Report Series (ESRI) Number 92. Dublin: ESRI.

Nyman, Anneli, Stina Rutberg, Margareta Lilja, and Gunilla Isaksson. 2022. The Process of using Participatory Action research when trying out an ICT solution in home based rehabilitation. *International Journal of Qualitative Methods* 21: 16094069221084791. [CrossRef]

O'Brien, Niamh. 2016. To 'Snitch' or Not to 'Snitch'? Using PAR to Explore Bullying in a Private Day and Boarding School. Unpublished Ph.D. thesis, Anglia Ruskin University, Chelmsford, UK. Available online: http://arro.anglia.ac.uk/700970/ (accessed on 2 February 2023).

O'Brien, Niamh. 2021. School Factors with a Focus on Boarding Schools. In *The Wiley Blackwell Handbook of Bullying: A Comprehensive and International Review of Research and Intervention*. Edited by P. K. Smith and J. O'Higgins Norman. Chichester: Wiley Blackwell. [CrossRef]

O'Brien, Niamh, and Audrey Doyle. 2023. Exploring School Bullying: Designing the Research Question with Young co-Researchers. Paper presented at the 7th World Conference on Qualitative Research, Faro, Portugal, January 25–27.

O'Brien, Niamh, and Tina Moules. 2007. So round the spiral again: A reflective particpatory research project with children and young people. *Educational Action Research* 15: 385–402. [CrossRef]

O'Brien, Niamh, and Tina Moules. 2012. Not sticks and stones but tweets and texts: Findings from a national cyberbullying project. *Pastoral Care: An International Journal of Personal, Social and Emotional Development* 31: 53–65. [CrossRef]

O'Brien, Niamh, Carol Munn-Giddings, and Tina Moules. 2018. The Ethics of Involving Young People Directly in the Research Process. *Childhood Remixed*, 115–28. Available online: https://www.uos.ac.uk/sites/default/files/Childhood%20Remixed_Journal_2018%20updated.pdf (accessed on 16 February 2023).

O'Higgins Norman, J., Christian Berger, Christophe Cornu, Donna Cross, Magnus Loftsson, Dorte Marie Sondergaard, Elizabethe Payne, and Shoko Yoneyama. 2021. *Presenting a Proposed Revised Definition of School Bullying*. Stockholm: World Anti-Bullying Forum & UNESCO. Paris: Ministère de l'éducation Nationale, de la Jeunesse et des Sports.

Olweus, Dan. 2013. School Bullying: Development and Some Important Challenges. *Annual Review of Clinical Psychology* 9: 752–80. [CrossRef]

Ozer, Emily J., and Laura Douglas. 2015. Assessing the key processes of youth-led participatory research: Psychometric analysis and application of an observational rating scale. *Youth & Society* 47: 29–50.

Patten, Mildred. 2016. *Questionnaire Research: A Practical Guide*. London: Routledge.

Percy-Smith, Barry. 2012. Exploring the role of children and young people as agents of change in sustainable community development. *The International Journal of Justice and Sustainability* 18: 323–39. [CrossRef]

Resnick, Lauren B. 2010. Nested Learning Systems for the Thinking Curriculum. *Educational Researcher* 39: 183–97. [CrossRef]

Reynaert, Didier, Maria Bouverne-de-Bie, and Stijn Vandevelde. 2009. A Review of Children's Rights Literature Since the Adopton of the United Nations Convention on the Rights of the Child. *Childhood* 16: 518. [CrossRef]

Schwartz, Amy Ellen, Leanna Stiefel, and Michah W. Rothbart. 2016. Do top dogs rule in middle school? Evidence on bullying, safety, and belonging. *American Educational Research Journal* 53: 1450–84. [CrossRef]

Scott, William R. 2008. Approaching adulthood: The maturing of institutional theory. *Theory and Society* 37: 427–42. [CrossRef]

Shamrova, Daria P., and Cristy E. Cummings. 2017. Participatory action research (PAR) with children and youth: An integrative review of methodology and PAR outcomes for participants, organizations, and communities. *Children and Youth Services Review* 81: 400–12. [CrossRef]

Skelton, Tracey. 2008. Research with children and young people: Exploring the tensions between ethics, competence and participation. *Children's Geographies* 6: 21–36. [CrossRef]

Slattery, Lindsey. 2019. Defining the word bullying: Inconsistencies and lack of clarity among current definitions. *Preventing School Failure: Alternative Education for Children and Youth* 63: 227–35. [CrossRef]

Slonje, Robert, and Peter K. Smith. 2008. Cyberbullying: Another main type of bullying? *Scandinavian Journal of Psychology* 49: 147–54. [CrossRef]

Spyrou, Spyros. 2011. The limits of children's voices: From authenticity to critical, reflexive representation. *Childhood* 18: 151–65. [CrossRef]

Stoudt, Brett G., Peter Kuriloff, Michael C. Reichert, and Sharon M. Ravitch. 2010. Educating for Hegeony, Researching for Change: Collaborating with Teachers and Students to Examine Bullying at an Elite Private School. In *Class Privilege & Education Advantage*. Edited by Adam Howard and Ruben A. Gaztambide-Fernandez. Lanham: Rowman & Littlefield, pp. 31–53.

Thornberg, Robert, and Hanna Delby. 2019. How do secondary school students explain bullying? *Educational Research* 61: 142–60. [CrossRef]

Tofteng, Ditte, and Mette Bladt. 2020. 'Upturned participation' and youth work: Using a Critical Utopian Action Research approach to foster engagement. *Educational Action Research* 28: 112–27. [CrossRef]

Vaillancourt, Tracy, Patricia McDougall, Shelley Hymel, Amanda Krygsman, Jessie Miller, Kelley Stiver, and Clinton Davis. 2008. Bullying: Are researchers and children/youth talking about the same thing? *International Journal of Behavioral Development* 32: 502–11. [CrossRef]

Vaughn, Lisa M., and Farrah Jacquez. 2020. Participatory Research Methods: Choice Points in the Research Process. *Journal of Participatory Research Methods* 1. [CrossRef]

Webb, Christine. 1989. Action Research: Philosophy, methods and personal experiences. *Journal of Advanced Nursing* 14: 403–10. [CrossRef]

Wikipedia. 2022. *Misogyny*. Available online: https://en.wikipedia.org/wiki/Misogyny (accessed on 30 January 2023).

Wójcik, Małgorzata, and Krzysztof Rzeńca. 2021. Disclosing or hiding bullying victimization: A grounded theory study from former victims' point of view. *School Mental Health* 13: 808–18. [CrossRef]

Younan, Ben. 2019. A systematic review of bullying definitions: How definition and format affect study outcome. *Journal of Aggression, Conflict and Peace Research* 11: 109–15. [CrossRef]

Article

Autoethnography as a Tool for the Achievement of Deep Learning of University Students in Service-Learning Experiences

María Isabel Segú Odriozola

Social and Human Sciences Department, Deusto University, 20012 Donostia San Sebastián, Spain; msegu@deusto.es

Abstract: This exploratory study was carried out within the framework of a pilot learning and service experience in the subject of Qualitative Research Tools in Social Work, where the autoethnographic field journal was used as a tool for the development of deep learning competency in a group of third-year university students undertaking a degree in Social Work and fourth year students undertaking a double degree in Social Education and Social Work in the Social Work, at the University of Deusto. The authors hypothesized that this qualitative research tool could help students develop their ability to critically reflect on their experiences, identify their own strengths and weaknesses in relation to deep learning competency, and establish goals to improve their learning. The service-learning methodology experience proposed for the students involved to participate in a program aimed at the transition to adulthood of young people in situations of vulnerability, where they were required to record in a field journal the emotions, interpretations, and contradictions that the experience of meeting and living with unaccompanied migrant minors using the program could evoke. The results of the qualitative study showed that the autoethnographic field journal was an effective tool for developing deep learning competency in the students participating in the pilot service-learning methodology experience. The results concluded that the autoethnographic field journal could be a valuable tool for promoting reflection, self-awareness, and critical thinking.

Keywords: autoetnography; qualitative research; service-learning methodology

1. Introduction

The evaluation of competencies related to the acquisition of deep thinking by students is a crucial aspect in university education. Nowadays, simply measuring theoretical knowledge is no longer sufficient in a constantly changing world, where graduates need to develop broader and deeper skills to tackle the challenges of the work and social environment.

Professors face the challenge of seeking effective strategies to assess these competencies and enable them to observe and measure the development of deep thinking in students. In this regard, the use of techniques based on qualitative research in Anthropology, such as field journals, can be a valuable option. The autoethnographic field journal is a tool used by anthropologists to record their observations and reflections during fieldwork. The potential of this tool lies in its ability to capture the complexity of deep thinking. Through the field journal, students can express their ideas in a freer and more personal format, allowing them to develop a deeper understanding of the topics studied and reveal the evolution of thinking over time, as well as the connections and interrelationships students establish between different concepts and experiences.

Assessing the competency of deep thinking is inherently challenging, as it cannot be objectively measured as with theoretical knowledge. However, the field journal can offer a pathway to observe and evaluate this type of competency in a more holistic manner.

By reviewing students' field journals, professors can identify patterns, recurring themes, strong arguments, and the level of reflection achieved by each student.

It is important to note that the objective of providing strategies such as the field journal to university professors is not simply to evaluate students, but also to foster their personal and academic development. By using this tool, students are encouraged to delve deeper into their thinking and to self-assess and self-regulate their learning. Additionally, the field journal can serve as a platform for dialogue and constructive feedback between professors and students, promoting more meaningful and collaborative learning.

The good practice presented is the result of the evaluation of an exploratory pilot experience that was developed as a strategy for the acquisition of the competence "Deep Learning" in students of a degree in Social Work and a double degree in Social Education and Social Work in the third year of the University of Deusto, and the objectives set out were as follows.

1.1. General Objective

Evaluate the suitability of the autoethnographic field journal as a tool for the development and achievement of deep learning competency in individuals engaged in service-learning methodologies.

1.2. Specifics Objectives

- Identify the potential of the autoethnographic field journal for the development of deep learning competency.

The possibilities offered by the tool for the development of deep learning competency should be analyzed. To do so, aspects of the competency that can be addressed through the use of the journal can be identified, such as critical reflection, self-regulation of learning, information management, and teamwork.

- Identify the limitations of the autoethnographic field journal for the development of deep learning competency.

