Scientific articles

La videoconferencia para favorecer el aprendizaje: una perspectiva del estudiantado de la UVEG

Video conference to promote learning: a perspective of the UVEG students

Videoconferência para promover a aprendizagem: uma perspectiva dos alunos da UVEG

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Resumen

El acelerado avance de la tecnología y la creciente demanda de formación académica han propiciado la utilización de videoconferencias en el ámbito de la enseñanza virtual como un espacio primordial para la interacción y el aprendizaje colaborativo entre docentes y estudiantes. Esta modalidad, de hecho, se erige como un medio motivador para aquellos que optan por la educación a distancia. Sin embargo, la incursión de las TIC en el ámbito educativo suscita interrogantes de índole compleja, especialmente en lo que respecta a la calidad del aprendizaje en entornos virtuales. Por ende, e presente estudio tiene por objeto explorar la perspectiva de los estudiantes en línea de la licenciatura en Pedagogía de la Universidad Virtual del Estado de Guanajuato (UVEG), específicamente en lo concerniente a las sesiones sincrónicas virtuales en la asignatura de didáctica. Para eso, y como instrumento de recolección de datos, se empleó una encuesta dirigida a una muestra representativa de estudiantes. Los temas abordados incluyen la participación en las sesiones virtuales sincrónicas, su impacto en el aprendizaje, cómo favorecen este último y qué aspectos consideran pertinentes para su inclusión en dichos encuentros. Los resultados revelaron que los estudiantes valoran las videoconferencias como una herramienta fundamental para su formación, pues les permite resolver dudas, acceder a información

complementaria y colaborar con sus pares. Además, reconocen su relevancia en el desarrollo profesional. La videoconferencia, por ende, emerge como un medio idóneo para respaldar la educación a distancia al facilitar la interacción entre docentes y estudiantes, y brindar entornos propicios para la construcción de conocimiento significativo.

Palabras clave: videoconferencia, tecnología educativa, enseñanza multimedia, video educativo, aprendizaje activo.

Abstract

The accelerated pace of technology and the search for academic training has generated the use of videoconferences in virtual teaching as a meeting space for learning, since it promotes interaction and communication between teachers and students and can be a space of motivation for those who opt for this type of study. The immersion of ICT in education has generated a question that is not easy to resolve, since much is questioned if quality learning is achieved in the virtual modality. This particular study intends to know the perspective of online students on the virtual sessions in the contribution of their learning, of the UVEG degree in Pedagogy, specifically in the subject of didactics. The survey was used as a data collection instrument for a small sample of students. Among the topics that are addressed are in relation to the virtual sessions, if they participate in them, if they help in their learning, how they promote their learning and what they consider should be addressed as topics in these synchronous meetings. The results showed that students consider videoconferences to be of great help in their learning by resolving doubts, expanding content information and interacting with their classmates, in addition to seeing them as an important part of their professional training. Videoconferencing is an excellent medium that supports distance education by bringing the teacher and student closer together to create conditions that generate significant learning.

Key words: educational technology, multimedia teaching, educational video, active learning.

Resumo

O avanço acelerado da tecnologia e a crescente demanda por formação acadêmica levaram à utilização da videoconferência no campo do ensino virtual como espaço primordial de interação e aprendizagem colaborativa entre professores e alunos. Essa modalidade, aliás, se apresenta como um meio motivador para quem opta pela educação a distância. Contudo, a incursão das TIC no campo educacional levanta questões complexas, especialmente no que diz respeito à qualidade da aprendizagem em ambientes virtuais. Portanto, o objetivo deste estudo é explorar a perspectiva dos alunos on-line da licenciatura em Pedagogia da Universidade Virtual do Estado de Guanajuato (UVEG), especificamente no que diz respeito às sessões virtuais síncronas na disciplina de didática. Para tal, e como instrumento de recolha de dados, foi utilizado um inquérito dirigido a uma amostra representativa de estudantes. Os temas abordados incluem a participação em sessões virtuais síncronas, o seu impacto na aprendizagem, a forma como a promovem e quais os aspectos que consideram relevantes para a sua inclusão nas referidas reuniões. Os resultados revelaram que os alunos valorizam as videoconferências como uma ferramenta fundamental para a sua formação, pois permite-lhes tirar dúvidas, aceder a informação complementar e colaborar com os seus pares. Além disso, reconhecem sua relevância no desenvolvimento profissional. A videoconferência surge, portanto, como um meio ideal de apoio à educação a distância, facilitando a interação entre professores e alunos e proporcionando ambientes propícios à construção de conhecimentos significativos.

