



Article

Evaluation of Quality and Equality in Education Using the European Foundation for Quality Management Excellence Model—A Literature Review

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Abstract: Purpose: The purpose of this study was to determine the effects of the European Foundation for Quality Management (EFQM) Excellence Model on education and its contribution to ensuring high-quality education equality. Design/Methodology/Approach: A systematic literature review was conducted based on data from three academic publishers (Taylor & Francis, Emerald, and Elsevier Science Direct). Of the 69 journal articles, 61 were published between 2003 and 2023 and documented the results of the EFQM quality tool, and 8 articles were removed. Findings: The study highlights the results of applying the EFQM Excellence Model in the educational sector. Based on the bibliographic review, the feasibility of using the model in primary, secondary, and tertiary education is identified. We examine the findings related to using the model to ensure equality in high-quality education and the challenges faced by educational systems, with the ultimate goal of meeting student expectations. Research limitations/Implications: An important limitation is that the data were only drawn from three major publishers and the authors did not have access to all the relevant databases, since the search for articles was carried out in English only. The search for articles was limited by the keywords, as the EFQM Excellence Model was originally designed for the private sector. Practical implications: The results and limitations recorded in the study and the presentation of the 88 articles motivate academic researchers to conduct further study and fill the gap left by the limited number of publications on the application of the EFQM Excellence Model in the educational sector. Originality/Value: The EFQM Excellence Model has not been widely implemented in the high-quality educational sector and the existing literature reviews are limited. More research in the field of education is needed to determine the contribution of the excellence model to the evaluation of high-quality education.

Keywords: European Foundation for Quality Management; equality in education; EFQM; primary; secondary; tertiary education; practical implications



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1. Introduction

The attainment of high-quality education at all levels and its evaluation, with the aim of creating equality, is an object of study for more and more researchers [1]. The increase in the competition of universities leads to the investment of significant resources to improve quality [2]. Increasing the satisfaction of all those involved in education and universities has led to the need to implement evaluation frameworks to ensure equality in high-quality education [3]. Total quality assurance, evaluations, and the excellence of organizations [4–6] are among the most commonly researched topics [7]. Regarding the evolution of educational organizations and the improvement of their results over the years, many quality

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models have been developed to evaluate them and achieve better results [8]. In recent years, the EFQM quality tool has been increasingly used by organizations to measure and evaluate their activities, while a number of European universities consider the tool to be the most basic measure for evaluating research activities and measurements [9–12].

Quality of education and its evaluation are receiving increasing amounts of attention. It is known that the assessment of the abilities and skills of the students was not, until a certain time, a concern for society and governments. Accordingly, there was no interest in the evaluation of the educational system and the satisfaction of students regarding their goals and aspirations [13]. The education sector, formerly oriented exclusively toward teaching, has directed its attentions toward the customer (pupil, student) over the years, with the aim of satisfying their expectations and providing optimal services [14]. In the international literature, there is an ever-increasing use of statistical tools and methodologies for the purpose of evaluating the total quality management of organizations [15]. Educational organizations and governments have allocated large financial sums to providing better services to clients [16].

In recent years, there has been a rapid increase in the use of teaching methods other than the teacher-centered method; this has been replaced with a student-centered one, focusing on meeting the expectations of students and pupils [17–20]. Equal opportunities for students in education and, by extension, their satisfaction are linked to their improved performance [21–23] and students' commitment to further improvement [24–26].

The desired goal of teaching is the satisfaction of students as it is linked to their optimal performance. However, most of the tools used in education focus on identifying the weaknesses of the services provided. The purpose of this research is to select the most suitable model for evaluating students' perceptions, in order to satisfy their expectations, to achieve equality in education, and to improve their performance. This study reviews the literature in order to identify and answer the following questions:

Why is a literature review of the implementation of quality assurance systems in the field of education necessary?

Is the EFQM Excellence Model in the field of education considered appropriate to ensure equality in high-quality education?

What are the benefits and shortcomings of implementing the Quality Model in education? This research systematically studies the literature on the EFQM Excellence Model with the aim of identifying and recording examples of its application at all levels of education. As a result, it highlights the shortcomings and weaknesses of the evaluation model during its application. The systematic review of the literature contributes to the creation of a database, through which educational institutions can make important decisions about whether or not to implement the quality model [27]. By categorizing the data, managers, teachers, researchers, and academics will be able to inform themselves and make decisions regarding the application of the quality tool at all levels, with the final goal of achieving an evaluation of the educational quality assessment for creating equality in high-quality education.

This constitutes the originality of this particular study and encourages further reports on cases where the EFQM Excellence Model tool is applied. The findings of this study were accepted by publications and journals after their approval for publication, meaning that academics and researchers can contribute to the expansion of the database or rely on it for further study. The research is based on a systematic literature review on the application of the EFQM Excellence Model tool, and the findings are presented and discussed in relation to the evaluation of education quality and equality. Moreover, we make proposals for further reviews and studies of the bibliography.

2. Literature and Models' Review

Evaluation in education is an essential tool for the proper management and organization of institutions, responding to the achievement of institutional goals [28]. As an organized and systematic process, evaluation is an important aspect of policy in many international organizations [29]. Education and training systems are very important for eco-

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nomic production and prosperity, as well as economic cohesion [30,31]. Demands for quality and efficiency in contemporary educational institutions mean that educational evaluation is necessary for creating equality in the sector [32–34]. Goodman and Sianesi [35] concur with this point; in their research on educational issues, they concluded that assessment at an early educational stage is linked to the educational qualifications of adults. Children's participation in high-quality programs from the time of their preschool education is closely related to their cognitive and emotional development [36].

It is important to understand equality's role in education, that is, in meeting the needs of each individual. Regardless of their national origin, economic status, political beliefs, skin color, or gender, all students should have equal opportunities and access to the same resources [37]. The non-discrimination of persons with disabilities, the equal treatment of all, and the absence of stereotyping and sexist behaviors contribute to equality [38]. The main goal of educational equality is to create an educational system that addresses all students and enriches their educational experience, in order to fulfill their goals. Unequal distribution of resources lays the foundations for unequal educational opportunities in the quality of education for pupils and students [39]. Equality in the lower levels of education is an essential factor for students' access to tertiary education, with clear academic consequences [40].

In Europe and America, the EFQM Excellence Model has been used in the field of education to assess and ensure quality [41,42]. Many educational organizations use the model to evaluate their performance but have faced problems with scoring based on the scores presented by the specific model; this is attributed to the fact that it was designed for the private sector and industry [43], although it is easy to use, even for inexperienced evaluators. The EFQM Excellence Model is a model in which organizational assessment can be combined with learning and further improvement [44].

According to [45], as shown in Figure 1, they have developed a plan which consists of two equally weighted parts: enablers to achieving excellence or quality operation and results produced by the company or the organization.

