Quality of higher education and incidence of learning styles: A Review

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ABSTRACT

This study presents a review of the Quality of Higher Education through the incidence of learning styles. The quality is important element the private sector, as well as for the public sector since it evaluates services, supply and working conditions, and the relationship with the environment where they carry out their activities. Therefore, higher education organizations cannot be exempt from the importance of quality. However, there are several factors that affect the quality of education, being one of the most important learning styles. Generally, from this background, the main objective of this study to define the role and quality concepts of higher education the analysis of the key aspects of quality assurance and its relationship with student learning styles, by briefly reviewing the literature in this regard that allows for defining this relationship and its importance. The results showed through these studies that there is no single style of learning, and that this must be flexible within the classroom to improve the educational experience of students, but that this cannot lead to the choice of a single style considered as suitable.

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Introduction

Higher education systems and institutions are currently exposed to rapid and constant changes and transformations. In recent years, the enrolment of students in higher education has increased substantially due to new market requirements and the profiles demanded by increasingly competitive companies (Rengifo-Millán, 2015). This development has been driven by an accelerated privatization and commercialization of higher education, including public institutions. Therefore, the pressure on higher education systems to provide access to it can be expected to increase massively in the coming years due to the recovery of developing countries, particularly in Asia and Africa (Glewwe et al., 2014). However, the issue of quality remains a key element for these organizations. While the quality of universities was unquestionable when they served a small elite, the institutions in today's massive higher education systems are under enormous pressure to change and adapt. In this context, questions about the quality and employability of Graduates are at the centre of higher education policy in many countries (Martínez et al., 2017).

Although the concerns about quality and relevance in higher education institutions are not new, in the last 25 years more comprehensive and systematic approaches have been introduced to control and improve them in many countries (González & Espinoza, 2008). External quality assurance agencies that periodically evaluate the quality of universities and / or their programs through accreditation, quality audit or evaluation have become a familiar feature of the higher education landscape. Some of them were guided by processes of integration between communities, such as the Bologna Process in Europe, with a strong emphasis on quality assurance policy, others were inspired by national reforms, and others were introduced as part of the cooperation for the development (de Vergara et al., 2014).

Based on the generalized assumption that Universities are primarily responsible for the quality of their services, internal quality assurance mechanisms have been established in many universities around the world. These mechanisms are often established to meet the requirements of international agencies or national regulatory bodies, but also to generate information that responds to the requirements of the institutions themselves for monitoring and managing internal quality (Guzmán, 2011).
Therefore, in most countries and universities, quality assurance varieties have existed for a long time, some of them formally, but often quite informal. Which has led to the determination of same at different levels of authority, but often at a level of punctual staff and the basic academic units in which they are located. However, in the changing and challenging times of expansion and differentiation of higher education, in addition to their social and economic importance, many of the long-established traditions of quality in universities are no longer considered adequate to meet the needs and current and future requirements (Quiroz, 2007).

Considering this context, in this review a brief theoretical review is made of the main concepts related to quality in higher education and the importance of learning styles, determining the main characteristics and transcendental elements in this regard that have been analyzed in various studies Worldwide.

The reminder of this study is organized as follows. The next section provides a review of extant literature. The third section discusses learning styles and the quality of higher education. Finally, conclusions and implications of the study are presented in the final section.

**Literature Review**

In recent decades, quality has evolved from a marginal position to being the main concern in higher education along with financing problems. This development has begun since the 1980s and has gained prominence in the 1990s, since external quality assurance has become a "global phenomenon." While the 1990s was considered “the decade of quality,” the decade of 2000 was called "the decade of international quality." The speed at which countries and institutions of higher education around the world created and adopted formal quality mechanisms has led some authors to refer to the development of quality management processes worldwide as the "quality revolution" (Schindler et al., 2015).