The limitations or difficulties that may arise when using the autoethnographic field journal to develop deep learning competency should be identified. For example, there may be difficulties with self-evaluation and feedback, or there may be problems with the practical application of knowledge acquired through the journal.

- Evaluate the suitability of the tool from the perspective of the teacher and the students.

Based on the information gathered, an evaluation of the suitability of the autoethnographic field journal for the development and achievement of deep learning competency in university students should be carried out. This evaluation should take into account both the pedagogical perspective of the tool and its pragmatic perspective, including its potentialities and limitations for teachers and students.

2. Theoretical Framework

The deep reflection that can be generated by deep learning derives from Dewey's (1933) reflective paradigm, according to which "human beings learn from interaction with their environment based on their functional adaptation capacity, through trial and error" (Ruiz 2013, p. 108). Learning by doing is an active learning methodology that is based on experience to assimilate concepts through actions. It also encourages students to learn from mistakes and draw conclusions after analyzing practice in a clear spirit of continuous improvement. Deep learning as a university competence is understood as the development of values and competences for professional insertion and active and responsible citizenship. Deep learning focuses on promoting heuristics, research, discussion, and participatory teaching with the main aim of helping students learn how to learn (Álvarez Cedillo et al. 2019). It was first used by two American academics, Marton and Säljö (1976).

Following Sabariego Puig et al. (2019), deep learning involves in students the acquisition of the ability for self-reflection, asking questions and seeking answers beyond what

is presented in the classroom. The information received is critically examined rather than assimilated as absolute truth. The same author indicates that "To produce deep and active learning, academic or professional reflection typical of Higher Education requires access to the ultimate critical level (critical or transformative reflection) for the (re)incorporation of new qualities into the acquired knowledge and skills of the learner" (Sabariego Puig et al. 2019, p. 816). This critical capacity will allow the student to recognize their own personal and professional strengths and weaknesses, as it provides a space for reflection where biases and stereotypes, strengths and weaknesses of themselves that can influence their future thinking and behavior, emerge.

In addition, this deep learning allows students to recognize complexity: the student, from achieving deep learning, understands that problems and situations can be complex and multidimensional and strives to understand all the aspects involved.

The proposal of reflection connected to the practice and theory of experiential learning (Dewey 1933; Kolb 1984) has shed light on the value of experiences and reflection through narrative as central axes of the learning process in the university context (Montagud 2015).

2.1. Service-Learning Methodology (SLM): Qualitative Research Tools in Social Work and Social Education

As we have just indicated, from the university environment and with the conviction that the university must be at the service of society and train people who transform the world, more and more subjects are being developed in which the development of formative knowledge and skills is linked to the experience of providing a service to the community. SLM is a methodology that integrates the learning of content, skills, and values and service to the community in the same educational project with the aim of offering a direct service to society to transform and improve it (Ferrán and Guinot 2012). All subjects and courses can be approached with this type of focus from involvement with the social needs of the environment.

The SML is a shared experience between different actors (university, students, and third sector entities) where a service to be provided is detected. This need can be detected by any of the three participating actors, and it will be the person responsible for the subject, the teacher, who facilitates and enables the demand to be adapted to the academic purpose so that the need is satisfied (Uruñuela 2018).

On the other hand, students will obtain learning through the practical application of theoretical contents received in the classroom, obtaining a response from their academic environment to the needs raised by the third sector entity (Perrenoud 2003). The evaluation system of the competencies acquired by the students through the SML experience will be carried out through autoethnography (Baz and Febrero 2013). According to Tapia (2006), there are three essential characteristics of SML:

- Active protagonism: the activity is actively led by the students.
- Solidary service: aimed at addressing real and felt needs of a community. Specific activities are planned, appropriate and limited to the age and abilities of the protagonists, and oriented to collaborate in the solution of specific community problems.
- Intentionally planned learning in relation to solidary activity: the project explicitly articulates the learning of curricular contents, in the case of educational institutions, or formative contents, in the case of social organizations.

2.2. Autoethnography as an Educational Toolkit

Autoethnography is a research approach that seeks to systematically describe and analyze personal experience in order to understand cultural experience (Ellis et al. 2015; Holman 2005). Autoethnography places the person who experiences the phenomenon at the center of interpretive practice (Custer 2014). From there, the person addresses their own experiences and relates them to the social phenomenon they are studying, establishing a dialogical relationship between their individual experience (which can also be collaborative) and the object of their analysis. The scope in which autoethnography unfolds allows for

the interweaving of experiential practice with deep learning (Kumar 2021). The purpose of autoethnography is to provide a deep and engaged look at a complex social phenomenon that the researcher has experienced firsthand and that they also address in their research work. In this way, autoethnography proposes to eliminate the distance between observer and observed, in an exercise whose result is an interpretation of the social phenomenon of the meanings they acquire (Arcila Mendoza et al. 2010).

It is relevant to consider how meanings are constructed; in this regard, Bruner (2003) states that the construction of meaning is a fundamental activity that arises from the continuous act of updating our history. Language will provide a system of symbols and interrelational rules that facilitate the thought process to the extent that it provides a categorical system that allows for the embodiment and organization of thought content. Hence, when talking about meanings, the narratives in which each subject relates their history or experiences must be considered; in this sense, a meaning is "a continuous process of being in which the subject updates their notions of the world, others, and themselves in symbolic terms, according to the evolutionary stage through acts, images, and signs" (Vergara and Margarita 2011, p. 78).

2.2.1. Autoethnographic Field Diary

The autoethnographic field diary is a qualitative research tool that allows researchers to reflect on and record their personal experiences while conducting ethnographic research (Chang 2013). This approach is based on the premise that the researcher is an active participant in the context being studied and, therefore, their experiences, reflections, and emotions should be included in the analysis. It was developed by Carolyn Ellis, Tony E. Adams, and Arthur P. Bochner in the 1990s. These authors promoted the use of autoethnography as a tool to understand the subjective experiences of researchers and to explore cultural and social themes from a personal and reflective perspective (Bochner and Ellis 2002). This tool enables obtaining a deeper and richer understanding of the cultural context in which the research is conducted, as well as the ability to include the researcher's personal reflections and emotions in the analysis. It can also help researchers discover new research questions and themes as they progress in their work (Custer 2014).

The autoethnographic field diary has several phases that must be followed for its proper use as a research tool. These phases, as indicated by Aguirre-Armendáriz (2012), are detailed below:

- Participant observation: The first phase of the autoethnographic field diary consists of participant observation. This involves the researcher's immersion in the cultural or social context being studied. During this phase, the researcher must take detailed notes on their experiences, reflections, and emotions, and how these are related to the culture or society being studied.
- Recording of notes and reflections: In this phase, the researcher records their notes and reflections in a field diary. It is important that the diary is detailed enough to allow for later reflection on the experiences and emotions that the researcher experienced during participant observation.
- Reflexive analysis: The reflexive analysis phase involves the review and reflection on the notes and reflections recorded in the field diary. During this phase, the researcher should look for emerging patterns and themes in their notes and reflections. They should also consider how these personal experiences are related to the cultural or social themes being studied.
- Writing the autoethnographic diary: The final phase of the autoethnographic field diary involves writing the autoethnographic diary. In this document, the researcher must use their notes and reflections recorded in the field diary to tell a story about their personal experience in the cultural or social context being studied. The writing of the autoethnographic diary may include detailed descriptions of the researcher's experiences, as well as reflections and analysis on how these experiences are related to the cultural or social themes being studied.

2.2.2. Autoethnography in Service-Learning Methodologies

The autoethnographic field journal is an analytical tool that can be very useful in courses that use service-learning methodologies in universities. This qualitative research tool allows students and teachers to reflect and record their personal experiences while carrying out a service task in the community (Dubé 2017). This enables them to better understand the complexity of the situation and how it affects the people seeking the service, as well as how their participation in the service task affects their own learning.

One of the main reasons why the autoethnographic field journal is useful in these courses is that it allows students and teachers to record their experiences and emotions while carrying out the service task. Through reflection on these experiences, they can better understand how they relate to the objectives of the service task and how these experiences can contribute to their personal and professional development. In addition, the autoethnographic field journal can help students and teachers identify problems and areas for improvement in the service task, which can be very useful for future service tasks in the same or other communities. The autoethnographic design is presented in this practice as a tool in the teaching-learning process of students that allows for deep reflection from Dewey's (1933) reflective paradigm. It should be noted that from the literature review, we found Dubé (2017) who also used the toolkit for service-learning purposes, but apart from this author, there is no evidence of other experiences of using the toolkit for learning purposes in higher education; so, apart from this author, it can be said that its use is new in this area.

With the application of this tool, it is possible to eliminate the distance between observer and observed, in a self-analytical exercise, whose result is an interpretation of the social phenomenon in which they are participating, and they can acquire perspectives of reflective thinking that would otherwise remain in the dark. Montagud (2016, p. 132) points out the benefits of narrative reflective thinking:

- Seeks to describe and analyze a problem or situation from one's own personal experience by connecting it with the social environment.
- Combines artistic and scientific language to produce a creative text that values personal experience.
- As an essential feature, it brings together the researcher, the researched, and the narrator in the same narrative.
- As a method, it combines features of autobiography and ethnography.
- As a product, it consists of an aesthetic and provocative text.
- As a process, it shows multiple layers of consciousness.

Another reason why the autoethnographic field journal is a valuable analytical tool in these courses is that it allows for a deeper understanding of the cultural or social context in which the service task is carried out. By recording their experiences and reflections in the journal, students and teachers can identify emerging patterns and themes in their interaction with the community and individuals they seek to serve. In this way, they can have a better understanding of how the culture and social norms of the community influence the service task and how the service task can impact the community and their own learning.

3. Methodology

3.1. Epistemological Approach

The constructivist approach and meaningful learning provide theoretical and methodological support for the characteristics and strategies that facilitate the development of competencies, to achieve autonomous learning and independent work, fundamental foundations in deep learning processes. This theoretical and methodological approach is based on the idea that knowledge is not simply transmitted from a teacher to a student, but is constructed by the student through their interaction with the learning context and their reflection on their own experiences and thoughts (White 2001). In this sense, learning is conceived as a social process in which students construct their own knowledge from

practical experience and interaction with the real world (Piaget 1952; Bruner 1960; Ausubel 1967; Vygotsky 1978).