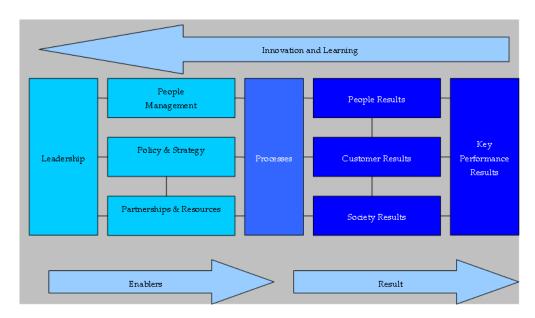


Figure 1. The EFQM Excellence Model. Source: EFQM (2010).

The EFQM quality model consists of a set of criteria classified into two categories, "enablers" and "results" [46,47]. The enablers include five criteria: leadership, people, strategy, partnerships, and resources and processes. The remaining criteria are included in the results and are referred to as people results, customer results, society results, and key results [48]. The EFQM Excellence Model is considered the most reliable quality tool compared to other models in terms of its evaluation [49], and it consequently achieves

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the appropriate preconditions for equality in education. The EFQM Excellence Model reflects the viability of the organization and its weaknesses and strengths, and, therefore, contributes to the improvement of its performance. Due to its ease of use, it has been applied beyond educational organizations [50–52] in other sectors, such as the health sector [53–55], tourism [56], government [57–59], and private services [60,61]. The EFQM Excellence Model is also essential in educational organizations. Every manager in a school, as well as senior executives in tertiary education, has the ultimate goals of satisfying the expectations of pupils and students, optimizing their performance, and providing them with all the necessary resources for their further development. As shown in Figure 2, educational organizations, like any organization, constitute a complex management system; in addition to the management of human resources, it is also necessary that these organizations ensure the proper management of financial resources, optimization with the aim of excellence, and the attainment of equality in training [62].



Figure 2. The EFQM Excellence Model in Education. Source: Adapted from EFQM Model https://efqm.org/efqm-model (accessed on 12 December 2021).

According to [63], as shown in Figure 2, The EFQM Model has been recognized by thousands of organizations around the world for more than 30 years and continues to set the management agenda for any organization seeking a long-term, sustainable future.

The present research examines the EFQM quality tool in order to identify the weaknesses and advantages of its use in the educational environment and to improve the processes that enhance performance and facilitate the creation of equal opportunities in education. The results of this research show that the schools and universities where the EFQM quality model was implemented corrected their weaknesses and contributed to the creation of educationally equal conditions. The EFQM model can be applied with great ease by educational organizations and is considered a tool for optimizing performance and evaluating the quality of education, with the aim of creating equality in high-quality education [64,65]. This is confirmed in a study conducted by Safari et al. [66], who emphasize that the EFQM quality model is an important tool for evaluating the quality of tertiary education and contributes to high-quality education. While the quality model was originally created for use in the private sector, it can be successfully applied in the field of education; however, the knowledge in the field regarding the use of the tool itself is limited [67]. The authors of [68] confirm the reliability and validity of the EFQM quality tool and its contribution to improving quality in education.

The EFQM Excellence Model is structured in such a way as to continuously monitor all processes, ensuring improvements in efficiency while satisfying stakeholders and customers; it therefore has the advantage of generating greater improvements [69–71].

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The EFQM model is mainly focused on the overall educational system and not on the interested parties, i.e., pupils and students; it is therefore necessary to restructure it. In particular, the EFQM–Hamdan model is considered ideal, as it focuses on strategic and operational performance and contributes to aligning the school or university's aims with its current practices [72]. Leadership is a key factor in promoting equality in education [73,74]. Leadership focusing on all stakeholders, students, teachers, and parents plays an important role in equality by providing sound educational practices. Transforming leadership, promoting a shared vision, innovation, the use of advanced technology, and leadership-driven teacher initiatives contribute to educational equality. With their active participation and the promotion of strategies adapted to the data of each school and society, professors and teachers can combat inequality.

3. Materials and Methods

To evaluate the literature and document and present the implications of the European Foundation for Quality Management's model of excellence, a systematic literature review was conducted. This analysis highlighted the many advantages of the implementation of the model, which, after an evaluation of the educational system, creates the necessary prerequisites for the creation of equality in high-quality education [75]. A systematic bibliographic review and the corresponding database generates not only a presentation of articles but contributes to the understanding of the subject [76]; it is a point of comparison, grouping the results of different researchers [77]. During the present systematic review, the extraction of the results was based on the use of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow diagram [78]. The gathering of studies that were determined to meet the predetermined eligibility criteria necessary to answer the research questions acts as a source of guidance for academics and researchers, who can draw their own results and conclusions [79].

To complete the present research, articles from three reliable journal publishers (Elsevier Science Direct, Emerald, and Taylor & Francis) from 2003 to the present day were recorded in a database after conducting a systematic bibliographic review. In this database, the application of the EFQM Excellence Model and the role it plays in education are presented. The systematic bibliographic review is an important tool for approaching the bibliography and conducting critical analyses of the results of primary research and studies, making an excellent contribution to the clarification of topics and new research directions. A systematic literature review involves a combination of factors [80], as shown in Figure 3. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement was published in 2009 to help researchers conduct a review of valid and reliable primary studies and present the findings. The evolution of the PRISMA 2020 model clarifies the process of conducting a systematic literature review, informing researchers on how to explore, select, and evaluate studies and present their findings.

A systematic literature search can identify weaknesses in primary research and also constitutes a resource for academics and researchers due to its presentation of findings, with the aim of correcting these weaknesses in future research [81,82]. In many studies [83,84], the PRISMA 2009 tool is used to perform a systematic literature review and successfully report the observations and conclusions with transparency.

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PRISMA 2020 flow diagram for new systematic reviews which included searches of databases and registers only

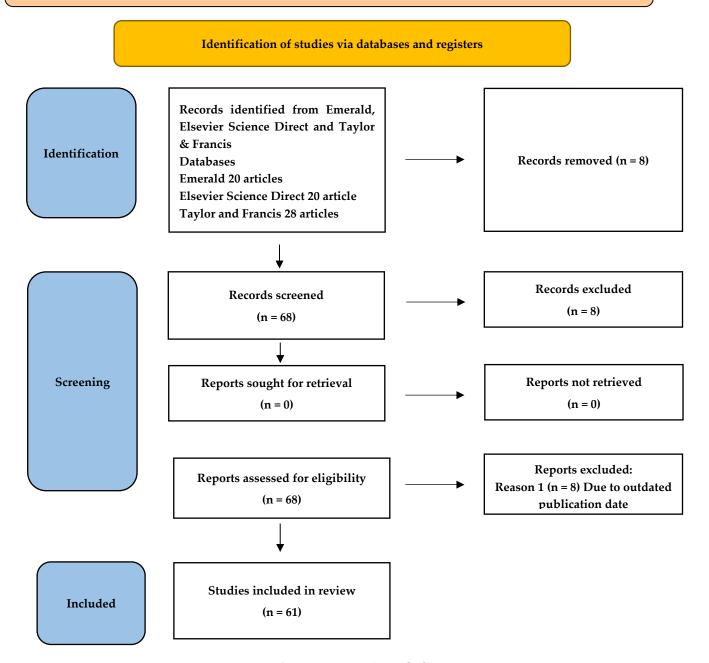


Figure 3. Systematic literature review (From [80]).

