

Quality in Higher Education: Defining the Conceptual Contents and their Relative Predominance

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Abstract

The purpose of this study is to investigate the conceptual content of the term “quality” in higher education, as it emerges from the descriptions and discussions of authors, researchers, and experts in 22 scientific publications. The analysis of the qualitative data is based on the methodology of grounded theory. From the analysis, 21 major dimensions or characteristics of quality in higher education emerged due to their high frequency of occurrence, were subdivided into five broader categories: “learning environment”, “learning content”, “processes”, “students”, and “teachers”. According to the main findings, from the “learning environment” category, the dimension concerning psychosocial elements predominated in the literature. From the category “learning content”, two dimensions prevailed (student-centred teaching and learning) and the dimension concerning taking an interest in and caring about students. From the “processes” category, the dimension concerning assessment prevailed. In the category “students”, the dimension of improved learning outcomes was the most frequently observed, and finally, from the “teachers” category, two dimensions prevailed over the others, one concerning pedagogical skills and the other termed skills: emotional, management, reflection.

Keywords: educational quality, higher education, quality dimensions, quality education

1. Introduction

The concept of quality in the education system is not new. It first appeared in U.S. schools, colleges, and universities in the 1930s (Anastasiadou, Zirinoglou, & Florou, 2014). According to Ishikawa (as cited in Argyriou, 2017), quality begins and ends with education. Quality in education has been recognized as an issue that can guide the effort to improve the teaching and learning process (Nicolau, Nicolaidou, & Constantinou, 2005).

Analytically, quality in education is associated with the improvement of the learning process. This improvement results from the implementation of appropriate teaching practices and methods, from the design of a curriculum that meets students’ needs to the improvement of services provided by schools (Dritsa, 2016).

According to Kaluge and Tjahjono (2004), the quality of education is not only related to the curriculum and educational technology but also to the content of the education and teaching itself. However, the quality of education is difficult to evaluate, as it is influenced by various factors, such as social and historical circumstances, policy choices, and the quality requirements of the parties involved (Hatzidimitriadou, 2011). The existence of many definitions of the quality of education shows the complexity and multifaceted nature of the concept; moreover, the terms „efficiency“, „equality“, and „quality“ are often used interchangeably (United Nations International Children's Emergency Fund [UNICEF], 2000).

Nevertheless, many attempts have been made to conceptually approach quality education with the best known, the one that defines quality education as the one that contributes to moral development, character development, the integration of personality and the spiritual upliftment of individuals. However, this definition is considered incomplete because it doesn’t include the evaluation of the educational work and, for this reason, another definition is proposed based on satisfying the needs and expectations of the recipients of education (Pourgianou, 2012).

2. Literature Review

Quality teaching in higher education includes basic dimensions concerning the assessment methods, the class

size, the students' ability, the type of subject and other contextual dimensions (Young & Shaw, 1999). Moreover, according to Chalmers (2008) the framework for quality in higher education involves four basic dimensions. These are: a) institutional climate and systems, b) assessment, c) diversity, and d) engagement and learning community. Analytically, academic environment is a basic dimension to student success. Moreover, assessment is a very important condition for quality learning, while diversity in higher education is used as a measure of quality teaching and concerns socioeconomic, cultural and ethnic diversity, as well as diversity concerning students' characteristics such as talents, abilities and learning styles. Besides, engagement includes not only student's engagement with their own learning but also staff commitment with their academic institution and their students.

In addition, quality teaching in higher education includes several dimensions, such as well-adapted learning environments, soliciting and using feedback, effective design of course content and curriculum, effective assessment of learning outcomes, services that support students, and a variety of learning contexts such as collaborative learning etc. (Henard & Roseveare, 2012).

Furthermore, Chalmers et al. (2014) underline seven basic dimensions of quality in higher education. The first basic dimension refers to design and planning of learning activities, the second basic dimension concerns teaching and support of student learning, the third basic dimension concerns assessment and provision of feedback to students on their learning, the fourth basic dimension concerns development of effective learning environments, student guidance and support, the fifth basic dimension is about integration of scholarship, research and professional activities with teaching and in support of student learning, the sixth basic dimension concerns assessment of practice and continuing professional development, and the seventh basic dimension concerns personal and professional effectiveness.

Yet, Zerihun, Beishuizen, and Van Os (2012) underline five basic dimensions in the context of quality in higher education. These are: the way that teachers organize and present the courses, the feedback that teachers give and receive, the degree of student involvement in the learning process, students' judgments of their engagement in the learning process, and the quality of evaluation and assessment practices.

3. Purpose and Research Questions

The purpose of this paper was to identify the characteristics and elements that constitute the concept of quality education through the study of scientific texts, books and journal articles. In particular, the paper aims to answer the following research questions:

1. What are the basic dimensions of the term „quality“ in higher education?
2. What are the broader categories in which the basic dimensions of the term „quality“ in higher education are included?
3. What is the proposed theoretical framework of quality in higher education?

4. Method

4.1 Research Design

The research was qualitative, and the method of data analysis was based on the methodology of grounded theory. Grounded theory refers both to the method, which gives guidelines on how to identify the categories, and to the interpretive framework within which the phenomenon under study is understood. The aim is to highlight a central category that will include the essential meaning of the object under consideration, which will contribute to the understanding of this object (Iosisfidis, 2003).

The analysis of the data in this study included three stages of coding: a) the initial coding, b) the focused coding, and c) the theoretical coding (Miles & Huberman, 1984). The same process was followed by Hockett (2010) in her doctoral dissertation investigating the effect of lesson study on the way teachers design, apply, and understand differentiated instruction. Analytically, initial coding was the first step in data analysis and involved the initial examination of data. The coding was done line by line, with the same definitions of quality in higher education, and generally in the body of the text (paragraphs) in places where the characteristics or dimensions of the quality in higher education were given. Therefore, sentences and/or paragraphs were selected as the unit of analysis. With this technique, an effort was made to not deviate from the words and sentences of the data and to avoid premature generalizations. As data collection progressed, comparisons were made with the original codes, and all codes were treated as temporary and flexible. Focused coding was the second step in the data analysis. In focused coding, data were examined to identify the most important and/or common codes. The codes were compared within and between the sources in order to find which codes are more appropriate and relevant to the

data set as a whole and what additional data were needed to deepen or further update a code. The coding allowed the data to be reduced, focusing on the most important and key points that would lead to the theory. The final stage of the analysis was theoretical coding. At this stage, possible relationships between important codes were tested, assuming how they could be theoretically related. The theoretical framework emerged from the process of continuously comparing data sources and detailed memos or notes. Memo writing was the way for the grounded theory researcher to understand the codes, classify them according to their importance, connect them, and compare them in order to construct a theoretical framework to arrive at the essentially grounded theory (Charmaz, 2006; Hockett, 2010).