However, unlike the industry where quality concerns generally came from within (for example, a company's desire to improve its market performance), the requirements for higher education institutions to document and demonstrate quality They come mainly from external entities such as accreditation commissions and quality agencies financed by the government (Wong, 2012).

Another area of agreement among experts on academic quality is that the concern for quality in higher education has been driven primarily by the need to demonstrate responsibility. While higher education institutions have long considered that quality is important, historically, this situation was taken for granted. Therefore, many of the current requirements for higher education institutions to document the quality of their programs emerged during the 1980s and 1990s, as demonstrating responsibility became a key concern worldwide (Cardoso et al., 2018). The majority of external quality agencies related to higher education emerged as a response to government pressure or legislation for higher education institutions to demonstrate that they are achieving what the government and / or society demands. Most higher education institutions receive a percentage of public funds and societies expect these funds to be used wisely for the maximum benefit of those interested in higher education. There is also a substantial agreement that the quality imperative in higher education was based on market and government pressure to adapt to external political agendas (Cardoso et al., 2018).

In a similar vein, some studies suggest that there are numerous factors underlying the greater scrutiny of higher education and the emphasis on accountability. One of the most frequently cited drivers of concern for quality in higher education is massification, a term used to reflect the shift from a higher education system that historically served a small number of elite students to a much bigger system in charge of serving students from all sectors of society. The aforementioned massification has led to the creation of many new institutions of higher education, as well as the growth of existing institutions to accommodate a growing number of students (Alzafari & Ursin, 2019).

Another frequently mentioned factor along with massification is diversification. As the higher education sector has grown, the amount of diversity in the system has increased substantially in terms of the types of institutions and programs available. Current higher education students have also become much more varied in terms of characteristics such as race, ethnicity, family history, age and amount of previous academic preparation. This has led to a growing number of questions about whether a high level of quality can be maintained in such diverse institutions, which provides material for the international debate on quality (Giannakis & Bullivan, 2016).

Whereas, in recent decades, the world has become a more complex place. In many countries, higher education has the task of serving more people and receiving less funds from students, directly involving governments. The result has been a higher level of scrutiny and emphasis on accountability. However, it is important to keep in mind that the greater public scrutiny of higher education today is not due to higher education institutions being less valued, but their importance and notoriety within the markets are prioritized (Harvey, 2007).

**Quality in higher education**

It is of limited value to discuss the quality of the service without defining what it is and how the customer perceives it. Therefore, when trying to define the quality of service, it is equally important to clarify the constructions of "service" and "quality".
The definition of services by Voss et al. (2007) comprises two components: the what of the provision of services and the how of it. Higher education is a service that comprises these two components. At the same time, features are important elements for the understanding of services. Quinn et al. (2009) cite three well-documented characteristics of the services that must be recognized so that the quality of the service is fully understood:

- Intangibility
- Heterogeneity
- Inseparability.

This means that a service has no physical form, since it is an activity carried out, it is different according to the various meetings with clients and is produced and consumed at the same time (Voss et al., 2007). Higher education owns all these characteristics of a service, in which the student also participates in the process of providing the service. However, higher education has a unique feature as a service, which focuses on its main focus to provide quality learning experiences to students as their clients through effective learning processes (Voss et al., 2007).

In response to the question "what is quality in higher education?" Hill et al. (2003) state that there is no simple answer to this question, since 'quality', as 'beauty' is subjective, a matter of personal judgment. However, there is an almost universal consensus that quality in higher education is not well defined. While some authors have suggested that it is a waste of time to try to define quality (Hodgkinson & Brown, 2003), other experts on academic quality argue that it is important to obtain more information on how different stakeholders perceive quality (Srikanthan & Dalrymple, 2007). Hill et al., (2003) argue that conventional wisdom and common sense require some discussion about what is meant by quality before considering quality systems.

**Quality assurance in higher education**

Quality assurance has been integrated into multiple organizations since the beginning of the 21st century. This reflects the gradual understanding that lasting improvement could not be achieved without paying close attention to the quality of management practices that are used on a daily basis (that is, that "management quality" is as important as "management of quality") (Blanco-Ramírez & Berger, 2014).

