



University tutoring: face-to-face or virtual: a systematic review

Tutoría universitaria presencialidad o virtualidad: una revisión sistemática

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Abstract

University tutoring is an activity in which the tutored (student) and the tutor (teacher) participate and which promotes the personal, academic and professional development of the student. This article presents a systematic review of university tutoring based on sources of information consulted to identify the most important dimensions and establish the benefits it represents for students. 5 scientific articles were collected heuristically, using search engines and journal repositories (SciELO, Scopus, Redalyc and DOAJ) between 2017 and 2021. From the review of the research consulted, 8 predominant dimensions were identified in which the three parties that make up the university tutoring program are identified: the institution, the tutor and the student. University tutoring is an indicator of the quality of university education and an effective procedure to reduce the gap that exists in education, especially to reduce student dropout and improve the student's overall performance.

Key words: college tutoring, tutoring, tutors, college students, individualized instruction.

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Resumen

La tutoría universitaria es una actividad en la que participan el tutorado (estudiante) y el tutor (docente) y que promueve el desarrollo personal, académico y profesional del estudiante. Este artículo presenta una revisión sistemática de la tutoría universitaria a partir de fuentes de información consultadas para identificar las dimensiones más importantes y establecer los beneficios que representa en los estudiantes. Se recopilaron artículos científicos de manera heurística, utilizando motores de búsqueda y repositorios de revistas (SciELO, Scopus, Redalyc y DOAJ) entre 2017 y 2021. De la revisión de las investigaciones consultadas se identificaron 8 dimensiones predominantes en las que se identifica a las tres partes que conforman el programa de tutoría universitaria: la institución, el tutor y el estudiante. La tutoría universitaria es un indicador de calidad de la educación universitaria y un procedimiento eficaz para reducir la brecha que existe en la educación, en especial para disminuir la deserción estudiantil y mejorar el desempeño integral del estudiante.

Palabras clave: tutoría universitaria, tutoría, tutores, estudiantes universitarios, enseñanza individualizada.

Introduction

University tutoring -which we will call tutoring from now on- is an activity that has been carried out since the beginning of mankind. It was given by people who received the name of tutor or mentor, initially it was the mother who performed this activity overseeing the initial education of her children; in ancient Greece we have Socrates as Plato's tutor and Plato as Aristotle's mentor; in the Middle Ages it was the abbey and monasteries where the activity we know today as tutoring began (Jiménez, 2020), which is based on humanism. Epistemologically, tutoring is in the paradigm of constructivism whose main representatives (Lev Vygotsky, Jean Piaget and David Ausubel) consider that the person reaches knowledge through social interaction in the environment where he is (Bejar, 2018); that is to say that the student learns more effectively in an environment of participation and exchange with peers (Díaz, 2020). In its beginnings, tutoring was oriented only to solve students' academic problems; however, now, this concept has a broader definition (Alonso-García, Rodríguez-García, & Cáceres-Reche, 2018) because it considers that the objective of tutoring should be to promote the comprehensive development of students (academic, professional and personal) for the benefit of their learning (Clerici, & Da Re, 2019; Guerrero-Ramírez et al., 2019; Martínez, Conejo, & Rodríguez, 2017; Amor, & Dios, 2017).

On the other hand, with the implementation of the Bologna Process and the creation of the European Higher Education Area, European universities modified their education systems to adapt to the new requirements. In this context, tutorials have become one of the main activities for the process of incorporation of universities to the common European space; this represents an indicator of change and an important mechanism to define quality in university education; for this reason, there are many institutions in

the world that are implementing it to favor the students' capacity for reflection and decision making (Klug, & Peralta, 2019; López, & Prendes, 2017; Martínez et al., 2020). In the Latin American environment, in contrast, tutoring is born as a mechanism to foster greater learning and commitment on the part of students and to reduce student dropout (Di Vita, Daura, & Montserrat, 2020).

Since tutoring is an activity in which the tutored (student) and the tutor (teacher) participate, it is necessary for the latter to promote the individual, academic and intellectual development of the student, motivating him/her to achieve competencies and carry out scientific research activities (Benites, 2020).