3.1. Identification

The PRISMA guidelines, which are accepted by academics, researchers, and journals, were used to carry out the present literature review as they provide an acceptable methodology [85]. During the implementation of the research, valid published articles from reliable journals were selected. Their validity was ensured by the review and their acceptance for publication by experienced specialized staff at globally recognized journals.

At this stage and after the formulation of the research questions, previous corresponding works were studied, which referred to the application of the EFQM Excellence Model in educational organizations with the aim of promoting equality in higher education. Out of the 69 articles that were viewed and studied by the members of the research team, 61 were included in the research and are listed in Table A1 in Appendix A, numbered

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from [86–143]. Eight articles were excluded due to their being published a long time ago, as shown in Table A1 in Appendix A, where they are presented in the last column, titled "REMOVED" [144–151]. In recent years, more and more academic research related to the educational sector has been conducted; this is also a means of combating the global economic and social crisis, through the attainment of high-quality education. The specific keywords (European Foundation for Quality Management, equality in education, EFQM, primary, secondary, tertiary education, and practical implications) were selected for the literature review after performing a web audit. The keywords were selected for their relevance to the research objectives. The quality tools were originally designed for the private sector, and the terms EFQM Excellence Model, primary, secondary, and tertiary education were used to concretize the subject.

Based on the selection criteria, appropriate articles and publications were identified and references were searched for retrieval, many of which were not retrieved due to a required financial payment. However, the study of the EFQM Excellence Model presents many positive findings regarding the improvement of effectiveness and educational efficiency, increasing academic interest in conducting further studies. A search was undertaken for articles published between the years 2003 and 2023 from three reliable journal publishers (Elsevier Science Direct, Emerald, and Taylor & Francis). During the search, several studies in English and other languages were identified; however, this was also one of the limitations of the present research, as it was based on English-language publications. In order to identify the appropriate articles, terms such as equality in education, EFQM Excellence Model in education, and secondary and tertiary education were used. Finally, a total of 69 published articles were identified, with 20 articles from Elsevier Science Direct, 20 from Emerald, and 28 from Taylor & Francis, as presented in Table A1 in Appendix A. Figure 4 presents the percentage of articles published in the respective journals, while Figure 5 shows the temporal variation in the publications.

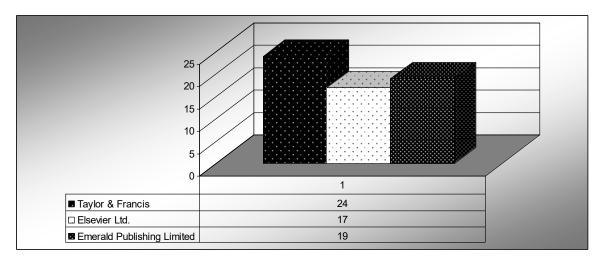


Figure 4. Percentage of articles published relating to the EFQM excellence model and its application to ensure equality in education.

Of the 69 articles selected, 8 were excluded from the research due to their early publication dates. Specifically, of the 28 articles selected from the Taylor & Francis journals, 4 were excluded; of the 20 articles selected from the Emerald Publishing Limited journals, 1 was excluded; and of the 20 articles from the Elsevier Ltd. journals, 3 were excluded. The articles that were removed are shown in the last column in Table A1 in Appendix A.

Figure 5 shows the annual increase in publications related to the implementation of the EFQM Excellence Model and the pursuit of equality in education from 2003 to the present. From 2013 to 2023, interest in the application of the EFQM Excellence Model in educational organizations and attempts to ensure the appropriate prerequisites for ensuring equality in education seem to have increased compared to the previous decade, when there was less

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interest. The number of articles increased exponentially from 15 in the period from 2003 to 2012 to 45 in the period from 2013 to 2023. The chart does not include the eight articles that were excluded due to their earlier publication dates, which were between 1991 and 2001.

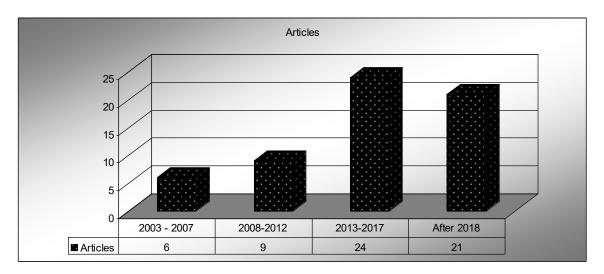


Figure 5. Number of relevant publications from 2003 to 2023.

3.2. Screening

At this stage of the bibliographic review, the research shows a number of studies corresponding to the research object. The title, the summary, and the conclusions constitute the main criteria for the selection of the final articles that were included in the study. However, some of the selected studies had to be considered in their entirety, and their relevance is to be determined in the present investigation. As mentioned above, the appropriateness and credibility of the published articles were determined based on their approval by the specialized staff of the journals. The articles were evaluated by the authors of the research individually, and then a meeting of the team members was held to discuss, evaluate, and record the findings in the database. The team members were selected for their suitable communication, collaboration, and problem-solving skills. The team's strong organizational skills, due to experience and the writing of many published articles, contributed to the cooperation of the team members for the realization of the present research. The conclusions are presented in Column 5, Table A1, in Appendix A. They are intended to be used for further research by academics and researchers, as few articles were identified as relevant to the application of the EFQM Excellence Model in education, since the quality tools were originally designed for use in the private sector. The studies are listed in the table by year of publication and in alphabetical order of the first author's name. The articles were coded with a number that is included in the long column in Table A1 and in the bibliography. Eight articles were not included in the research results due to their early publication dates [144–151].

3.3. Included

As indicated by the classification of the articles in Table A1 in Appendix A, most of the publications that the present research refers to were published between the years 2013 and 2023, as indicated in Figure 5. Since 2013, it is clear that scholars and academics have been interested in ensuring equality in high-quality education. Figure 5 shows that, in the years 2013–2017, the number of publications increased in relation to previous years. However, the level of interest remained unchanged from 2017 to the present, with a similar percentage of publications produced; this confirms the importance of equality in education and also the need to ensure high-quality education. Most of the identified papers were published in Taylor & Francis journals—24 out of 60, or 41%; this was followed by 19 (31%) publications in Emerald journals, and a smaller 28%, or 17 out of 60, in Elsevier Science Direct journals,

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as shown in Figure 4. The publications all refer to the application of the EFQM Excellence Model in education in order to study the attainment of equality in high-quality education. The PRISMA methodology was used to search for valid and reliable older published articles corresponding to the present research, and to select and evaluate them appropriately.

4. Results

The present bibliographic review aims to study the EFQM Excellence Model and its contribution to the field of education in terms of achieving equality in high-quality education, after examining many previous studies [152–154]. The bibliographic review shows the weaknesses but also the advantages of the management and operation of educational spaces and projects, the satisfaction or failure to meet the expectations of pupils and students, and their perceptions regarding the prevalence of equal opportunities for all. The EFQM Excellence Model has been successfully applied in the field of education [155], and more and more studies are being carried out regarding this specific quality assessment tool by academics and researchers. In the present study, we sought to present as many publications as possible related to the EFQM Excellence Model and equality in education, with the aim of identifying weaknesses as well as advantages, and to record the satisfaction of students.

