

Chapter 3 Virtual tutorial support to promote the comprehensive education of students in the Open Education System of the Universidad de Veracruz

Capítulo 3 El acompañamiento tutorial en la modalidad virtual para favorecer la formación integral de estudiantes en el Sistema de Enseñanza Abierta de la Universidad de Veracruz

GARCIA-AGUILAR, Susana*, ROMERO-CASTAÑEDA, Diana Angélica and VALDERRABANO-PEDRAZA, Diana Elizabeth

Pedagogy Educational Program of the Open Education System, Universidad de Veracruz

ID 1st Author: *Susana, Garcia-Aguilar* / **ORC ID:** 0000-0002-3694-5052

ID 1st Co-author: *Diana Angélica, Romero-Castañeda* / **ORC ID:** 0009-0005-5704-7314

ID 3nd Co-author: *Diana Elizabeth, Valderrabano-Pedraza* / **ORC ID:** 0009-0006-3516-1404

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S. García, D. Castañeda and D. Valderrábano

*susagarcia@uv.mx,

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Abstract

This document presents the results of an educational research focused on understanding the perception of students from the Academic Area of Humanities at the Open Education System (SEA, Sistema de Enseñanza Abierta) of the University of Veracruz (UV), Xalapa region, regarding virtual tutorial support to enhance their comprehensive education. A total of 121 students participated, 60 from Pedagogy and 61 from Law. The study was exploratory with a quantitative approach, and a questionnaire with 13 items was designed and administered. The results provided insight into what is happening in virtual tutoring at the Open Education System, and actions were proposed to improve and complement this substantive function in Higher Education Institutions with a face-to-face modality.

Tutoring, virtual modality, comprehensive training

Resumen

Este documento presenta los resultados de una investigación educativa enfocada a conocer la percepción de los estudiantes del Área Académica de Humanidades del Sistema de Enseñanza Abierta (SEA) de la Universidad Veracruzana (UV), región Xalapa, sobre el apoyo tutorial virtual para mejorar su formación integral. Participaron 121 estudiantes, 60 de Pedagogía y 61 de Derecho. El estudio fue exploratorio con enfoque cuantitativo, se diseñó y administró un cuestionario con 13 ítems. Los resultados permitieron conocer lo que sucede en la tutoría virtual en el Sistema de Educación Abierta, y se propusieron acciones para mejorar y complementar esta función sustantiva en las Instituciones de Educación Superior con modalidad presencial.

Tutoría, Modalidad Virtual, Formación integral

1. Introduction

Academic tutoring is a substantive function of Higher Education Institutions, its main feature is to provide support to students in their school career guiding academic, personal, professional, integration and permanence decisions, to promote this process, the attention and monitoring have been given with greater tendency in the face-to-face modality, However, since the confinement by *COVID-19*, the modality migrated to a virtual modality in which there have been situations that have favored the tutorial accompaniment, however, there are some disadvantages such as lack of connectivity or lack of ability to handle technology among others, which have been detected and options have been sought to improve the tutorial attention in virtual modality.

Currently we resume face-to-face academic activities, however, within some educational and tutorial practices the virtual modality is retaken, as in the case of tutoring offered to students of the Academic Area of Humanities of the Open Education System of the University of Veracruz, Xalapa region. Therefore, this study offers us a look at the virtual attention and suggestions to improve the tutorial processes in favor of the integral formation. The objective of the research was to know the perception of the students of the Academic Area of Humanities of the Open Education System of the University of Veracruz, Xalapa region, about the tutorial accompaniment in the virtual modality to favor their integral formation. The document was structured with the development of the topic where the characteristics of tutoring are described, the methodology used to achieve the objective, the analysis and interpretation of results and the conclusions with proposals for improvement.

2. Development

The confinement was originated by the SARS-CoV-2 pandemic, which is a virus that is part of the "Coronavirus" family of viruses, named for its "crown" shape. It is the most recent of the coronaviruses, identified in 2019 and causes the disease called COVID-19 (Government of Mexico, 2022), which caused the closure of academic and economic activities. In the case of educational institutions at the elementary, middle, and high school levels, they changed from a face-to-face modality to a virtual modality to continue with their academic work, in this change different benefits and disadvantages of virtuality became visible, in this context tutoring was not exempt from the use of technology for accompaniment. The National Association of Universities and Institutions of Higher Education (ANUIES, *Asociación Nacional de Universidades e Instituciones de Educación Superior*) defines tutoring as:

The individual accompaniment and teaching support, based on personalized attention that favors a better understanding of the problems faced by the student, on the part of the professor, regarding his adaptation to the university environment, the individual conditions for an acceptable performance during his training and for the achievement of the academic objectives that will allow him to face the commitments of his future professional practice (National Association of Universities and Institutions of Higher Education, 2000, p. 4).