Within this theoretical framework, evaluation is understood as an integral part of the learning process and should be constant throughout the experiential process. In this way, students have the opportunity to assess their own progress and receive constant feedback to improve their understanding and competencies.

One of the most effective methods to promote meaningful learning and the development of competencies in students is through the implementation of activities that involve the provision of solidarity services in their community. These activities are integrated into the curriculum and planned systematically so that students can develop values and attitudes of commitment and improvement of their social environment (Martín-García et al. 2021).

The Application of Professional and Solidarity Practices (APPyS) is an example of this type of activity. The implementation of APPyS generates an experiential transformation in students, as it allows them to come into contact with the real needs of their community and generates processes of deep service-learning to the community. This methodology is based on the idea that training becomes meaningful when it connects with the motivations and vital experiences of students (Ferrán and Guinot 2012).

3.2. Description of the Good Practice

The practice was developed within the framework of the course called "Qualitative Research Tools in Social Work" of the academic year 2022–2023, from September to January (4 h/week). The sample consisted of 32 students from the 3rd year of the degree in Social Work and the 4th year of the double degree in Social Work and Social Work and Social education at the University of DEUSTO in Spain. The entity where the experience took place was a third sector entity, GAzteOn SareLan, an organization that works with young people in situations of vulnerability and/or exclusion in their transition to adulthood. During the experiential practice, students had to carry out an analysis of the emancipation needs of these former wards based on professional accompaniment in context.

The specific competences of the course were the realization of a diagnostic report of the group based on a qualitative research design, and the transversal competence: deep learning of the students. The methodology developed for this purpose was that of service-learning.

When it comes to evaluating the experience, two levels of analysis can be observed, since on the one hand we want to evaluate the acquisition of deep learning, based on the autoethnographic diary, while they are performing the service, and on the other hand, a second questionnaire needs to be developed for the students to evaluate the validity of the autoethnographic diary toolkit.

In terms of the methodology of this design, one could consider a mixed approach, combining qualitative and quantitative methods. On the one hand, the questionnaire guiding deep learning during the service activity focuses on open-ended, qualitative questions to capture students' experiences and perceptions. The qualitative tools for the acquisition of competences were accompaniment, observation, in-depth interviews, and the self-ethnographic field diary. Regarding the self-ethnographic field diary tool, in order to achieve the transversal competence, deep learning, the students had to submit a self-ethnographic field diary where they had to answer these questions weekly throughout the duration of the service-learning experience. Self-reflexive guiding ad-hoc questionnaire, based on questions used to encourage introspection and growth in educational and developmental settings (Deeley 2016):

1. How do I feel about the experiential practice and what aspects of it have challenged me or taken me out of my comfort zone?
2. How do I feel about the people I interact with during this experience and what are my feelings about it?

3. What personal values have been reflected or challenged during this experiential practice, and what do I like most about myself and why?
4. What are my goals and expectations in participating in this experiential practice, and how have they evolved over time?
5. What is costing me the most and why?
6. What am I learning from the experience, and what specific skills or knowledge have I developed or strengthened?
7. What would I like to improve about myself as a future professional, and what do I think my role is in this experience?
8. How do I think I can contribute to this experiential practice, and what changes or improvements can I implement in my approach or attitude to maximize my learning and personal growth?
9. How has this experience impacted my perspective on the world and my future professional path, and what connections can I establish between this experience and the concepts or theories I have learned in my studies?
10. How can I apply what I have learned in this experiential practice to other situations in my personal or professional life, and how can I use this experience to build a network of contacts or expand my professional network?

3.3. Questions and Items for the Tool Evaluation

On the other hand, the autoethnographic diary evaluation questionnaire, in addition to open-ended questions, includes closed-ended questions and rating scales to collect quantitative data on the effectiveness and perception of the toolkit itself. This combination allows for a more complete understanding of the outcomes and effectiveness of the service-learning design using the autoethnographic diary.

The students must carry out an evaluation of the self-ethnographic field diary tool and its usefulness for achieving deep analysis by answering the following questions:

1. What positive aspects would you value about the self-ethnographic field diary tool?
2. What limitations have you seen?
3. What overall assessment would you make of the implementation of this reflection tool?
4. What improvement aspects would you propose?

4. Results and Discussion

4.1. The Potential of the Autoethnographic Field Journal for the Development of Deep Learning Competency

Autoethnography has provided students with a sense of construction in the moment of being able to self-analyze the way they approach problems that have brought to light personal conditioning factors for action. Based on what was recorded in their journals, students have been able to construct meaning for several reasons. First, autoethnography involves reflection and critical analysis of one's own experience, which can help students understand and make sense of their personal experiences and environment. By reflecting on their own experiences and emotions, students can identify patterns and emerging themes in their lives and environment, allowing them to construct deeper meaning and understanding of their experiences. The academic time allocated for introspective analysis of themselves and their professional performance in the field has been valued, as can be seen in the following accounts:

> *"I have enjoyed having time to reflect in this course. Everything goes very fast, and I have appreciated being able to have time to think and reflect. The fact that I am "obliged" to write daily and think about how I felt in each intervention has helped me to pause. Action with reflection seems silly, but we act without reflecting, and I think that thinking about how I have been functioning has given me perspective on how I act, how I am, and how I behave as a professional."* (E31)

In addition, reflexive experience in the context of intervention allows students to simultaneously integrate theoretical and practical knowledge in professional practice (Perrenoud 2003), which allows them to become aware of how they generate their personal/professional relationships in order to accept and improve them. This is explained by the following student:

> *"I had never stopped to think about the influence we generate in others. [. . .] We had connected a lot, and on the days when I was sick and couldn't go to Amelia's center, she missed me, at least that's what my classmates told me, and she was distressed just thinking that she wouldn't see me again. I think the responsibility we have as professionals when establishing links with the people we work with is enormous, and it is an element that I have realized by having to stop and think and write about the emotions I have been feeling."* (E22)

Self-reflection has provided a resignification of emotions in students, understood as the process of giving a new meaning or interpretation to an emotion that is being experienced. Instead of simply accepting the emotion as it presents itself, resignification involves reevaluating it and seeking a more positive or useful meaning. The student experiences it this way:

> *"I had always felt rejection towards people without a home, now I think that rejection was nothing more than a shield to not delve into the causes, empathize with them, and not suffer if I couldn't do anything."* (E30)

In the inductive analysis of the evaluation, there is also the sense of construction that students generate when analyzing their own and others' experiences, as they have been able to identify the social and cultural norms that influence their environment, which allows them to construct a deeper sense of the society in which they live (Arcila Mendoza et al. 2010).

> *"Now I understand that the use of the veil can be voluntary for Muslim women and an option. In Salma's case, her family allows her not to wear the veil, but she wants to wear it even though she is the only one in her school who does."* (E19)

The autoethnographic field journal can generate interest and curiosity in learning for several reasons. First, autoethnography involves a personal and reflective exploration of one's own experiences, which can be very motivating and stimulating for students. By reflecting and critically analyzing their personal experiences, students can discover new ideas, perspectives, and knowledge that can be very interesting and challenging. Autoethnography has generated interest and curiosity in learning among students by allowing them to explore the culture and society in which they live in a deeper and more authentic way. By analyzing their own experiences and those of others, students have been able to discover patterns and emerging themes in their environment and in society. The fact that it has allowed for creative expression to narrate their experiences and emotions in a personal and meaningful way, through texts, drawing, photography, video, among others, has been a creative way for them to acquire knowledge in students. The fact that they were allowed to express themselves creatively in data collection for subsequent analysis, such as writing, drawing, photography, and video, among others, has been a discovery that has motivated them, as they were unaware of these practices to communicate their experiences and emotions in this symbolic, personal, and meaningful way Montagud (2016).

> *"I have enjoyed being able to capture elements for analysis in images . . . I didn't know that this could also be done this way."* (E22)

> *"It has been a different course that has allowed me to write poems to express my feelings."* (E5)

The students have demonstrated that they have been able to apply their own skills and knowledge to solve real problems and needs in the real world, more specifically by collaborating directly with a group of people who share a series of more or less common needs that identify them as a group. In resolving practical cases in the classroom and

solving "paper" problems, the problem situations are easily resolved by applying the required intervention model methodology, in the same line as indicated by Tapia (2006). However, real-world experience allows them to become aware of the real difficulties that may arise when working with real people, and through reflective practice, knowledge, and expertise emerge from their own experience. They explain it in the following way:

> *"The practical cases that are solved on paper always have a 'Disney ending,' they always end well, paper can withstand anything. But when you're face-to-face with a young person who has crossed the Strait of Gibraltar in a dinghy and is telling you about everything that has happened to them, you see the harshness of their story, the traumas they have . . . That's not going to be solved in two hours."* (E13)

> *"Thinking about my personal and professional weaknesses has helped me identify areas for improvement. I think I have a lot to learn, even though I have always achieved very good results in resolving practical cases in class, but when I was in the center, there were situations in which I didn't know how to respond, what to say . . . I felt like crying, and that's not professional, I can't cry in front of them, they have enough to deal with."* (E4)

4.2. Limitations of the Autoethnographic Field Diary for the Development of Deep Learning Competence Had Been

The limitations of the autoethnographic field diary for the development of deep learning competence lie in the subjective nature of this toolkit, as the learner interprets and records their experiences. This inevitably introduces personal biases and prejudices into the reflection, which may affect the validity and reliability of the findings. To effectively engage in self-criticism, as Sabariego Puig et al. (2019) mentioned, it is important for the student to adopt a critical and reflective attitude towards their own work and be able to identify their own starting biases and personal prejudices. In addition, the student must consider the limitations of their own perspective and consider multiple viewpoints.

> *"I don't know if what I'm saying is a product of my experience. The truth is that in the past, I had an altercation with some Moors who threatened me and my friends with a knife to rob us, and now I don't believe everything they say."* (E15)

To minimize the impact of this bias, complementary research techniques can be used that allow for data triangulation and validation of the findings. In addition, it is important to receive feedback and constructive criticism from other researchers and experts in the field to help identify possible biases and areas for improvement. Furthermore, difficulties were observed in interpreting the data collected in the diary, which limited the understanding of the results and made it difficult to identify relevant patterns and trends.