At the same time, the PRISMA tool used to carry out the literature review is recommended by many researchers for its validity [156,157]. As shown in Column 5 in Table A1 in Appendix A, the 61 articles under consideration identify many areas in which equality in education is highly important. The main goal is to fulfil the expectations of students; for this reason, the application of the EFQM excellence tool is considered necessary, in order to overcome weaknesses in the educational sector and to highlight advantages that are considered necessary for providing equal educational opportunities to all, regardless of their nationality, gender, or political, economic, and social beliefs. The equal distribution of resources to students, along with guidance and support, contributes to improving their efficiency [158]. This study aimed to highlight the successful application of the EFQM Excellence Model in the educational sector and the creation of appropriate opportunities to provide quality services to students, with the goal of student satisfaction [159].

In Table A1 in Appendix A, the 69 selected articles are presented after being evaluated. The articles were selected from three world-renowned journal publishers, Taylor & Francis, Emerald, and Elsevier Science Direct, due to their validity and reliability; the articles were arranged in chronological order and then in alphabetical order according to the first author's name. The titles of the articles, the years of publication, the authors, and the journals of publication are presented in detail. The selected articles were read repeatedly by well-published and suitably experienced team members, and the findings were recorded to construct Table A1. The team members met regularly to reach agreements on how to record the final data. In the fifth column, the corresponding conclusions of each research paper are displayed, along with the paper's contribution to the quality of education and the equality of opportunities for all students. The conclusions refer to all 69 articles, including the 8 that were rejected due to their publication dates, which were earlier than the selected papers. The chronological search referred to the time period of 2003 to 2023; however, the eight rejected articles that were published between the years 1991 and 2001 record important findings that were deemed necessary to present, even though they were not taken into account in assessing the percentage contribution to the journals, as shown in Figure 4 and in terms of their publication dates in Figure 5.

The recording of the results in Table A1 shows the importance of the EFQM Excellence Model and its usefulness for the smooth operation of educational organizations and the satisfaction of the expectations of students, in relation to the desire to provide equal opportunities for education and training. It is clear that all those involved in the field of education, as well as governments, ministries of education, professors, academics, and researchers, must provide quality services to students and ensure the equal provision of high-quality education in order to improve student satisfaction. The distribution of financial

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resources with fair criteria will contribute to the improved provision of services to all students [160]. It is imperative that all involved understand the level of services provided to students. The continuous training of educational staff, leadership teams, and administrators may contribute to increased costs, but it will also ensure the provision of a high level of quality services to the students and, by extension, improve their satisfaction [161–163].

It is clear, therefore, that the EFQM Excellence Model enables the effective operation of educational organizations by identifying their weaknesses and highlighting the advantages of its application, and in this way contributing to the satisfaction of students, resulting in the creation of equality in high-quality education. The creation of equality in education, the quality of education, and the satisfaction of students' needs are pressing issues, and they need to be studied by many academics and researchers if solutions are to be found.

5. Discussion

In the bibliographic review carried out using the PRISMA model, 69 articles were collected from three internationally recognized journal publishers, Taylor & Francis, Emerald, and Elsevier Science Direct. Eight of the articles were rejected due to their early publication dates, between 1991 and 2001; the present research focused on the years 2003-2023 when analyzing the application of the European Foundation for Quality Management's Excellence Model in primary, secondary, and tertiary education. The aim of the review was to identify the weaknesses but also the advantages of using the tool in the educational sector, with the ultimate goal of evaluating the quality of education in order to create equality in high-quality education. When conducting the bibliographic review, the results of applying the EFQM Excellence Model were recorded, despite the fact that the bibliographic sources were limited in research relating to schools and academic spaces, since the model was originally designed to be applied in the private sector, for which there is an abundance of bibliographic references. A logical consequence of all the factors noted above is that further qualitative and quantitative analyses of the EFQM Excellence Model are necessary, in order to identify all those factors that contribute to the evaluation of the quality of education with the goal of achieving high-quality education and ensuring equal educational opportunities for all. The goal is the satisfaction of students' expectations and the equal financial distribution of resources that could contribute to ensuring equality in education.

The EFQM Excellence Model successfully contributes to strategic planning, as it directs people in leadership positions, managers, and vice-managers in the education sector to define their goals, have a shared vision, and pursue this vision's realization by motivating and including all those involved and understanding the resources available to facilitate success in the areas described above. With the application of the EFQM Excellence Model, the City of Glasgow College managed to achieve the best score from a group of international evaluators, who highlighted the involvement of all teachers, their dedication to the common vision, and their active participation in the realization of goals, with excellent cooperation between them. The improvement of processes and the involvement of all relevant parties in achieving innovative goals, with the simultaneous training of personnel and continuous performance measurements, are some of the benefits of applying the EFQM Excellence Model. However, there are several limitations to the application of the EFQM model, as the collection of data to measure performance and achieve evaluations may take a long time, necessitating overtime work from the staff with accompanying dissatisfaction. Meanwhile, the participation and cooperation of all involved are often not attained due to people's inability to accept innovative goals or their fear of evaluation. The implementation of the EFQM Excellence Model faces challenges in the field of education, such as resistance to change, limited resources, the absence of continuous training for teachers, and the difficulty of measuring quality.

Based on this research, it is understood that the satisfaction of student expectations and the provision of equal opportunities for success lies with the educational institution and not with the student. The education sector has the potential to offer quality higher education services to clients and achieve educational equality in the long term. The field

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of education exemplifies the provision of these kinds of opportunities, and students are called on to take advantage of the opportunities offered to them; otherwise, there will be detrimental effects on their careers and in the distribution of the positions and roles available in society [164]. The equal teaching of the languages and cultures of students' countries of origin at all levels, the elimination of elements that degrade the cultures of minorities, and the unequal distribution of financial resources according to the needs of the respective educational institution are factors related to equal opportunities in schools, according to the included articles.

Education is a public good that improves the position of individuals in society; therefore, governments should contribute to ensuring the acquisition of basic education to improve the quality of life of individuals and society at large. Equality of entry opportunities in the educational system at different levels, as well as the opportunity for students to complete their studies, need to be pursued for all students. The application of the EFQM Excellence Model contributes to the evaluation of the quality of education in order to create equality in high-quality education, proving that the educational sector can continuously improve its processes and meet the expectations of students through the creation of a framework for improvement. The use of the EFQM quality tool demonstrates the need to assess the quality of education worldwide in order to ensure equality through best practices. The globally renowned publishers Taylor & Francis, Emerald, and Elsevier Science Direct allow academics and researchers to access many books and articles related to topics of interest, among which is the application of the EFQM Excellence Model in the fields of education, health, natural science, technology, informatics, and mechanical engineering. The present study refers to the use of the EFQM model in the educational sector, at the primary, secondary, and tertiary levels. However, because the model was originally designed to be used in the private sector, the literature related to its use in the field of education is limited [165].