Palavras-chave: videoconferência, tecnologia educacional, ensino multimídia, vídeo educativo, aprendizagem ativa.

Introduction

The integration of technology to enrich the teaching-learning processes in the field of higher education responds to a society immersed in a digital environment, which demands the preparation of future professionals capable of adapting to a world in constant evolution. In other words, in the era of the knowledge and information society, individuals with innovative and creative skills, endowed with critical thinking, autonomy and responsibility in their learning process are required. In this context, educational platforms emerge as a strategy aimed at improving educational processes, since they place the student at the center of the learning process.

This reality justifies the growing use of digital platforms in higher education institutions, as they constitute effective tools to facilitate the acquisition, assimilation and construction of knowledge. In fact, it is considered that the use of technology in current education encourages the active participation of the student in various evaluative and co-evaluative tasks, since they offer a more flexible training model, oriented towards more sustainable teaching and more stable learning. In the words of Durt (2008, cited by Barrera and Guapi, 2018), the incorporation of ICT in higher education represents a commitment to a genuinely competitive university, which promotes continuous learning.

However, it is extremely important to avoid improvisation in their use, since poor implementation could cause a loss of interest in both students and teachers, hence several fundamental aspects must be considered. Firstly, it must be comprehensive and place the student at the center of the learning process, valuing both its affective and cognitive dimensions. In addition, you must motivate and support them in the construction of their personal projects, as well as encourage the assumption of responsibility in their own learning process.

Likewise, it is important to take into account the four factors that Keasley (2000) identifies as crucial for effective virtual teaching, that is, experience in the use of computer media, the level of familiarity with virtual teaching, flexibility in the teaching process and skill in participatory dynamics and facilitation of learning (Barbera and Badia, 2005).

Now, one of the most used resources in virtual education is videoconferencing. In this regard, Bautista *et al*. (2020) explain the following:

> Videoconferencing with a tutor becomes a fundamental pillar in the learning process in non-face-to-face modalities. The use of this tool implies a paradigm

shift for those who use it, demanding a transformation in the educational act (p. 7).

In fact, and thanks to the rapid advance of technology, videoconferencing has achieved great popularity in virtual teaching, since it increases interaction and communication between teachers and students, which promotes the motivation and learning of individuals (Olivier, 1996, cited by Solano, 2005).

For this reason, it is necessary to investigate with students who train online whether they consider this strategy to be necessary and important to promote their learning. The results obtained could serve as a starting point for the university to consider implementing this resource in its educational programs. Furthermore, this research is pertinent due to the limited information available on the impact of videoconferencing on the construction of student learning.

Use of videoconferencing in universities

The use of videoconferencing in university education became popular due to the emergency caused by the covid-19 pandemic and the need to maintain the training of students, which has been reported in various investigations. For example, in a study by Roig-Vila *et al.* (2021) on communication in the university classroom during the context of covid-19, using Google Meet, we sought to identify the communication needs of the students and determine if this tool satisfied them. The results showed that although the teachers used synchronous audiovisual communication, which adjusted to the demands of the students, the degree of satisfaction was notably low.

Likewise, in an article on the impact of videoconferencing in higher education during the covid-19 pandemic, Vera (2021) investigated the perspective of teachers on these platforms and their impact on the teaching-learning process. Data was collected through a Like scale questionnaire, which revealed a high preference for the Zoom platform and the need to provide greater training in educational technology and active methodologies. In conclusion, it was considered necessary to rethink the didactic-digital strategy and integrate teachers into decision-making.

Likewise, Camera (2020) examined the link between the use of videoconferencing and collaborative learning in students of the Puerto Maldonado Branch Professional School of Law of the Andean University of Cusco in 2020. The results indicated a direct and

significant relationship between the use of said resource and collaborative learning, which is why it was concluded that its implementation in the teaching-learning process facilitates the development of group learning.