Although it may be difficult, or even impossible, to find a unique and unambiguous definition of Quality Assurance, it is generally accepted to represent a philosophy or management approach 'composed of a' set of mutually reinforcing principles, each of which is supported by a set of practices and techniques (Dean & Bowen, 1994, p. 92).

In addition, these principles are part of a highly debated integrated management paradigm: Total Quality Management (TQM), which defines some general guiding principles and the central concepts of quality (de Vergara et al., 2014). However, there is no model that can provide an ideal and unique solution for all the requirements of the organization.

Concern for quality in higher education, which includes education, research, services and approaches at the institutional level (Alzafari & Ursin, 2019), gave rise to the debate on the applicability of quality management tools to higher education, where the most important challenge all the time is the 'critical rethinking' of quality and improvement, as well as the design of quality models in a language that is familiar to the culture of universities and that can adapt to their mission.

Theoretically, the management literature shows that a more integrative vision of quality assurance practices is proposed and implemented, as part of a broader system of management practices. In fact, the literature seems to be changing its approach from an approach based on quality measurement models in organizations, to a holistic and total management approach that promotes quality within organizations (González & Espinoza, 2008).

Consequently, it could be argued that universities are, in practical terms, in the process of following the trend found in the quality assurance literature and in the daily life of organizations in other sectors, seeking greater integration of various practices of management within a global management and government system.

According to the literature on higher education studies (Alzafari & Ursin, 2019), there are four main dimensions at the process level:

- Teaching and learning
- Research and scholarships
- Other projects developed by the University
- Support processes.

In turn, the literature on quality in higher education (Billing, 2004) refers to three organizational levels: program level, unit level and institutional level. Finally, the literature on quality assurance (Ewell, 2010) consensually presents eight principles of the same:

- Customer focus
- Leadership

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Learning styles and the quality of higher education

Learning styles in higher education

In higher education, research suggests that combining learning styles with teaching styles may result in higher student achievement (Song & Oh, 2011). If teachers know their students' learning styles, they can match their teaching styles with their learning styles, making their teaching more effective (Sternberg et al., 2008). For example, a study by Arias et al. (2014) found that teaching through student learning styles improved student performance. This was also confirmed by Aragón and Jiménez (2009) who stated that the educational processes developed based on the learning styles of the students are more effective.

However, Williamson and Watson (2007) warn that the combination of learning and teaching styles over a long period of time could make both teachers and students feel more comfortable and make the learning environment less challenging for both groups. Therefore, intentional mismatch should be included, so that both students and teachers can develop and explore the most challenging learning styles, so that both groups can adapt to different learning environments. As a consequence, it is important that teachers help students to understand the limitations of their preferred learning styles, helping them expand them to succeed in a variety of different learning environments (Tulbure, 2012).

However, matching the teaching styles with those of student learning does not mean that the teacher should adjust their teaching style to the learning of each one, nor that the teacher should use a unique teaching style that encompasses all students. Because what is really required is a balanced teaching strategy that adapts to the different learning styles that can be appreciated in the class (Felder & Spiro, 2005). On this aspect, Felder and Spurlin (2005) affirm that a teaching style that responds to a single style of Learning would not address the needs of the rest of the students in the class. This evidence was confirmed by the participants of their study who were PhD students, who, in their recommendations of criteria for an instrument of evaluation of learning styles, stated that it was necessary to consider that there is no single approach for all students.

Tulbure (2012) argues that students arrive in a learning environment with an already developed style, and that if they find a mismatch between their own learning styles and the teacher's teaching styles, they are likely to reject the learning environment. Therefore, the lack of correspondence between teaching and learning styles could cause students to lose interest in the class, which can lead to poor performance in activities and exams, to failure in their courses and, ultimately, the abandonment of studies (Felder & Spurlin, 2005).