4.2 Search of Material Concerning Quality in Higher Education

The search for material concerning quality in higher education was conducted in scientific journals, conference proceedings, books, and scientific reports that provided an original definition of quality in higher education or gave some characteristics or elements of the term „quality education“ in the specific level of education. No time limit was set, as the snowball method was used to collect original definitios that were more complete.

4.2.1 Selection Criteria

Table 1 presents the selection criteria for including material.

Table 1. Selection Criteria

Category	Selection criteria
Publication type	Book chapters, books, scientific reports, papers in scientific journals or proceedings
Publication year	No time limit
Content	Conceptual definition of the concept of quality in higher education
Educational context	Higher education
Writing language	Greek, English

4.2.2 Searching, Checking, and Selecting the Material

The search of the material was conducted in the Educational Resources Information Center (ERIC), Google Scholar, Taylor & Francis Online, Emerald Insight, and ScienceDirect databases using the terms [quality of education OR quality education OR quality teaching OR quality learning] AND [higher education OR university]. The material was selected from literature reviews and empirical studies. In addition, material was found in print and electronic books. Figure 1 describes the process of finding, checking, and selecting the material.

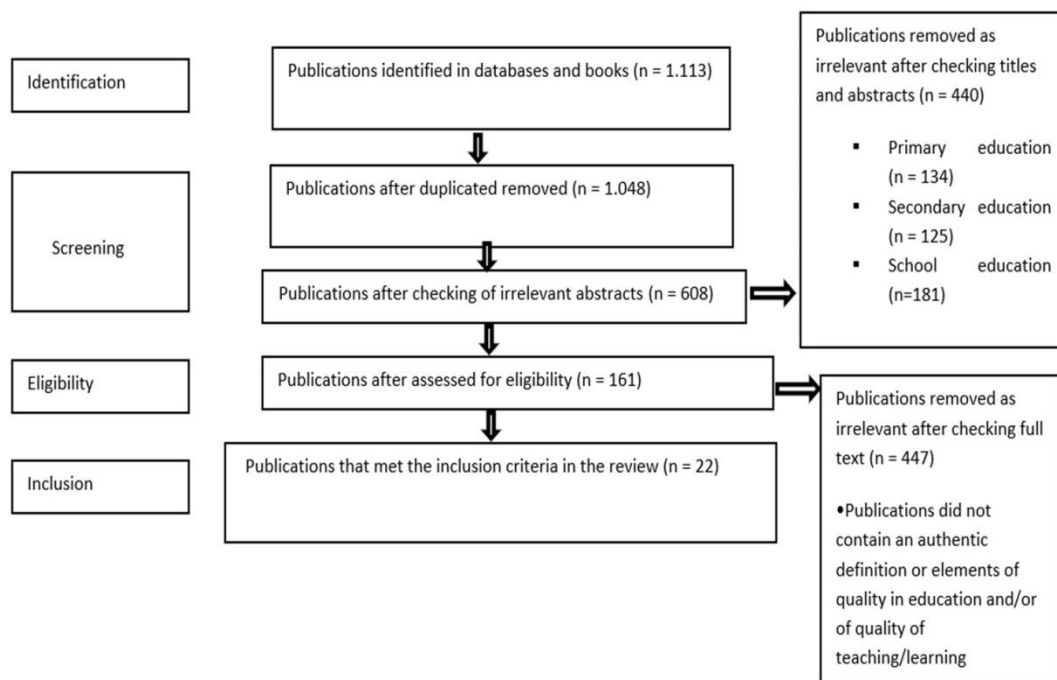


Figure 1. Process of Finding, Checking, and Selecting the Material

4.2.3 Organization of the Material

The material was organized as follows. Initially, the publications that would be included in the analysis were selected. The original definitions or the body of the text that contained dimensions or characteristics of quality education from each publication were selected and entered into tables that were divided into columns with categories.

The first column contained the names of the researchers/authors, the writing language, the year, and the type of publication. The second column contained the level of education, the third column contained the text of the publication with the definition and/or the dimensions, and the last column contained the coding. Next to the column with the coding, the memos or notes kept by the researchers in the form of comments were included.

4.2.4 Export Data

For the publications that were included in the analysis, Microsoft Word was used to create tables and add notes on the definitions of quality education or parts of the text of each publication that contained characteristics or elements of quality education. The table that concerns the initial pilot determination of the quality dimensions of higher education was created in Microsoft Word and is presented in the results section of this paper.

Besides, Microsoft Excel was used to present the data in graphs regarding the type of publication, the year of publication, and the writing language. Moreover, the combination of the Microsoft Excel and Microsoft Word was used to create tables showing the percentages of dimensions in the definitions. These tables appear in the results section of this study.

4.2.5 Synthesis of the Data

This section presents the publications in terms of type, year of publication, and writing language, while the analysis and synthesis of the data resulting from the publications and the answers to the research questions are presented in the results section. The data regarding the type of publication are presented in Table 2.

Table 2. Type of Publication

Type of publication	Number	Percentage %
Journal paper	12	54
Conference paper	0	0
Book	5	23
Various scientific papers (e.g., reports)	5	23
Total	22	100

Moreover, the data regarding the year of publication are presented in Figure 2.

