

## Determinants of university students' satisfaction with information technology based classroom use by pandemic Covid19

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### CHRONICLE

### ABSTRACT

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Educational activities have changed due to the pandemic and it was necessary to respond by giving continuity to the formative processes with virtual platforms as it happened at the Universidad Nacional del Centro del Perú - School of Social Work. The objective was to know the level of satisfaction of students in the use of the virtual platform chosen, using the Questionnaire for the evaluation of learning environments in distance education (Sp-DELES) of 42 questions with dimensions: teacher support, student interaction and collaboration, personal relevance, real learning, active learning, autonomy and satisfaction. A total of 213 students were consulted, the instrument was distributed digitally and anonymously. For the descriptive analysis, the results were ranked in three response categories: agree, indifferent and disagree; the Autonomy dimension was valued with 69.01% agreement and 9.39% disagreement. The dimension with the lowest appreciation was Satisfaction with 25.35% agreement and 28.64% disagreement. Structural equation modeling was performed with SmartPLS, obtaining that Faculty support (FS) and Active learning (AL) have a direct relationship with Satisfaction (S) in the use of the virtual platform with beta values ( $\beta$ ) of 0.279 and 0.872 respectively. Contrarily, Real learning (RL) and Autonomy (A) have an inverse relationship with Satisfaction (S) with beta values ( $\beta$ ) of -0.025 and -0.122 respectively. The study reflects that there is no relationship between Interaction and Communication among Students (ICS), Personal Relevance (PR) and Satisfaction (S) as the p-values were greater than 0.05. The value of the coefficient of determination ( $R^2$ ) was 0.778 being the representative model. The study is non-experimental, descriptive, explicative and cross-sectional.

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## 1. Introduction

Education is a fundamental right of every person, at the same time that it allows the social, economic and cultural development of communities; this is indicated in the Universal Declaration of Human Rights and the Political Constitution of Peru. Also, the United Nations Organization (UN) has formulated 17 goals within The Agenda for Sustainable Development, among which is the guarantee of quality, equitable and inclusive education, as well as the promotion of learning opportunities, regardless of their forms (United Nations, 2018). By virtue of this, and in the importance of giving continuity to professional training, in the face of the Covid 19 pandemic, is that in the Faculty of Social Work (FATS) of the National University of

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Central Peru (UNCP) Microsoft Teams has been implemented, which serves as a computer support to distance education or virtual education taken as an alternative in the face of the new reality.

Virtual education has its particularities in relation to traditional education and much more with emergency remote teaching, because what is involved is to design new strategies and mechanisms for online learning and not only the use and transfer of processes to information technologies (Torrás, 2021). Means & Neisler (2021) indicated that in order to achieve effective online education, the modality, role of the instructor, role of the student, pace of the classes, instructor-student ratio, among others, must be taken into account; at the same time, they emphasize the combination of formats (face-to-face and virtual) within a holistic view of training.

Although Dasso & Evaristo (2020) did not find relevant differences (from a statistical point of view) between face-to-face and non-face-to-face learning, they suggest being much more exhaustive and objective in the measurement of learning. The concern for providing a quality service is not exclusive to the undergraduate, but also to the postgraduate, thus Cardenas et al. (2021) indicate that the use of virtual platforms allows the construction of learning and knowledge through communication and interactivity, allowing the creation of new pedagogical practices.

Also, Ali & Ahmad (2011) evaluated these levels of acceptance of distance learning using 26 items in the dimensions satisfaction (proper), student-instructor interaction, instructor performance and subject evaluation, finding acceptable levels; promoting distance education to places where it is not accessible for social, economic or geographical reasons. Luongo (2018) highlighted the importance of distance learning monitoring and teacher training to increase learning effectiveness levels. They also suggest the provision of incentives for those who design and teach distance subjects, as they require more time and use of additional resources than typical training.