At the University of Veracruz, the Institutional Tutoring System aims to:

Support students in solving academic problems, promote their autonomy and integral formation, as well as contribute to improving their academic performance, through individual or small-group attention. To govern its activities, there is a Regulation of the Institutional Tutoring System, which incorporates provisions aimed at making the operation of tutoring in educational programs more efficient (University of Veracruz, 2012, p.3).

Academic Tutoring in the University of Veracruz

Based on Article 7 of the University of Veracruz Tutoring Regulations (2012), academic tutoring refers to the monitoring by an academic, called Academic Tutor, of the academic trajectory of one or more students during their stay in the corresponding educational program, to guide them in the decisions related to the construction of their professional profile.

Dimensions of UV Mentoring

Tutorial activity at the University of Veracruz is oriented in four dimensions, which are the following:

- Academic dimension: Oriented to the monitoring of the student's school career.
- Personal dimension: Refers to strategies to contribute to developing values and autonomous, responsible, and informed decision-making.
- Professional dimension: Related to the support and guidance to students in the definition of their professional objectives and the development of an ethical attitude.
- Dimension of integration and permanence: focused on strengthening the student's sense of belonging to the institution and fostering commitment to their academic education (University of Veracruz, 2022, p. 8).

In this sense, the orientation developed by the tutor contemplates the main aspects that should guide the tutor to achieve an adequate management of the problems to be presented, consisting of providing adequate, relevant, and updated information, so that each tutor decides freely from their needs and possibilities, always making an informed decision making.

Modalities of tutorial attention at UV

With reference to the modalities of attention at the UV, in Article 42 of the Tutoring Regulations, there are the modalities of attention that refer to the environments in which the tutorial activity is developed, and they can be face-to-face and non-face-to-face. The use of the modalities will be in accordance with the characteristics of the educational program, the students, the tutors, the type of tutoring, and the objectives of the tutoring session.

The modalities can be I. Face-to-face: characterized by the fact that the relationship between the tutor and the tutored is face-to-face, in a predetermined physical space, and can be individual or group, which should be grouped according to common profiles; and II. Non-presential: it is characterized because the relationship between the tutor and the tutored is mediated by physical distance and is asynchronous (University of Veracruz, 2012, p. 17).

The non-face-to-face modality was considered during the period of confinement due to the COVID-19 pandemic, and to conduct the activity it was necessary to have technological tools that favored the attention and follow-up of the tutors. Our university conceives tutoring in the face-to-face modality, with the objective of providing adequate accompaniment to those being tutored, to generate the rapprochement and bonds of trust necessary for better counseling. It is important to mention that face-to-face tutoring should be strengthened with other digital means of communication, to bring information closer and to ensure that the tutor's presence is constant and permanent.

Aims of Integral Formation at the University of Veracruz

With reference to the integral formation that must also be promoted from academic tutoring, it is framed through four purposes that include intellectual, human, social, and professional aspects. Each one of these addresses the following aspects:

- Intellectual training. This type of training tends to foster in students the logical, critical, and creative thinking necessary for the development of knowledge, especially those of a theoretical nature that circulate in a privileged manner in the university environment; as well as to foster an attitude of permanent learning that allows self-training. A student trained in this way develops the ability to reason, analyze, argue, induce, deduce, and others, which allows the generation and acquisition of new knowledge and problem-solving.
- Human formation. Human formation is an indispensable component of integral formation and is related to the development of attitudes and the integration of values that influence the personal and social growth of the human being as an individual. Human formation must address the subject in its emotional, spiritual, and corporal dimensions.
- Social formation. Strengthens the values and attitudes that allow the subject to relate and coexist with others. From this perspective, it fosters awareness, recognition, and the correct location of the various social problems; it strengthens teamwork, respect for opinions that differ from their own, and respect for cultural diversity.
- Professional training. This development is oriented towards the generation of knowledge, skills, and attitudes aimed at the knowledge of the profession. Professional training includes both an ethics of the discipline in its practice and new knowledge that favors the insertion of graduates in favorable conditions in the current situation of the world of work (University of Veracruz, 1999, p. 23).