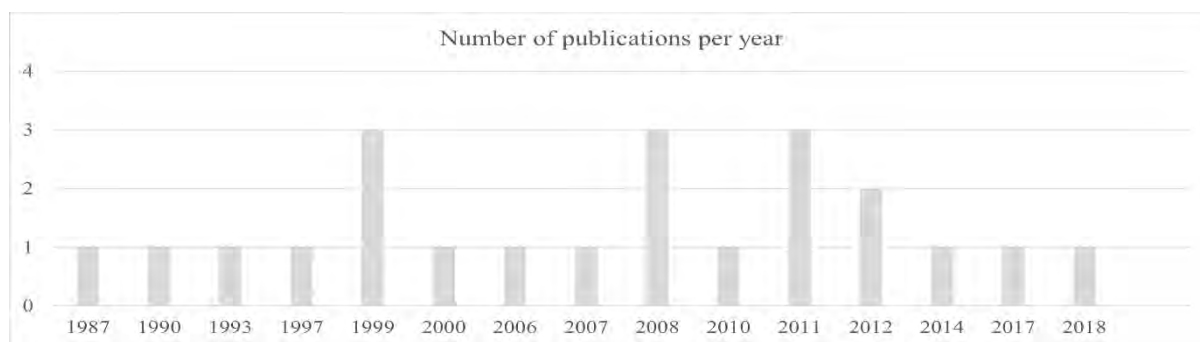


Figure 2. Number of publications per year

Finally, the data regarding the writing language are presented in Figure 3.



Figure 3. Number of studies based on the writing language

5. Results

5.1 Basic Dimensions of the Term 'quality' in Higher Education

5.1.1. Process of Identification of Basic Dimensions of Quality in Higher Education

The identification of dimensions was subject to the subjective judgment of the researchers. Below there are some examples of how the researchers identified some of these dimensions as they emerged from the original texts of the publications that were collected and examined.

“However, some general characteristics of good teaching/learning contexts ... are: 1. an appropriate motivational context.” (Biggs, 2011, pp. 91-92). The previous was classified as *psychosocial elements*.

“... teaching effectiveness comprises ... characteristics as ... class size ...” (Young & Shaw, 1999, p. 670). The previous was classified as *physical elements*.

“Diversity is an indicator that is theoretically and empirically supported by the research literature and is frequently employed as a measure of quality teaching.” (Chalmers, 2008, pp. 10-11). The previous was classified as *respect for diversity*.

“Research points out that Quality Teaching ... Learning communities—groups of students and/or teachers who learn collaboratively and build knowledge through intellectual interaction - are judged to enhance student learning by increasing students’ and teachers’ satisfaction.” (Hénard & Leprince-Ringuet, 2008, p. 3). The previous was classified as *collaboration, sharing and team spirit*.

“We may define good teaching as instruction that leads to effective learning, which in turn means thorough and lasting acquisition of the knowledge, skills, and values the instructor or the institution has set out to impart.” (Felder & Brent, 1999, p. 10). The previous was classified as *student-centred teaching and learning*.

“However, some general characteristics of good teaching/learning contexts ...: 2. a well-structured knowledge base ...” (Biggs, 2011, pp. 91-92). The previous was classified as a *well-structured knowledge base*.

“Quality teaching ... involves several dimensions, including the effective design of curriculum ...” (Hénard & Roseveare, 2012, p. 7). The previous were classified as *continuous curriculum improvement*.

“... tutoring and mentoring for students in the education process ..., are only some of the items that must be part of the agenda of university debate, if the goal is to improve teaching and learning processes.” (De Vincenzi, Garau, & Guaglianone, 2018, p. 64). The previous was classified as *interest in all students and caring about them*.

“... the promotion of good practices leading to students’ autonomous learning ...” (De Vincenzi et al., 2018, p. 64). The previous was classified as *life skills*.

“The Essential Practices and ATTRIBUTES of High Quality Teaching and Learning ... The lesson plan is mapped to state and/or district standards, with clear goal(s) and objectives ...” (MacGregor, 2007, p. 16). The previous was classified as *teaching*.

“The framework is underpinned by carefully researched definitions and principles of quality teaching that are expressed through seven criteria: 1. Design and planning of learning activities ...” (Chalmers et al., 2014, p. 23). The previous was classified as *learning*.

“The adoption, of course, of the principles of quality in the classroom requires professors to pay special attention to the following points: ... the continuous assessment of the performance of the learners-students to correct

mistakes ...” (Zavlanos, 2017, p. 264). The previous was classified as *assessment*.

“Research points out that Quality Teaching ... Adequate support to staff and students (financial support, social and academic support, support to minority students, counseling services, etc) also improves learning outcomes.” (Hénard & Leprince-Ringuet, 2008, p. 3). The previous was classified as *support and supervision*.

“The Students' Evaluations of Educational Quality presents a comprehensive definition and measurement of teaching quality and is comprised of eight factors... Assignments refer to perceptions of the value and fairness of graded work.” (Guolla, 1999, p. 89). The previous was classified as *involvement/participation*.

“Quality teaching ... involves several dimensions, including ... soliciting and using feedback ...” (Hénard & Roseveare, 2012, p. 7). The previous was classified as *feedback*.

“The task provided – the teaching/learning activity itself – must be valued by the student and not seen as busy-work or trivial. The student must have a reasonable probability of success in achieving the task.” (Biggs, 2011, p. 92). The previous was classified as *challenging learning activities*.

“The purpose of teaching is, of course, learning. So quality of teaching is its fitness for the purpose of promoting learning.” (Ellis, 1993, p. 17). The previous was categorized as *improved learning outcomes*.

“... the pedagogical training of higher education professors, ... are only some of the items that must be part of the agenda of university debate, if the goal is to improve teaching and learning processes.” (De Vincenzi et al., 2018, p. 64). The previous was classified as *knowledge of educational context, content, curriculum, pedagogy*.

“The Students' Evaluations of Educational Quality presents a comprehensive definition and measurement of teaching quality and is comprised of eight factors... Enthusiasm represents the extent to which students perceived the instructor displaying enthusiasm, energy, humour and an ability to hold their attention. Rapport is the extent to which students perceived the instructor to be friendly, interested in students and accessible in or out of class.” (Guolla, 1999, p. 89). The previous was classified as *pedagogical skills*.