For their part and in the context of pandemic, Villanueva et al. (2020) concluded that most of the university students studied prefer remote education, while identifying that the role of the subject teacher and his or her ongoing training, raise these levels of satisfaction. Flores et al. (2020) found that theoretical classes were more highly valued than practical classes, while males were more reluctant and skeptical of this form of education, while those in the first semesters viewed this educational modality favorably. At the same time, the virtual learning environment promotes that students can act as teachers of their own colleagues through collaborative environments, strengthening their own learning Rose (2020). Currently, university-level classes are sought to improve learning through repetition, participation and feedback using digital tools (Tautz et al., 2021).

Consequently, it is of interest to know the level of satisfaction with the use of the virtual classroom by students of FATS - UNCP during the Covid19 pandemic period, since it will allow the development of action plans within the framework of continuous improvement, compliance with standards established by the National System of Evaluation, Accreditation and Certification of Educational Quality (SINEACE) and educational quality assurance.

## **2. Literature review**

### *2.1 Structural models*

It is a technique for advanced statistical analysis mostly used in social sciences in recent times, it is considered as one of the multivariate techniques capable of combining factor analysis and regression, facilitating the simultaneous analysis of the relationships between measured and latent variables (Hair et al., 2017). Alaminos et al. (2015) indicate that a structural model can be defined as a narrative where an attempt is made to give an explanation about the why of something with a limited number of exogenous and endogenous variables, even though the explanation may not be complete, it remains to take into account the residual elements obtained through variances.

### *2.2 Virtual education*

Anathanarayanan (2014) refers to any instructional format that is governed by some type of technology (e.g., the Internet), characterized by temporality and geographical separation between teacher and students. Virtual education is considered one of the mediums with greater interaction and useful for distance learning, oriented to instruction and training (Arafa & Abd, 2021).

### *2.3 Real learning*

Also known as meaningful learning, Moreira (2012) indicates that this learning is characterized by the interaction that occurs between previous and new knowledge, so that new knowledge acquires meaning and previous knowledge is fixed. The type and nature of learning will depend on the professional career and the semester in which the student participates, so education must be managed in a systemic and comprehensive way (Inga et al., 2020).

### *2.4 Active learning*

Declared as the set of shared methods and strategies that seek to involve the student in formative tasks such as evaluation, analysis and synthesis of contents; seeking that he/she acts and reflects on what he/she does, as well as acting and reflecting on the action he/she develops (Fink, 2003).

Oltra et al. (2012) indicate that active learning requires a high involvement in the process by the student, who develops cases, works in teams, develops projects, among others; as opposed to expository methods where the student's role is more passive.

### 2.5 Student autonomy

For Benson (2001), student autonomy is the student's ability to be responsible for and manage his or her education, through the search, discrimination and treatment of information that contributes to his or her cognitive development.

Given the current circumstances of virtual education, it is more common to promote student autonomy, developing their capacity for decision and action in virtual environments; that is, the responsibility for their learning and cognitive development in a distance education context is transferred to them. In other words, student autonomy refers not only to educational practices, but also to the responsible and disciplined use of technology and resources intended for these purposes (Lai, 2017).

## 3. Research Methodology

For the study, 213 regular students of FATS-UNCP with experience in the use of the virtual education platform made available to them during the 2021 - II academic period were approached, discriminating the I and X semesters. In the case of I because they did not register enrollment in the period of study and X because the work they do makes minimal use of the digital platform, so their assessments could generate an intentional bias. Table 1 shows the distribution of the students surveyed.

**Table 1**

Distribution of FATS - UNCP students by semester

CHARACTERISTIC	N° STUDENTS	%	
GENDER	Male	7	3.29%
	Female	206	96.71%
	<b>Total</b>	<b>213</b>	<b>100.00%</b>
SEMESTER	II Semester	8	3.76%
	III Semester	30	14.08%
	IV Semester	45	21.13%
	V Semester	30	14.08%
	VI Semester	28	13.15%
	VII Semester	9	4.23%
	VIII Semester	37	17.37%
	IX Semester	26	12.21%
	<b>Total</b>	<b>213</b>	<b>100%</b>

Of the total number of participants, 213 (96.71% and mean age 20.64) were female and 7 (3.29% and mean age 19.42) were male. The mean age was 20.60 years. The study is non-experimental, descriptive and cross-sectional, taking the 2021-II academic period as the space for analysis.

