

Online Learning and Academic Satisfaction of University Students of Administrative Sciences in A Public University of ICA in Post-Pandemic Times

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Abstracts: The importance of this research focused on the adaptation to online learning, since traditionally a face-to-face education was developed for university students, but the transition to an asynchronous education, with the needs and development of university students have changed, such as: learning resources, academic mentoring, and teaching didactics, the satisfaction of what is learned, the virtual platform used to study to identify their changes and others. The purpose of this study was to recognize the factors that influence asynchronous learning in the academic satisfaction of the students of the professional career of Administration of the San Luis Gonzaga National University, presenting the theoretical constructs as well as the results of the research that preceded us, both international and national, within the scheme of a curriculum based on professional competencies. The methodology of the study focused on basic quantitative research that allowed a correlational study in order to analyze the factors of distance learning of the 618 students that were part of the population, and to obtain the information from the students, a questionnaire of 23 questions was applied. Subsequently, current statistical tools were used, and the research findings were important in considering that the research objectives were validated, and the hypotheses were contrasted, where online learning is significantly related to the academic satisfaction of the students.

Keywords: Online Learning, Academic Satisfaction, virtual education, Remote Classes and Virtual Support

1. INTRODUCTION

The year 2020 due to the times of covid-19, brought as a consequence the virtuality of education. A new experience for Peruvian students that were entirely carried out in person. In the last two years, the confinement of the population presented a complete transition in the daily life of both professionals and students. Where Peruvian students then had to face a complete transition of the way they carried out their studies, that is, from a face-to-face educational teaching in which all their previous generations have studied and have developed to a totally virtual teaching, new and unexplored by almost all the students, is where this trance brought with it a new way of learning and with it both difficulties and opportunities.

The Peruvian student had to fit in and look for the most effective and correct way to live with his classmates, where they did not have a physical relationship as it was in a classroom, but a distance communication. On the other hand, the new learning that their teachers instilled in them; specifying both teachers and students learned this new way of teaching. In the course, students can feel satisfied with the education provided, adapted and without remaining attached to traditional face-to-face classes; while, on the other hand, they may feel that the quality of teaching has changed, where they do not feel that they learn, as a result, several students may abandon or interrupt their studies. The research objective was to explain how satisfied management of State University were with the virtual education received.

2. RESEARCH BACKGROUND

Finding out that the progress of learning online in a competency-based curriculum, according to (Olguín L., Arriaga M., & Gaeta G, 2023), who corroborated that the context and the level of motivation allows validating what the student learns, even with the use of various resources; today the pandemic allows us to necessarily use

technological devices, noting that the student found it difficult to move from synchronous to asynchronous education, but that, what was done allowed them to slowly take advantage of academic mentoring to get better, as well as to improve internet services and electronic devices as necessary tools. The experiences with electronic and digital devices, in the professional formation of students of health sciences as the aps, were strategic ways to learn to apply the theoretical knowledge and develop their skills of their future professional work (Rodriguez P., Pino A., Neira P., & Cancino B., 2023).

Meaningful learning, which has the student himself as the main character in his professional training, using technological resources such as a virtual platform, asynchronous discussions, etc., is reinforced with strategies of inverted learning, using the model of projects and formative research and asynchronous active mediation strategies (Azofeita-Mora & García-Martínez, 2023). The important thing is that the methodologies of teachers in these times must be renewed to develop critical thinking skills, self-learning, leadership, student self-realization, especially virtual strategies that allow the modernization of teaching work (Jarrín M., 2023).

The covid-19 pandemic brought changes and new opportunities for the realization of new professionals in universities by training them from wherever they are at home, at work with flexible classes and allowed the development of digital competencies for both teachers and students (León P., Ochoa M., Restrepo B., & Semenic, 2023). The most motivating resources used in the virtual classrooms and the ones that were most frequently used were the videos and the interactive presentations of the contents which motivated the student even in the feedback actions (Gutierrez-Soriano, Fouillux-Morales, Zamora-López, & Petra-Micu, 2023).

Other relevant studies, and that we agree with their results, are those found by (Valdiviezo Rodriguez, Ulloa, Sanchez, & Cando, 2022), which allowed us to reevaluate the didactic resources that vocational training institutions put at the service of students, especially those that provide them with confidence and satisfaction in what they learn. For many students their learning is centered on the work done by the teacher and his enthusiasm, the use of digital strategies learned to modernize their didactic activities, the ways to motivate them to be autonomous self-learners, with collaborative work, with their support at the right time to reinforce their educational skills (Castro, et al., 2023). Recognizing that significant learning through collaborative work is an organizational and learning strategy that benefits both students and teachers as highly influential in reinforcing their competencies (Andrade, Perdomo, & Tigasi, 2023).