“... stimulating reflection on the role of teaching in the learning process all contribute to quality teaching.” (Hénard, 2010, p.8). The previous was classified as *skills: emotional, management, reflection*.

“The framework is underpinned by carefully researched definitions and principles of quality teaching that are expressed through seven criteria: ... continuing professional development.” (Chalmers et al., 2014, p. 23). The previous was classified as *teacher professional development*.

5.2 Broader Categories in which the Dimensions are Included

In the early stages of the study of the material, a conceptual map was created in which the basic elements of a quality education were noted from each publication. This helped to create labels for the number of characteristic items found. Common or similar elements were entered into the same column, and, as the study of the material progressed and other elements emerged, the original categories were revised to include these new elements.

Thus, similar elements were combined into a broader, overarching category, to create as few categories as possible. The resultant dimensions of quality education are presented according to their popularity frequency and relative frequency to highlight the contribution of each element to quality education’s conceptual content.

Figure 4 presents the conceptual map of the initial pilot identification of quality education components.

		Learning environment	Learning Content	Processes	Students	Teachers
Higher Education	Felder & Brent, 1999		Acquisition of the knowledge, values, skills		Learning orientation	
	Guolla, 1999	<ul style="list-style-type: none"> Course materials Interaction between teachers and students 		<ul style="list-style-type: none"> Organization of the course and class presentations Unbiased, fair assessment 	<ul style="list-style-type: none"> Learning orientation Students' perceptions of the value and fairness of graded work 	Enthusiasm energy, humor, friendliness, empathy, accessibility in or out of class
	Young & Shaw, 1999	Class size	Acquisition of skills	<ul style="list-style-type: none"> Type of subject Use of assessment practices 		
	Samu, 2006	Diversity is at the very center of teaching				
	Biggs, 2011	Organized learning environment that motivates students	New learning connects with old	Self-assessment	<ul style="list-style-type: none"> Students are active while learn Formative feedback Task not seen as busy-work or trivial 	Reflection on the role of teaching in the learning process, including self-monitoring and self-assessment
	Chalmers et al., 2014	Effective learning environment		<ul style="list-style-type: none"> Design and planning of learning activities Use of assessment Integration of research, professional activities and scholarship with teaching and in support of learning 	<ul style="list-style-type: none"> Support of students' learning Feedback 	<ul style="list-style-type: none"> Continuing professional development Professional effectiveness Personal effectiveness

Figure 4. Initial Pilot Identification of Elements of Quality in Higher Education

The dimensions of quality in higher education that were most mentioned in the publications were grouped into five categories: a) learning environment, b) learning content, c) processes, d) students, and e) teachers.

5.2.1 Learning Environment

Learning environment refers to the adoption of strategies by teachers that aim to enhance student learning in an environment that minimizes behavioural problems and is enjoyable, fruitful, constructive, and supportive, contributing not only to the academic but also the social and emotional development of students (Polymeropoulou & Sorkos, 2016). Category "learning environment" includes the following dimensions:

- Psychosocial elements
- Physical elements
- Respect for diversity
- Collaboration, sharing, and team spirit

Psychosocial data refer to quiet and safe environments where teachers behave in a way that creates security for students. They also relate to inclusive environments where all forms of discrimination are eliminated. The physical elements refer to the presence of adequate teaching materials and textbooks, working conditions for students and teachers, and the ability of teachers to apply certain teaching approaches (UNICEF, 2000).

Diversity refers simultaneously to the diversity and uniqueness of people and to the span of every form of

diversity – cultural, racial, socio-economic, developmental (which includes special needs), and diversity based on gender. Respect for diversity means that everyone is treated the same as the majority, dominant groups (Mac Naughton, 2006). Collaboration, sharing, and team spirit point to students being able to collaborate and interact by exchanging information as they participate in group activities, thus developing team spirit (Conley & Muncey, 1999).

Table 3 summarizes the publications concern the category "learning environment". Specifically, it shows the relative frequency of each dimension of quality education in the sample of publications (N=22).

Table 3. Dimensions of the category "learning environment"

	Dimensions	Relative frequency of each dimension	Authors
Learning environment	Psychosocial elements	41%	<ul style="list-style-type: none"> • Marsh, 1987 • Guolla, 1999 • Chalmers, 2008 • Hénard & Leprince-Ringuet, 2008 • Hénard, 2010 • Biggs, 2011 • Hénard & Roseveare, 2012 • Chalmers et al., 2014 • Zavlanos, 2017
	Physical elements	18%	<ul style="list-style-type: none"> • Marsh, 1987 • Guolla, 1999 • Young & Shaw, 1999 • Zavlanos, 2017
	Respect for diversity	14%	<ul style="list-style-type: none"> • Samu, 2006 • Chalmers, 2008 • Zavlanos, 2017
	Collaboration, sharing and team spirit	5%	<ul style="list-style-type: none"> • Hénard & Leprince-Ringuet, 2008

5.2.2 Learning Content

Learning content includes topics, beliefs, attitudes, concepts, and events that are often grouped into each learning subject or field under the knowledge, skills, values, and attitudes provided to be acquired by students, forming the basis of teaching and learning (United Nations Educational Scientific and Cultural Organization [UNESCO], 2022). Category "learning content" includes the following dimensions:

- Student-centred teaching and learning
- Well-structured knowledge base
- Continuous curriculum improvement
- Interest in all students and caring about them
- Life skills

Student-centred teaching and learning refer to a shift from teacher-centred teaching to the needs of each individual student and his or her interests, talents, and experiences (Kyprianidou, 2012). A well-structured knowledge base is about the knowledge that is built on what students know (Biggs, 2011).

Continuous curriculum improvement concerns a curriculum that is improved so that it expresses the educational system and can meet the needs of the labour market (Zavlanos, 2017). Interest in all students and caring about them is related to bonding – the degree to which students perceive that the teacher is friendly, interested in them, and available in or out of the classroom (Guolla, 1999).