In most of the articles that were studied, their conclusions were recorded, and references are made to the necessity of equal access opportunities at various educational levels. It is deemed necessary that all students have the same cognitive experiences and development. Given the equality of opportunities available throughout the educational system, dignity should be ensured in the decision-making process and in professional rehabilitation. Many authors who have studied the EFQM Excellence Model emphasize its significant contribution to achieving all of the above goals, highlighting the weaknesses and strengths of the educational system while aiming to meet the expectations of students. In recent years, as shown by the bibliographic review, there has been increased academic interest in the study of the EFQM excellence tool in education, specifically in relation to equality in education. The effective application of the model in the educational sector requires further research to improve the efficiency of educational systems and processes and student satisfaction [166]. The studies selected in the present research prove that, through the strengthening of continuous improvement processes, the EFQM Excellence Model enhances institutions' competitive advantages and contributes to the creation of equal preconditions of high-quality education [167,168]. The authors of [168,169] claim that a combination of the EFQM Excellence Model and statistical control tools, such as Six Sigma, Failure Modes and Effects Analysis (FMEA), and Pareto Chats statistical inference, should be used in quality assessments.

6. Conclusions

The use of the EFQM Excellence Model in the educational sector has not been widely studied. The EFQM model, like similar quality assessment tools, was mainly designed to be used in the private sector, with the result that few literature reviews have been carried out on its use in public organizations, despite the many advantages of its application in secondary education settings. Many educational institutions have accepted the positive effects of the EFQM quality tool, resulting in their commitment to performance excellence while meeting student expectations. This is a factor that motivates many educational

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organizations to seek to improve their competitiveness and to provide equal educational opportunities regardless of students' race, ethnicity, economic status, and political beliefs. However, much future research is required to record big data [169–177], reach conclusions, and present them in databases.

The present research evaluated the EFQM Excellence Model and the quality of education with the goal of creating equality in high-quality education. Student satisfaction, the provision of high-quality education, equality in education, and the presence of equal opportunities for education and personal development need to be the object of future research, as they have been deemed necessary to improve the level of services provided to students. While this literature review has recorded and presented some findings, it is also intended to encourage further future research, as there are very few studies related to the EFQM excellence tool in conjunction with the quality assurance of high-quality training. The advantages shown by its application, such as improved student satisfaction through the improvement of educational processes and the equal distribution of resources, may influence more educational organizations to use the model and reap the benefits. Educational organizations that use the EFQM Excellence Model carry out evaluations of their services in order to keep pace with technological and economic developments and to achieve the consolidation of their competitiveness in their field, providing appropriate opportunities for equality and educational for all. The lack of a literature review of the EFQM Excellence Model in relation to its application in the educational sector motivates further research focusing on the practical implications of the tool and the pursuit of equality in high-quality education.

An important advantage of applying the model both to higher education institutions and to other levels of education is that it constitutes an open model for assessing the development of the organization. One major benefit is that everyone involved participates in the improvement process, and self-evaluation is a key factor in overcoming all challenges in time. The model provides a circular process of evaluation, with the aim of identifying weak points and processes in need of improvement, developing appropriate approaches to achieve this objective with the aim of satisfying the final recipients, i.e., the students, and increasing performance for all levels of education. The application of the EFQM Excellence Model in tertiary education promotes teamwork and contributes to personal academic self-improvement.

It is important to note, however, that the EFQM Excellence Model is not equally applicable to every academic culture, as some do not fit well with the use of the model. The culture of the staff involved in the evaluation process often makes it impossible to apply the model at every level of education, as there is a lack of cooperation and management support in the fulfillment of a common vision and shared goals. A typical example is the application of the EFQM Excellence Model in higher education in Serbia and Russia, with the aim of achieving sustainable excellence. This example shows that the education sector, for which the model was not originally designed, could not adapt to the requirements of the excellence model, due to lack of experience and the pressure to meet expectations immediately [178]. If adapted to the culture of each place, the EFQM model could contribute to enhancing excellence at all levels of education and achieving high levels of performance and improvement. All those involved, including educators, directors, and academics, with appropriate cooperation and the necessary resources at their disposal, can cope with the demands of the model and achieve their goals. The model can be effectively applied in education and in the evaluation and improvement of school and academic environments.

Like all studies, this systematic bibliographic review, which was based on the PRISMA model, showed limitations. First, the search for articles was limited to three journal publishers, Taylor & Francis, Emerald, and Elsevier Science Direct. Although these publishers are globally renowned for their credibility, other databases and journals could be searched for articles related to equality in education that document the effects of applying the EFQM excellence tool in secondary and tertiary education. In addition, the search was based only on English language articles. Finally, the excellence model was originally designed for the

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private sector and appears in a limited number of publications focused on the public sector, and especially the educational sector; as a consequence, we were required to use keywords such as "equality in education", and "primary, secondary, and tertiary education", as well as "EFQM Excellence Model", which is used by those from other fields, such as public organizations. This limited the article search.

Considering the above limitations, it is necessary to further investigate the subject and conduct more literature reviews to record data and conclusions related to equality in education and the application of the EFQM Excellence Model in the education sector, with the aim of further improving the relevant processes and meeting student expectations. We suggest conducting future research and literature reviews, drawing material from other databases, journals, and articles, beyond the world-renowned publishers discussed here. At the same time, it is necessary to conduct quantitative research that can address the identified limitations and advance our understanding of the topic.

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Appendix A

Table A1. European Foundation for Quality Management Excellence Model and results in Education.

Year	Authors	Journal	Title	Impact on Results	References
2023	Bollom, J.E., Balde, A., Jandi, Z., Boira, Gunnlaugsson, G. & Einarsdottir, J.	International Journal of Educational Research. Elsevier Ltd.	Equality of opportunity: Social determinants of university expectation amongst school attending adolescents in Bissau, Guinea-Bissau	Research has shown that parental influence and support influences a student's decision to attend University.	[86]
2023	Filippi, E., Banno, M. & Trento, S.	Technological Forecasting and Social Change Vol. 191, June 2023, 122528	Automation technologies and the risk of substitution of women: Can gender equality in the institutional context reduce the risk?	This study investigates how the institutional context in terms of gender equality affects the risk of substitution faced by European women, their risk of being replaced by automation technologies.	[87]
2023	Horta, J.B.G. and Ramos, M.T.G.	A Pending Conversation, Emerald Publishing Limited	Educational Materials in Elementary Education in Mexico: A Missed Opportunity to Promote Gender Equity	This research presents an analysis of gender equality messages in textbooks and official educational documents in Mexico.	[88]
2023	Longlands, H. & North, A.	International Encyclopaedia of Education (Fourth Edition), 2023.	Education, equality and international development.	This chapter explores gender equality and girls' education and how these have been positioned in relation to a wider development agenda within global policy contexts.	[89]

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Table A1. Cont.

