Teaching the Global Goals: Exploring the Experiences of Teacher Educators in an Online-Environment through Vignette Research †

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Abstract: The Teach4Reach research project explores how teacher education programmes can be leveraged to support the Sustainable Development Goals by raising awareness about the SDGs in teachers and teacher educators, and crafting future-focused research agendas on quality education, gender equality, reducing inequality and good health and wellbeing. It seeks to build international collaborative networks in teacher education to support the SDGs, and to support scientific knowledge development on the SDGs in education. As a data-generative strategy, the project utilises a series of online webinars that are coupled with research colloquia and vignette research. This paper shares the experiences of teacher educators from the inaugural Teach4Reach webinar through a vignette research methodology. In doing so, the paper echoes the challenges and opportunities presented in online environments. How do teacher educators experience online environments themselves in the search for quality education? Based on the vignette findings, the paper advocates for a revisitation of the four pillars of education: Learning to know (“the educator understands”), learning to do (“the educator is able to…”), learning to live together (“the educator works with others in ways that…”) and learning to be (“the educator is someone who…”).

Keywords: teacher education; teacher educators; sustainability; SDG 4; vignette research

1. Introduction

Teacher Educators are powerful agents of change with the ability to support the educational mission needed in the context of sustainable development. Their knowledge and competences are crucial for sustainable teaching and learning and can shape values and perspectives, and develop skills and concepts for pre-service or in-service teachers. This study posits that universities and schools should be experiential places of learning under principles of sustainability [1,2] (p. 47).

The Teach4Reach project views teacher education as a critical pivot to attaining the Sustainable Development Goals in Agenda 2030. Some studies [3] (pp. xvii) indicate that only 7% of Teacher education programmes cover education for sustainable development and that it remains disconnected within the curriculum [4] (p. 7). Teachers can play an important role in creating awareness about sustainability. It is also widely accepted that effective teachers are the most important factor in a students’ learning. With less than ten years left until 2030, the percentage on sustainability sciences in teacher education curricula
needs to be increased substantially, in order to create global awareness of the criticality of the global goals for intergenerational equity, and for economic, environmental and social sustainability. Current crises like the Corona pandemic, also point towards the necessity of the implementation of new skills for creating global awareness in Teacher Education of sustainable development and the SDGs.

Though all 17 Global Goals are relevant within the field of education, the Teach4Reach project prioritises four SDGs, e.g., Quality education, Gender equality, Reduced inequalities, and Good Health and Wellbeing. The rationale for the focus on these four SDGs is its people-focus and the urgency of these SDGs in both the South African and Austrian contexts from where the study originated. Basic education can be critical to educating youth about the societal challenges such as gender-based violence, poverty reduction through reduced inequalities and the long-term effects of investments in quality education and wellbeing. In the advent of the fourth industrial revolution where technology plays a prominent role, there is substantial potential in the affordances of technology and teacher education to make progress on sustainable development in the areas of quality education, gender equality, reduced inequality, good health and wellbeing. By infusing the SDGs in teacher education and teacher professional development curricula, early sensitisation in pre- and in-service teachers can potentiate teachers to come up with practical solutions for sustainability in the classroom. Problem based learning is one way in which knowledge can be imparted. It can also help develop critical problem solving skills and values through teaching. This will be one of many avenues explored during the course of this project.

One essential factor for implementation of the SDGs is to enable a more sustainable and just society for all qualified teachers. For this, teacher education has to respond to transformation processes [5] (p. 29) and has to encourage changes in knowledge, skills, values and attitudes [2] (p. 9). Teacher Education must therefore meet these challenges and deliver a reorientation towards an Education for Sustainable Development [6]. How do teacher educators support Agenda2030 and specifically Sustainable Development Goal 4 on Quality Education even as they negotiate the changing landscapes in education?