For Manzanares, et al. (2022) comparing student satisfaction with teaching performance during the first and second year of the pandemic where teaching gave a turn to its face-to-face to virtual didactics increasing in students their level of satisfaction with the didactical process. This is due to the atypical methodology applied that gave them the paths to continue teaching in an easier way.

Another relevant contribution to this research came from Gelineau-Morel and Dilts (2021) who concluded that covid-19 proved to be a "disruptive reform", catalyzing the rapid formation of a virtual neurology curriculum. The results of their survey showed that their curriculum increased the well-being, obligation and partnership of Costa Rican university students, compared to their pre-covid curriculum. (Gelineau- Morel & Dilts, 2021).

On the other hand, the results in Bolivia, focused on implementing paradigms of protagonist for the student in their learning and emphasizes that the step to reach an integral digitalization of education could be given only with the institutional commitment that reflects the commitment of teachers and students (Torres- Diaz, Rivera- Rogel, Beltran-Flondi, & Andrade-Vargas, 2022)

Nisa Hassan et al. (2021) demonstrate the importance of adequate and timely technical support during digital education that can improve students' academic self-perception and online course satisfaction. The results suggest that the responsible governing bodies establish educational policies that contribute to improvements in vocational training and focus better on the academic and technical processes of students. (Nisa Hassan, y otros, 2021). Education in its virtual modality must ensure active learning, which allows the student to have the most important role in their learning, but it must be recognized that it brings with it deficiencies if we do not have the necessary

didactic resources that can be disadvantageous for the interaction of the students, hence the teacher must plan his actions with motivating actions for the student's learning to improve the levels and quality of learning (Viñan, Erazo, Murillo, & Calderón, 2022)

The findings showed that, except for instructor support, there was a significant difference in students' perceptions of online learning environments. In addition, a significant difference was found in their satisfaction with online learning environments according to academic current. Arts students scored the highest, while science students scored the lowest in their perceptions of online learning environments and satisfaction in online learning environments (Dastidar, 2021).

According to Villacorta (2022) with his research concluded that the level of relationship is positive between virtual education and student academic satisfaction, with the coefficient Correlation Rho = .757, with a significance of $.00 < .01$. (Villacorta, 2022). Other investigation such as Correa (2021) concluded using the Spearman Rho coefficient ,653 that there is a direct relationship between digital and virtual education and the academic complacency of physiotherapy and rehabilitation students. (Correa, 2021).

On the other hand, it was observed in a national university that academic satisfaction tends to decline, reaffirming student discontent regardless of whether it is a university that meets the minimum quality requirements. The pandemic definitely took our entire university education system by surprise. (Carhuaz, 2020).

(Mamani, 2021) concluded that there is a direct relationship between virtual teaching and satisfaction of university students, with a Spearman's Rho ($P = 0.567 < \alpha = 0.05$).

Then, there is an important connection between TIC skills and the enthusiasm of university students, although, some of them still have certain limitations to TIC usage. (Mancha, Casa , Yana, & Mamani, 2022). Finally, he determines that there is an immediate connection between the two variables proposed: the attitude taken by the student towards distance education and their satisfaction with it. The positive progress of the perception that students have, it would be practical to improve the ICT skills of both teachers and students for an effective curricular execution. (Valverde, 2022)

3. JUSTIFICATION OF THE RESEARCH PROBLEM

The transition to a Virtual Education from a face-to-face one was taken by obligation in all the countries due to the times of confinement by covid-19, although, it should be noted that this virtual modality was already part of some colleges in foreign countries, but in these last two years it was general without exception.

This research reflected, in the students, the development of their academic capacities and skills in the new mode of virtual teaching, and the panorama that also reflected the precariousness of some students in not having the necessary technological devices to carry out their studies, and as a consequence they choose to abandon their professional studies.

4. LITERATURE REVIEW

4.1. Virtual Education

Crisol- Moya, et al. (2020) defines virtual education as education that uses electronic devices to develop, and has caused a great impact, which can be offered at all educational levels, with multimedia, hypertext and interactive features. Its quality compromises the didactics of the teacher, opting for didactic tools, which help the achievement of learning in students in the improvement of their professional performances, strengthening their capacities and educational skills with a committed mentoring in the student Marciniak and Gairín (2018) who cite Marún-Espinosa (2011).