The Distance Education Learning Environments Survey Questionnaire developed by Walker (2003) was used, translated into Spanish Sp-DELES, which contains 42 questions distributed in 7 dimensions: teacher support, interaction and collaboration among students, personal relevance, real learning, active learning, autonomy and satisfaction. The questions were closed-ended and had Likert scale responses (1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always). For the purpose of carrying out the evaluation of the factors, the scales (calculation table) for each of them were elaborated based on the ratings of: Agree, Indifferent and Disagree, the same that allowed ordering and classifying the information collected.

The questionnaire was delivered virtually using Microsoft Forms, indicating the nature and objective of the questionnaire; the link was available for completion during the last two weeks of the study period analyzed. Informed consent, anonymity and confidentiality of the data were assured. The average time used to respond was 10 minutes. Once the information was collected, a data matrix was available, which was processed with MS Excel and SPSS version 25.0 applications for descriptive analyses and SmartPLS 3.37 software (Ringle et al., 2015) for inferential statistical analysis and the respective hypothesis testing.

The cross-sectional design of the present research has a referential character, it is considered valid for the formulation of plans to improve the levels of teaching-learning, satisfaction and usability of the distance education platform.

## 4. Results

### 4.1 Descriptive results

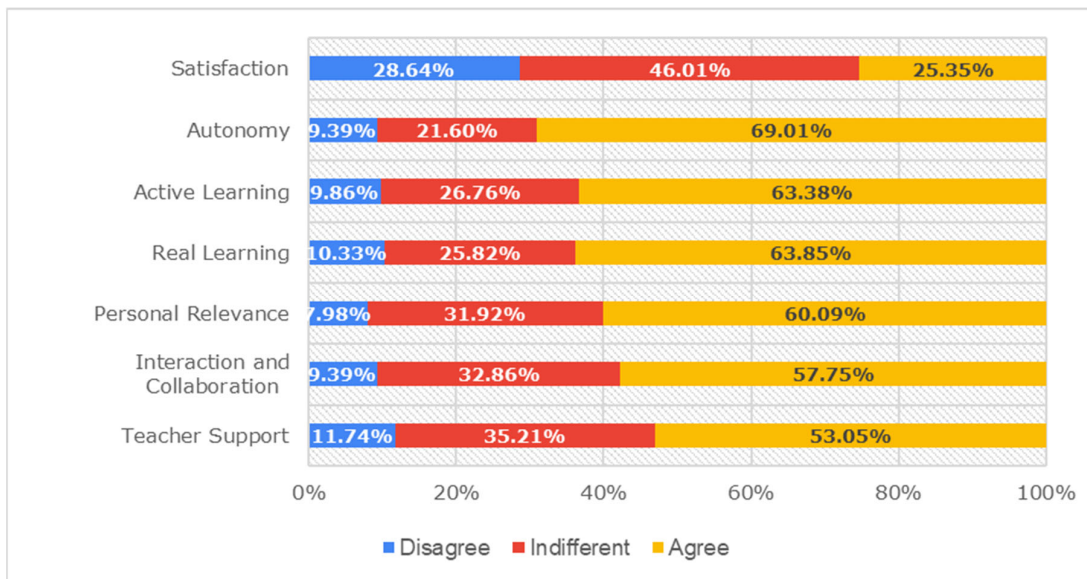
According to the dimensions established in the data collection instrument (Sp-DELES), they have been processed for each one of them with their respective valuation, which will allow establishing the respective comparisons. The results obtained are shown in Table 2.