2. Methods

The Teach4Reach research project adopts a mixed-methods methodology, which is founded in phenomenology. It employs a combination of vignette research, in-depth interviews and artefact gathering to collect data. This paper reports on the vignette research section during the initial phases of the study.

The complexities of the synergies between teacher education and the Sustainable Development Goals (SDGs) necessitates a qualitatively nuanced research methodology, in this instance–vignette research. Infusing teacher education curricula with knowledge and awareness of the SDGs is a multi-layered process that requires finesse and in-depth understanding of the dynamics at play and a vignette methodology can serve this purpose.

The Teach4Reach research project leverages a two-year webinar series on teacher education and the SDGs (Global Goals teaching) to build a key group of researchers in teacher education who prioritise the sustainable development goals in teaching and research. The six webinars over the two-year period provide safe spaces for the sharing of ideas on ways in which teacher education curricula can be reformed or shaped to contribute towards the achievement of the identified sustainable development goals. International experts in sustainability sciences also contributes to the discussions.

Within this framework of the webinar series, the status quo of the SDGs and teacher education are researched in teacher education programmes from the Global South and the Global North. The audience of the webinars and the sample for the data collection for the project are Teacher Educators in Austria and South Africa and pre-and in-service students (undergraduate and postgraduate) from a variety of scientific disciplines. The two groups are important stakeholders for the implementation of the SDGs in Teacher Education. The connection between different stakeholders (groups and from different
countries) also provides a platform to share ideas, and to rethink critical current concepts in teacher education and sustainability.

Concurrent to the webinar series, the project focuses on the development of the next generation of teacher education researchers who focus on sustainable development. As such, the webinars and the research project may also potentially provide innovative and sustainable ideas that provide a holistic and transdisciplinary character for lifelong learning. The study actively seeks future developments that can be initiated to consider the four selected SDGs in teacher education programs.

2.1. Rationale for the Teach4Reach Project

Expanding the critical mass of researchers and future teachers, who contribute to knowledge development in the sustainable development goals within the realm of global teacher education, can serve as a key strategy to attaining the global goals as presented in Agenda 2030.

The primary research question in the Teach4Reach project is:

How can teacher education programmes be leveraged to support Agenda 2030 and the sustainable development goals?

The secondary research questions in the Teach4Reach project are:

(a) In which ways do the SDGs currently feature in teacher education programmes from the Global South and the Global North?
(b) How can quality education, gender equity, inequality, and good health and wellbeing be improved via teacher education programmes?
(c) What can a university didactic setting that realizes the above-mentioned SDGs-goals, within the framework of teacher education programmes look like in concrete terms?

2.2. Research Question

For the purpose of this paper, the research team zoomed in on the experiences of teacher educators during high-level discussions on the role of teacher education programmes to support Agenda2030. The research question in this paper therefore is:

How do teacher educators experience online discussions on quality education?

The rationale for this level of analysis, is the assumption that teacher educators play a pivotal role in the ways in which future teachers will engage with the science of sustainability broadly, and quality education (SDG 4) specifically. Deeper understandings of their personal lived experiences may therefore potentially contribute to more engaged learning environments in the future.

2.3. Research Setting and Participants

An integrated process that couples research team meetings, before, during, and after each webinar, is followed in the broad research project. Within this process, the vignette research methodology is regarded as a highly suitable methodology to capture tonal variation as teacher educators and students engaged with SDG materials and discourses, even in virtual settings such as interactional webinars.

This paper reports on a section of the data collected at the inaugural Teach4Reach webinar which took place mid-year in 2021. The focus of the webinar was on SDG 4 (Quality education). The webinar was hosted from the Future Africa campus of the University of Pretoria. Registered participants (n = 109) included virtual delegates from Mauritius, Mozambique, Zimbabwe, Kenya, Sudan, Austria, Italy, France, Germany, Canada and the United Kingdom. An additional group of virtual participants (n = 136) engaged via livestreaming on youtube.