Technological resources in the non-face-to-face modality

Regarding the use of Information and Communication Technologies (ICT) in university education, Paredes, Vargas, Inciarte, and Mercado (2023, p. 19) mention:

That for more than a decade, Information and Communication Technologies (ICT) have promoted renewed ways of promoting teaching-learning processes, especially in higher education, this projection accelerated as a result of the effects generated by the COVID -of the XXI century, which caused the adaptation of renewed technological platforms to overcome the gaps of connection and accessibility in environments mediated by intra and internet in institutions. In addition to the above, there is the importance of the creation and renewal of online academic programs and assertiveness in decision-making (governance) in higher education institutions (HEIs) to maximize the usefulness of ICTs (p. 19).

In this regard, regarding the use of technology in the non-face-to-face modality during the pandemic, the National Association of Universities and Institutions of Higher Education presented a Report of the National Survey COVID-19: The Student Community facing the Health Emergency, it is mentioned that, from October 20 to November 29, 2021, questionnaires were applied to 273,177 students, representing a response rate of 46.2%, from 486 institutions. The document presents a section on technological resources to receive distance education where it is mentioned that:

During the confinement, the most important and necessary resources for students to continue their classes at a distance were computing devices and stable Internet access. Faced with the lack or limitation of any of these elements that directly impacted student performance, the vast majority of HEIs took different support measures for their students. Even so, 43.2% of students used a cell phone as their main device to continue their studies (National Association of Universities and Institutions of Higher Education, 2022, p. 53).

Regarding the technological platforms used by HEIs to support education. 80.7% of the students report that one of the three main electronic media most used by their institution to communicate with students was email, 78% point out that WhatsApp was the second most used electronic media, and 44.7% share that the third was the Google Classroom platform. Additionally, students mentioned other computer platforms and other means of communication that educational institutions used during the confinement to communicate with students, among which the videoconferencing platforms Google Meet with 20.1% of students mentioning it, and Zoom with 17.9%, as well as the educational content management tool Moodle with 17.6% and finally the use of "Other platforms" with 17.2% (ANUIES, 2022, p. 77).

Contextual framework

The Open Education System (SEA) of the University of Veracruz (UV) is an academic entity founded in 1980, was created to provide higher education opportunities to people who for distinct reasons such as work or family responsibilities, geographical isolation, or lack of transportation, could not have access to a traditional school modality during the week. The SEA is present in all five regions of the UV and is committed to achieving and preserving standards of quality and social relevance. Currently, five undergraduate CS are offered: Accounting and Law in the five regions, Administration in the regions of Xalapa, Veracruz, and Orizaba, Pedagogy in Xalapa and Sociology in the Orizaba region; and the master's program in Human Rights and Constitutional Justice is offered in the Veracruz region (University of Veracruz, 2018, p. 2).

In the period August 2022 - January 2023, the Pedagogy Educational Program in the Xalapa region registered a population of 614 students, while in the SEA Xalapa Law program, 659 students are currently enrolled, this information was provided by the SEA Technical Secretariat. In each educational program, there are about 40 academic tutors and they serve between 5 and 30 students.

Each school period the tutors register their reports of attention to their students in which they describe the actions developed in the following dimensions: academic, personal, professional, and integration and permanence, in table 1, it is observed that in the period August 2021 - January 2022, 27 out of 40 tutors registered while in the period February - July 2022, 35 academic tutors registered.

Table 1 Register of tutors' reports

Number of tutors with a record of the tutors' reports	School periods
27 Academic tutors	August 2021 - January 2022
35 Academic tutors	February - July 2022

Source of reference: Own Elaboration

3. Methodology

The study was channeled in a quantitative research approach of exploratory type, in this regard Zafra (2006, p. 13) mentions that "exploratory studies are usually carried out when the objective is to examine a topic or research problem that has not been studied or has not been addressed before". In the case of virtual tutoring in the SEA, the perception that students have regarding this substantive function of the University of Veracruz and the modality has not been investigated, so the approach is suitable for research.