On the other hand, López Guerrero *et al*. (2020) shared the experience of a group of teachers with the use of various videoconferencing *software.* In this sense, teachers recognized the potential of the interactivity of live classes for learning, although they highlighted that this effectiveness depended on student attendance.

Regarding studies on students' perceptions regarding the use of videoconferencing, it should be noted that these have gained relevance especially as a result of the pandemic. In the research by Chanto and Loáiciga (2022) the following findings are raised:

> Among the main results obtained is that the preferred platform for videoconferencing is Zoom, and despite social distancing this medium has strengthened their learning, but during the process they experience boredom and fatigue. Likewise, it highlights experiences that cause nervousness, lack of motivation and feeling undervalued, although they show satisfaction and tranquility in other parameters (p. 56).

For their part, Fuertes *et al*. (2023) conducted a study on teachers' and students' perceptions regarding interactive synchronous video conferencing. The data collected indicated that both students and teachers positively valued this medium as a facilitator of learning.

In another work, Saavedra (2019) investigated the use of videoconferencing as a support resource in the collaborative learning of students in the second cycle of computer science subjects at the Faculty of Law of the University of San Martín de Porres. The objective was to determine if the use of videoconferencing improved group learning, through two experimental groups. The findings showed that its use significantly improved students' collaborative learning, which was reflected in higher grades compared to those who did not use it.

Carbajal (2021) also conducted a study on how videoconferencing platforms can serve to promote interaction between teachers and students in higher education, specifically at the José Faustino Sánchez Carrión National University (UNJFSC) in Huacho. This author concluded that videoconferences promote interaction between these actors in the educational context.

Likewise, Mejía's (2010) research on the impact of videoconferencing on the teaching-learning process of the English language in first-year high school students at the Blanca Martínez de Tinajero School, Province of Tungurahua, Ambato Canton, demonstrates that they do impact directly in said process. Therefore, according to the results obtained, the author affirms that videoconferences are an effective teaching option, since they promote the relationship between teachers and students, as well as language learning.

Based on these studies, it can be inferred that synchronous online education through videoconferencing becomes a very useful complement to teaching-learning processes. Therefore, it would be ideal for all programs offered by universities to consider videoconferencing as a valid strategy to support student learning.

In fact, these practices have served to highlight the importance of the role of the teacher, even in the virtual modality, since in this their presence is even more fundamental. This is because in any educational process the teacher not only acts as a mediator, guide or motivator, but also creates the necessary conditions to facilitate learning. In other words, thanks to these technological resources, teachers can clarify doubts, correct tasks and practice together with students to improve learning (Ángulo, 2021).

However, it is worth remembering that in the online modality the pedagogical proposal requires a different accompaniment approach. Therefore, given the integration of technology in the teaching and learning processes, it is crucial to adapt pedagogical strategies to make the most of them.

> Universities must formulate a joint vision of the future regarding their teaching-learning models. Among other issues, they must establish the objectives pursued with the implementation of ICT, the recipients of the new services, the content that will be offered, the use that will be made of the ICT and the user access mode. to them (Bricall *et al*., cited by Bravo, 2000, p. 2).

Having explained the above, this study aims to analyze the use of videoconferencing of synchronous sessions as a strategy to improve the learning of students of a degree in Pedagogy, for which the following question has been formulated: what is the perspective of the students? online about virtual sessions and their contribution to learning?

Materials and methods

The methodology used consisted of applying a survey through a Google form, which was shared during the last virtual session (of a total of three) of the Didactics module. This made it possible to collect objective information about the students' perception of their learning in virtual classes.

The questionnaire consisted of 7 items, of which 3 were closed questions and 4 were open. The topics addressed included aspects related to the students' participation in the virtual sessions, their perception of the usefulness of these sessions for their learning, how they favored their learning process, and what topics they considered relevant to address during these synchronous meetings.

The survey was carried out using the Google Forms application, and the estimated time to complete it did not exceed two minutes, since the questions were easy to understand. The link to the form was shared during the last scheduled session, and students were given 7 days to return it.