We can see that there are diverse and varied investigations that have been carried out in relation to university tutoring, which show different scopes and conclusions, although there is no source that synthesizes them. In summary, the objective of this article is to make a systematic review of university tutoring from all the sources of information consulted to identify the dimensions with which it has been analyzed and to establish the benefits it represents in the students to then raise some conclusions to improve its application.

Materials and Methods

A documentary research was conducted on the topic of university tutoring in which information was collected heuristically, applying the Google Scholar search engine; various journal repositories such as SciELO, Scopus, Redalyc, DOAJ, Eric and Dialnet were accessed and the following keywords were searched: university tutoring ; tutoring; tutors ; tutors ; university student ; individualized teaching ; mentor ; tutors ; mentoring; mentoring; as a filter, articles published between 2017 and 2021 were considered.

It was also observed that the databases consulted were adequate and coherent with the objective of the search. Information was found in each of them, but in different quantities. Likewise, when compiling each article related to the topic of mentoring, the bibliographic sources were reviewed and, from there, other documents on the same topic were searched (i.e., the selected article provided clues for the search of others). In addition, to locate the most relevant articles, an Excel data matrix was used in which the main characteristics of each article were noted (author, title, object of study, unit of analysis, country, space, instrument, results and conclusions). Based on the question posed in the systematic review, the most important articles were selected and analyzed hermeneutically. Table 1 summarizes some of the primary sources consulted, indicating the author, year of publication, title, results and conclusions.

Table 1. Identification of the main investigations

N o.	Author and year of publication	Article title	Results	Conclusions
1	Beniot (2021)	Peer tutoring: a strategy for strengthening pedagogical vocation	Peer tutors show a clear tendency to teach and learn.	Peer mentoring is an important strategy for strengthening the education profession during teacher training.
2	Di Vita, Daura, & Montserrat (2020)	University Tutoring between Latin America and Europe: The Case of Universidad Austral (Argentina) and the University of Studies of Palermo (Italy).	Tutoring at UA is personalized, while at UP it is complementary. UA teachers receive training, while UP teachers do not.	Personalized tutoring by teachers and student tutors prevents students from dropping out and falling behind in their academic progress.
3	Martinez et al., (2020)	University tutoring as seen by its students: Proposals for improvement.	Greater commitment of the tutor in his/her relationship with the student.	Tutoring favors the integral development of the student (academic, personal, professional).
4	Guerrero, & Tigrero (2020)	Students' perceptions of host tutoring at the University of	Tutoring motivates students' academic and personal development.	First-term tutoring is desirable because it improves academic performance

		the Arts in Ecuador.		and personal development
5	Benites (2020)	The role of academic tutoring in raising the academic performance of college students.	Tutoring encourages students to fulfill their duties during their university education.	The tutoring was able to improve the academic performance of the students and reduced the number of failures.
6	Carranza et al., (2020)	University students' perceptions of face-to-face and virtual tutoring.	Virtual tutoring requires the application of motivational tactics to be most beneficial.	The tutor should investigate how to motivate students during virtual tutoring.
7	ADDIN CSL_CITATION {"citationItems":[{"id":"ITEM-1","itemData":{"DOI":"10.22550/REP78-1-2020-03","ISSN":"21740909","abstract":"Large numbers of students on particular degrees and a progressive depersonalisation of the teaching and learning process are typical characteristics of higher education. This situation results in a need to analyse the tutorial activity processes currently in use. This work aims to investigate various factors associated with the main agents involved in this process: tutors (profiles and functions) and students (needs). It is based on a	Profiles and functions of university tutors and their effects on students' tutorial needs	Tutoring should assist the student during the initial stage at the university.	The mentor must have empathy, leadership, sensitivity and authority.

survey-type methodology creating an instrument for distribution among degree students at the Universidad de Huelva. This is first subjected to validation processes to obtain a theoretical reference model with which to evaluate interactions among the emerging factors. Notable results include a theoretical model with correlations between tutor profiles and regressions, or influences of these profiles on functions and student needs. Furthermore, it reveals two types of university tutor: those who prioritise the academic aspects of tutoring, and those who prioritise personal aspects. Both profiles are associated with types of function that react to the needs students display throughout their time at university, and support the thesis that university tutoring is developing towards an integral model in which the personal dimension is especially relevant.