2.4. Vignette Research

As stated, the primary vignette methodology used in this project is associated with the “Innsbruck Vignette Research” approach, an innovative phenomenological approach to empirical school research, which attempts to capture and analyse the experiences of
students in school [7,8]. Hence, a special focus is placed on experiences regarding the quality of education, gender issues, (in-)equalities and individual well-being. The challenge for researchers is how to capture these experiences while in the field. Therefore, researchers in the field attempt to stay open and are particularly attentive to pathic elements such as atmosphere, facial and bodily expressions and tone of voice of pupils and teachers. These details are collected by researchers in protocols, which then form the basis for writing the vignettes. The vignettes are thick descriptions of the lived experience of the researchers and as close as possible to the experience of the participants in the field. Due to the linguistic expansion, vignettes are best understood as a form of literary non-fiction in which researchers strive to manifest and point to the impossible plurality of the experience by revealing the pathic qualities of a tangible moment perceived by them. To ensure that the researchers communicate the essence of the experience of the participants as completely as possible without adding their own interpretation, the individual genesis of a vignette is documented, then communicatively validated with the participants in the field and through a workshop method within a research team.

Once vignettes have been crafted, they become the primary data for phenomenological analysis, a process referred to as “vignette reading”. In reading a vignette, researchers engage in the experience as readers, holding back from categorizing and explaining in order to uncover, peel off and add layers of understanding to what is given. Hence, an appropriate interpretation of data in the phenomenological tradition is one which “points to” phenomena of experience rather than “points out” findings [9].

From a university didactic perspective, vignettes are also used as instruments of professionalization by making experiences regarding the quality of education, gender issues, (in-)equalities and individual well-being comprehensible. Hence, they can contribute to a sustainable change in the attitude of (future) teachers and teacher educators, as in this case the sustainability agenda.

In the project, vignettes are used as research instruments during the webinars, to capture the experiences of the participants in the webinar and guarantee a learner-oriented perspective on the four selected SDGs. In this paper, the vignettes focus on SDG 4 on ‘Quality education’.

2.5. Data Collection and Ethics

Ethical clearance was provided by the Ethics Committee of the Faculty of Education at the University of Pretoria (UP) (EDU049/21). Additional approval for the study was granted by The UP Survey Coordinating Committee on 4 June 2021.

Data was collected during the second breakout session of the webinar. Participants were informed of the study at multiple timepoints, e.g., webinar invitations, on the webinar programme itself and during the proceedings. Participants consented to the sessions being recorded.

The broad theme of the second breakout session was stated as, ‘Understandings of sustainability and quality education in the global context’. Within each breakout group, the open discussions were guided by the following questions/themes:

- How can teacher education programmes be leveraged in the future, to support Agenda 2030 and the sustainable development goals?
- Welchen Beitrag können LehrerInnenbildungsprogramme zukünftig leisten, um die Agenda 2030 sowie die Ziele für nachhaltige Entwicklung zu unterstützen? (German parallel session).
- In which ways do the SDGs currently feature in teacher education programmes from the Global South and the Global North?
- How can quality education (SDG4) be supported and improved via teacher education programmes?
- Within the framework of teacher education programmes, what can a university didactic setting that realizes the SDGs-goals, look like in concrete terms?
A vignette researcher was allocated to each breakout room. The vignette researchers captured observation data as the dialogue under each of the questions/themes unfolded. In this paper the vignettes that emanated from three of the sessions are shared, e.g., the sessions that addressed the questions, “How can teacher education programmes be leveraged in the future, to support Agenda 2030 and the sustainable development goals?”, its German parallel, “Welchen Beitrag können LehrerInnenbildungsprogramme zukünftig leisten, um die Agenda 2030 sowie die Ziele für nachhaltige Entwicklung zu unterstützen?”, and “Within the framework of teacher education programmes, what can a university didactic setting that realizes the SDGs-goals, look like in concrete terms?”. 