Although there is no clarity and consensus on the concept of learning styles, a broad body of literature can be found that is dedicated to the development of a series of instruments designed to measure individual learning styles. Tulbure (2012) suggests that, when measuring learning styles, it is necessary to use the most used instruments that are available.

As mentioned, there is a wide debate about learning styles (Aragón & Jiménez, 2009). These styles analyze how individuals process information, taking into account the role of cognitive and affective processes (Arias et al., 2014). There is also a perception that learning improves when the material is designed to match different learning styles (Tulbure, 2012).

However, research on learning styles has contributed to improving quality in higher education, especially among students from disadvantaged educational settings. Since the study of the learning styles of these students, allows to recognize their strengths and weaknesses, and facilitates the teacher to access important information for the academic development of the students. Different research has shown that the knowledge of university students about their own learning styles increases academic success and reduces the dropout rate (Johnson, 2007).

However, learning styles have also been criticized for generating a division between those students who fit the model and those who do not. In this context, it is possible to consider that those who do not fit the model need reinforcement work and receive differentiated treatment within the class (Hall & Moseley, 2005). For this reason, Hall and Moseley (2005) criticized the use of learning styles to foster an individualistic approach to learning and ignore the context in which learning takes place. Therefore, some studies are against encouraging students to adopt a particular learning style because students may be limited on an intellectual level, and avoid learning situations that are not within their personal learning range (Tulbure, 2012). On this aspect, Williamson and Watson (2007) argue that students adjust and modify their learning styles depending on the task in question and, therefore, it is difficult to design a teaching style that responds to a unique and particular learning style.

As a consequence, it is important that teachers help students to understand the limitations of their preferred learning styles, helping them expand them to succeed in a variety of different learning environments (Tulbure, 2012).
that a student must show the ability to select an appropriate learning style considering the demands of the learning situation and their own abilities.

On the other hand, learning style assessment instruments have been criticized for the weakness in the reliability and validity of their measurements (Williams et al., 2013). Inappropriate use of learning style assessment instruments could lead to stereotyping of students (due to their classification), which would lead to a limitation in the development of their full abilities.

In summary, although there are several definitions of learning styles, their existence is recognized, which can be assessed through the use of learning style assessment instruments. These evaluations serve to provide students and teachers with a body of substantial and valuable information for the teaching and learning process. Since knowing the learning styles of the students by the teachers could help them in the planning of the classes, at the same time that research on the theoretical basis of the mentioned styles could be essential to enrich their teaching and learning practices.

**Learning styles and their impact on the quality of higher education**

Considering the above, it is undeniable that learning styles have a substantial impact on quality of higher education, since it affects the base of universities; in the process of "teaching - learning". Therefore, it is essential to analyze the different studies that have been carried out based on learning styles and the quality of higher education.

While the association between learning styles and teaching styles is well supported, less attention has been paid to the quality perceived from the student's point of view, and therefore it is not clear whether a student's learning style impacts the quality it perceives of the work of teachers. In a study on the quality of teaching linked to learning styles, Ginns et al. (2007) found that students' perceptions about the quality of teaching were related to the quality of their approach to learning. Although questions have been kept about whether students' perceptions regarding teaching drive their learning approaches, or if their learning styles affect their perceptions of teaching, or both, since students' perceptions about Teaching quality have been used in performance indicators aimed at improving student learning (Ginns et al., 2007).

However, it has been mentioned that students who perceive that their teaching is of higher quality are more likely to adopt high quality styles for their learning. Apodaca and Grad (2005) reported that students who perceived that their teachers were passionate, organized and accessible were identified as leaders for learning and these have a positive impact on their learning.

The perception that awareness of the teaching style can help the student understand all the contents that are complex to teach, and perhaps can contribute to reducing overall failure by improving the learning process, is a complex but tempting perspective that clearly deserves more attention and research (Cassidy, 2004).