Life skills are defined as the skills for adaptive and positive behaviour that allow individuals to effectively meet the demands and challenges of everyday life. Life skills are classified into three broad categories: thinking skills, social skills, and emotional skills (Prajapati, B. Sharma, & D. Sharma, 2017).

Table 4 summarizes the publications concern the category "learning content". Specifically, it shows the relative frequency of each dimension of quality education in the sample of publications (N=22).

Table 4. Dimensions of the category "learning content"

	Dimensions	Relative frequency of each dimension	Authors
Learning content	Student-centred teaching and learning	18%	<ul style="list-style-type: none"> • Marsh, 1987 • Felder & Brent, 1999 • Young & Shaw, 1999 • Zavlanos, 2017
	Well-structured knowledge base	5%	<ul style="list-style-type: none"> • Biggs, 2011
	Continuous curriculum improvement	14%	<ul style="list-style-type: none"> • Massy, 1997 • Hénard & Roseveare, 2012 • Zavlanos, 2017
	Interest in all students and caring about them	18%	<ul style="list-style-type: none"> • MacGregor, 2007 • Hénard & Leprince-Ringuet, 2008 • Hénard & Roseveare, 2012
	Life skills	9%	<ul style="list-style-type: none"> • De Vincenzi et al., 2018 • Zavlanos, 2017 • De Vincenzi et al., 2018

5.2.3 Processes

As for processes, the literature mentions that, until recently, many discussions about the quality of education focused on the inputs of the system, such as infrastructure, student-teacher ratios, and the content of the curriculum (UNICEF, 2000). Category "processes" includes the following dimensions:

- Support and supervision
- Teaching
- Learning
- Assessment

Support and supervision refer to the quality of administrative support and leadership; they are an important element of the processes for both students and teachers (UNICEF, 2000). Teaching is understood as a series of actions that include organizational actions as well as interpersonal relationships aimed at learning (Matsagouras, 2011; Skepetari, 2019).

Learning is an internal process in which stimuli and information from the environment are processed and facilitated by pre-existing knowledge (Matsagouras, 2011). Assessment is defined as a process in which data are collected based on certain criteria to give value to something; as a function, the evaluation process is directly related to the educational process (Oiconomopoulos, Tzetzis, & Kioumoutzoglou, 2006).

Table 5 summarizes the publications concern the category "processes". Specifically, it shows the relative frequency of each dimension of quality education in the sample of publications (N=22).

Table 5. Dimensions of the category "processes"

	Dimensions	Relative frequency of each dimension	Authors
Processes	Teaching	36%	<ul style="list-style-type: none"> • Marsh, 1987 • Massy, 1997 • Guolla, 1999 • Young & Shaw, 1999 • MacGregor, 2007 • Hénard & Roseveare, 2012 • Zerihun et al., 2012 • Zavlanos, 2017
	Learning	14%	<ul style="list-style-type: none"> • Marsh, 1987 • Hénard & Roseveare, 2012 • Chalmers et al., 2014
	Assessment	50%	<ul style="list-style-type: none"> • Massy, 1997 • Guolla, 1999 • Young & Shaw, 1999 • MacGregor, 2007 • Chalmers, 2008 • Biggs, 2011 • Rekalidou, 2011 • Zerihun et al., 2012 • Chalmers et al., 2014 • Zavlanos, 2017
	Support and supervision	27%	<ul style="list-style-type: none"> • De Vincenzi et al., 2018 • Massy, 1997 • Allen & Palaich, 2000 • Hénard & Leprince-Ringuet, 2008 • Hénard, 2010 • Chalmers et al., 2014 • De Vincenzi et al., 2018

5.2.4 Students

Students and teachers are two of the main factors on which the improvement of the educational system's quality is based. It is very important to pay attention to quality education in people. In this context, it is crucial for students to learn to demand quality and cultivate quality mentalities and behaviours (Vitantzakis, 2012). Category "students" includes the following dimensions:

- Involvement/participation
- Feedback
- Challenging learning activities
- Improved learning outcomes

Student involvement/participation refers to their active participation in academic, complementary, as well as their commitment to learning and their educational goals (Christenson, Reschly, & Wylie, 2012; Vassiliadou, 2020). Feedback is information provided by a teacher, a student, a peer, oneself, or an experience about aspects of one's performance or understanding (Bijlsma, Visscher, Dobbelaer, & Veldkamp, 2019).

Challenging learning activities refer to the work provided and specifically to the fact that the teaching/learning activity itself should be appreciated by the student and should not be considered something that requires a lot of work or is insignificant (Biggs, 2011). Improved learning outcomes arise from teaching strategies that are based on the developmental needs of the student and aim to facilitate learning and personal development by contributing to the best possible quality of life for the students, as well as to the improvement of living conditions in the wider society (Hollins, 2011).

Table 6 summarizes the publications concern the category "students". Specifically, it shows the relative frequency of each dimension of quality education in the sample of publications (N=22).

Table 6. Dimensions of the category "students"

	Dimensions	Relative frequency of each dimension	Authors
Students	Involvement/participation	36%	Marsh, 1987 Guolla, 1999 MacGregor, 2007 Chalmers, 2008 Hénard & Leprince-Ringuet, 2008 Biggs, 2011 Zerihun et al., 2012 Zavlanos, 2017
	Feedback	36%	Marsh, 1987 MacGregor, 2007 Hénard & Leprince-Ringuet, 2008 Biggs, 2011 Hénard & Roseveare, 2012 Zerihun et al., 2012 Chalmers et al., 2014 Zavlanos, 2017
	Challenging learning activities	9%	Marsh, 1987 Biggs, 2011
	Improved learning outcomes	59%	Colling, 1990 Ellis, 1993 Felder & Brent, 1999 Guolla, 1999 Allen & Palaich, 2000 MacGregor, 2007 Chalmers, 2008 Hénard & Leprince-Ringuet, 2008 Schuck, Gordon, & Buchanan, 2008 Hénard, 2010 Zerihun, Beishuizen, & Van Os, 2011 Chalmers et al., 2014 Zavlanos, 2017