Participants

The sample was made up of 41 students from the Virtual University of Guanajuato, belonging to the Pedagogy major, specifically those enrolled in the Didactics subject of the Virtual University of Guanajuato (UVEG). To select them, a simple random sampling was carried out. The age of the participants ranged between 20 and 51 years.

Instruments

The instrument used was a questionnaire composed of a total of 7 questions. Of these, 3 were closed-ended, with "yes" and "no" options, with the purpose of identifying whether the students participated in synchronous sessions in the subjects they have taken, if they attended them regularly and if they perceived that these actions contribute to their learning.
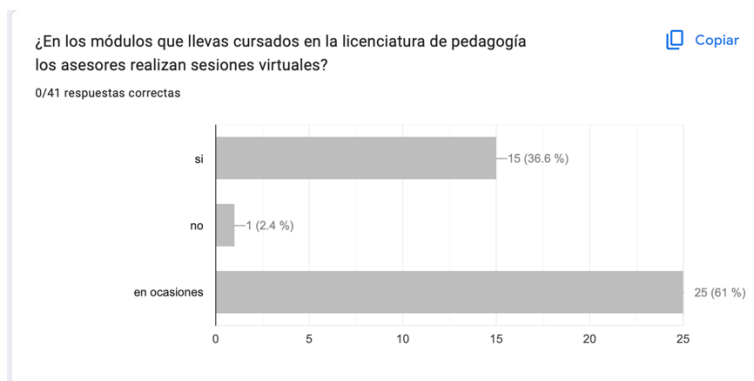
In addition, 4 open questions were included in order to analyze the perspective of using synchronous sessions to promote learning. The questions were the following:

1. How do virtual sessions benefit your learning?
2. What do you think should be addressed in the virtual sessions?
3. Do you think it is important for your learning to hold virtual sessions?
4. What do you think of virtual sessions in online education?

Results

The results obtained are presented below : Regarding the first item related to the holding of virtual sessions by the degree advisors, the following results were found: 61% of the participants indicated that synchronous sessions are occasionally scheduled. , 36.6% stated that they are carried out regularly, while only 2.4% indicated that this activity is not carried out.
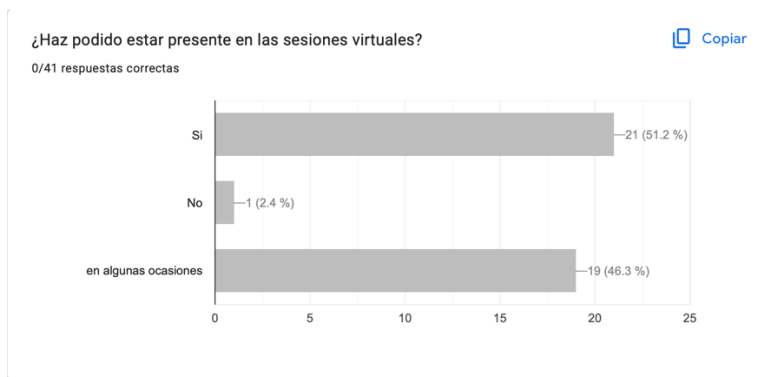
Figure 1. Programming of virtual sessions by teachers

¿En los módulos que llevas cursados en la licenciatura de pedagogía
los asesores realizan sesiones virtuales?

0/41 respuestas correctas

si	15 (36.6 %)
no	1 (2.4 %)
en ocasiones	25 (61 %)

Source: self made

Regarding participation in synchronous sessions, it can be seen that 46.3% occasionally attend these scheduled meetings, 51.2% attend regularly, while only 2.4% do not participate in these virtual sessions periodically.

Figure 2. Participation in virtual sessions by students

¿Haz podido estar presente en las sesiones virtuales?

0/41 respuestas correctas

Si	21 (51.2 %)
No	1 (2.4 %)
en algunas ocasiones	19 (46.3 %)

Source: self made

Regarding whether virtual sessions facilitate learning, 97.6% stated that these sessions contribute to their learning, while 2.4% indicated that they sometimes do.