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8	Blakman,& (2020)	Bermudez	Peer tutoring: experience of the Student Pedagogical Advisory Program at Universidad Católica de Guayaquil	The Student Pedagogical Support (APE) program developed by high-achieving students has achieved satisfactory results.	Peer tutoring strategies help improve academic performance.
9	Lagarda, Rodriguez, & Vera (2020)		Psychosocial, work and family adjustment assessment to create selection profiles for university tutors.	Tutoring has not been adequate to solve the problems of declining student tardiness, failure and dropout rates.	It is concluded that in order to be selected, a mentor must have high standards of life satisfaction, self-concept, internal control and a success orientation.
10	Venegas-Ramos, & Sallán, (2019).	Gairín	Approach to the state of tutorial action in Chilean universities	Mentoring has greater emphasis in the first years of study through peer tutoring.	Peer tutoring has a greater presence due to the work that many students perform as course assistants.
11	Gargallo, Pérez-Sanz, & Esteban-Salvador (2019).		University students' perceptions of academic tutoring: a review of relevant factors.	Four aspects are highlighted: self-confidence, personal motivation	The tutorial action serves as a stimulus to face studies, as well as to optimize their learning time.

			and economic savings.
12	Klug, & Peralta (2019).	University tutoring. Perceptions of students and tutoring staff on its use and operation.	The tutors emphasize listening skills and teamwork. For the student, tutoring provides a comprehensive view of life at the university. There is no standardized and homogeneous model of tutorial action. The organization of tutorials must have a theoretical framework to support and maintain it.

Source: authors' own elaboration.

Di Vita, Daura, and Montserrat (2020) made a comparison of the tutoring systems applied in two universities, finding that at Universidad Austral tutoring is carried out in a more organized manner with training for tutors and personalized tutoring; this results in a decrease in dropouts and delays in student progress.

On the other hand, Guerrero and Tigrero (2020) conducted a mixed approach research in which a total of 174 students were evaluated by applying questionnaires, an aptitude scale and open questions, finding that tutoring given to students who have recently entered the university improves their academic performance and their inter and intrapersonal relationships and avoids conflicts that may arise in the student due to the change he/she experiences when being subject to a different teaching system. Benites (2020) conducted a descriptive exploratory research, finding that tutoring is based on the development of curricular competencies and the achievement of learning; the tutor's intervention is to understand the student's problems and propose activities to improve their academic performance, thereby reducing the number of failed students. Touching on a more current topic, Carranza et al. (2020) through a hypothetical deductive non-experimental study studied the perception of university students on face-to-face and virtual tutoring; 28 students were evaluated with the application of surveys, the result obtained was that students were more satisfied with face-to-face tutoring because in the virtual modality they did not feel that it motivated them to improve their academic performance. Delgado-García, Conde and Boza (2020) also conducted a quantitative approach research in which 581 students were evaluated through surveys; it was found that tutoring should be applied throughout their university

life, even until their insertion into the working world, empowering their integral development (that is, academic, personal and professional development); also, it was concluded that to meet these objectives the tutor must have certain skills such as knowledge of the course, empathy, leadership, sensitivity and authority. Extending to another form of application of tutoring, Blakman and Bermudez (2020) through surveys applied to 312 students concluded that peer tutoring - carried out by students of high academic performance - manages to improve the performance of those being tutored. As we can see, tutoring represents a continuous social exchange between the tutor and the tutored; in this sense, the research conducted by Lagarda, Rodríguez and Vera (2020) is important, in which, based on the application of questionnaires to 108 teachers, they concluded that the tutor, in order to perform this task, must have high standards of life satisfaction, internal control and orientation to success. Thus, Klug and Peralta (2019) conducted a mixed approach research in which tutors and students were evaluated through questionnaires and semi-structured interviews, concluding that assertive communication and teamwork are important for effective tutorial action; it was also stressed that the organization of tutoring must have a theoretical framework that supports and sustains it.

Results

After reviewing the research consulted, the most relevant dimensions that have been used to analyze the mentoring variable were grouped together and are shown in Table 2.

Table 2. *Dimensions of the mentoring variable*

No.	Dimension
D1	Content and structure of the mentoring program
D2	Tutor's capabilities and functions
D3	Tutor-student relationship
D4	Personal and social development of the student
D5	Student academic development
D6	Student professional development
D7	Tutor and student digital skills
D8	Student desertion

Source: authors' own elaboration.