Lynch and Markham (2003) demonstrated that the satisfaction of learning requires a mixture of teaching models and pedagogies that contribute to the learning environment, and lead to the development and preparation of the student to enter the market. Although Lynch and Markham (2003) examined the effects of the learning environment, their study did not consider whether the teacher's characteristics, such as academic training, are correlated in the link between teaching and classroom learning. For example, business study faculties are expected to produce business graduates with the skills and competencies required to acquire a job upon graduation.

Therefore, it is pertinent to understand the relationship between the characteristics, attributes of the teacher, the administration of the course and the class, with the learning styles preferred by the students. According to Sadler-Smith (2001), what seems to be out of reach is the systematic operationalization of style in learning, teaching, training or management.

Regarding the perception of teachers, Samuelowicz and Bain (2001) examined the teaching conceptions taught by professors in the fields of science in two universities (one university at a distance and the other traditional). The objective of the study was to discover, describe and systematize the direct experience of teaching as it is perceived, experienced and reported by academic professors.

According to Samuelowicz and Bain (2001), two parties are involved in the teaching-learning process: teachers and their students. Therefore, they affirmed that the conceptions of teaching may depend on the context, at least for some teachers. And that there are influences such as the level of the course and the students that make it up, which can strongly condition the style of a teacher.

Hernández and Hervás (2005) pointed out the influences that teachers’ teaching approaches can have on student learning styles. The authors affirmed that the teacher plays an important role in the formation of student perceptions, since the way in which the teacher presents what is required of the student, what is important, the teaching style of the teacher and the method of evaluation will influence what and how the student will learn, either by adopting a superficial or profound approach to learning. He also discovered that the students' learning style was related to the student's intention and the nature of the task that the students had to carry out. He concluded that student learning strategies and approaches depended on context.

Samuelowicz and Bain (2001) found that preliminary observations suggested the possibility that teachers have ideal conceptions and teaching practices. Their evidence suggested that the teaching objectives expressed by teachers coincided with the ideal conceptions of teaching, while their teaching practices, including evaluation, reflected their labor perceptions of teaching. This disjunction between the ideal and functional conceptions of teaching in higher education constitutes, according to them, one of the mysteries of the same, based on the disjunction between the established objectives (promotion of critical thinking) and educational practice (unimaginative coverage of the content and memorization of important facts).
Richardson (2005) reviewed different research on teaching conceptions taught by teachers. The objective of its review was to analyze and compare the findings of a substantial number of largely independent studies to identify if there were common elements in the findings. Richardson (2005) framed the reviewed research into two teaching orientations: content-oriented (teacher-centered) and learning-oriented (student-centered). Under the guidance of content-oriented teaching (teacher-centered), he arranged the conceptions of teaching as follows: imparting information and transmitting structured knowledge. Under the guidance of learning-focused teaching (student-centered), he arranged the following conceptions of teaching: to facilitate understanding and conceptual change / intellectual development. The author considers that the intermediate conception, which recognizes the interaction between the teacher and the students as necessary, is a bridge of transition between the two conceptions of teaching. However, the most recent research by Samuelowicz and Bain (2001) on the academic beliefs of teaching and learning showed that Richardson (2005) was wrong. According to them, it was the purpose and nature of the interaction, not the interaction itself, that differentiated the orientations and beliefs about teaching and learning. Some forms of interaction focused on teaching, as they intended to maintain the attention and concentration of the students on what the teacher was saying, or to verify whether the students followed the teacher's reasoning (Samuelowicz & Bain, 2001).