2.6. Data Analysis

Vignette research precipitates the process of data analysis in that it entails an iterative-generative process. Raw vignettes are crafted from synchronous observation data and then developed in subsequent processes of refinement until final vignettes are presented. For the purpose of this paper, three vignette researchers crafted raw vignettes, presented it to critical readers, and then refined the vignettes. Iteratively, the final vignettes then also present a new level of data sources. Three vignettes are presented here.

3. Findings

As stated, the findings from the study are presented via three vignettes. As such, it depicts the critical minutiae at play during complicated discussions on matters of quality education, teacher education and sustainability.

3.1. Vignette 1

The scene takes place during a breakout session in a webinar on the topic ‘Supporting the Agenda 2030 in Teacher Education’. After a presentation the participants are invited to join one of five breakout sessions. This breakout session focusses on the topic ‘How can teacher education programmes be leveraged in the future to support Agenda 2030 and the SDG’s?’ and there are just over 10 participants from Europe and Africa in the session. After an introduction by the moderator, Wilma, a first participant shares his thoughts on the topic. Once he finishes Wilma thanks him for his input and asks the participants if there are any remarks, questions or ideas that they would like to share. Derek raises his hand digitally and Wilma acknowledges this by saying his name and that he wants to say something. Derek turns on his camera and unmutes his microphone. He beams into the camera with eyes wide open and a smile from cheek to cheek. He lifts his head slightly while inhaling audibly and opens his mouth in one gesture. At this moment Wilma begins speaking again. Derek lowers his shoulders and tilts his head downward. His gaze descends and fixates on his desk directly in front of him. He furrows his eyebrows and the corners of his mouth turn slightly downwards. He mutes his microphone. Wilma finishes what she wanted to add and calls Derek by name again and asks him to pose his point. Derek’s facial expression changes instantly. He raises his shoulders, tilts his head back and lifts the corners of his mouth to a broad smile. He raises his eyebrows and his eyes are wide open. The tone of his facial muscles is relaxed. Derek proceeds to talk and introduces himself in a hasty manner. He points out that unlike the other participants, he isn’t an expert on the subject, but that he would like to raise a question. His facial expression and tonality change. His eyebrows are furrowed and the smile is replaced by a neutral expression of his lips. His eyes aren’t wide open anymore and his gaze seems focussed and fixated on the bottom of his screen. He tenses his face muscles. His speech is slow and clear. He asks about possible collaborations and how they can be achieved, as he sees them as necessary in order to reach all students. After his question, his tonality and facial expression return to relaxed smile that he showed when he initially started talking. His eyes are wide open again and his eyebrows are slightly raised. He says that he would like to hear other opinions on this matter, thanks Wilma and turns off his webcam and mutes his microphone. Wilma thanks him and asks participants to share their thoughts on the matter. Meryl, another participant,

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raises her hand digitally. Wilma acknowledges her and asks her what she would like to say. Meryl unmutes herself, turns on her webcam and starts to talk. She speaks for roughly 5 min on an unrelated matter that doesn’t connect to Derek’s question. Derek’s screen remains dark and his microphone remains muted for the rest of the breakout session.

3.2. Vignette 2

“I warmly welcome you to topic 2”, trumpets Angelika, the facilitator of the German-language breakout session into the “Zoom” round. She frowns, squints her eyes, before her face relaxes into a broad smile. Her eyes wander searchingly over the screen before Angelika briefly introduces herself. She welcomes the experts from Austria invited for this session, the two students Lisa and Verena, the teacher educator Sarah, and Lucas, professor and Unesco Chair for Global Citizenship Education. Then, with a short welcome, she turns to the remaining five people present in this session. “I would have thought that the experts would open a small round of reflection”, Angelika suggests. She shares her screen and shows the audience a promotional video summarising the goals of the 2030 Agenda, especially SDG4. She then gives the floor to the invited experts with “I would be interested to hear what the four experts have to say”. Almost immediately Lisa, one of the two students, then the student Verena, then the teacher trainer Sarah speak up. In addition, a South African professor intervenes with a request to speak. The discussion revolves around lone wolfism in teacher education, inequalities and the lack of implementation of SDGs even in privileged teacher education programmes. Suddenly the discussion stops. Lucas clears his throat: “I’m actually quite happy that I was able to listen to you first”, he says thoughtfully, before adding. “What are the experiences?” He pauses, then continues, “It’s about habitus reflexive action, or actions in need to be questioned”. He says with determination: “It’s not just about what doesn’t work, but the question is where can we discern and start?”.