5.2.5 Teachers

According to the data, teachers today are a critical factor in the educational process and play a very important role in the quality of work that is provided during the educational process. Therefore, they should be able to successfully fulfil their duties and the requirements of the educational process and of their students (Vassilopoulos, 2018). Category "teachers" includes the following dimensions:

- Knowledge of educational context, content, curriculum, and pedagogy
- Pedagogical skills
- Emotional/management/reflection skills
- Teacher professional development

Knowledge of educational context, content, curriculum and pedagogy are elements of teachers' professional knowledge of teaching. In particular, knowledge of educational contexts varies depending on class or group work, government and school district funding, and the nature of culture and society (Shulman, 1987). Content knowledge includes knowledge of the subject matter and its organizational structures (Shulman, 1986, 1987). Knowledge of the curriculum is connected with the complete programs that are designed for the teaching of each subject, the various educational materials that are available, and the description of all the characteristics that function as indications but also as contraindications for the use of the specific curriculum (Shulman, 1986). Finally, general pedagogical knowledge concerns the general principles and strategies of classroom organization and management (Shulman, 1987).

Pedagogical skills refer to the ability of the teacher to cultivate a positive psychological climate, where good relations prevail between members and there is a spirit of cooperation and unity, and communication is seamless and effective (Karolidou, 2017). Emotional skills refer to the ability to recognize one's own feelings and the feelings of others, to take them into account and react appropriately to them, and to seek to interact socially with others (Denham et al., 2003). Management skills include the actions taken by teachers to create and maintain a learning environment that contributes to the achievement of teaching objectives (Tsardikou, 2021).

Reflection, meanwhile, is understood as the ability of teachers to think about their educational and pedagogical work and the context in which it takes place in order to recognize, reconsider, and critically consider the perceptions and practices they apply in order to change them (Augitidou, 2011). Finally, teacher professional development refers to the professional progress that teachers achieve, through which they gain more experience in relation to the educational work and develop their critical thinking by reflecting on their teaching methods (Vassilopoulos, 2018).

Table 7 summarizes the publications concern the category "teachers". Specifically, it shows the relative frequency of each dimension of quality education in the sample of publications (N=22).

Table 7. Dimensions of the category "teachers"

	Dimensions	Relative frequency of each dimension	Authors
Teachers	Knowledge of educational context, content, curriculum, pedagogy	9%	Chalmers et al., 2014 De Vincenzi et al., 2018
	Pedagogical skills	18%	Marsh, 1987 Guolla, 1999 Hénard & Leprince-Ringuet, 2008 Chalmers et al., 2014
	Skills: emotional, management, reflection	18%	MacGregor, 2007 Hénard, 2010 Biggs, 2011 Zavlanos, 2017
	Teacher professional development	9%	Allen & Palaich, 2000 Chalmers et al., 2014

5.3 Proposed Theoretical Framework of Quality in Higher Education

The research data collected, analysed, codified, and presented at the stage of the theoretical coding of research lead to the formation of a theoretical framework, as a theoretical basis to become an objective and/or generalized essential theory regarding the definition of the conceptual content of the term „quality“ in higher education.

More specifically, the formulation of the theoretical framework aims to identify the basic dimensions of quality and the categories in which these dimensions are included, in their classification based on their importance and in highlighting the connection between them. The specific proposed theoretical framework for quality in higher education emerged from the process of continuously comparing data sources and detailed memos/notes, presented in Figure 5.

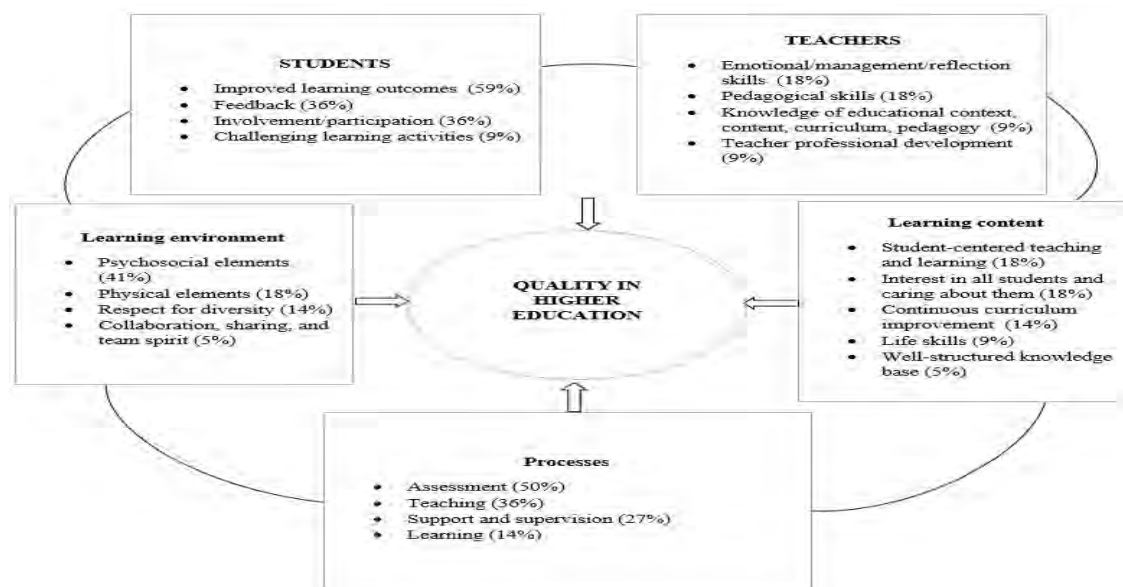


Figure 5. Proposed Theoretical Framework of Quality in Higher Education

6. Discussion

The aim of this study was to identify the dimensions of quality higher education and classify them in broader categories to conceptually approach the content of the quality of education. The methodology used was grounded theory, and the sample consisted of 22 publications in scientific reports, books, and journals.

Twenty-one dimensions emerged through this analysis which are: psychosocial elements, physical elements, respect for diversity and collaboration, sharing and team spirit, student-centred teaching and learning, well-structured knowledge base, continuous curriculum improvement, interest in all students and caring about them, life skills, support and supervision, teaching, learning, assessment, involvement/participation, feedback, challenging learning activities, improved learning outcomes, knowledge of educational context, content, curriculum, and pedagogy, pedagogical skills, emotional/management/reflection skills, and teacher professional development.