The virtual education that is currently given as a way to face difficulties of social distancing, brings with it the use of interactive environments in learning using electronic devices and with a teacher who must seek that the student learns autonomously, self-taught with the timely support of a tutor, who promotes their significant learning Mendoza et al. (2019) Therefore, the teacher must show developed digital skills, which reinforce and strengthen their didactics in the teaching-learning process with the use of technological devices (Espada, Rocu, Navia, & Gómez-López, 2020), so that the student leads motivated his process of learning virtually committed to their critical thinking skills, be able to self-manage, self-learn, self-discipline with ethics and critical sense (Sosa & Reina, 2021).

University virtual education is a process of teaching-learning using electronic devices such as the internet with asynchronous activities with physical presence of the teacher (e-learning), or in a combined way (b-learning). For Micheli and Armendáriz " (2011) "the groups of Virtual Education parts of the university order (faculties, laboratories, university administration, etc.), which are configured by work teams whose task is the progress of Virtual Education Systems sustained in technological devices"

For López (2020), virtual education has the following advantages:

- It can be carried anywhere students are located.
- Adaptable to the student's schedule.
- It requires more responsibility from the student in their learning.
- It offers both teachers and students the opportunity to provide more time in their educational action.
- It provides alternatives to students on learning rhythm strategies, deepening content.
- Self-assessment and co-evaluation processes can be easily applied.

4.2. Academic Satisfaction

Figuroa (2019) defines academic satisfaction as the valuation that students give to their academic practice on campuses, prioritizing their characteristics and the achievement of their expectations, or it can also be conceived as the student's mood that arises between what they expect and reality in the academical context. Academic satisfaction is being analyzed by different conceptual approaches, but within two perspectives including the effectiveness of the service and the psychological tranquility of the student. (Vergara-Morales, Del Valle, Díaz, & Pérez, 2018)

Studying the satisfaction of a person, other authors come to use administrative models such as total quality because the student is considered in many countries as the consumer of the educational service, but can also be approached by psychological models such as Maslow's motivation theory, or Herzberg's bifactorial theory or the theory of expectations of Oliver Hernández et. al (2010).

Remote education uses technological tools, which can be massive, sustained in the methodology and pedagogical practices, and with the help of a cohesive organizational mentoring is that it has as purposes the autonomous learning of the students, (Gil, 2001) . Applying virtual education in forced periods of confinement, has allowed that the knowledge was given in a diffuse and decentralized way, this ass obtained by technological equipment: cell phones, cameras, audio equipment, etc. It makes the knowledge is no longer centered on the teacher and for him it becomes a challenge to improve their didactic strategies and prepare himself constantly for the quality of training of the new professional (Olivares, Fernández, Ruiz, & Romero, 2022).

On the other hand, Garduño Vera (2005) explains that the virtual room is the proper place for investigation, strengthening and renovation of strategies and methodologies that need virtual instruction to be executed in distance educational alternatives. (Garduño, 2005) but, for Sarmiento (2013) specifies that asynchronous education is the form that best adapts to the knowledge society, privileging the person and knowledge. Knowledge moves rapidly through the advancement and creation of new technologies, generating a primarily virtual way of being. (Sarmiento, 2013) .

Walker (2012) arrived that classroom assessment techniques foster the vision of educating, which is a formative process that evolves over time. By being able to react quickly to students' responses, it provides the opportunity for immediate feedback to the speaker who can be promptly acted upon, thus giving the teacher the opportunity to close the feedback loop. It encourages self-evaluation by the student and reflection between teachers and students. However, care must be taken when choosing the appropriate technique and also allowing enough time in class to ensure that they are optimal in their use. (Walker, 2012) Garduño proposes that virtual spaces be designed where universities and other educational institutions share their academic experiences applied in their respective faculties. New technologies, the evolution of education and learning, the internet access and digital information require us to rethink traditional ways of educating, teaching and learning. (Garduño, 2005).