For data collection, the instrument used was the questionnaire, and the following indicators were considered for the design:

- I. General data
- II. Perception of mentoring
- III. Tutorial/virtual support
- IV. Benefits and disadvantages of the virtual modality

To calculate the sample size, the SEA Technical Secretariat was asked for information on the total number of students enrolled in the Law and Pedagogy Educational Programs of the SEA Xalapa region. Given that we wish to know opinions, the following formula was used to calculate a sample size for proportion with a finite population, since we have the information of the students currently enrolled in the educational programs of Law and Pedagogy of the Humanities Area of the SEA.

$$n = \frac{Nz_{\frac{\alpha}{2}}^2pq}{e^2(N-1) + z_{\frac{\alpha}{2}}^2pq}$$

Where:

n = Sample size

N = Population (total number of students enrolled in each of the educational programs)

p = Probability of an event occurring

q = Probability that an event does not occur ($1 - p$)

$z_{\frac{\alpha}{2}}$ = Confidence level (95% level)

e = Estimation error

There are 659 students currently enrolled in the SEA Xalapa Law program and 614 in the SEA Xalapa Pedagogy program, with this information the sample sizes for each of the educational programs are as follows:

– Law

$$n = \frac{(659)(1.96)^2(0.5)(0.5)}{(0.12)^2(659-1) + (1.96)^2(0.5)(0.5)} = 61$$

– Pedagogy

$$n = \frac{(614)(1.96)^2(0.5)(0.5)}{(0.12)^2(614-1) + (1.96)^2(0.5)(0.5)} = 60$$

A total of 121 participants from the Humanities Area of the Open Education System of the University of Veracruz, Xalapa region, 60 from Pedagogy and 61 from Law.

4. Results

To know the perception of the students of the Humanities Area of the Open Education System of the University of Veracruz, Xalapa region, about the tutorial accompaniment in the virtual modality to favor their integral formation, a questionnaire with 13 questions was elaborated and applied to 121 students, the analysis of results is described below.

General data

Of the 121 students who participated in the survey, 69% were female and 31% were male.

Table 2 shows the ages of the SEA Law and Pedagogy students surveyed, the youngest age recorded was 18 years old and the oldest was 58 years old, with an average age of 28.29 and a standard deviation of 8.71, that is, we can see that the age of the SEA students does vary, since the same system has older students.

Table 2 Descriptive statistics of the age of SEA law and pedagogy students

Variable	N	Media	Minimum	Maximum	Standard deviation
Age	121	28.39	18	58	8.71

Source of reference: Own Elaboration

On the other hand, it was asked which is the municipality of residence of the students of the Humanities area of the SEA, obtaining as an answer that 54.54% are students from Xalapa, 5.78% live in Coatepec, with 4.95% are from Banderilla and Emiliano Zapata, 2.47% say they are from Alto Lucero, Veracruz and Xico, 1.65% come from Cosaután, Jilotepec and Las Vigas de Ramírez, and 0.83% of the students are from various municipalities such as Acajete, Actopan, Nogales, Tlapacoyan, among others.

Perception of mentoring

Regarding the perception of tutoring, students were asked if they consider that academic tutoring favors their integral formation, 88% answered yes and only 12% said no. Of those who answered yes, they were asked in what way it favored them. Of those who answered yes, they were asked in what way it favored them, most of the students consider that it solves doubts, they have help, orientation, it serves as a guide, and the word "clarify" also stands out. In general, the students have the support to be oriented through academic tutoring, either about their school career, educational experiences, procedures, problems, etc.

Regarding student attendance to scheduled tutorials, Table 3 shows that 88% of the students said that they do attend tutorials and only 12% said that they do not.

Table 3 Attendance at tutorials

Student attendance at scheduled tutorials	Percentage
Do attend	88%
No attendance	12%

Source of reference: Own Elaboration

Tutorial/virtual support

Regarding virtual tutorial accompaniment, 94% of the students mentioned that they had received virtual tutoring before, during, and after the pandemic, and 6% said they had not, as shown in Table 4. Those who said no were asked for what reason and the answer that stood out the most was because there was not enough time to clarify doubts.

Table 4 Virtual support

Virtual tutorial support	Percentage
They have received virtual tutorial support	94%
They have not received virtual tutorial support	6%

Source of reference: Own Elaboration

Likewise, they were asked which are the technological tools by which they have communication with tutors, in Table 5, it is observed that 84.2% use WhatsApp, followed by Zoom with 65.5%, 46% use email, 28.1% use the Eminus platform, as well as 23.7% use Teams, 16.5% have contact by Google Meet, only 8.6% use Telegram and 4.3% use Facebook and another platform such as Hangouts and Google Chat.