These dimensions were classified in five broader categories: a) learning environment, b) learning content, c) processes, d) students, and e) teachers.

Regarding "learning environment", the dimension that prevails is *psychosocial elements*, followed by *physical elements*, *respect for diversity*, and finally, *collaboration, sharing and team spirit*. In terms of "learning content", *student-centred teaching and learning* prevail, as well as *interest in all students and caring about them*, followed by *continuous curriculum improvement*, and, finally, *well-structured knowledge base*. In terms of "processes", *assessment* is the dimension that prevails, followed by *teaching*, *support and supervision*, and, finally, *learning*.

Regarding "students", the dimension that concerns *improved learning outcomes* prevails, followed by *feedback*, and, to a lesser extent, *knowledge of educational context, content, curriculum, pedagogy*, and *challenging learning activities*. Regarding "teachers", *pedagogical skills* as well as *skills: emotional, management, reflection* prevail, followed by *teacher professional development* and *knowledge of educational context, content, curriculum, pedagogy*.

Then, the dimensions that appeared in each category were analysed in detail, starting from the dimension of each category with the strongest presence in the definitions of quality education or was mentioned more as a dimension of quality higher education in the relevant literature.

The *psychosocial elements* dimension belongs to the "learning environment" category and concerns the academic environment (Chalmers, 2008) and specifically, a learning environment that is enjoyable (Zavlanos, 2017), organized (Biggs, 2011), effective (Chalmers et al., 2014), propitious (Hénard, 2010), well-adapted (Hénard & Roseveare, 2012), that address the personal needs of the students (Hénard & Leprince-Ringuet, 2008), motivates them (Biggs, 2011) and supports quality work from the students (Zavlanos, 2017). In addition, this dimension involves course materials (Marsh, 1987), which are excellent, as well as the interaction between teachers and

students, which reflects students' perceptions of the extent to which the teacher invites students to share their ideas and encourages classroom discussions (Guolla, 1999).

Furthermore, the dimension *physical elements* from the category "learning environment" concerns the importance of class size (Young & Shaw, 1999), the use of information and communication technology (Zavlanos, 2017) and course materials (Marsh, 1987; Guolla, 1999).

The dimension *respect for diversity* from the category "learning environment" refers to national, cultural and socio-economic diversity as well as diversity regarding the abilities and talents of students (Chalmers, 2008). Specifically, this dimension involves the recognition of students' diversity, individuality and singularity (Zavlanos, 2017), and the fact that the diversities and differences between groups of students as well as within groups of students should be at the very centre of teaching (Samu, 2006).

Also, the dimension *collaboration, sharing and team spirit* from the category "learning environment" relates to the collaborative learning environment, namely the learning communities where groups consisting of either only students or teachers and students learn collaboratively and build knowledge through intellectual interaction (Hénard & Leprince-Ringuet, 2008).

Furthermore, the dimension *student-centred teaching and learning* from the general category "learning content" is linked to the fact that higher education teachers are challenged to use student-centered approaches (Santos, Figueiredo, & Vieira, 2019). Specifically, this dimension relates to learning that contributes to self-control, self-assessment, empowerment, mental development, motivation and emotional stability. Also, this dimension includes holding clear expectations for learning and the smooth adaptation of students to the learning environment (Zavlanos, 2017).

The dimension of *interest in all students and caring about them*, which also belongs to the category "learning content", emphasizes the importance of the student being at the centre of the teaching process (MacGregor, 2007; Hénard & Leprince-Ringuet, 2008; De Vincenzi et al., 2018). This means that the learning environment should address the students' personal needs (Hénard & Leprince-Ringuet, 2008). In addition, this dimension concerns the existence of student support services (Hénard & Roseveare, 2012) as well as tutoring and mentoring for students in the educational process (De Vincenzi et al., 2018).

Furthermore, the dimension *continuous curriculum improvement* from the category "learning content" includes the effectively designed curriculum (Hénard & Roseveare, 2012), namely which and how processes are developed, revised and improved (Massy, 1997) and how the curriculum harmonizes with the philosophy of the education system and the requirements of the labour market (Zavlanos, 2017).

The dimension *life skills* from the category "learning content" includes the production of ideas, the development of criticism and thinking, the ability to analyse, synthesize and evaluate (Zavlanos, 2017) and students' autonomous learning (De Vincenzi et al., 2018).

Finally, the dimension *well-structured knowledge base* from the category "learning content" refers to the fact that new learning should build on the old. Therefore, students should build on their experiences and what they already know when discussing a topic, and teaching should emphasize the interconnectedness of topics (Biggs, 2011).

Assessment, one dimension of the "processes" category, is an equally important element of a quality education. Specifically, this refers to the use of assessment practices (Young & Shaw, 1999; Chalmers et al., 2014), methods, strategies and techniques (Rekalidou, 2011) to assess the progress or the performance of students (Zavlanos, 2017; De Vincenzi et al., 2018) and specifically, the learning outcomes, while monitoring learning outcomes by teachers helps to link them with the improvement of teaching and learning processes (Massy, 1997). In addition, as underlined by researchers, assessment should be continuous (Zavlanos, 2017), clear (MacGregor, 2007), of high quality (Zerihun et al., 2012) unbiased, fair (Guolla, 1999) and learning-oriented (MacGregor, 2007; Chalmers, 2008). Moreover, researchers refer to student self-assessment that is a modern assessment approach (MacGregor, 2007; Biggs, 2011; Zerihun et al., 2012), where teachers promote and encourage students to self-assess and set goals (MacGregor, 2007).

The dimension *teaching* from the category of "processes" includes several important elements such as the organization (Marsh, 1987; Guolla, 1999; Zerihun et al., 2012), course presentation (Guolla, 1999; Zerihun et al., 2012), subject type (Young & Shaw, 1999), lesson plans with clear objectives (MacGregor, 2007), the use of pedagogical techniques (Hénard & Roseveare, 2012) and pedagogical design (Massy, 1997). In addition, researchers refer to a teaching style is beneficial, democratic, living, diagnostic, therapeutic (Zavlanos, 2017), clear and utilizes research-based strategies (MacGregor, 2007).