Another limitation to mention was centered on the writing of narratives, as writing to produce autobiographical accounts students have found the time dedicated to writing somewhat cumbersome. On average, they have spent more than two hours per week on the analysis, and the fact that they had to write it in the field notebook has been considered to slow down their work. They propose being able to do it on a computer.

> *"[. . .] it should be allowed to do it on the computer. Writing by hand takes a long time, and besides, the written document can get lost or damaged, whereas if you do it on Drive, it's always saved and accessible."* (E12)

4.3. Suitability of the Tool from the Perspective of the Teacher and the Students

The assessment of the experience has highlighted the effort to create ambitious and meaningful tasks that reflect how knowledge is used in the field. The teacher, in their role as process facilitator, involves students in the context of active learning, so that they can apply and test their social skills and professional competencies acquired in the university setting (Sabariego Puig et al. 2019). The function of the facilitating teacher in this practice is to provide students with clear procedural standards, provide constant feedback, offer opportunities to review the work being completed, and accompany them in their personal processes.

As a facilitating professor, it is necessary to continuously evaluate the experience and students' learning, and to adapt to the needs they present.

This learning dynamic in the Service, accompanied by the reflection generated in the autoethnographic journal, helps to understand and internalize theoretical knowledge and promotes strategic and metacognitive thinking so that students learn to evaluate and guide their own learning (Perrenoud 2003). In this autoethnographic exercise, the role of the student-researcher-narrator is vital because it allows for experiential interaction with the sociocultural processes in which they are immersed, leading to processes of self-analysis, self-introspection, and self-observation, structuring their emotions around their own sociocultural journey in a deep reflective practice:

- Emotionally, in the development of this proposal, autoethnography assumed as a research method, challenging ways of accessing knowledge, uses narrative collection techniques from students that allow them to reflect, understand, and face their own emotions, perhaps not identified previously. Reflective practice involves introspective and critical reflection on our actions and decisions. In this sense, awareness of how we generate our personal and professional relationships is fundamental to reflective practice, as it allows us to evaluate how we are interacting with others and how our actions affect others. Through awareness of our relationships, we can identify patterns of behavior that may be dysfunctional or unhealthy, and seek ways to improve them. This allows us to develop more effective interpersonal skills, such as clear and respectful communication, active listening, empathy, and conflict resolution.
- Pedagogically, the tool of the autoethnographic field journal has generated interest and curiosity in learning, as it has meant a personal and reflective exploration of their own experiences. By reflecting and critically analyzing their personal experiences, students have discovered new ideas, perspectives, and emerging patterns and themes in their environment and in society in general, which has been very stimulating. In future, due to the fact that it allows for creative expression to narrate their experiences, it is anticipated that the expression of emotions in a personal, meaningful, mixed method, through texts, drawing, photography, and video, among others—as a triangulation design that also combines complementary techniques of a self-administered reflective thinking questionnaire and the realization of discussion groups to deepen the narrative of the process—would be beneficial and could obtain more complete results in creative way for students to acquire knowledge.

In the professional field of social work, awareness of our relationships can have a significant impact on our ability to work in teams and collaborate with other professionals. It can also help us establish healthy and productive relationships with service users.

5. Conclusions

The acquisition of the "Deep Learning" competence is gaining importance in higher education, but its practical application and the methods for its acquisition are still under development. This study specifically focuses on exploring how the autoethnographic tool can facilitate the development of indicators related to student learning outcomes in the university context, which can be a valuable contribution to the field of higher education.

The application of this tool in the context of service-learning is an innovative and underexplored approach in the academic literature, as observed through the conducted literature review. Most previous studies have focused on more traditional evaluation methods, such as surveys or structured interviews. Thus, this study presents an original perspective by proposing the use of autoethnography, beyond its common association with the field of anthropology, as a means to acquire this competence.

The exploratory approach of the study opens up new lines of research in the academic field and can provide a starting point for future investigations, inspiring other researchers to delve deeper into this topic.

References

Aguirre-Armendáriz, Elizabeth. 2012. Un recorrido autoetnográfico: De las construcciones sociales de la sequía hacia otras construcciones posibles. *Athenea Digital* 12: 175–83. [CrossRef]

Álvarez Cedillo, Jesús Antonio, Teodoro Álvarez Sánchez, Raúl Junior Sandoval Gómez, and Mario Aguilar Fernández. 2019. La exploración en el desarrollo del aprendizaje profundo. *RIDE Revista Iberoamericana para la Investigación y el Desarrollo Educativo* 9: 833–44. [CrossRef]

Arcila Mendoza, Paola Andrea, Yency Liliana Mendoza Ramos, Jorge Mario Jaramillo, and Óscar Enrique Cañón Ortiz. 2010. Comprensión del Significado desde Vygotsky, Bruner y Gergen. *Diversitas: Perspectivas en Psicología* 6: 37–49. [CrossRef]

Ausubel, David P. 1967. Learning theory and classroom practice. *Ontario Institute for Studies in Education Bulletin* 1: 31.

Baz, Vanesa Lorenzo, and Begoña Matellanes Febrero. 2013. Desarrollo y evaluación de competencias psicosociales en estudiantes universitarios a través de un programa de aprendizaje-servicio. *Revista internacional de Educación Para la Justicia Social* 2.

Bochner, Arthur P., and Carolyn Ellis. 2002. *Ethnographically Speaking: Autoethnography, Literature, and Aesthetics*. Walnut Creek: Rowman Altamira, vol. 9.

Bruner, Jerome. 1960. Biografía y Teoría del Aprendizaje por Descubrimiento. Available online: https://www.lifeder.com/jerome-bruner (accessed on 22 May 2023).

Bruner, Jerome. 2003. *Making Stories: Law, Literature, Life*. Harvard: Harvard University Press.

Chang, Heewon. 2013. Individual and collaborative autoethnography as method. In *Handbook of Autoethnography*. Walnut Creek: Left Coast Press, pp. 107–22.

Custer, Dwayne. 2014. Autoethnography as a transformative research method. *The Qualitative Report* 19: 1–13. [CrossRef]

Deeley, Susan J. 2016. *El Aprendizaje-Servicio en educación superior: Teoría, práctica y perspectiva crítica*. Madrid: Narcea Ediciones, vol. 44. [CrossRef]

Dewey, John. 1933. *How We Think: A Restatement of the Relation of Reflective Thinking to the Educative Process*. Boston: D.C. Heath y Co Publishers. [CrossRef]

Dubé, Gabrielle. 2017. La Autoetnografía, un Método de Investigación Inclusivo. *Visión Docente ConCiencia XV* 83: 6–23. Available online: https://www.redalyc.org/jatsRepo/4548/454854402008/html/index.html (accessed on 22 May 2023).

Ellis, Carolyn, Tony E. Adams, and Arthur P. 2015. Autoetnografia, Un Panorama. *Astrolabio, Nueva Época* 14: 249–73. [CrossRef]

Ferrán, Ane, and Cinta Guinot. 2012. Aprendizaje-servicio: Propuesta metodológica para trabajar competencias. *Portularia* 12: 187–95. Available online: https://dialnet.unirioja.es/servlet/articulo?codigo=4548673 (accessed on 22 May 2023).

Holman, Jones. 2005. Autoethnography: Making the personal political. In *Handbook of Qualitative Research*. Edited by N. K. Denzin and Y. S. Lincoln. Thousand Oaks: SAGE, pp. 763–91.

Kolb, David. 1984. *Experiential Learning: Experience as the Source of Learning and Development*. Englewood Cliffs: Prentice-Hall.

Kumar, Kari L. 2021. Understanding and expressing academic identity through systematic autoethnography. *Higher Education Research & Development* 40: 1011–25. [CrossRef]

Martín-García, Xus, Brenda Bär-Kwast, Mónica Gijón-Casares, Josep María Puig-Rovira, and Laura Rubio-Serrano. 2021. El mapa de los valores del aprendizaje-servicio. *Alteridad. Revista de Educación* 16: 12–22. [CrossRef]

Marton, Ference, and Roger Säljö. 1976. On qualitative differences in learning: I—Outcome and process. *British Journal of Educational Psychology* 46: 4–11. [CrossRef]

Montagud, Xavier. 2015. Complejidad, reflexividad y autoetnografía. Las posibilidades de la investigación narrativa en la mejora de la práctica profesional. *Trabajo Social Global-Global Social Work: Revista de Investigaciones en Intervención Social* 5: 3–23. [CrossRef]

Montagud, Xavier. 2016. Analítica o evocadora: El debate olvidado de la autoetnografía. *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research* 17: 1–19. [CrossRef]

Perrenoud, Philippe. 2003. Qu'est-ce qu'apprendre? *Enfances & Psy* 4: 9–17. [CrossRef]

Piaget, Jean. 1952. *The Origins of Intelligence in Children*. New York: International Universities Press, vol. 8, pp. 18–1952.

Ruiz, Guillermo. 2013. La teoría de la experiencia de John Dewey: Significación histórica y vigencia en el debate teórico contemporáneo. *Foro de Educación* 11: 103–24. [CrossRef]

Sabariego Puig, Marta, Angelina Sánchez Martí, and Ana Belén Cano Hila. 2019. Pensamiento reflexivo en la educación superior: Aportaciones desde las metodologías narrativas. *Revista Complutense de Educación* 30: 813–30. [CrossRef]

Tapia, María Nieves. 2006. *Aprendizaje y Servicio Solidario: Algunos Conceptos Básicos*. Buenos Aires: Programa Nacional Educación Solidaria.

Uruñuela, Pedro Ma. 2018. *La metodología del Aprendizaje-Servicio: Aprender Mejorando el Mundo*. Madrid: Narcea Ediciones, vol. 215.

Vergara, Sánchez, and Maria Margarita. 2011. De la simbolización como representación de la falta. Available online: https://repository.unab.edu.co/handle/20.500.12749/17668 (accessed on 22 May 2023).

Vygotsky, Lev S. 1978. *Mind in Society: Development of Higher Psychological Processes*. Cambridge: Harvard University Press.

White, Michael. 2001. *Reflexiones sobre la práctica narrativa*. Adelaida: Centro de Publicaciones Dulwich.