The transition to a Virtual Education from a face-to-face one was taken by obligation in all countries due to the covid-19 pandemic, although it should be noted that this virtual modality was already part of colleges in foreign countries, but in these last two years it was general without exception. Students develop academic skills in the new mode of virtual teaching, and the panorama that also reflects the precariousness of some students in not having the necessary technological devices to carry out the studies, and that as a consequence they choose to abandon their professional studies. In an asynchronous educational process, the process of emotional skills such as empathy, problem solving, complacency, assertiveness, trust, security must also be demonstrated and it is up to the university professor to have a range of didactic resources to enrich the student's meaningful learning that not only encompasses the cognitive of the student but also attitudinal and acting aspects from which he learns (Tacca, Tacca, & Cuarez, *Inteligencia emocional del docente y satisfacción académica del estudiante universitario*, 2020)

Currently learning at any of the educational levels is no longer only focused on the cognitive but it is integral, covering the emotions with the aim that the student feels pleasure for what he learns, a result that is noticeable when he participates with emotion and satisfaction and this helps to implant the information in memory and influences behavior (Tacca, Tacca, & Alva, *Estrategias neurodidácticas, satisfacción y rendimiento académico en estudiantes universitarios*, 2019). For this reason, the levels of academic satisfaction brought as a result better degree of satisfaction with life and constitute the engine of their studies for a university career (Barrientos-Illanes, Pérez-Villalobos, Vergara- Morales, & Díaz-Mujica, 2021).

5. MATERIAL AND METHODOLOGY

This research study was the basic type; of correlational level, in search of deepening the existing scientific knowledge about reality, thus allowing to generate new and updated information. Cross-sectional since, the data was analyzed in the course of time of the academic semester 2022-I of the Administration students of San Luis Gonzaga National University, where, the variables were described and analyzed in a defined lapse of time.

For the research study, various methods were used, such as synthetical, deductive and inductive, methods of great help to generalize constructs of the variables under study. The analytical-synthetic method is one of the most used and applied methods in the field of research, and it allowed us to study and mentally analyze the parts that make up the whole and then join and combine these parts so that we find new relationships. On the other hand, the inductive-deductive method has allowed us to observe various specific aspects detecting among all of them a common characteristic, and the same inversely, as Aristotle implanted it, from a general premise we can deduced specific premises.

The students that made up the population were a total of 618 students who were in the 2022-I academic semester and had been studying asynchronously for four academic semesters to date. Many of them had an internet service with connection difficulties, since they were located in urban and rural areas where companies do not offer a good technological connection service up to date. The sample consisted of 162 students selected by statistical criteria that represented all the academic semesters that the students were studying in the academic year 2022-I, from the first to the fifth year of the professional career of administration.

The research design was non-experimental correlational, and a questionnaire was applied with 23 distinguished questions, twelve of them had the aim to recognize the characteristics of virtual education and eleven

to know the academic satisfaction of the students to whom it was applied to a sample of 162 students, both virtual and in person, because the cycle was blended with students who took their subjects in person while others carried virtually, this was through surveys printed on paper and then delivered to each respondent for filling, and by Google Forms, a digital tool that allowed us to send our survey through a link to students for digital filling. Once the data of both physical and virtual surveys were obtained, descriptive statistical tools and inferential statistics were used by applying the spss.

5.1. Research Instrument

A questionnaire of 23 questions was used, which allowed us to have more confidence in the research with the indicators of each variable. 12 questions were designed to analyze the Online Learning indicators, such as: Videoconference, virtual material, virtual didactic resources of the teacher, competency development strategies, and 11 questions were designed to analyze the indicators of Academic Satisfaction such as: Developed competences, learning fulfillment, motivation, comfort, feedback, and use of communication technologies. At least 2 questions refer to the aspects of the ways of learning, self-learning, the student's asynchronous learning, the difficulties and advantages offered by the virtual platform, the didactic tools and resources offered by the teacher for their academic subjects their motivation and satisfaction with the results of their learning, of the academic mentoring actions, etc. In addition, we sought to make an exhaustive analysis of how students learn asynchronously and their academic satisfaction with what they do.

The population of Administration students in the semester 2022 – I was 618 who are enrolled in their respective academic cycles.

Table 1. Population of Management Students studying in 2022

Year/semester	N° students
Second year	92
Third year	215
Fourth year	131
Fifth year	180
Total	618

Note. Academic Management Faculty of Administration San Luis Gonzaga National University 2022.