The dimension *support and supervision* within the general category "processes" includes elements such as monitoring teaching practices in their real context (De Vincenzi et al., 2018), adequate support for academic staff (Hénard & Leprince-Ringuet, 2008; Hénard, 2010) and students (e.g., counselling services, academic, social, financial support, etc.) (Hénard & Leprince-Ringuet, 2008) and the provision of resources (e.g., technical support). Furthermore, how the environment of the educational institution motivates and rewards improving the quality of teaching and learning and the provision of human, technical and financial resources needed to achieve quality (Massy, 1997). In addition, this dimension includes the integration of research, professional activities and scholarship with teaching and in support of learning (Chalmers et al., 2014), the professional training of teachers (Schneider & Preckel, 2017), the recruitment of teachers to where there is a greater need, the development of strong district leadership and finally, the redesign of teacher accountability systems so that all teachers have the knowledge and skills they need to improve student learning (Allen & Palaich, 2000).

The dimension *learning* from the category "processes" involves a variety of learning contexts (Hénard & Roseveare, 2012), the design and planning of learning activities (Chalmers et al., 2014), as well as workload difficulty (Marsh, 1987). The dimension *improved learning outcomes* from the category "students" is a key component of quality in higher education and refers to elements that are related to learning orientation (Colling, 1990; Ellis, 1993; Felder & Brent, 1999; Guolla, 1999; Allen & Palaich, 2000; Hénard & Leprince-Ringuet, 2008; Schuck et al., 2008; Zerihun et al., 2011; Zavlanos, 2017). Analytically, this dimension involves the impact that teaching has on students' learning (Hénard, 2010), the support of students' learning (Chalmers et al., 2014), the students' commitment to their learning (Chalmers, 2008) and finally, the existence of clear evidence that students learn and this evidence of student learning is observable and explicit (MacGregor, 2007).

The *involvement/participation* dimension from the "students" category refers to students that are actively engaged in and outside of the classroom (Biggs, 2011; Zavlanos, 2017) in other words, the degree of students' involvement in their learning, (MacGregor, 2007; Zerihun et al., 2012) as well as their commitment to their education (Chalmers, 2008). Moreover, this dimension involves the extent to which students perceive alternative approaches to the subject presented by teachers, and how students perceive the fairness and value of their graded work (Guolla, 1999). In addition, this dimension concerns a student's ability to relate to other students (Hénard & Leprince-Ringuet, 2008) as well as group interactions where students are encouraged to participate in the learning process (Marsh, 1987).

The dimension *feedback* in the category "students" is one of the most important elements of the learning procedure (Henderson, Ryan, & Phillips, 2019). It reflects evaluations of the teachers (Zerihun et al., 2012; Zavlanos, 2017), by the students themselves (Biggs, 2011; Hénard & Roseveare, 2012; Zerihun et al., 2012; Zavlanos, 2017) and by other students (Biggs, 2011) as each provides feedback that is unique to their perspective (Biggs, 2011). Furthermore, teachers provide feedback to students on their learning, (Chalmers et al., 2014) and this feedback is frequent (MacGregor, 2007) and formative (Biggs, 2011).

The dimension *challenging learning activities* belongs to the category "students" and refers to "the task provided – the teaching/learning activity itself – must be valued by the student and not seen as busy-work or trivial. The student must have a reasonable probability of success in achieving the task" (Biggs, 2011, pp. 91-92). In addition, it refers to tasks that contribute to the understanding of the subject (Katrina et al., 2019).

The dimension *pedagogical skills* in the broader category "teachers" includes the personal effectiveness of the teacher (Chalmers et al., 2014) and, specifically, teacher characteristics such as enthusiasm (Frenzel, Becker-Kurz, Pekrun, Goetz, & Lüdtke, 2018), energy, humour, friendliness, empathy, accessibility in and outside of the classroom (Guolla, 1999) and how well the teacher interacts with students (Guolla, 1999; Hénard & Leprince-Ringuet, 2008).

The dimension *skills: emotional, management, reflection* also belongs to the category "teachers" and contains reflections on the role of teaching in the learning process (Hénard, 2010; Biggs, 2011), self-monitoring, and self-assessment (Biggs, 2011). In addition, this dimension involves the use of a positive behaviour management strategy. This means that teachers' expectations are clear and that they monitor student behaviour in a positive, preventive and subtle manner (MacGregor, 2007), such as with rewards that motivate students (Zavlanos, 2017).

7. Conclusion

This study involved a conceptual analysis of quality in higher education achieved by studying the defining components of quality education as identified from 22 scientific books, texts and journal articles. The analysis of the qualitative data is based on the methodology of grounded theory.

Twenty-one dimensions emerged through this analysis, which were subdivided into broader categories.

Specifically, *psychosocial elements, physical elements, respect for diversity and collaboration, sharing and team spirit* have been included in the broader category, “learning environment”. *Student-centred teaching and learning, well-structured knowledge base, continuous curriculum improvement, interest in all students and caring about them and life skills* were all included in the category “learning content”.

Teaching, learning, assessment and support and supervision were included in the category "processes". *Involvement/participation, feedback, challenging learning activities and improved learning outcomes* were included in the category “students” and *knowledge of educational context, content, curriculum, pedagogy, pedagogical skills, skills: emotional, management, reflection and teacher professional development* were included in the category “teachers”.

From the "learning environment" category, the dimension concerning psychosocial elements predominated in the literature. From the category "learning content", two dimensions prevailed (student-centred teaching and learning) and the dimension concerning taking an interest in and caring about students. From the "processes" category, the dimension concerning assessment prevailed. In the category "students", the dimension of improved learning outcomes was the most frequently observed, and finally, from the "teachers" category, two dimensions prevailed over the others, one concerning pedagogical skills and the other termed skills: emotional, management, reflection.

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