Figure 3. Videoconferencing helps your learning
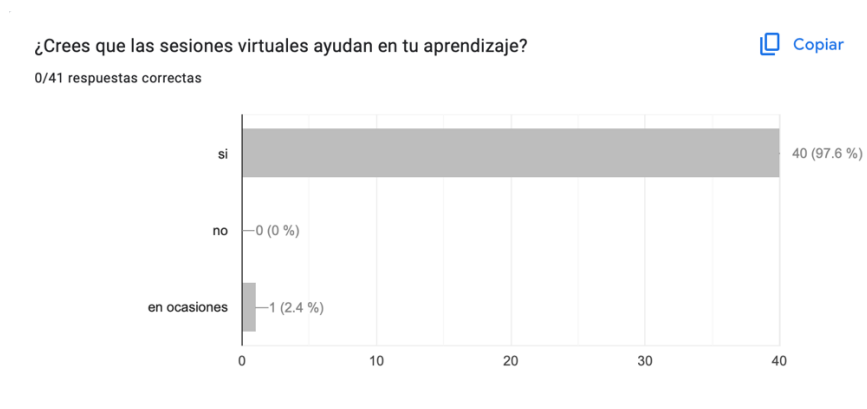
Source: self made

To analyze the open-response questions, the answers were examined verbatim and some categories were identified. Regarding the first question about how virtual sessions promote learning, the answers were the following:

Table 1. How videoconferences benefit learning

No.	Ideas	
1	Clarifies doubts	19
2	Understand the topic or challenge	8
3	Connect with colleagues	2
4	Interaction with the advisor	1
5	Feedback	2
6	Provide information	2
7	Explain the topic	3
8	Information is socialized	1
9	Knowledge is acquired	1
10	Spaces for dialogue are opened	1

Source: self made

Table 2. What should be addressed in the virtual sessions according to the students'
perception

1	Topics, content	7
2	Explanation of topic and/or challenge	8
3	Exercises and/or examples	2
4	Tips on carrying out the activities	1
5	Subject information	1
6	Feedback	1

Source: self made

In relation to the item about the importance that virtual sessions have for students, it is observed that, of the 37 responses obtained, 35 stated that they are important, one person expressed that they are not and another indicated that they are important on some occasions.

Table 3. Student perception of virtual sessions

	Are important	6
	They are essential for academic training	2
	They are favorable	2
	They are necessary	2
	They are helpful	1
	They serve us a lot	1
	It is a form of support	2
	They are a good tool	1
	They are enriched	1
	They are fundamental	1
	They are essential	1
	They are very useful	

Source: self made

Discussion

With respect to the stated objective of knowing the perspective of the students of the Virtual University of the State of Guanajuato on synchronous sessions and their contribution to learning, it was evident that they show a positive acceptance of the use of synchronous videoconferences to improve their educational process and facilitate the achievement of learning objectives. As Barráez (2020) points out, "learners cannot be considered simply as clients or consumers of information" (p. 43), since it is essential to guarantee the quality of the programs offered, which requires the design of learning experiences. collaborative learning.

In this context, videoconferencing is revealed as an effective means that supports distance education because it facilitates interaction between teacher and student, and creates enriching learning situations. In the words of Ángulo (2021), "these tools and interactivity with teachers are of great help in helping to make learning collaborative, but above all meaningful "(p. 5).

Regarding the question asked (what is the perspective of online students about virtual sessions and their contribution to learning?), it was found that they consider the implementation of these strategies to be crucial to accompany their educational process. These findings highlight the imperative need for interactions between teachers and students, as well as between students themselves, which demonstrates that communication represents a vital pillar to build and reconstruct knowledge. In other words, given that learning is a complex process that involves the development of communication skills, it is essential to promote teaching practices that encourage interaction and the exchange of opinions and knowledge between participants (Valverde, 2009).

In the case of the virtual modality, it should be noted that videoconferences are emerging as accompaniment strategies that can improve these communicative processes between educational actors. In the words of Solano (2006), "Videoconferencing is a two-way and synchronous service that uses new communication channels to promote an exchange of visual and auditory information between two or more distant interlocutors " (p. 123).

Now, given the growing demand for access to quality education for a greater number of people, educational institutions are adopting alternatives that promote teaching-learning processes through the use of various digital tools. The objective is to create learning environments that facilitate the construction of knowledge by students.