**Table 2**

Distribution of the dimensions of satisfaction with distance education of FATS - UNCP students in the academic year 2021-2022

Rating	Indicators													
	Teacher Support		Interaction and Collaboration		Personal Relevance		Real Learning		Active Learning		Autonomy		Satisfaction	
	F	%	F	%	f	%	f	%	f	%	f	%	f	%
Disagree	25	11.74%	20	9.39%	17	7.98%	22	10.33%	21	9.86%	20	9.39%	61	28.64%
Indifferent	75	35.21%	70	32.86%	68	31.92%	55	25.82%	57	26.76%	46	21.60%	98	46.01%
Agree	113	53.05%	123	57.75%	128	60.09%	136	63.85%	135	63.38%	147	69.01%	54	25.35%
<b>TOTAL</b>	<b>213</b>	<b>100%</b>	<b>213</b>	<b>100%</b>	<b>213</b>	<b>100%</b>	<b>213</b>	<b>100%</b>	<b>213</b>	<b>100%</b>	<b>213</b>	<b>100%</b>	<b>213</b>	<b>100%</b>

In order to carry out an adequate evaluation of the dimensions of the determining factors in the use of the virtual classroom, scales (calculation table) have been prepared based on the evaluations of: Disagree, Indifferent and Agree, the same that allowed ordering and classifying the information collected. The percentage distribution of agreement for each of the factors is shown in Fig. 1.



**Fig. 1.** Percentages of the levels of agreement (concordance) by factors in the use of the virtual classroom by university students in the Covid19 pandemic period of FATS - UNCP in the academic period 2021-II.

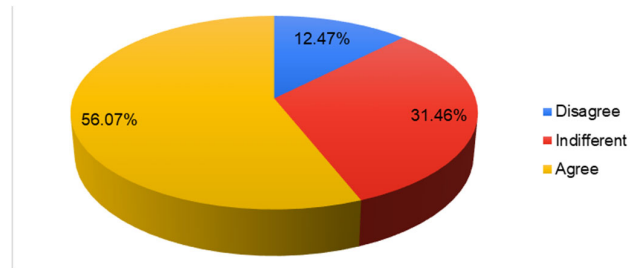
Satisfaction seeks to estimate the extent to which students are pleased with the various teaching-learning strategies used by teachers in their pedagogical work. In the case of the students evaluated, only 25.35% of them expressed this satisfaction, which is not a decisive result, but has to be evaluated in its entirety, that is, in relation to the other dimensions that make up the research. In the Autonomy dimension, more than two thirds (69.01%) of the FATS students state that in the use of the virtual platform they have been able to manage their own learning through the allocation of time dedicated to study, review of content and completion of tasks, which at the same time demonstrates the degree of maturity and responsibility with which they carry out their studies. On the other hand, in Active Learning, which indicates their academic ability, commitment to their academic training and degree of independence, about two thirds (63.38%) of the students evaluated say they agree with their performance, again showing the degree of identification and desire to be adequately trained.

Regarding Real learning, which associates the contents developed in the subjects with the reality in which they will work as future professionals, 63.85% agreed with the materials and casuistry used in their training; this satisfaction is linked to the constant training, preparation and teaching experience. In relation to Personal Relevance, the generation of personal experience, the level of contribution of the environment to personal development and the human contribution of the curricular content are valued, the valuation of the agreement given by the students to this dimension is 60.09%, which puts in interest the humanistic formation declared in the purposes of the university and faculty.

Regarding the dimension Interaction and collaboration, this evaluates the propensity of students to form study and work teams, promote debates, exchange ideas and relate to each other in their professional training process. In this dimension, more than half of the students evaluated (57.75%) indicate that they agree with their behavior and performance in this aspect. At the same time, the faculty support dimension seeks to know (at the students' level of appreciation) how involved and committed the teachers are in clarifying doubts, providing feedback when required, supporting the comprehension and understanding of contents, stimulating student participation and being an advisor in personal matters. Thus, 53.05% of the students feel satisfied with the work developed by their teachers in this pandemic context using Microsoft Teams as a platform for virtual education.

This level of satisfaction is supported by the provision of a tutoring and student follow-up system implemented by the faculty as part of its Quality Management System (QMS).