Article

Evaluating the Impacts of a Research Ethics Training Course on University Researchers

Jasper Knight

School of Geography, Archaeology and Environmental Studies, University of the Witwatersrand, Johannesburg 2050, South Africa; jasper.knight@wits.ac.za

Abstract: Training in research ethics is an essential part of professional development for graduate students and academic and research staff at universities and other research institutions. Certificated training in research ethics has been offered at the University of the Witwatersrand, Johannesburg, South Africa, since 2019. This training comprises a 4 h content-based workshop followed by a written assignment with attendees who are mainly graduate students and academic staff of the University. This study presents the results of an anonymous online survey that evaluated the impacts of the ethics training on researcher professional activities, in particular where their research deals with human participants. Those invited to take part in the survey were the successful attendees who had attained a Certificate of Competence in Research Ethics. Results (n = 92) showed that the majority of respondents were satisfied with the nature, format and depth of content of the training, and reported that it has a positive impact on their development as researchers. Specifically, this included thinking through their project design, and developing critical thinking and problem solving skills related to their project. Overall, the results highlight the importance of research ethics training in researcher development, as well as engendering critical reflection on ethical issues in different research contexts. It also shows the importance of ethics training in a 'live' session where participants are able to ask questions, engage in debate, and undertake a written assessment that tests their application of ethics concepts.

1. Introduction

Research ethics is increasingly recognised as an important element in the professional training and development of all types of researchers—in academia, government and industry—and at all levels, from students to professional researchers, technicians and consultants (Beauchemin et al. 2022; Brear and Gordon 2021; Knight 2019; Pillay and Qhobela 2019). The interactions of researchers with any research participants have potential to give rise to negative outcomes for those participants, to the researchers, and to wider society (Ratnam and Drozdzewski 2022). Landmark documents and international guidelines, such as the Belmont Report and the Singapore Statement on Research Integrity, help frame the development of research ethics practices and processes at the international level (Fischer 2006; Friesen et al. 2017; Nagai et al. 2022). However, how these principles are applied at the national level depends on national policies and procedures which are themselves set in a legal and regulatory context. In addition, ethics review processes and requirements may vary between institutions or academic disciplines, and this can give rise to inconsistent standards and practices (Kalichman et al. 2015; Mumford et al. 2015; Rudra and Lenk 2021). Hitherto, most research ethics training developed worldwide has been in medical rather than non-medical contexts, including in the fields of nursing, psychiatry, clinical medicine and bioethics (e.g., Bravin et al. 2020; Chen 2003; Cummings et al. 2018; Halkoaho et al. 2013; Sullivan et al. 2020). By contrast, research ethics training in the social sciences is

relatively less well developed (Emmerich 2016) but has engaged with overarching issues of participant vulnerability, traditional knowledge systems and cultural diversity (e.g., Knight 2019; Koloi-Keaikitse et al. 2021; Tijdink et al. 2021; Valkenburg et al. 2021). Nevertheless, there has not been a systematic assessment of the effectiveness and transformative potential of research ethics training for social science researchers; this study contributes to this debate.

Undergoing ethics clearance for a project is often seen as a key way for researchers to develop an understanding of ethical issues in research (e.g., Brown et al. 2020; Madikizela-Madiya and Motlhabane 2022; Sivasubramaniam et al. 2021). Evaluating and mitigating risk and vulnerability is an essential part of research design and planning (Bonde et al. 2016; Gannon 2014), and appropriate research training can help researchers, and especially graduate students, to navigate these ethical issues (Löfström 2012; Rashid 2020). This means that consideration of research ethics, amongst a range of other issues related to academic integrity, should be seen as an important part of the development of the professional practice of researchers (Tammeleht et al. 2022; Valkenburg et al. 2021). Despite this clear relationship between researcher training in ethics and the ethical conduct of those researchers when they are engaged in data collection and analysis using human participants, there is often a mismatch between training and practice (Brown and Kalichman 1998; Hildt et al. 2019). One reason for this is that obtaining ethics protocol clearance for a particular study is often seen as a 'tick-box' exercise rather than an activity that can lead to ongoing self-reflection of one's own professional practice and the better design of any project (von Unger 2016). A second reason is that ethics training is not always integrated with training in other research methodologies and study design elements for graduate students, but seen as a stand-alone activity outside of the successive stages of completing a research degree (e.g., writing a proposal or a literature review, presenting at a conference, writing a paper) (Brown et al. 2020; Dowling Dols et al. 2017; Farrugia 2019). Thus, the lack of seamless integration of research ethics as part of ongoing research training hinders its development through academic programmes at the institutional level worldwide (Beauchemin et al. 2022; Hansson 2011; Tijdink et al. 2021).

In order to better address these limitations of research ethics training and research professional development, more integrated and ongoing researcher training is required, especially for graduate students in the social sciences. Most research ethics training that is currently on offer, both internationally and within individual institutions, has most commonly been developed in a medical rather than a non-medical (social science) context at these institutions, despite social science researchers having different requirements for ethics training because of the different ways in which they may interact with human participants and their data (Emmerich 2016; Kalichman et al. 2015; Sheehan et al. 2018). This study aims to evaluate the effectiveness of research ethics training (mainly for social science researchers) at one university through surveying successful attendees on their experiences and perceptions of the training and its impacts on their research and academic development. This is based on results from an anonymous online survey.

2. Background and Institutional Ethics Training

The University of the Witwatersrand, Johannesburg, South Africa, has offered certificated training in research ethics since April 2019, designed and run by the author, who chairs one of the University's research ethics committees (RECs). The University of the Witwatersrand is a research-intensive institution with some 1174 permanent academic staff across five faculties and 33 academic schools. In total 39.4% of the total student population of 42,175 are in graduate programmes (2021 figures), including 2470 PhD and 8267 Masters students. The University has a number of research ethics committees to oversee research projects undertaken by academic staff and graduate students, and these committees are registered with the National Health Research Ethics Council (NHREC), a national statutory body established under the Health Act of 2003. A guideline document (in 2015) provided by the NHREC states that researchers should receive adequate training in research ethics,

as well as clearance from an REC, prior to the commencement of their study. However, there are very limited options available for research ethics training in South Africa through an accredited institution or through online courses. This was the motivation of the author to develop a short but intensive research ethics training workshop in 2019, which has continued to date.

This training comprises a 4 h content-based workshop followed by a written assignment. Attendees are mainly staff and graduate students of the University, with a few external researchers from other institutions and agencies. In detail, the workshop comprises an academic lecture (presented in PowerPoint) of approximately 2½ h duration dealing with key issues in research ethics. In sequence, the lecture discusses: (1) the meaning and definition of ethics, including normative and research ethics; (2) the nature of 'research', who researchers are and how they may interact with human participants in different ways; (3) different philosophical approaches to relationships between the individual and society, as developed by Kant, Bentham and others; (4) the role of ethics in decision-making; (5) a description of post-World War II developments in research ethics, including the Nuremberg Code, Declaration of Helsinki, Belmont Report and Singapore Statement on Research Integrity; (6) the legislative and regulatory framework of research ethics in South Africa and how research ethics processes are managed at the University of the Witwatersrand; and then (7) detailed discussion of key ethical principles that are important in social science research in the developing world, including informed consent, confidentiality, vulnerability, and risk. Throughout, cognisance is made of the specific African research context, including wider issues of social responsibility, social justice, traditional knowledge and Ubuntu, and respect for the authentic voice of the participant. This lecture is then followed by an open question and answer session. After a comfort break, the second part of the workshop (approximately 1 h duration) describes how to make an ethics application to the University's REC. This element is not discussed further in this study.

Since the training began in April 2019, 30 separate training sessions have been run, with 7 to 139 attendees in each session. Some of these sessions were face-to-face; during and coming out of the COVID-19 pandemic, the training has been run as a live session online through MS Teams. In total 1821 people have attended the training (to December 2022). Following the training, all attendees are sent the presentation slides, key readings, a reading list, and have an opportunity to complete and submit a certificated assignment. This assignment comprises three compulsory short-answer essay questions based on topics discussed in the workshop. The questions asked are different for each training session. Typical questions have included:

- Discuss the demographic factors that might give rise to increased vulnerability.
- Describe the different ways of obtaining informed consent for studies that are conducted online.
- What are some of the ethical issues involved in using social media posts as research data?
- Discuss some of the ethical issues associated with illiteracy amongst participants.
- A research study uses orphans as participants. Identify and discuss some of the major ethical issues of such a study.

These questions require the attendees to integrate elements from different parts of the lecture and show the application of key concepts to real-world situations. These questions are specifically designed to promote reflection and problem-solving, as a way of developing researchers' skills and understanding. The answers provided by attendees are then evaluated by the workshop leader on a pass/fail basis. If attendees pass all three questions, they receive a Certificate of Competence in Research Ethics, valid for 3 years, which provides evidence of research ethics training and fulfilling the requirements of the NHREC. These certificates are produced and signed by the Research Office of the University, which administers graduate research training across the University. To date (December 2022), 796 attendees in total have received a Certificate of Competence in Research Ethics (43.7% of all attendees for the period 2019–2022). In detail, in 2022 there were 793 attendees (11 monthly training sessions were run), of which 450 (56.7%) submitted an assignment. Of

these 450, 87 (19.3%) failed, the main reasons being that they did not answer the questions posed or did not resubmit with corrected answers when asked to do so. Attendees are given several resubmission attempts, where needed. This gave a pass rate in 2022 of 45.8%.

3. Methods

This study can be considered as mixed-methods in its approach because it involved some quantitative analysis of the survey results. The study focused on evaluating the experiences of attendees who had obtained a Certificate of Competence in Research Ethics following training in the period April 2019–November 2021, inclusively (n = 421). A confidential database of email addresses of successful attendees had been maintained through this time and this was used to contact potential participants in this study. All potential participants were adults over the age of 18. Following institutional ethics clearance being obtained (protocol H21/11/30), all potential participants were emailed with detailed participant information sheet about the study and a hyperlink to the online survey. The information sheet stated that the online survey would take around 15 min to complete, and completing and submitting the online survey will be taken to mean consent to participate; the original survey data would be destroyed after 5 years, and the survey would be both anonymous and confidential. The maximum number of potential participants was therefore 421 but it also was likely that the actual number would be significantly lower because former students may have left the University (and therefore their student email addresses would be invalid). The online survey was run through Survey Monkey (https://www.surveymonkey.com/, accessed on 10 January 2023) and comprised ten open-ended questions (Table 1).

Table 1. The questions posed in the study survey.