Year	Authors	Journal	Title	Impact on Results	References
2023	Luo, C. & Jiang, S.	Heliyon 9 (2023) e16324. Elsevier Science direct.	The knowledge map of gender equality in cross-cultural communication: A bolometric approach	This article explains the current hot topics of cross-cultural and gender studies. Gender issues manifest themselves differently at different times and regions, so there is still a long way to go to solve this problem.	[90]
2023	Torrico, M.G.C., Hinojosa Pareja, E.F., Buenestado Fernandez, M. & Jimenez Millan A.	Women's Studies International Forum. Elsevier Ltd.	A statutory requirement: Teaching innovation for gender equality at university	The present research opens up lines of research such as the impact of feminist methodologies from the student perspective and the analysis of student learning and standpoints in relation to knowledge in study plans	[91]
2022	Iqbal, A., Hassan, S., Mahmood, H. & Tanveer, M.	Heliyon 8 (2022), e11394. Elsevier Ltd.	Gender equality, education, economic growth and religious tensions nexus in developing countries: A spatial analysis approach	This research tests the effects of religious tensions, governance, economic growth, and education on gender equality	[92]
2022	Jasti, N.V.K., Venkateswaran, V. & Kota, S.	The TQM Journal, Vol. 34. Emerald Publishing Limited	Total Quality Management in higher education: a literature review on barriers, customers and accreditation.	The findings include the identification of barriers to the successful implementation of the EFQM excellence model of higher education institutions and the satisfaction of student expectations.	[93]
2022	Mattebo, M., Ostlund, G. & Elfstrom, M.L.	International Journal of Educational Research Open, Vol. 3, 2022, 100145	Availability of attachment relations and safe school environment are associated with subjective well-being in 15-year-olds-with girls reporting less well-being and less equality	Understanding young people's well-being, as they experience equity and safety, is particularly important for identifying potential preventive interventions in the school setting.	[94]
2021	Agbevanu, W.K., Nudzor, H.P., Tao, S. & Ansah, F.	International Perspectives in Social Justice Programs at the Institutional and Community Levels Innovations in Higher Education Teaching and Learning, Vol. 37, Emerald Publishing Limited	Promoting Gender Equality in Colleges of Education in Ghana Using a Gender-Responsive Scorecard	The study concludes that effective use of quality tools appears imperative to promote women's success in settings where the gender gap is an issue in teacher education.	[95]

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Table A1. Cont.

Year	Authors	Journal	Title	Impact on Results	References
2020	Medne, A., Lapina, I. & Zeps, A.	International Journal of Quality and Service Sciences, Vol. 12. Emerald Publishing Limited	Sustainability of a university's quality system: adaptation of the EFQM excellence model.	The findings indicate that the EFQM excellence model can provide a management framework and a comprehensive overview of a university to identify the necessary improvements and promote the implementation of progress activities on the way to sustainable development and equality in education.	[96]
2020	Rodriguez– Mantilla J.M., Martizen-Zarzuelo A. & Fernadez-Cruz F.J	Evaluation and Progra, Planning 80 (2020) Elsevier Ltd.	Do ISO:9001 standards and EFQM model differ in their impact on the external relations and communication system at schools?	The implementation of the model in Spanish schools for the communication system and external relations in school revealed that it haw a medium high level of impact on the communication system and a moderate level in the external relations dimension, while the size of schools plays an important role in their external relations	[97]
2020	Rodriguez– Mantilla, J.M., Fernandez-Guz, F.J. & Fernandez-Diaz, M.J.	Total Quality Management and Business Excellence. Taylor and Francis.	Factors associated with the impact of implementing quality management systems at schools: a multilevel analysis	The study highlights the importance of the EFQM quality tool and the high level of influence of teachers' behavior on student education.	[98]
2020	Stamelos, G. & Lempesi, G.E.	International Perspectives on Gender and Higher Education, 57–74 Emerald Publishing Limited.	Gender and Higher Education: The Greek Case	The participation of women s higher than that of men in higher education. However, within higher education, inequalities remain. This to means that social, cultural and economic stereotypes persist and are present.	[99]
2020	Zabaniotou A.	Global Transitions Elsevier Ltd.	Towards gender equality in Mediterranean Engineering Schools through networking, collaborative learning, synergies and commitment to SDGs-The RMEI approach	Networks of universities with a common vision can have a pivotal role in catalyzing changes and metabolizing learning into practice.	[100]
2019	Laurett, R. & Mendes, L.	International Journal of Quality & Reliability Management, Emerald Publishing Limited	EFQM model's application in the context of higher education: A systematic review of the literature and agenda for future research.	The paper provides a broad overview of the main issues of benefits, barriers and critical success factors in education	[101]

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Table A1. Cont.

Year	Authors	Journal	Title	Impact on Results	References
2019	Mahlangu, V.P.	Diversity within Diversity Management. Emerald Publishing Limited	Equality and Diversity of Students in Higher Education	This chapter provides an opportunity to advance our knowledge of equality and diversity of students in higher education	[102]
2019	Marimon, F., Mas-Machuca, M., Berbegal- Mirabent, J. & Liash, J.	Total Quality Management and Business Excellence. Taylor and Francis.	UnivQual: a holistic scale to assess student perceptions of service quality at universities	The aim of the study is to satisfy the expectations of the students beyond economic and social distinctions, for a desirable study program that refers to the quality of learning methods and the development of their skills.	[103]
2018	Brundrett, M. & Thuy Dung, M.T.	International Journal of Comparative Education and Development Emerald Publishing Limited	The challenge of ensuring gender equality in Vietnamese and English high schools: Espoused and real commitments	The main findings include that despite a strong commitment to gender equality, both pedagogy and curriculum fail to promote gender equality in the country of Vietnam.	[104]
2018	Calvo-Mora, A. Dominguez, M. &Criado, F.	Total Quality Management and Business Excellence. Taylor and Francis.	Assessment and improvement of organisational social impact through the EFQM Excellence Model	Total quality management is used by educational organizations to create a sustainable competitive advantage.	[105]
2018	Kasperaviciute- Cerniauskiene, R.	Total Quality Management and Business Excellence. Taylor and Francis.	The adoption of ISO 9001 standard within higher education institutions in Lithuania: innovation diffusion approach	This work explores the promotion of innovation in Tertiary education with the aim of the fastest allocation of resources for equality in education.	[106]
2017	Chen, I.S., Chen, J.K. & Padro, F.F.	Total Quality Management and Business Excellence. Taylor and Francis.	Critical quality indicators of higher education	This study explores the weakest dimensions of total quality management and determines the critical quality indicators for universities Innovation; human resources play an important role in improving student performance.	[107]
2017	Das, P. & Mukherjee, S.	Total Quality Management and Business Excellence. Taylor and Francis.	Improvement in higher education quality of the North-East University of India	The study identifies weak areas for improvement and the fight against socio-political factors, racial disorders to promote equality in education.	[108]
2017	Hrnciar, M &Madzik, P.	Total Quality Management and Business Excellence. Taylor and Francis.	A 3D view of issues of quality in higher education	This study demonstrates the importance of connecting tertiary education graduates with employers.	[109]

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Table A1. Cont.