On the other hand, it is necessary to calculate the average value of the results by dimension, establishing the level of agreement (concordance) of the use of the distance education platform (Microsoft Teams) in the students of FATS - UNCP in the academic period 2021-II. These results are shown in Fig. 2.

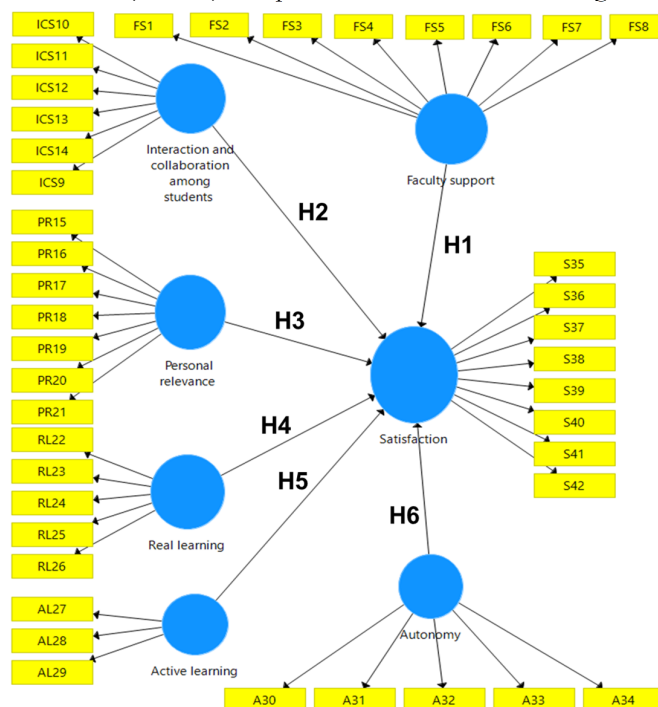


**Fig. 2.** Level of agreement (concordance) of university students in the use of the virtual classroom for pandemic Covid19 of FATS - UNCP in the academic period 2021-II

These results indicate that more than half (56.07%) of the students are pleased with the use of the Microsoft Teams platform used to conduct distance classes at FATS. It is understood that the levels of agreement are associated with the various applications made available by the platform such as list calling, screen sharing, sharing presentations and videos, chat, use of the Whiteboard, use of applications such as Sharepoint, Forms, Sway, Trello, Stream and others that make the classes effective. It should be noted that teachers are being trained every six months in the use of the virtual platform and applications, this training is provided by the Office of Academic Management and Innovation of the UNCP. Likewise, at the level of teachers and students, they have Smartphones, laptops, PCs and tablets to connect to the MS Teams platform and provide or receive the respective classes. The restriction identified in them, is the lack of internet service in the various places where they reside, limitation in the data plans used or insufficient number of computers per family which could explain the 31.46% of students who showed indifference to the use of the virtual platform.

4.2 Inferential results with SmartPLS

The theoretical model used is based on the DELES (Distance Education Learning Environments Survey) Questionnaire translated into Spanish with 42 items, distributed as follows: teacher support (8 items), interaction and collaboration among students (6 items), personal relevance (7 items), real learning (5 items), active learning (3 items), autonomy (5 items), all of them as independent variables and satisfaction (8 items) as dependent variable as shown in Fig. 3.



**Fig. 3.** Conceptual model and research hypothesis

The following hypotheses have been put forward for the research:

**H<sub>1</sub>:** *There is a significant relationship between faculty support and Satisfaction of virtual classroom use in FATS - UNCP students.*

**H<sub>2</sub>:** *There is a significant relationship between interaction and collaboration among students with Satisfaction with the use of the virtual classroom in FATS - UNCP students.*

**H<sub>3</sub>:** *There is a significant relationship between personal relevance and Satisfaction of virtual classroom use in FATS - UNCP students.*

**H<sub>4</sub>:** *There is a significant relationship between real learning and satisfaction with the use of the virtual classroom in FATS - UNCP students.*

**H<sub>5</sub>:** *There is a significant relationship between active learning and satisfaction with the use of the virtual classroom in FATS - UNCP students.*

**H<sub>6</sub>:** *There is a significant relationship between autonomy and satisfaction with the use of the virtual classroom in FATS - UNCP students.*

#### 4.2.1 Measurement model

In order to find out whether the theoretical concepts are being measured adequately by means of the observed variables, the Cepeda & Roldán (2004) measurement model is presented. Based on the proposed theoretical model, the Confirmatory Factor Analysis has been performed through partial least squares, in order to calculate the corresponding factor loadings; the same that according to Hair et al. (2017) should be greater than 0.70 as shown in Table 3.