Questions Posed	Nature of the Answer Required
Q1. You attended one of the Research Ethics training sessions. How did you find this training, was it useful or interesting? Please explain your answer.	Free text
Q2. Did the training give you increased awareness of ethics in research? Please explain your answer.	Free text
Q3. Did the training help you to better plan or implement your research project, such as its methodology? Please explain your answer.	Free text
Q4. Did the training (and the self-reflection based thereon) help develop your skills as a researcher? If so, how?	Free text
Q5. Did the training help you identify and solve any ethical problems in your research? Please explain your answer.	Free text
Q6. Having now attended the training, what in your view are the advantages and disadvantages of the nature of the training (e.g., its style, length, depth/breadth, frequency, etc.)? Please explain your answer.	Free text
Q7. To receive the certificate, you had to write some short essay-style answers. Did this assignment help you to understand or articulate the ethical issues discussed? Please explain your answer.	Free text
Q8. Would you change anything about the nature of the assignment (e.g., its length, style, format, etc.)? Please explain your answer.	Free text
Q9. Do you have any other suggestions for how the university or your faculty/school/organisation might better develop aspects of research ethics through its activities or training opportunities? Please explain your answer.	Free text
Q10. Please rate your overall experience of the research ethics training and its impacts, on a scale of 0 (very bad) to 10 (very good).	Self-selected number from 0 to 10

In total, 92 individuals completed the survey (21.9% response rate), following an initial email invitation and a later reminder, with responses completed in the time period when the survey was open, between 1 January and 22 March 2021 inclusively. Anonymous responses from the survey were analysed thematically. Supporting evidence through quotations from anonymous participants are presented below.

4. Results

Results from the online survey are grouped and presented according to the themes of the questions posed. First, the nature of the training itself is briefly considered (Q1, 6, 10; Table 1), then the training activities and assessment (Q7, 8). Most concern is paid to the questions dealing with the relationship between ethics training and researchers' critical self-reflection and development (Q2–5). Overall, the majority of survey respondents were satisfied with the nature, format and depth of content of the training, and reported that it had a positive impact on their development as researchers.

4.1. The Nature of the Ethics Training

Q1 asked whether the ethics training was useful or interesting. All (100%) of the respondents (n = 92) agreed that it was indeed useful and/or interesting, and from different perspectives. For example, comments from different respondents included: '*Yes it was useful, particularly in my role as research supervisor both in undergraduate and postgraduate studies in the School of Humanities*'; '*Extremely useful training. I was not aware of all the subtle elements required when considering ethics approval for humans*'. Other items voluntarily mentioned as explanation included: the relationship to obtaining institutional ethics clearance (n = 14), the historical context of research ethics (8), the wider context of research ethics in social science (8), an increased knowledge about ethics (which was discussed in the research training) (7), applications to different research situations (7), exposure to new ideas and content (5), application to the better supervision of students by lecturer attendees (4), how to deal with vulnerable groups (4), and the skill/knowledge of the trainer (3). For example, a respondent commented: '*The training sessions were very useful to me in that I was at the early stages of my PhD. The training enabled me to understand the ethics application process I was to undergo for my PhD research. Secondly, I am a lecturer myself, and I supervise students who often need ethics clearance. The training has empowered me with knowledge to guide my students on the ethics clearance process*'. Other comments mentioned that the training was more theoretical than practical, and that it could have provided more specific examples.

The nature of the training workshop itself was discussed in Q6 (Table 1). Responses (n = 88) mentioned most commonly the length of the training (n = 18) as both too long and too short—comments included: '*The training is of a reasonable length and covers all the basics within the time given for it. However, it is not frequent and so it's easy to forget some concepts and the long yet very brief notes given do not make it easy to remember the information provided in the training*'; '*The major advantage is that its style of delivery is very compressed and detailed, however, its short period of delivery could be disadvantageous as so much information is presented in a short period of time*'. Other comments mentioned: the depth and intensity of training (10), the timing/frequency of training (9), and making the training compulsory (4). Comments on these elements from different participants included: '*Style is great as I appreciated the history lesson before the actual lecture on research ethics. Please continue with the compartmentalisation. The length is important to ensure breadth is achieved. The information shared and pace of delivery by the lecture was excellent*'; '*The presenter was very knowledgeable and managed to provide appropriate examples throughout the training sessions. It might be useful to change the format into a more interactive workshop and smaller groups to ensure learning from peers is also incorporated*'. Overall, 46 comments (52%) were mainly positive, 14 (16%) were negative, and 19 (22%) comments included both elements. Some other responses (9, 10%) were inconclusive. The free-text comments highlighted a range of topics and suggestions. These included: going into some elements in more detail, presenting it to students at the beginning of the year, running the workshop over several days, and offering more interactive elements.

Five respondents specifically commented on the requirement of having to write an assignment. Detailed free-text comments on this element included: '*I think for me having to submit an assignment was a huge advantage as it pushed me to read and to think critically. However, the assignment part is a deterrent to some and this to me shows that some do not really like reading and being assessed*'; '*I enjoyed the training. I did not enjoy the assessment. Even so, I found the whole experience really good*'.

The overall experience of workshop participants was rated in Q10 along a scale from zero (low) to 10 (high). The distribution of responses (n = 91) is shown in Figure 1. The results have a mean value of 8.94 (range 5–10), median of 9 and mode of 10.
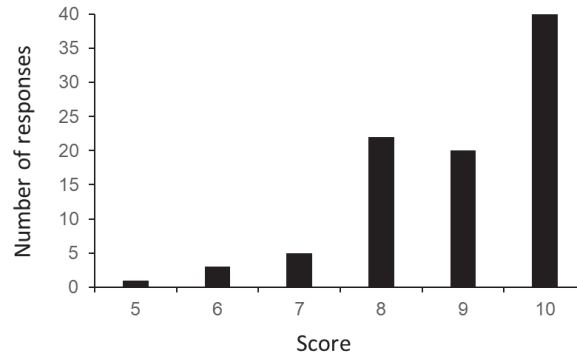

Figure 1. Distribution of responses to question 10 (n = 91).

4.2. The Nature of the Ethics Training Activities and Assessment

Q7 concerned the nature of the written assignment. Overall, almost all of the respondents (n = 91) agreed that doing the assignment had helped them understand ethical issues (n = 90, 99%). The respondent who disagreed with this said: '*I found the exercises useful but not specific enough in terms of evaluation—I think the lack of understanding of how the essays would be evaluated took away from the value of the research involved, that is to say: I was more focused on "passing" because I didn't know what was required than doing a comprehensive study on the topic*'.

Themes of the free-text comments made by the respondents to this question included: that the assignment made them think more deeply (n = 17) and they engaged in critical thinking (10). Comments on these points included: '*Yes, it helped me to process the information I had learnt and to read more on the topic. The research articles shared by the lecturer were very useful to guide the learning and to cement what was taught in the lecture*'; '*Yes, the assignment required good understanding and interpretation of ethics in research. It also enhanced understanding by giving practical and real-life scenarios*'; '*Yes, the assignment was essential in applying the lessons learnt and also engage in critical thinking on ethical issues in research*'. Some respondents also noted some issues related to reading articles from the reading list provided (9), the reading list was useful (4), there were problems in understanding the assignment questions (3), and there were useful practical examples given (3). One participant commented: '*It really required a lot of depth and understanding. It was set at a very good and difficult level. This was not just a "check-the-box" assessment*'.

When asked about any changes to the written essay assignment (Q8), most of the respondents (n = 89) stated that the assignment was fine and needs no change (68, 76%). Comments included: '*No, it forces a researcher to engage with the content of research ethics which I found to be helpful*'; '*No, the assignment is clear and precise. It allows for the student to interpret what was taught using their own understanding. The lecturer was also not prescriptive about writing style which allowed for you to focus on sharing your understanding of the question and not get lost in writing style requirements*'. Other comments mentioned: a greater submission time for the assignment (attendees get a week to complete it) (n = 4), that the assignment questions were challenging (3), and that it encouraged critical reflection (2). Some respondents also requested a greater word count; others requested a smaller word count. On this point, one respondent noted: '*Initially, I thought that the 300–400 word limit was very restrictive—but it actually made me condense my thoughts into succinct sentences*'.

4.3. Ethics Training and Researcher Development

One of the major proposed outcomes of the ethics training was to embed ethical principles in research practices at all levels, and to facilitate the self-reflection of researchers. Q2 asked whether the training led to an increased awareness of ethics. The responses (n = 92) were dominantly explicitly yes (88, 96%) with the other responses favourable but less clear. Specific comments included: '*Yes it did. The literature on the various aspects of vulnerability and vulnerable groups was an eye-opener*'; '*There was quite a lot I didn't know about ethics but through the training I was made aware and became quite conscious about ethics in my study*'; '*It did, my views on ethics in research were always rather one dimensional. This training assisted me in looking at ethics from a different perspective*'.

The training also promoted that attendees view ethics and its relationship to research in different ways. Some comments on this point included: '*Yes, especially how it arose from medical ethics—and how it is applied in humanities*'; '*Yes it did. As a scientist, I have been doing research for +30 years on inanimate subjects. During this time, it never really occurred to me that many of the principles actually applied to my work*'. Such comments show how the ethics training had potential to promote reflection and the application of ethics principles to the specific contexts relevant to different researchers. One key element was whether the research training helped researchers better plan their project and improve their methodology (Q3). Respondents to this question (n = 90) dominantly agreed with this proposition (75, 83%). Comments included: '*Yes, it assisted in thinking through ethical pitfalls and how these may be addressed*'; '*It helped me to redesign my research methods*'; '*Very much so. I could clearly see possible ethics issues and design the research to solve them*'. The majority of those who did not agree that the training helped them stated that they had already designed their project or submitted their research proposal (5), or that their project did not involve human participants (3). One interesting outcome on this point was that respondents become more confident in their approach and actions as researchers. Comments included: '*Yes it did and also gave me courage to use other methods of data collection as I knew better how to address ethical issues that may arise as a result of my study*'; '*Absolutely—not only did it make me revise my whole methodology but it gave me more confidence in my amended approach*'; '*Of course, my existing research skills were sharpened. I have also noted my increased knowledge and confidence in teaching, reviewing and guiding research students in the subject matter*'.