The sample was obtained with statistical sampling criteria specific to the case with the formula to be used to find the general sample will be as follows:

Where:

- n** = sample size
- N** = Population
- Z** = **1.96** at 95% confidence level
- E** = Error allowed (5%)
- p** = (maximum heterogeneity of 50% x 50% is assumed) 0.50
- q** = 1- p = 0.50

Sample of students:

$$n = \frac{(1.96)^2(618)(0.50)(0.50)}{(0.05)^2(618 - 1) + (1.96)^2(0.50)(0.50)}$$

$$n = 237.1358025$$

$$n = 237 \text{ undergraduate students}$$

$$n = \frac{n^{\circ}}{1 + \frac{n^{\circ}}{N}} = \frac{237}{1 + \frac{237}{618}} = 171.3762019 \approx 171 \text{ undergraduate students}$$

Below, we show how the sample was obtained for the Research:

Table 2. Population and Research Sample

Students of the Faculty of Administration of UNICA 2022	Population	Sample
Second year	92	26
Third year	215	60
Fourth year	131	36
Fifth year	180	50
Total	618	162

That is, at a 95% confidence level we have determined a sample of 171 students from a population of 618 to conduct our research. This sample was distributed proportionally for each year within the 2021-2 semester, thus obtaining a sample of 26 students for the second year that is made up of students of the IV cycle, 60 students for the third year that is made up of students of the VI cycle, 36 students of the fourth year that is made up of students of the VIII cycle and 50 students of the fifth year that make up students of the IX and X cycle.

To obtain the information of the present research, the following techniques were used: Observation, which was direct, where we had a direct contact with the elements or characters in which the phenomenon that was intended to be investigated was presented, and the results obtained were considered original statistical data. And the indirect observation that consisted of taking data from the subject(s) as the facts arose before the eyes of the observer, who could certainly have some training about that activity. In addition, the interview, a technique that was carried out by applying a questionnaire of 23 questions to a sample of students, in our case 117 students, of which a part was applied virtually and another face-to-face.

The instruments used to obtain information were as follows:

5.2. Research Sheets

This helped us retain the information collected. Within this type of files, all the data that were later developed in the content of the research were entered. That is, this format involves the elements to be investigated, such as the topic, content, authors, etc. Contingency tables extracted from the SPSS were used. The use of SPSS will allow us to group the data into categories, to contrast the general hypotheses and specific hypotheses. In addition, the contingency table allowed us to perform the analysis and interpretation of the information obtained from the investigation. Using the SPSS statistical package, the results of the study were presented graphically, as a result of the tabulation of data and at the same time will serve to interpret and explain them.

6. RESULTS AND DISCUSSION

6.1 Testing of Main Hypotheses

Next, we present the results obtained by contrasting the hypotheses; using the statistical package spss and the inferential statistical method Chi square.

Null Hypothesis: H_0 : Virtual Education is not significantly related to the Academic Satisfaction of San Luis Gonzaga National University students, 2022.

Main hypothesis: H_1 : online learning is significantly related to the Academic Satisfaction of San Luis Gonzaga National University students, 2022.

Table 3. Contrast Main Hypothesis

	Value	df	Asymptotic significance (bilateral)	Signification
Pearson's Chi-square	66,043 ¹⁰	20	,000	,000 ^b
Likelihood ratio	62,878	20	,000	,000 ^b
Fisher's exact test	62,417			,000 ^b
Linear by linear association	41.312 ^c	1	,000	,000 ^b
Number of valid cases	162			

The statistical table shows the results of the chi-square at a confidence level of 95% and with 20 degrees of freedom its value is: $66.043 > 31.4104$ and p value of $.000 < 0.05$, in addition there was the contingency coefficient: 0.538 and p value = .000, therefore, the null hypothesis is rejected and it is accepted that online learning is significantly related to the Academic Satisfaction of San Luis Gonzaga National University students, 2022.

Secondary Hypotheses Testing

A) Ho1: Virtual learning resources are not directly related to the Academic Satisfaction of San Luis Gonzaga National University students, 2022.

Ha1: Virtual learning resources are directly related to the Academic Satisfaction of San Luis Gonzaga National University students, 2022.