**Table 3**

Factor loadings of latent variables

Variable	Indicator	Factor loading value	Variable	Indicator	Factor loading value
Faculty support	FS1	0.843	Real Learning	RL22	0.946
	FS2	0.885		RL23	0.971
	FS3	0.909		RL24	0.978
	FS4	0.903		RL25	0.962
	FS5	0.926	Active Learning	RL26	0.925
	FS6	0.907		AL27	0.940
	FS7	0.841		AL28	0.960
	FS8	0.876		AL29	0.953
Interaction and collaboration among students	ICS9	0.938	Autonomy	A30	0.955
	ICS10	0.926		A31	0.902
	ICS11	0.944		A32	0.956
	ICS12	0.931		A33	0.949
	ICS13	0.938		A34	0.947
Personal relevance	ICS14	0.939	Satisfaction	S35	0.936
	PR15	0.940		S36	0.898
	PR16	0.907		S37	0.934
	PR17	0.927		S38	0.940
	PR18	0.952		S39	0.949
	PR19	0.958		S40	0.910
	PR20	0.920		S41	0.935
	PR21	0.951		S42	0.942

After the calculation with the SmartPLS software (v. 3.3.7), the data concerning the measurement model have been obtained, as shown in Fig. 4.

Likewise, as part of the data analysis, reliability has been evaluated through Cronbach's alpha which, according to Nunnally (1978), when greater than 0.90, means adequate internal consistency. The values for composite reliability are also greater than 0.9, so that, according to Nunnally & Bernstein (1994) these values are satisfactory. The summary of the data is shown in Table 4.