These overall results are supported by the follow-up question on whether the training helped develop the researcher's skills (Q4) (n = 90). Most of the respondents (84, 93%) agreed that the training achieved this outcome. Specific comments included: '*Yes it did. The training also covered the issue of different methods of getting consent from participants, and the formulation of questionnaires. This was helpful to me*'; '*It helped me especially in my methodology and even the types of questions to ask participants*'; '*I have become aware that there is a link between research methodology and ethics. The way the methodology is formulated will determine whether an ethics application will succeed or not*'. It is noted that these comments cover both practical elements, such as deploying a particular instrument, and more general issues of research approach. This may indicate that such ethics training may help develop different types of researchers' skills. Other respondents, however, were not sure that the training developed their skills (n = 4). One comment was: '*It is hard to reflect on how my skills as a researcher have improved when I make very little progress in my research. I assume that understanding the need and the basis for ethical clearance does improve and refine the research process, but I have not felt this yet*'.

In terms of whether the training helped solve any ethical problems in their research (Q5), the results are more mixed. Of the respondents to this question (n = 86), the majority said yes (57, 66%). Comments included: '*The training did help, but I did not detect problems that had to be solved*'; '*Yes. I exposed weaknesses with my methodologies*'; '*The training helped me to realise that the way my questions were phrased were insensitive and may discourage conversation and offend participants. The training made me realise that I needed to be more mindful in the way I ask my participants questions*'. This may indicate

the important role of training as a way to prevent ethical issues arising in the first place. Other respondents (n = 19) said that they had no ethical problems in their study anyway. Comments included: 'Not really as I made sure these were addressed at the planning stage thanks to the training'; 'It has not. At most, it got me thinking deeper about the nature of my research'.

5. Discussion

Research ethics training is a vital part of wider research training in data collection and analysis methodologies for social science graduate students, and as professional development for more experienced researchers (von Unger 2016). There is also now a greater awareness of the societal context in which research takes place, especially in the social sciences and humanities, and how researchers interact with participants at the community level (Hopkins et al. 2022; Hosseini et al. 2022; Koloi-Keaikitse et al. 2021). This is particularly important in a developing world context (Knight 2019; Nyirenda et al. 2020; Seehawer 2018) where research participants may exhibit higher vulnerability (Horn 2007; Ramabu 2020; Ratnam and Drozdzewski 2022) but where it is important that the authentic voices of participants and indigenous (traditional) knowledge are allowed to come through in data collection and reporting (Knight 2019; Tangwa 2017). All of these issues highlight that social science research projects with human participants require careful design and management, facilitated through systematic training activities and critical self-reflection on the part of researchers (Beauchemin et al. 2022; Daku 2018; Pimple 2002; Tijdink et al. 2021). Ethics training is the starting point of this self-reflection journey.

Although this study deals with a specific ethics training course, its results highlight the varied benefits of ethics training for researchers. This includes providing an opportunity for critical reflection on their own research practices, understanding of their positionality, reflection on project design, a better understanding of the nature of risk and vulnerability, and how risk can be mitigated. The free-text comments from different questions also showed that these outcomes were nuanced and variable, likely because of the wide range of backgrounds and experience of the attendees. Whilst a demographic breakdown of attendees was not been kept, all training sessions included researchers at different levels (from Honours (4th year) students to full professors) and at different stages in the research process (from planning a single degree project to having completed many projects and publications). The attendees also came from different disciplines, ranging from health science to engineering, from physics to psychology and drama. This means that the attendees may have different expectations, levels of engagement, or types of training required that is relevant to their needs. Inevitably this means that generic ethics training cannot be relevant to everyone all the time.

The literature highlights the need to embed training in discipline-specific contexts so that attendees can better engage with the content and apply it to their own topics (Hildt et al. 2019; Kalichman et al. 2022; Valkenburg et al. 2021). In answer to Q9 on how the institution may further develop ethics training (n = 85), comments included: making it compulsory for all staff/students (n = 15), developing more ethics activities at faculty or school level (10), tailoring the training to specific disciplines (6), and developing it as a stand-alone course/module (6). These comments highlight that the training is valued irrespective of the background of the researcher, but that there needs to be a balance between general ethics principles and how these can be enacted in specific cases (e.g., Chen 2003; Hunt and Godard 2013; Pimple 2002). Several respondents' comments for Q3 and Q5–8, however, mentioned that the training provided specific examples and applications from different contexts.

A clear theme in the results of this study is that the written assessment task was important in focusing the minds of the attendees on specific ethical issues, applying the information from the training lecture into their own contexts, and in articulating their understanding in a formal, academic and written format. Comments from respondents (for Q7) supporting this view included: *'The questions stretched my thinking and enabled me to apply what I had learnt in class'; 'I was able to put into my words what I had learned*

during the training. Through coming up with solutions for the ethical issues in the assignment, I was able to gain a bit more understanding of ethical issues'; 'The questions also required critical thinking, which helped me to understand ethical issues in more detail'. Some previous studies have also identified the importance of collaborative learning through class discussion (e.g., Brown and Kalichman 1998; Danowitz and Taylor 2011; Tammeleht et al. 2022) and written assessment in crystallising knowledge and encouraging reflection (Katsarov et al. 2022). It should be noted that the assessment element of most online ethics training options is through multiple-choice questions, which is based on rote learning with no opportunity for reflection or discussion of the nuances of ethical problems. Other training options use attendance rather than attainment as a criterion. The written assessment evaluated in this study clearly promotes a critical and deeper engagement with ethical issues that is valued by respondents.

Tijdink et al. (2021) discuss how a process of checks-and-balances, mentoring, feedback and reflection can allow researchers to engage with ethical issues. The latter is a limitation of the training described in this study, where one respondent (for Q4) said: '*I don't feel it helped me as a researcher as it was not an ongoing training with constant evaluation and feedback*'. Although this type of longitudinal activity and support was not carried out in this study, it highlights that ethics training is most effective where it is embedded as part of wider graduate training programmes, and where researchers have the opportunity to reflect on ethical issues and their own research activities through a community of practice. In the view of the author, as a chair of a university REC, changing the 'hearts and minds' of both students and experienced academics on the importance of research ethics is key, and this can only be done with institutional support, which itself is not a given.

6. Conclusions and Future Outlook

This study provides an example of the outcomes of research ethics training on researchers at a South African university. Such training is still not conducted globally, and there is limited ethics training in Africa outside of medical contexts (Ateudjieu et al. 2010). The study highlights the critical role of research ethics training in developing researchers' skills, including the best approaches to project design as well as practical aspects of managing data collection with human participants. Results from this study show that the ethics training produces positive outcomes for all types of researchers, and also highlights the limitations and future opportunities of this ethics training. This may include dealing with specific types of ethical issues for different data collection methods (e.g., in ethnography, or in the use of social media), distinguishing between student and more experienced researchers, and ethical issues in reporting data (e.g., anonymity, confidentiality) or storing data for reuse. In addition, the 2010 Singapore Statement on Research Integrity frames research ethics in a wider context (Kleinert 2010) and this should also be considered when developing a research ethics training program (Huybers et al. 2020; Knight 2019).

An important element in Africa, however, is the lack of training capacity (Ali et al. 2012; Hyder et al. 2013; Ndebele et al. 2014), and this also needs to be addressed in order to provide consistent research training support across the continent. There is also particular concern in Africa regarding issues of academic misconduct, which highlights the need for training in wider research integrity rather than just research ethics alone (Kombe et al. 2014). The results of this study highlight the importance of research ethics training in researcher development, as well as engendering critical ethical reflection into their research activities. Engagement with and reflection on research ethics issues can lead to better research practices which then, in turn, can result in more satisfying and ethical interactions with research participants and better research outcomes.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Not applicable.

Acknowledgments: I thank the anonymous reviewers for their comments on this paper.

Conflicts of Interest: The author declares no conflict of interest.

References

Ali, Joseph, Adnan A. Hyder, and Nancy E. Kass. 2012. Research ethics capacity development in Africa: Exploring a model for individual success. *Developing World Bioethics* 12: 55–62. [CrossRef]

Ateudjieu, Jérôme, John Williams, Marie Hirtle, Cédric Baume, Joyce Ikingura, Alassane Niaré, and Dominique Sprumont. 2010. Training needs assessment in research ethics evaluation among research ethics committee members in three African countries: Cameroon, Mali and Tanzania. *Developing World Bioethics* 10: 88–98. [CrossRef] [PubMed]

Beauchemin, Élie, Louis Pierre Côté, Marie-Josée Drolet, and Bryn Williams-Jones. 2022. Conceptualising Ethical Issues in the Conduct of Research: Results from a Critical and Systematic Literature Review. *Journal of Academic Ethics* 20: 335–58. [CrossRef]

Bonde, Sheila, Clyde Briant, Paul Firenze, Julianne Hanavan, Amy Huang, Min Li, N. C. Narayanan, D. Parthasarathy, and Hongqin Zhao. 2016. Making Choices: Ethical Decisions in a Global Context. *Science and Engineering Ethics* 22: 343–66. [CrossRef]

Bravin, Julia, Jessica Carrasco, and Michael Kalichman. 2020. Ethical Foundations for Graduate Students in the Psychological Sciences. *Translational Issues in Psychological Science* 6: 247–56. [CrossRef]

Brear, Michelle R., and Rebecca Gordon. 2021. Translating the principle of beneficence into ethical participatory development research practice. *Journal of International Development* 33: 109–26. [CrossRef]

Brown, Carol, Jane Spiro, and Sarah Quinton. 2020. The role of research ethics committees: Friend or foe in educational research? An exploratory study. *British Educational Research Journal* 46: 747–69. [CrossRef]

Brown, Sarah, and Michael W. Kalichman. 1998. Effects of training in the responsible conduct of research: A survey of graduate students in experimental sciences. *Science and Engineering Ethics* 4: 487–98. [CrossRef] [PubMed]

Chen, Donna T. 2003. Curricular approaches to research ethics training for psychiatric investigators. *Psychopharmacology* 171: 112–19. [CrossRef]

Cummings, Christy L., Gina M. Geis, Henry A. Feldman, Elisa R. Berson, and Jennifer C. Kesselheim. 2018. Assessing Ethics Knowledge: Development of a Test of Ethics Knowledge in Neonatology. *Journal of Pediatrics* 199: 57–64. [CrossRef] [PubMed]

Daku, Mark. 2018. Ethics beyond ethics: The need for virtuous researchers. *BMC Medical Ethics* 19: 42. [CrossRef]