According to UNESCO (2015), cited by Cob and Xacur (2019), ICT allows students to have access to knowledge and information, promotes participation by emphasizing respect, its use contributes to problem solving, and learn to live together, since they are a means of communication that through applications promote collaborative work.

Talking about a communication model focused on the process implies interaction, participation and negotiation of all educational actors. This position requires a methodology that allows both teachers and students to be protagonists of a dialogue in which knowledge, experiences, interests and needs are contextualized, confronted and related to explore and investigate the objects of knowledge and link them with life.

In this sense, videoconferences constitute "a means that facilitates bidirectional and symmetrical communication, since both become potential senders or receivers" (Chacón, 2003, p.2)

However, it is essential to recognize that to achieve a true dialogue, where the teacher's role is that of guide and companion, and that of the student is that of an active subject, there must be communication loaded with sensitivity and affectivity that contributes to physical development. and intellectual of the students. Therefore, it is important that the content of the communication has not only cognitive significance, but also emotional significance (Valverde, 2009).

Understood in this way, dialogue represents a problematizing, active and participatory methodology, which can enhance students' communication skills and promote their capacity for critical thinking, expression of ideas, argumentation and respect for the opinions of others.

On the other hand, Guerrero (2003), cited by Camacho and Flores (2018), explains that " the information technologies that participate in an educational process can be considered as action systems (external action), but also as a source for the creation of innovative cognitive models or thinking frameworks that generate knowledge" (p. 101).

In summary, when educational spaces are transformed into learning environments where interaction is essential, a source of motivation and stimulation for learning is generated. However, the incorporation of this new learning modality has not been easy, since it has raised questions about the use of technological tools to achieve significant learning and their educational potential , among others. These questions lack definitive answers, since it is necessary to understand that both virtual and in-person education are based on different approaches and differentiated methods.

Conclusions

It can be concluded that synchronous videoconferences in virtual mode represent an opportunity to strengthen, accompany and facilitate student learning. Therefore, it can be suggested that universities should integrate this *e-learning tool* to support students in their educational process.

However, it must also be taken into account that technological means alone do not constitute learning instruments, which is why adequate planning and didactic design is required to fulfill their function. This means that teachers have the responsibility of developing teaching strategies that promote the construction of knowledge using digital resources in the context of online education.

On the other hand, the opinion of those surveyed revealed the importance of implementing support strategies to enrich their learning through means such as videoconferences, which give them the opportunity to interact with both the teacher and their classmates, which promotes a of more significant academic training.

Likewise, it is worth highlighting that although there are numerous platforms that offer this tool and research has been carried out on the perception of students regarding its usefulness during the pandemic, it is crucial to continue evaluating the opinions of students who are training in virtual environments in the post-pandemic era, since the results obtained indicate that virtual sessions are beneficial for learning, by providing a space mediated by technology in real time that allows them to clarify doubts, better understand the topics, receive feedback and participate in dialogues and interactions with their students. peers.

Finally, students in the virtual modality recognize the importance of having the guidance of a guide who helps them in their learning, who resolves their doubts, explains the content and activities, and provides them with support that makes them feel the closeness of the teacher.

Future lines of research

It is necessary to recognize that this research allowed us to identify the importance of virtual sessions for student learning in the online modality. However, this study does not exhaust all the possibilities in this field, so it will be necessary to also explore those universities where virtual sessions are part of the curriculum, even when student participation is not always ideal. Additionally, it is important to investigate whether synchronous virtual sessions have the same impact on learning for both students who connect in real time and those who view them later.

Likewise, a dialogue should be encouraged about the teaching strategies used by teachers to convert synchronous sessions into spaces for the construction of learning through pedagogical dialogue. To do this, the development of digital skills by both teachers and students must be taken into account to properly use the platforms that host the tools for videoconferencing.

In addition, it is necessary to delve into the analysis of the advantages and disadvantages that videoconferences can have in the training of students. These lines of research open a range of possibilities in the educational field, especially with regard to the acquisition of learning, a field that will continue to expand with the rapid advancement of academic training mediated by technology.

Thanks

RIDE magazine for giving me the opportunity to materialize this work, which can serve as a meeting point with other areas of knowledge or open a range of possibilities for future research.

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