Table 5 Percentage of technology tools used by academic tutors

Technological Tool	Percentage
WhatsApp	84.2%
Zoom	65.5%
E-mail address	46.0%
Eminus	28.1%
Teams	23.7%
Google Meet	16.5%
Telegram	8.6%
Facebook	4.3%
Another	4.3%

Source of reference: Own Elaboration

Regarding communication with their tutors through technological means, Table 6 shows that 55% of the students consider communication to be very good, 32% said it was good, 11% said it was fair, 1% said it was bad, and 1% said it was very bad; in general, the opinion of communication through technological means is considered very good by the students.

Table 6 Communication with tutors through technological means

Communication through technological means	Percentage
Very good	55%
Good	32%
Regular	11%
Bad	1%
Awfully bad	1%

Source of reference: Own Elaboration

Benefits and disadvantages of the virtual modality

Regarding the benefits and disadvantages of virtual tutoring, SEA Law and Pedagogy students were asked about the benefits of academic tutoring in virtual mode. In general, students felt that in the virtual modality, there is more flexibility to take tutoring virtually.

They were also asked about the disadvantages of tutoring virtually, and they responded that the connection, lack of internet, problems, communication, and signal. In other words, the main disadvantages are internet or connection problems.

Table 7 shows the opinion of the students regarding their satisfaction with the tutorial accompaniment through virtual media 42% said it was excellent, 26% said it was particularly good and good, only 4% said it was regular and 2% rated it as bad. With these answers, we observe that most of the students of the programs of Law and Pedagogy SEA feel satisfied with the tutorial accompaniment through virtual means.

Table 7 Satisfaction with tutorial support through virtual means

Communication through technological means	Percentage
Excellent	42%
Very good	26%
Good	26%
Regular	4%
Bad	2%

Source of reference: Own Elaboration

5. Conclusions and suggestions

In conclusion, it is highlighted that the tutorial accompaniment in the virtual modality has been significant for the students since through their perception the benefits and disadvantages of academic tutoring were identified during the period of confinement due to the COVID-19 pandemic, this accompaniment that migrated from the face-to-face to the virtual, the attention and follow-up by the tutor was manifested through various technological resources that allowed him to establish contact with the students being tutored. It should be noted that the essence of tutoring did not change with the modality, the challenge was to develop it with the resources that were available to address the dimensions: personal, professional, academic integration, and permanence.

On the other hand, it is recognized that there are some disadvantages in the virtual modality, such as internet or connection problems, these situations are reflected in the fact that they do not have communication with their tutors, and sometimes the tutoring schedules in the Open Education System overlap with classes, in addition to the fact that some students expressed that they do not feel accompanied by their tutor because the time allocated to the tutorial activity is not enough at least to clarify doubts.

However, in general, students consider that virtual tutoring has been satisfactory since it allows them to take it wherever they are, there is flexibility and good communication, so it is evident that both in the face-to-face and virtual modality the tutor fulfills the commitment to accompany their students during their stay in the institution, it is evident that technological resources are of great help to maintain different channels of communication with the students, together with good planning of the tutorial activity, providing reliable information and channeling the students in a timely manner in case of any problematic situation. Collaborative work with tutors, the Tutoring Coordination, the Educational Authorities, sharing successful experiences of tutorial accompaniment, as well as training and updating of good tutorial practices, is considered fundamental since these actions will be reflected in effective attention and follow-up to the tutored students. Finally, it is recognized that regardless of the modality, the tutorial accompaniment fulfills its fundamental function, which is to favor the integral formation of the student.

Considering the benefits and disadvantages of virtual tutorial support, the following is suggested:

- Through the results of this research, it is proposed to train tutors in technological means to optimally develop virtual tutoring and take advantage of institutional platforms such as Eminus 3 and Eminus 4.
- To make a greater diffusion of the dates of tutoring by each tutor and the Tutoring Coordination to socialize the scheduled dates.
- Schedule longer tutorials, as well as conduct individualized tutorials through the various platforms and technological tools, since those being tutored consider that the time allocated for tutoring is too little and they do not manage to resolve all their doubts.
- Verify that sessions are scheduled at times that do not overlap with other activities, such as work, classes, or personal matters.
- The virtual tutoring modality should remain, combined with face-to-face tutoring, so as not to lose the approach and provide sufficient flexibility for those students who for certain reasons cannot travel to the institution.
- Train and update tutors on topics related to ICT, assertive communication, and human relations.
- Plan individual and group tutoring considering students' credit progress (0-40%, 41%-70, 71% - 100%).
- Create interactive material for the dissemination of pertinent information for the tutor and mentee.

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