Danowitz, Amy M., and Christopher E. Taylor. 2011. Integrating a Peer-Taught Module on Practical Research Ethics into the Graduate Student Orientation Curriculum. *Journal of Chemical Education* 88: 1090–93. [CrossRef]

Dowling Dols, Jean, Mary M. Hoke, and Maureen L. Rauschhuber. 2017. Mock Institutional Review Board: Promoting Analytical and Reasoning Skills in Research Ethics. *Nurse Educator* 42: E4–E8. [CrossRef] [PubMed]

Emmerich, Nathan. 2016. Reframing Research Ethics: Towards a Professional Ethics for the Social Sciences. *Sociological Research Online* 21: 7. [CrossRef]

Farrugia, Lorleen. 2019. WASP (Write a Scientific Paper): The ongoing process of ethical decision-making in qualitative research: Ethical principles and their application to the research process. *Early Human Development* 133: 48–51. [CrossRef]

Fischer, Bernard A. 2006. A Summary of Important Documents in the Field of Research Ethics. *Schizophrenia Bulletin* 32: 69–80. [CrossRef]

Friesen, Phoebe, Lisa Kearns, Barbara Redman, and Arthur L. Caplan. 2017. Rethinking the Belmont Report? *The American Journal of Bioethics* 17: 15–21. [CrossRef]

Gannon, William L. 2014. Integrating research ethics with graduate education in geography. *Journal of Geography in Higher Education* 38: 481–99. [CrossRef]

Halkoaho, Arja, Mari Matveinen, Ville Leinonen, Kirsi Luoto, and Tapani Keränen. 2013. Education of research ethics for clinical investigators with Moodle tool. *BMC Medical Ethics* 14: 53. [CrossRef]

Hansson, Sven Ove. 2011. Do we need a special ethics for research? *Science and Engineering Ethics* 17: 21–29. [CrossRef] [PubMed]

Hildt, Elisabeth, Kelly Laas, Christine Miller, Stephanie Taylor, and Eric M. Brey. 2019. Empowering Graduate Students to Address Ethics in Research Environments. *Cambridge Quarterly of Healthcare Ethics* 28: 542–50. [CrossRef]

Hopkins, Peter, Raksha Pande, Nafhesa Ali, Claire Chambers, and Richard Phillips. 2022. Working with community interviewers in social and cultural research. *Area* 54: 400–7. [CrossRef]

Horn, Lyn. 2007. Research vulnerability: An illustrative case study from the South African mining industry. *Developing World Bioethics* 7: 119–27. [CrossRef] [PubMed]

Hosseini, Mohammad, Michał Wieczorek, and Bert Gordijn. 2022. Ethical Issues in Social Science Research Employing Big Data. *Science and Engineering Ethics* 28: 29. [CrossRef] [PubMed]

Hunt, Matthew R., and Beatrice Godard. 2013. Beyond procedural ethics: Foregrounding questions of justice in global health research ethics training for students. *Global Public Health* 8: 713–24. [CrossRef]

Huybers, Twan, Bronwyn Greene, and Detlef H. Rohr. 2020. Academic research integrity: Exploring researchers' perceptions of responsibilities and enablers. *Accountability in Research* 27: 146–77. [CrossRef]

Hyder, Adnan A., Waleed Zafar, Joseph Ali, Robert Ssekubugu, Paul Ndebele, and Nancy Kass. 2013. Evaluating institutional capacity for research ethics in Africa: A case study from Botswana. *BMC Medical Ethics* 14: 31. [CrossRef]

Kalichman, Michael W., M. L. Devereaux, and D. K. Plemmons. 2022. A Course for Teaching and Learning about the Responsible Conduct of Research. *Journal of Empirical Research on Human Research Ethics* 17: 284–91. [CrossRef]

Kalichman, Michael, Monica Sweet, and Dena Plemmons. 2015. Standards of Scientific Conduct: Disciplinary Differences. *Science and Engineering Ethics* 21: 1085–93. [CrossRef]

Katsarov, Johannes, Roberto Andorno, André Krom, and Mariëtte van den Hoven. 2022. Effective Strategies for Research Integrity Training—A Meta-analysis. *Educational Psychology Review* 34: 935–55. [CrossRef]

Kleinert, Sabine. 2010. Singapore Statement: A global agreement on responsible research conduct. *The Lancet* 376: 1125–27. [CrossRef] [PubMed]

Knight, Jasper. 2019. The need for improved ethics guidelines in a changing research landscape. *South African Journal of Science* 115: 6349. [CrossRef]

Koloi-Keaikitse, Setlhomo, Gail Geller, Dudu Jankie, and Joseph Ali. 2021. Cultural Values and Beliefs of Selected Local Communities in Botswana: Implications for Human Subject Research Ethics Practice. *Journal of Empirical Research on Human Research Ethics* 16: 424–34. [CrossRef] [PubMed]

Kombe, Francis, Eucharia Nkechinyere Anunobi, Nyanyukweni Pandeni Tshifugula, Douglas Wassenaar, Dimpho Njadingwe, Salim Mwalukore, Jonathan Chinyama, Bodo Randrianasolo, Perpetua Akindeh, Priscilla S. Dlamini, and et al. 2014. Promoting research integrity in Africa: An African voice of concern on research misconduct and the way forward. *Developing World Bioethics* 14: 158–66. [CrossRef]

Löfström, Erika. 2012. Students' ethical awareness and conceptions of research ethics. *Ethics & Behavior* 22: 349–61. [CrossRef]

Madikizela-Madiya, Nomanesi, and Abraham Tlhalefang Motlhabane. 2022. Educational Research Ethics Committees as Space for Situated Learning in Higher Education. *Education Research International* 2022: 7971812. [CrossRef]

Mumford, Michael D., Logan Steele, and Logan L. Watts. 2015. Evaluating Ethics Education Programs: A Multilevel Approach. *Ethics & Behavior* 25: 37–60. [CrossRef]

Nagai, Hiroyuki, Eisuke Nakazawa, and Akira Akabayashi. 2022. The creation of the Belmont Report and its effect on ethical principles: A historical study. *Monash Bioethics Review* 40: 157–70. [CrossRef]

Ndebele, Paul, Douglas Wassenaar, Solomon Benatar, Theodore Fleischer, Mariana Kruger, Clement Adebamowo, Nancy Kass, Adnan A. Hyder, and Eric M. Meslin. 2014. Research Ethics Capacity Building in Sub-Saharan Africa: A Review of NIH Fogarty-Funded Programs 2000–2012. *Journal of Empirical Research on Human Research Ethics* 9: 24–40. [CrossRef] [PubMed]

Nyirenda, Doborah, Salla Sariola, Patricia Kingori, Bertie Squire, Chiwoza Bandawe, Michael Parker, and Nicola Desmond. 2020. Structural coercion in the context of community engagement in global health research conducted in a low resource setting in Africa. *BMC Medical Ethics* 21: 90. [CrossRef]

Pillay, Dorsamy (Gansen), and Molapo Qhobela. 2019. Research ethics and integrity challenges require innovative approaches. *South African Journal of Science* 115: 7485. [CrossRef] [PubMed]

Pimple, Kenneth D. 2002. Six Domains of Research Ethics. A heuristic framework for the responsible conduct of research. *Science and Engineering Ethics* 8: 191–205. [CrossRef] [PubMed]

Ramabu, Nankie M. 2020. Whose autonomy is it? Botswana socio-ethical approach to the consenting process. *Developing World Bioethics* 20: 184–93. [CrossRef]

Rashid, Rafi. 2020. Training STEM Ph.D. Students to Deal with Moral Dilemmas. *Science and Engineering Ethics* 26: 1861–72. [CrossRef] [PubMed]

Ratnam, Charishma, and Danielle Drozdzewski. 2022. Research ethics with vulnerable groups: Ethics in practice and procedure. *Gender, Place & Culture* 29: 1009–30. [CrossRef]

Rudra, Pranab, and Christian Lenk. 2021. Process of risk assessment by research ethics committees: Foundations, shortcomings and open questions. *Journal of Medical Ethics* 47: 343–49. [CrossRef]

Seehawer, Maren Kristin. 2018. Decolonising research in a Sub-Saharan African context: Exploring Ubuntu as a foundation for research methodology, ethics and agenda. *International Journal of Social Research Methodology* 21: 453–66. [CrossRef]

Sheehan, Mark, Michael Dunn, and Kate Sahan. 2018. In defence of governance: Ethics review and social research. *Journal of Medical Ethics* 44: 710–16. [CrossRef]

Sivasubramaniam, Shivadas, Dita Henek Dlabolová, Veronika Kralikova, and Zeenath Reza Khan. 2021. Assisting you to advance with ethics in research: An introduction to ethical governance and application procedures. *International Journal for Educational Integrity* 17: 14. [CrossRef]

Sullivan, Brian T., Mikalyn T. DeFoor, Brice Hwang, W. Jeffrey Flowers, and William Strong. 2020. A Novel Peer-Directed Curriculum to Enhance Medical Ethics Training for Medical Students: A Single-Institution Experience. *Journal of Medical Education and Curricular Development* 7: 1–10. [CrossRef]

Tammeleht, Anu, Kairi Koort, María Jesús Rodríguez-Triana, and Erika Löfström. 2022. Knowledge building process during collaborative research ethics training for researchers: Experiences from one university. *International Journal of Ethics Education* 7: 147–70. [CrossRef]

Tangwa, Godfrey B. 2017. Giving voice to African thought in medical research ethics. *Theoretical Medicine and Bioethics* 38: 101–10. [CrossRef] [PubMed]

Tijdink, Joeri K., Serge P. J. M. Horbach, Michèle B. Nuijten, and Gareth O'Neill. 2021. Towards a Research Agenda for Promoting Responsible Research Practices. *Journal of Empirical Research on Human Research Ethics* 16: 450–60. [CrossRef] [PubMed]

Valkenburg, Govert, Guus Dix, Joeri Tijdink, and Sarah de Rijcke. 2021. Expanding Research Integrity: A Cultural-Practice Perspective. *Science and Engineering Ethics* 27: 10. [CrossRef]

von Unger, Hella. 2016. Reflexivity beyond Regulations: Teaching Research Ethics and Qualitative Methods in Germany. *Qualitative Inquiry* 22: 87–98. [CrossRef]