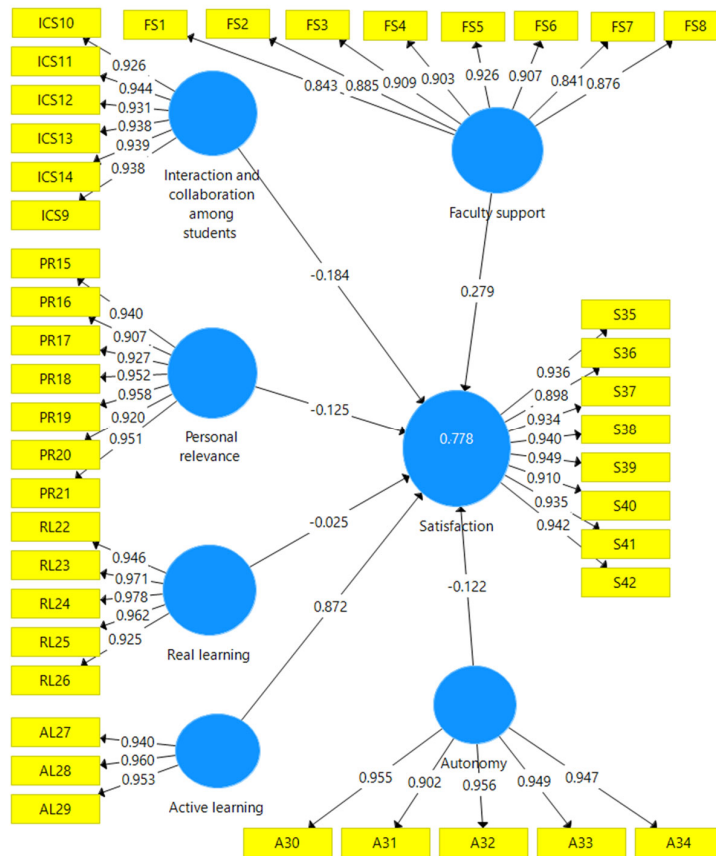


Fig. 4. Measurement model

Table 4  
Test results for the measurement model

	Fiabilidad		variance extracted		Discriminant validity					
	Cronbach Alpha	Composite reliability	Average variance extracted (AVE)	AL	A	FS	ICS	PR	RL	S
Active learning	0.977	0.980	0.877	0.951						
Autonomy	0.977	0.982	0.915	0.930	0.942					
Faculty support	0.947	0.966	0.904	0.743	0.738	0.887				
Interaction and collaboration among students	0.968	0.975	0.887	0.861	0.826	0.793	0.936			
Personal relevance	0.961	0.967	0.787	0.900	0.910	0.839	0.884	0.937		
Real learning	0.972	0.977	0.876	0.918	0.909	0.798	0.847	0.947	0.956	
Satisfaction	0.978	0.981	0.866	0.672	0.606	0.556	0.556	0.597	0.613	0.931
Reference values	> 0.7	> 0.7	> 0.5							

Convergent validity has been calculated through the average variance extracted (AVE), which according to Hair et al. (2017) and Fornell and Larcker (1981) should be greater than 0.5, which expresses that the various items truly measure the referred construct. Fornell and Larcker (1981) also indicate that if the correlation values between constructs are lower than the square root of the average variance extracted (AVE) values, the discriminant validity is adequate.

4.2.2 Evaluation of the structural model

Complementarily, bootstrapping was performed with 5000 sub-samples in order to obtain the values of the Student's t-statistic and p-value, which together with the results shown in Fig. 4 and Table 4, allow us to accept or reject the hypotheses proposed. See Table 5.

**Table 5**

The summary of testing the hypotheses

	Mean sample	Standard deviation	Path Beta Value ( $\beta$ )	Student's <i>t</i> statistic	<i>p</i> Value	Decision	<i>R</i> value
H1: FS → Satisfaction	0.304	0.161	0.279	2.734	0.000	Accepted	0.778
H2: ICS → Satisfaction	0.210	0.205	-0.184	4.456	0.150	Rejected	
H3: PR → Satisfaction	-0.105	0.367	-0.125	1.989	0.083	Rejected	
H4: RL → Satisfaction	0.370	0.346	-0.025	4.381	0.014	Accepted	
H5: AL → Satisfaction	0.253	0.253	0.872	3.452	0.048	Accepted	
H6: A → Satisfaction	0.104	0.257	-0.122	2.473	0.003	Accepted	

FS: Faculty support; ICS: Interaction and collaboration among students; PR: Personal relevance; RL: Real learning; AL: Active learning; A: Autonomy  
Criteria:  $t > 1.96$ ;  $p < 0.05$

Given the criteria, hypotheses H1, H4, H5 and H6 are accepted, while hypotheses H2 and H3 are rejected.

For hypothesis H1; the Faculty Support (FS) has a positive and acceptable relationship on Satisfaction (S), since  $\beta=0.279$ ,  $p = 0.000$ , which makes inferring the importance of the follow-up and support of the faculty in the classes through the virtual classrooms; these activities were associated to tutoring, constant supervision, attendance call, teaching methodology, etc.

In the case of hypothesis H2, Interaction and collaboration among students (ICS) has no relationship with Satisfaction (S), given that  $p > 0.05$ . In pandemic period, interpersonal relationships have been limited by the use of platforms such as Zoom, Google Meet, Microsoft Teams, etc, reducing the levels of communication, integration and camaraderie.

With respect to hypothesis H3, Personal relevance also maintains no relationship with Satisfaction, considering that the  $p$  value  $> 0.05$ . This suggests that the students do not feel that their classes and professional academic training in a virtual education context have a transcendence in their lives, so they take their educational activities lightly.