These 8 dimensions encompass all the parties involved in tutoring, namely: the structure of the tutoring program; the skills and functions of the tutor; and the benefits received by the students. The number of times these dimensions have been used in the research varies: for example, personal and social development is the most frequent, while the tutor's skills and functions are the least frequent, although this does not mean that they

are of less importance in the process of developing the tutoring action, but rather that they are the least evaluated.

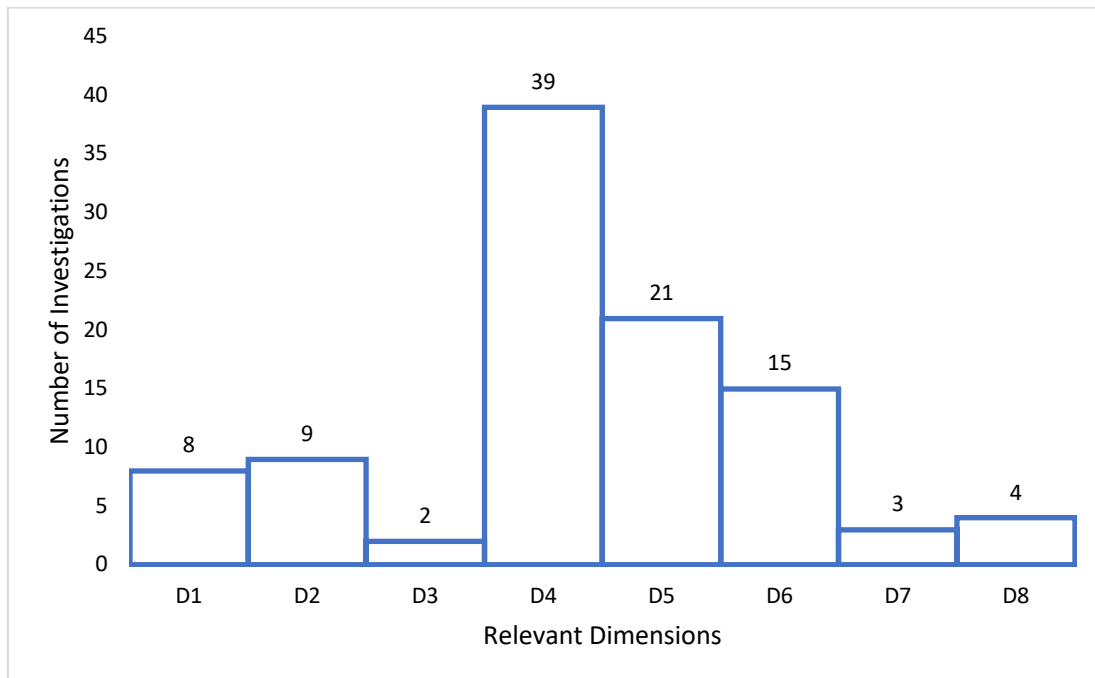


Figure 1 shows the dimensions and the number of times they are mentioned in the studies analyzed.

The countries of origin of the research reviewed were Argentina, Bolivia, Brazil, Chile, Colombia, Cuba, Ecuador, Spain, Italy, Mexico, Peru and Portugal, with 9 and 8 publications, respectively, in Spain and Mexico.

Discussion

The analysis of the tutoring variable allowed us to identify 8 dimensions, all of them important for tutorial action. The one with the greatest presence was the personal-social development of the student, which confirms that for an integral formation, not only academic development is important. On the other hand, the least studied were tutor-student relationship and digital skills of the tutor and the student, which suggests that they should be further analyzed in future research; another of the dimensions with less presence was student desertion, which had greater participation in research conducted in previous years and now is explained in some way within the dimensions identified. Likewise, it was identified that tutoring in universities is made up of three important and differentiated parts: first we have its organizational structure, programs, regulations, functions, responsibilities and compensation, which represents the administrative basis of this activity (Moreno, Veytia, & Estrada, 2019); then we have the teachers who perform the important work of tutoring, in some cases supported by previously trained students who stand out for their high academic performance (Blakman, & Bermúdez,

2020; Bravo et al, 2019); finally, there are the students, or the tutored, who are the beneficiaries of this activity.