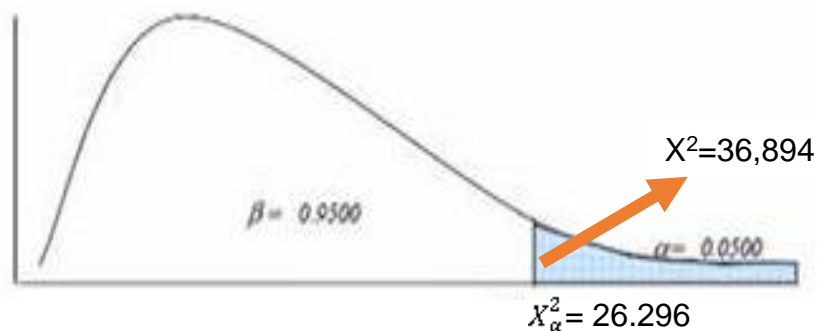


Figure 1. Secondary Hypothesis Testing 1

The results when using the spss show us that the value of Chi square is $36.894 > 26.29$ with 16 degrees of freedom at 95% confidence level with a p value = $.002 < .05$; also with a contingency coefficient 0.431 p value = $.002 < .05$, the same that shows us that the relationship has a moderate intensity, so the decision is made to reject the null hypothesis and accept the alternative hypothesis Virtual learning resources are directly related to the Academic Satisfaction of San Luis Gonzaga National University students, 2022.

B) Null Hypothesis Ho2: Virtual accompaniment is not related to the Academic Satisfaction of San Luis Gonzaga National University students, 2022.

Alternative hypothesis: Ha2: Virtual accompaniment is significantly related to the Academic Satisfaction of San Luis Gonzaga National University students, 2022.

Table 4. Chi square of specific hypothesis contrast 1

	Value	df	Asymptotic significance (bilateral)	Signification
Pearson's Chi-square	42,738 ^o	12	,000	,000 ^b
Likelihood ratio	41,460	12	,000	,000 ^b
Fisher's exact test	40,462			,000 ^b
Linear by linear association	25,945 ^c	1	,000	,000 ^b
Number of valid cases	162			

The statistical results express that chi-square with 12 degrees of

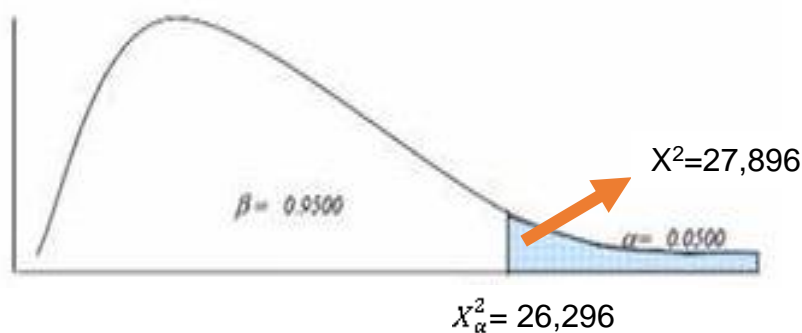
Freedom at 95 confidence level is: $42.738 > 21.026$, and with $p \text{ value} = .000 < .05$, and a contingency coefficient of: 0.457 and $p \text{ value} = .000 < .05$, which tells us that the intensity level of the relationship is moderate, so it is concluded to reject the null hypothesis and accept the alternative hypothesis: Virtual accompaniment is significantly related to the Academic Satisfaction of San Luis Gonzaga National University students, 2022.

C) Null Hypothesis: Ho3: The virtual didactics of the teacher is not directly related to the Academic Satisfaction of San Luis Gonzaga National University students, 2022

Alternating Hypothesis Ha3: The virtual didactics of the teacher is directly related to the Academic Satisfaction of San Luis Gonzaga National University students, 2022.

Figure 2

Secondary Hypothesis Testing 3



Consequently, when obtaining the Chi-Square value whose value was $27,896 > 26,296$ with a confidence level of 95% and with 16 degrees of freedom with a $p \text{ value}$ of $.033 < .05$; also deciding to contrast by finding the contingency coefficient whose value is 0.383 that verifies there is high intensity in the moderate correlation between the study variables with $p \text{ value}$ of $.003 < .05$. In conclusion, the null hypothesis is rejected and the alternative hypothesis is accepted: The virtual didactics of the teacher is directly related to the Academic Satisfaction of San Luis Gonzaga National University students, 2022.