Hypothesis H4 is accepted, showing that there is a negative and weak relationship between Real learning (RL) and Satisfaction (S), with values  $\beta=-0.025$ ,  $p = 0.014$ . The inverse relationship is striking, since it would indicate that students feel that they do not learn in their virtual classes, limiting their dedication to topics relevant to their professional career. This relationship is weak, almost insignificant.

As for hypothesis H5, this is accepted, showing that Active learning (AL) has a positive and strong relationship with Satisfaction (S), with values  $\beta=0.872$ ,  $p = 0.048$ . Active learning is expressed by the discipline and commitment shown by students to their professional training. They indicate that the learning processes in virtual environments depend a lot on an orderly and methodical behavior on the part of the students, generating satisfaction.

In relation to hypothesis H6, this is also accepted, demonstrating that there is an inverse and weak relationship between Autonomy (A) and Satisfaction (S) with values  $\beta=-0.122$ ,  $p = 0.003$ . Although it is true that virtual education grants autonomy and discretion, this does not contribute significantly to formative satisfaction, since students feel the need to be always supervised by teachers.

Finally, as postulated by Hair et al. (2017), the coefficient of determination ( $R^2$ ) whose value is 0.778, indicates that the model is representative and has a predictive capacity of 77.80%. The SRMR value was 0.048, expressing an adequate goodness of fit. The calculated NFI was 0.94, which is acceptable.

## 5. Discussion

Moazami et al. (2014) compared the influence of teaching methods on student learning, concluding that virtual education was more effective than traditional education in 69%, coinciding with those obtained in the present research. The study conducted by Boullusa et al. (2017) proceeded in a similar way, since it also reduced the categories of student perception to three intervals of amplitude; with percentages of approval concordance and satisfaction above 70%. On the other hand, in the research by Placencia et al. (2015) where they evaluated the use of the virtual simulation laboratory, students expressed their satisfaction with it at 90% thus improving the teaching-learning process.

On the contrary, the result found by Acosta & Villegas (2013), was that teachers interact with students; however, this is insufficient to indicate the effectiveness in the use of the platform used. As in the present research, the training of teachers and students in virtual education tools is a development strategy for the better use of the platform and achievement of the objectives set; likewise, as Fernández-Pascual et al. (2013) refer, the incorporation of novel tools in the formative research process makes possible collaborative and cooperative learning during the use of the virtual platform. As indicated by Yuryevna et al. (2020), there is a need to establish new ways of relationship between teachers and students in the teaching-learning process, qualitatively modifying the activities involved. In the same sense, Zheng et al. (2020) state that it is important to establish relationships with those who design the courses in order to modify them and orient them to the students. On the other



hand, Chen et al. (2020) state that to ensure an adequate educational service it is important to consider reliability, access and connection speed, subject management, interaction, learning and technical support. Complementarily, social networks have contributed to academic activities by promoting a new form of online and collaborative social learning (Sobaih et al., 2020). The transversal design of the present research has a referential character, it is considered valid for the formulation of plans to improve the levels of teaching-learning, satisfaction and usability of the distance education platform.

## 6. Conclusions

The conformity in the use of virtual platforms for learning and education received by FATS students is determined by the conjunction of dimensions that are part of the DELES Sp Questionnaire, the most important and relevant being the possibility of taking charge of one's own learning (Autonomy) with 69.01%. Satisfaction, on the other hand, is the dimension with the lowest appreciation with 25.35%, although this is not decisive, since 46.01% are moderately satisfied.

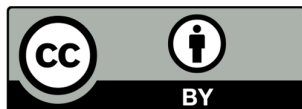
Given the results of the structural model, the elements that are most important in generating satisfaction with the educational service are: teacher support (FS) and active learning (AL). In the first case as support for curricular and pedagogical programming, and in the second by transferring the responsibility for their own learning to the students, making them the protagonists of this task.

Virtual education has become, for now, the training alternative in the face of the pandemic caused by Covid 19; however, it also constitutes a new proposal for professional training and the generation of diverse educational modalities. Finally, the training of teachers and students in the use of the virtual platform for distance education is fundamental, since it allows the best use of the functions provided by MS Teams.

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