Another concept was also determined that indicates that tutorial action is favorable for students as long as it is carried out in a planned manner with well-planned objectives and goals (Martínez, Pérez, & Martínez 2018), an affective and empathetic communication and a fluid and cordial relationship among all participants (López, & González, 2018; Sánchez, Luna, & López, 2019); all this will result in a quality mentoring program, necessary in these times in which higher education has become progressively massified and depersonalized with greater emphasis on some professions (Delgado-García, Conde, & Boza, 2020).

In relation to the benefit obtained by the student, previously the concept was that academic development represented the primary objective of tutoring . However now, personal-social development and professional development have also been added; this represents a more comprehensive concept of education (Bejar, 2018; Alonso-García, Rodríguez-García, & Cáceres-Reche, 2018), although it is necessary to differentiate the tutoring programs according to the characteristics of the students and their professional studies (Gargallo, Pérez-Sanz, & Esteban-Salvador, 2019); for this reason, tutoring programs should be evaluated on an ongoing basis, examining what students think, assessing both the priorities and needs they perceive (Martínez et al., 2020; Alves, Simao, & Leitinho, 2018).

Similarly, in relation to the tutor, it was found that he/she must have the ability to identify the characteristics of students and enhance their capabilities to promote their self-learning and collaborative work ; for this - in addition to having mastery of the course - he/she must have competencies such as empathy, leadership, communication, teamwork, as well as pedagogical preparation (Sánchez, Luna, & López, 2019; Batista et al., 2019; Miranda et al., 2019); for this reason, the need arises for teachers who are going to exercise tutoring to be selected based on the aforementioned characteristics (Lagarda, Rodríguez, & Vera, 2020); however, the vast majority of university teachers - because of the profession they have followed- do not have pedagogical training, this is a reality that influences the quality of tutoring ; because of this, courses and trainings should be programmed for teachers who will perform the tutoring tasks referred to the mentioned competencies (Aguilar-Salinas, Chávez-Valenzuela, & de las Fuentes-Lara, 2017; Aguilera, 2019).

Another important aspect is the one that refers to virtual tutoring that in times of pandemic takes special relevance, in this regard only three investigations were found in which it is mentioned that the teacher must have developed digital skills ; in addition to

carrying out the tutorials with didactic strategies that motivate the student and keep their attention, the result obtained was that the tutored preferred face-to-face tutoring rather than virtual (Toledo, 2019; Toledo, 2017; Carranza et al., 2020). Finally, in relation to the question of this review article, several answers have been found -mostly favorable- that show that tutorial activity has served to decrease student dropout, delay in academic progress, improve academic performance and favor student development in personal -social, academic and professional aspects (Díaz, 2020; Di Vita, Daura, & Montserrat, 2020; Martínez et al., 2020; Guerrero, & Tigrero, 2020; Benites, 2020; Sánchez, Luna, & López, 2019; Bejar, 2018; Fernández, & Barbagallo, 2017).

Conclusions

Tutorial action is an effective procedure to reduce the gap that exists in education (Clerici, & Da Re, 2019) and represents an indicator of quality if it is properly organized and structured with training and incentive programs for the tutor and with permanent evaluations of the tutoring program that allow identifying needs and shortcomings that should be corrected in a process of continuous improvement. This implies that tutors should have the necessary competencies to actively involve students and motivate them so that they reach autonomy in their learning processes (Di Vita, Daura, & Montserrat, 2020; Carranza et al., 2020) or also promote the realization of workshops that contribute to the integral development of the student (Javier Napa et al., 2019); in cases where tutoring has been developed in this way, the results achieved have been of benefit to students (Di Vita, Daura, & Montserrat, 2020); otherwise the lack of support and recognition to the tutorial activity brings opposite results (Martínez et al., 2020). On the other hand peer tutoring had satisfactory results and helped to improve the academic performance of the tutored, resulting in an important alternative that can be taken into account when implementing a tutoring program (Blakman, & Bermúdez, 2020; Estevam et al., 2018). In relation to the moment of application of the tutorial action, this was carried out at the entrance of students to the university; however, due to the favorable results achieved, its application to the entire university studies should be considered. Finally, it is important to promote the development and application of virtual tutoring, training teachers in transversal and digital skills so that they can continue with their tutoring activities while the limitations in which we find ourselves as a result of the pandemic last.

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