Year	Authors	Journal	Title	Impact on Results	References
2017	Manatos, M.S. Sarrico, C.S & Rosa, M.J.	Total Quality Management and Business Excellence. Taylor and Francis.	The integration of quality management in higher education institutions: a systematic literature review	The innovative contribution of quality management to global institutional management systems is highlighted.	[110]
2017	Rotta, D.L. & Rave, J.P.	Total Quality Management and Business Excellence. Taylor and Francis.	A relevant literary space on the use of the European Foundation for Quality Management model: current state and challenges	The study emphasizes the use of the model for decision-making and the allocation of equals in higher education for equity in education.	[111]
2016	Manion, C.	International Perspectives on Education and Society, Vol. 28, Emerald Group Publishing Limited	Reflecting on Gender and Education Research and Practice in the Field of Comparative and International Education: Past, Present, and Future	The past, present and future of research, policy and practice on gender and education within the field of comparative and international education are analyzed.	[112]
2015	Akyuz, G.A.	Economics, Finance, Business & Industry. Taylor and Francis.	Quality excellence in complex supply networks: EFQM excellence model reconsidered	Findings using the EFQM excellence model indicate that multi-partner understanding is needed to promote equity in education.	[113]
2015	Anastasiadou, S.D. & Zirinoglou, P.A.	Procedia Economics and Finance.Elsevier Ltd.	EFQM Dimensions in Greek Primary Education System	The application of the EFQM model in education shows that leadership plays an outstanding role in Policy and Strategy and in the allocation of resources for equality in education.	[114]
2015	Jankal, R. & Jankalova, M.	Economics, Management and Tourism, 26–28 November 2015	The application of The EFQM Excellence Model by the evaluation of Corporate Social Responsibility activities of companies	The purpose of the paper is to point out the applicability of the EFQM Excellence Model in the evaluation of the level of Corporate Social Responsibility and the equality of members.	[115]
2015	Langstrand, J., Cronemyr, P. & Poksinska, B.	Total Quality Management and Business Excellence. Taylor and Francis.	Practise what you preach: quality of education in education on quality	The goal is the quality of teaching in education and the improvement of lesson planning based on qualitative thinking, through the improvement of the students' perceptive ability.	[116]
2015	Martinez-Caro, E., Cegarra Navaro, J.G. & Cepeda– Carrion, G.	Total Quality Management and Business Excellence. Taylor and Francis.	An application of the performance evaluation model for e-learning quality in higher education.	The research highlights the need to implement a quality tool to promote e-learning in higher education and to invest and allocate resources in universities to meet student expectations.	[117]

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Table A1. Cont.

Year	Authors	Journal	Title	Impact on Results	References
2015	Nenadal, J.	International Journal of Quality and Service Sciences, Vol. 7. Emerald Publishing Limited	Comprehensive quality assessment of Czech higher education institutions.	The EFQM Excellence Model is the most comprehensive tool for quality assurance and quality assessment and contributes to the achievement of equality assumptions in education.	[118]
2015	Sadeh, E. & Garkaz, M.	Economics, Finance, Business & Industry. Taylor and Francis.	Explaining the mediating role of service quality between quality management enablers and students' satisfaction in higher education institutes: the perception of managers	The EFQM model shows that customer satisfaction can only be achieved if the organization's efforts in quality management lead to enabling the institute to provide high quality services to its customers.	[119]
2014	Anastasiadou, S.D. & Zirinoglou, P.A	Procedia–Social and Behavioral Sciences Elsevier Ltd.	Reliability Testing of EFQM Scale: The Case of Greek Secondary Teachers	Educational institutions face challenges such as the technological revolution progress, diverse social demands, creation new jobs and for the Greek education system to continue its successful operation, it needs to be reformed according to students' expectations	[120]
2014	Anastasiadou, S.D., Zirinoglou P.A. & Florou, G.S.	Procedia–Social and Behavioral Sciences Elsevier Ltd.	The European Foundation Quality Management Evaluation of Greek Primary and Secondary Education	The categories of resources and processes appeared in the EFQM model. The Greek education system must be improved to achieve equality in education.	[121]
2014	Duque, L.C.	Total Quality Management and Business Excellence. Taylor and Francis.	A framework for analysing higher education performance: students' satisfaction, perceived learning outcomes, and dropout intentions.	An important finding is that student co-creation may be as important as perceived service quality in explaining students' cognitive learning outcomes, which in turn explain a high rate of satisfaction and affective learning outcomes.	[122]
2014	Edmark, K., Frolich, M. & Wondratschel, V.	Labour Economics Vol. 30, October 2014, Pages 129–142. Elsevier, Ltd.	Sweden's school choice reform and equality of opportunity	This study analyses whether the Swedish school choice reform, had differential effects for students from different socio-economic backgrounds.	[123]
2014	Soria-Garcia, J. & Martinez- Lorente A.R.	Total Quality Management and Business Excellence. Taylor and Francis.	Development and validation of a measure of the quality management practices in education.	The aim of this research is to confirm that the quality tool contributes to the identification of potential points in secondary education administration and areas of improvement.	[124]

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Table A1. Cont.

Year	Authors	Journal	Title	Impact on Results	References
2014	Yildiz, S.M.	Total Quality Management and Business Excellence. Taylor and Francis.	Service quality evaluation in the school of physical education and sports: An empirical investigation of students' perceptions.	This work aimed to evaluate the quality of educational services, access and academic support of students to provide equal opportunities.	[125]
2013	Asif, M. & Searcy, C.	Total Quality Management and Business Excellence. Taylor and Francis.	Determining the key capabilities required for performance excellence in higher education.	The performance excellence model in higher education institutions promotes the design and delivery of services equally to students.	[126]
2013	Dimitriadis, V., Kousoulis, A.A., Markaki, A., Sgantzos, M.N., Hadjipavlou, A. & Lionis C.	Disability and Health Journal Elsevier Ltd.	Quality assessment systems in rehabilitation services for people with a disability in Greece: A critical review	The European Quality in Social Services was evaluated as meeting all of the desired features, such as proper certification, equality, education and training.	[127]
2013	Doeleman, H.J., ten Have, S. & Ahaus, C.T.B.	Excellence Models TQM and Performance. Taylor and Francis.	Empirical evidence on applying the European Foundation for Quality Management Excellence Model, a literature review	In this article, the authors present a literature review of the EFQM excellence model aimed at improving learning performance.	[128]
2013	Kemp, L.J.	Gender equality. Foresight, Vol. 15. Emerald Publishing Limited	Progress in female education and employment in the United Arab Emirates towards Millennium Development Goal (3): gender equality	The purpose of this paper is to explore progress towards achieving gender equality in education.	[129]
2011	Campatelli, G., Citti, P. & Meneghin, A.	Business Excellence and Quality Management Systems. Taylor & Francis.	Development of a simplified approach based on the EFQM model and Six Sigma for the implementation of TQM principles in a university administration.	The model for evaluating organizations shows significant advantages such a reduced training time for stakeholders, short involvement of external mediators and guiding workgroups easily and quickly on the process improvement path.	[47]
2011	Halai, A.	International Journal of Educational Development	Equality or equity: Gender awareness issues in secondary schools in Pakistan	This paper focuses on gender awareness issues as a dimension of addressing the wider issue of the quality of education from the perspective of social justice.	[130]
2011	KukemeLk, H., Lilemaa, T. & Tondi, J.	Procedia Social and Behavioural Sciences, Vol. 11. Elsevier Ltd.	Teachers' professional involvement in creating a general learning environment in Estonian schools	According to this study comprehensive schools and vocational schools use the EFQM model of excellence and emphasizes the contribution of teachers to the comprehensive academic development of children	[131]

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Table A1. Cont.