3.3. Vignette 3

Silence dominates the unknown situation. Time ticks on as everyone introduces themselves and the contexts in which they function. As the kaleidoscope of participants keep quiet to await the instructions, no virtual eye-to-eye contact is made. Tobias, the facilitator, eagerly opens up the discussion on Sustainable Development Goals to everyone. Olivia excitedly makes it known that she knows Mia, as they attended the same rustic school in Swaziland. Smiles are seen on the split screens. “Consciousness is a crucial point for Sustainable Development Goals”, comments Olivia. “Teachers should be taught how to incorporate Sustainable Development Goals into education”, proclaims Mia. “We all know how important experience is”, responds Tobias. Everyone looks away; there is once again a resounding silence and awkward online presence. The operating light is still blinking, but it is returned with blank expressions. The distant humming sound of a ringing cell phone jolts the group back to reality. In an attempt to pick up where the quiet ended, Charlotte charges into a sentence: “It is not about knowing, but about being”. The conversation ensues. “I agree”, says Tobias, “a total human experience is crucial”. Suddenly, another screen opens and a seventh participant makes an appearance—Petra from Berlin. In a soft, almost shy voice, Petra lowers her head and whispers into her mic: “Empathy and social emotional competencies should be taken into account in education”. Paying close attention to what Petra has to say, Monika, in a more boisterous tone, elaborates on the importance of inquiry-based education, insisting that “it is one of the key aims in the future”. Amara’s screen is muted. She does not venture into the discussion, for now. “But what should teacher education look like in the year 2030?” inquires Tobias, seeking to steer the conversation in a particular direction. “I would like to see more assessments in the future and not standardised tests”, remarks Mia. “That’s profound”, chirps Tobias excitedly as he puts the tip of his pen in his mouth, “I think you are touching on an important aspect”. “Well, in my view the curriculum should be value-driven”, utters Amara next. “Education by nature is value-driven”, affirms Emily with a knowing smile. Not quite sure of what to
say next, “I wish to see teachers as lifelong learners”, adds Olivia. “These are all valuable remarks”, exclaims Tobias, as it appears everyone is still listening to the rhythm of the questions and answers. “Every voice must become one”, retorts Monika. “Marvellous”, replies Tobias as he glances at his watch and responds: “We’ll have to leave it at that until next time”. As each person disconnects, the images on the screen go blank like a thick heavy curtain closing out an audience and a deafening silence falls.

4. Discussion

The three vignettes portray three distinct experiences during the same timeframe, within the same webinar on SDG 4 (Quality education), within three separate breakout groups. Simultaneously, it illustrates the uniqueness of personal participatory experiences, even as it describes the complexities of high-level discussions on the interactions between teacher education, quality education and the broad sustainability agenda.

It has been established that higher education institutions are key for the implementation of sustainability principles and also that sustainability based curricula and culture change is key to mindset transformation to support Agenda2030 [10]. This role of higher education institutions necessitates the need for increasing interdisciplinarity. As such, calls for a more systematic introduction of the SDGs in university programs have also gained momentum [11], and are finding support in projects like the Teach4Reach project.