Richardson (2005) argued that these studies suggested a relationship between teaching conceptions, through approaches to it, and student learning outcomes. At the level of the individual teacher, the teaching methods adopted, the established learning tasks, the evaluation demands made and the specific workload were strongly influenced by the orientation of the teaching. These contextual variables affected student learning approaches. The author argued that there was a relationship between teaching conceptions, teaching approaches and learning outcomes, in which the intervening variable teaching approaches were influenced by the teaching conceptions of teachers, as well as by design curriculum, which was also affected by teachers' conceptions of teaching and student pressure factors and institutional influence. All of these variables would directly affect students' learning approaches and, therefore, would influence learning outcomes. Norton et al. (2005) stated that their research had implications for monitoring and improving the quality of teaching in higher education. In saying this, he established that quality problems in higher education focused solely on teaching practices.

Norton et al. (2005) also stated that the underlying beliefs about teaching could not be imposed by regulation. This did not imply that all teaching quality initiatives were useless, but that quality control initiatives of the control agencies of the same should be accompanied by development programs adjusted to the faculties, which should be appropriate and considered the significant influence of the conceptions of teaching. According to the authors, a logical position to improve the quality of teaching derives from the interpretation of the conceptions of teaching as a continuum, and from the degree of evidence that suggests that some professors alter their positions in the continuum. Therefore, if evidence of the link between the conceptions of teaching and the quality of student learning is accepted, then it should be possible to improve the latter by changing beliefs about teaching. The authors believe that quality improvement and teacher development measures should incorporate opportunities for participants to change their beliefs throughout the continuum towards a student-centered approach to learning.

As previously seen, Samuelowicz and Bain (2001) stated that the conceptions of teaching may depend on the context, at least for some teachers. Once again, if teachers' conceptions of teaching can depend on context, this means that they cannot be ordered continuously. It is important to observe two points in Richardson's proposal (2005). Not only are students seen as remotely controlled robots, where a teacher presses a button and students learn in a way, and where the teacher presses another button and students learn differently, but teachers are blamed for not pressing the correct button. In addition, if the right button exists, it must be a common one shared by all students in the classroom. A conclusion from Richardson's (2005) proposal is that the classroom is not a complex living environment in which human beings, teachers and students, try to interact with each other, but that the classroom is an environment in which Students respond to teaching methods, instead of reacting to them. Which seems to suggest that learning is neutral and that teaching is solely responsible for the failure of the quality of student learning. In this conception, it is possible to appreciate that it does not take into account all the variables that would directly affect the learning approaches of the students and, therefore, would influence the learning outcomes.

It is important to emphasize that teaching does not simply work in one direction, from teachers to students, since it flows in two directions, from teachers to students and vice versa. In addition, it is logical that students' perceptions of teaching may vary. Consequently, their perceptions of the quality of teaching in higher education also vary.

In relation to quality, Norton et al. (2005) stated that a study of teaching conceptions was important because it has been shown that these conceptions are related to the evaluation of student learning quality, and that understanding of teaching conceptions becomes important if the measures to improving the quality of teaching must have some effect. However, the way forward is not to investigate approaches to change teaching conceptions, as Norton et al. (2005), but to investigate the effects of students' perceptions on the quality of the teaching styles of their teachers, to see how it affects the quality of their learning in higher education. In this way, it will be possible to analyze whether quality can be applied as a concept for teaching and learning in higher education.

**Conclusions**

Considering the documents and publications analyzed, within this review it has been possible to verify the importance of quality for Higher Education organizations in today's world, since it transmits a specific image of the agencies and future graduates attending to
it exercising as clients. As such, students expect the service offered (teaching) to meet certain basic criteria, which are clearly linked to students’ learning styles and their perception in relation to the process of teaching – learning.

During the review it has been found that various authors seem to agree that there is no single style of learning, and that this must be flexible within the classroom to improve the educational experience of students, but that this cannot lead to the choice of a single style considered as suitable, since this can be counterproductive by not having challenges and ability to adapt teachers and students to the different environments that can be found in the real world, and in their future work environments. Therefore, this review opens new lines of research focused on empirical studies that relate the quality of higher education with the learning styles of students attending these institutions, because it can offer a new perspective on this, while Those styles best valued by the students and their effectiveness for the development of professional competencies of the graduates are identified.

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