Year	Authors	Journal	Title	Impact on Results	References
2010	Ali, N.A., Mahat, F. & Zairi, M.	Total Quality Management and Business Excellence. Taylor and Francis.	Testing the criticality of HR-TQM factors in the Malaysian higher education context	The research identifies weak areas, with a view to improving performance in tertiary education and equitable distribution of resources.	[132]
2009	Nadiri, H. Kandampully, J. & Hussain, K.	Total Quality Management and Business Excellence. Taylor and Francis.	Students' perceptions of service quality in higher education	This study aims to diagnose the applicability of the perceived service quality measurement scale to students. and to diagnose the level of student satisfaction in higher education.	[133]
2009	Sperandio, J. & Kagoda, A.	International Perspectives on Education and Society, Vol. 10, Emerald Group Publishing Limited	Learning from experience: Improving equality of access and outcomes for girls in Uganda's universal post-primary education and training initiative.	Girls' access to education has improved in many of the world's developing countries. These countries strive to achieve gender equality, promote women's empowerment and establish universal primary education.	[134]
2008	Bayraktar, E., Tatoglu, E. & Zaim, S.	Total Quality Management and Business Excellence. Taylor and Francis.	An instrument for measuring the critical factors of TQM in Turkish higher education	The research highlights the importance of quality work in tertiary education in order to fulfill the expectations of students.	[135]
2008	Blattel-Mink, B.	Equal Opportunities International, Vol. 27. Emerald Publishing Limited	Reinventing gender in higher education	The study highlights the need for more women in top positions in higher education, science, technology and decision-making processes in higher education. It is necessary to reveal the gender biases of recent strategies in higher education.	[136]
2008	Doherty, G.D. (2008).	Quality Assurance in Education, Vol. 16. Emerald Publishing Limited	On quality in education.	The study highlights the need for further research to ensure equality in education	[137]
2007	Davies, J., Douglas, A. & Douglas, J.	Quality Assurance in Education, Vol. 15. Emerald Publishing Limited	The effect of academic culture on the implementation of the EFQM Excellence Model in UK universities.	The paper seeks to explore the effect of academic culture on the implementation of the European Foundation for Quality Management's (EFQM) Excellence Model.	[138]
2006	Calvo-Mora, A., Leal, A & Roldan J.L.	Quality Assurance in Education. Emerald Group Publishing Limited.	Using enablers of the EFQM model to manage institutions of higher education.	The findings indicate that the model is a reliable and valid framework with which to measure and improve the organizational social impact	[139]

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Table A1. Cont.

Year	Authors	Journal	Title	Impact on Results	References
2005	Calvo-Mora, A., Leal, A. & Roldan, J.L	Total Quality Management and Business Excellence. Taylor and Francis.	Relationships between the EFQM model criteria: a study in Spanish universities	The results from the analysis of the measurement and structural model support the reliability and validity of the European Excellence Model for the evaluation and improvement of quality in the area of higher education.	[140]
2005	Osseo-Asare, A.E., Longbottom, D. & Murphy, W.D.	Quality Assurance in Education, Vol. 13. Emerald Publishing Limited	Leadership best practices for sustaining quality in UK higher education from the perspective of the EFQM Excellence Model.	The study determines the efficiency and effectiveness of quality improvement. It provides a conceptual framework for improving the 'weak'.	[141]
2004	Hides, M.T., Davies, J. & Jackson, S.	The TQM Magazine, Vol. 16. Emerald Publishing Limited	Implementation of EFQM excellence model self-assessment in the UK higher education sector–lessons learned from other sectors.	Self-assessment of the EFQM excellence model can help create a more customer-centric culture in technology education institutions.	[142]
2003	Cullen, J., Joyce, J., Hassall, T. & Broadbent, M.	Quality Assurance in Education, Vol. 11. Emerald Publishing Limited	Quality in higher education: from monitoring to management.	This study highlights the fact that universities face declining financial support from public funding sources.	[143]
2002	Ernest Osseo-Asare, A. & Longbottom, D.	Quality Assurance in Education, Vol. 10. Emerald Publishing Limited	The need for education and training in the use of the EFQM model for quality management in UK higher education institutions.	The study provides evidence to encourage the implementation of staff development strategies that provide education and training to deans, assistant deans and all staff involved in quality and performance improvement on the effective use of the EFQM model and improving student performance.	[144] REMOVED
2001	Davies, J., Hides, M.T. & Casey, S.	Total Quality Management. Taylor and Francis.	Leadership in higher education	The research emphasizes the promotion of island areas in Tertiary education by focusing on the development of knowledge of students who live and study in inaccessible areas.	[145] REMOVED
1998	Koch, J.V. & Fisher, J.L.	Total Quality Management. Taylor and Francis.	Higher education and total quality management	The research highlights the need to use quality tools in tertiary education to reduce student costs and campus collaboration.	[146] REMOVED
1996	Camison, C.	Tourism Management. Elsevier Science Ltd.	Total quality management in hospitality: an application of the EFQM model	The application of the EFQM model in the tourism sector showed a serious discrepancy between of the quality perceived by the customer and the quality that recognized by management for staff and customer satisfaction due to high cost	[147] REMOVED

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Table A1. Cont.

Year	Authors	Journal	Title	Impact on Results	References
1996	Morris, D.S.	Total Quality Management. Taylor and Francis.	Introducing total quality management into the Student Service Department of a college of further education in the UK	This research aims at the study of serving students in accordance with their needs and expectations, regardless of racial, economic and social distinctions.	[148] REMOVED
1995	Tofte, B.	Total Quality Management. Taylor and Francis.	A theoretical model for implementation of total quality leadership in education	This article studies the needs and expectations of students in ongoing learning processes, with the aim of promoting equality in education.	[149] REMOVED
1993	Hayes, K.J., Slottje, D.J. & Taylor, L.L.	Economics of Education Review. Elsevier Ltd.	Equality and fiscal equity in school finance reform	This paper examines the distributional implications of a tax-based school funding system for a more equal distribution of per-pupil expenditure.	[150] REMOVED
1991	Maijvogel, R.	Women's Studies International Forum. Elsevier Ltd.	School-age child care in the Netherlands: The shift from equality aims to the interest of the child	This article discusses how a Dutch feminist campaign was diverted from its original object to free mothers from the tyranny of the school timetable.	[151] REMOVED

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