In Vignette 1, the interactions between a group facilitator and a highly experienced group of educational and interdisciplinary researchers are portrayed. In this vignette, technology brings anonymity behind muted screens, even as it decreases the geographical distances between participants. The timeframe within which the discussion must take place, creates urgency, and the impetus of individual contributions reduces the opportunities for in-depth connections in between individual contributions. Non-verbal communication is tangibly experienced and amplified by projections on a flat screen. Even though the intellectual contributions to the discussion seem to be rich and intricate, the potentiation of new network-development and post-webinar follow-up are absent.

In Vignette 2, which captures some of the dynamics of the German parallel session on the same question (hence the German punctuation), the intricate dynamics between the group facilitator and the wider group of participants are again central in the storyline of the vignette. The conversational rhythms, mediated by technological interaction, are presented as staccato at some points, abrupt in others, and sometimes even on a vanishing continuum. The participants are concurrently listeners and contributors. Privilege and inequality, individualism, and intimacy of connections within a global world are implicitly present in this vignette. The vignette ends with a strong appeal to also find (hinspüren) what is working in education.

In Vignette 3 presents a corporal (e.g., bodily) experience of an online breakout session and it also expands the sensory ‘picture’ of the session. The affective effect of two participants connecting online after many years, ripples through the session and creates a moment of poignancy in a discussion on global education. The global becomes local. The unknown becomes familiar. Yet, the silences and the abruptness of screens opening and closing also generate the same ambiguities within a ‘learning’ environment, that are present in the previous vignettes.

There are scenes of similarity that present in all three of the vignettes: the challenges of turn-taking during online discussions, the impunity of “raising” of virtual and actual hands, and the unintended silences that interject the attempts at meaningful discussions. In all instances, the critical role of the facilitator is wellknown in the education realm, yet pertinently re-emphasised here.

In a systematic review of the literature on Education and SDGs [12] the importance of the acquisition of commitment and participatory processes have been emphasized in order to ensure optimal support for the SDGs in education. These authors [10,12] have argued that Education for Sustainable Development (ESD) should become the essence of teaching and learning at tertiary institutions, and also that educational institutions are to
be guided in the process of incorporating the SDGs, allowing for contextual adaptability and acknowledgment of the level of institutional commitment.

This paper illustrates the embedded advantage for studies that are investigating education in education. The lived experiences of participants during an online webinar on Quality Education (SDG 4) in this study echoes the lived experiences of teachers and students around the globe. Education researchers are learning along with all students. The personal becomes public and the learnings become pervasively applicable. If we, as educational researchers, struggle within the new realities of technological platforms, newfangled power dynamics and the vastness of possibilities, what are the implications for the students and teachers of the world? How do we support Agenda2030 and specifically Sustainable Development Goal 4 on Quality Education?

The relationship between teachers and society, their values, attitudes and behaviours with regard to sustainability have been broadly connected to the four pillars of education [13]: Learning to know (“the educator understands”), learning to do (“the educator is able to . . .”), learning to live together (“the educator works with others in ways that . . .”) [14] and learning to be (“the educator is someone who . . .”) [15,16]. The initial findings (and vignettes) in this paper, presents an appeal for a revisit to the four pillars of education in new ways that capture the new realities of education.

5. Conclusions

Teacher education programmes present a critical vehicle whereby Agenda2030 broadly, and SDG 4 specifically, can be supported. This paper presents the lived experiences of teacher educators as they grapple with the tenets of quality education in an online environment. As stated, the Teach4Reach project seeks to explore the ways in which teacher education programmes can be optimized to support sustainability. The paper presents an argument that education researchers are in a unique position to excavate their own learning experiences, in order to arrive at deeper understandings of learning processes; and thus potentially be able to contribute to a revisit of the notion of the four pillars of education [12], i.e., Learning to know, Learning to do, Learning to live together and Learning to be.


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Institutional Review Board Statement: The study was conducted according to the guidelines of the Declaration of Helsinki, and approved by the Institutional Review Board (or Ethics Committee) of The Faculty of Education at the University of Pretoria (EDU049/21).

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

Data Availability Statement: The data supporting the reported results and findings is available from the authors, upon reasonable request.

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