Other important results of this research were:

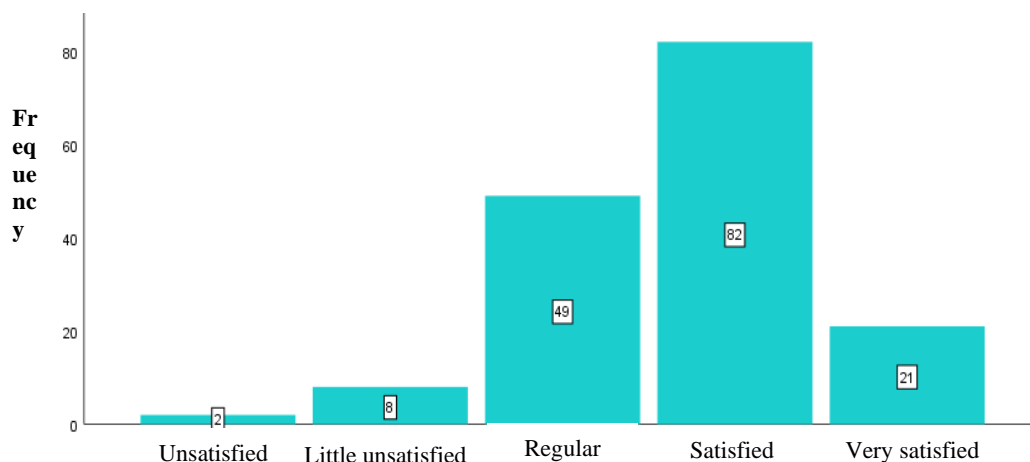


Figure 3. Students' satisfaction of usage of the virtual platform Laurasia for their learning

The participants of this research, manage to demonstrate their satisfaction for carrying out their studies virtually, in such a way that 63.5% show that they are happy or very happy with the applications provided by the platform in their learning, but for 30.2% they respond that they are regularly satisfied, instead for 6.1% they tell us that they feel not happy or unhappy with the way they are learning their subjects of their academical semester which have been executing.

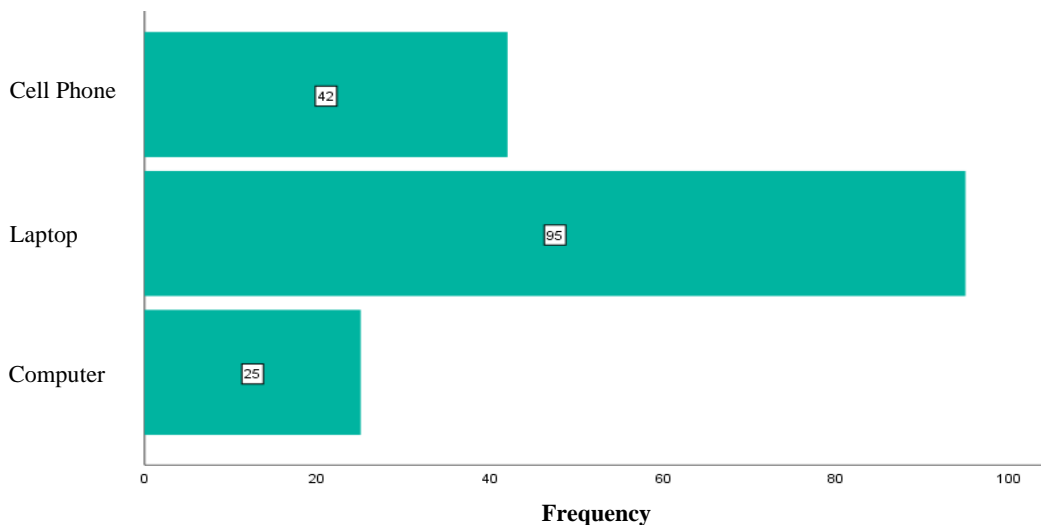


Figure 3. Electronic devices used by the administration university students in their learning in 2022

The electronic devices that students use for their learning in 2022, in their virtual classroom are among the laptop and they use it in 58.6%, while the cell phone is used by 25.9% and the computer is used by 15.5%.

Table 5. Analysis of the subjects' syllables and distinction strategies for cooperative work of the teacher

		Frequency	Percentage	Valid percentage	Cumulative percentage
Valid	Almost never	4	2,5	2,5	2,5
	Sometimes	43	26,5	26,5	29,0
	Almost always	81	50,0	50,0	79,0
	Always	34	21,0	21,0	100,0
Total		162	100,0	100,0	

The curriculum is developed in each academic semester, having a tool for planning and controlling the syllables of the subjects, when the student is asked if in a curriculum by competencies such as the one that has been developed he felt that the teaching activities revolved on him, and 71% think that always or almost always, They 1965

felt protagonists of university work, while 26.5% stated that sometimes significant work strategies were used, however, 2.5% answered that he was almost never the protagonist of his own learning.

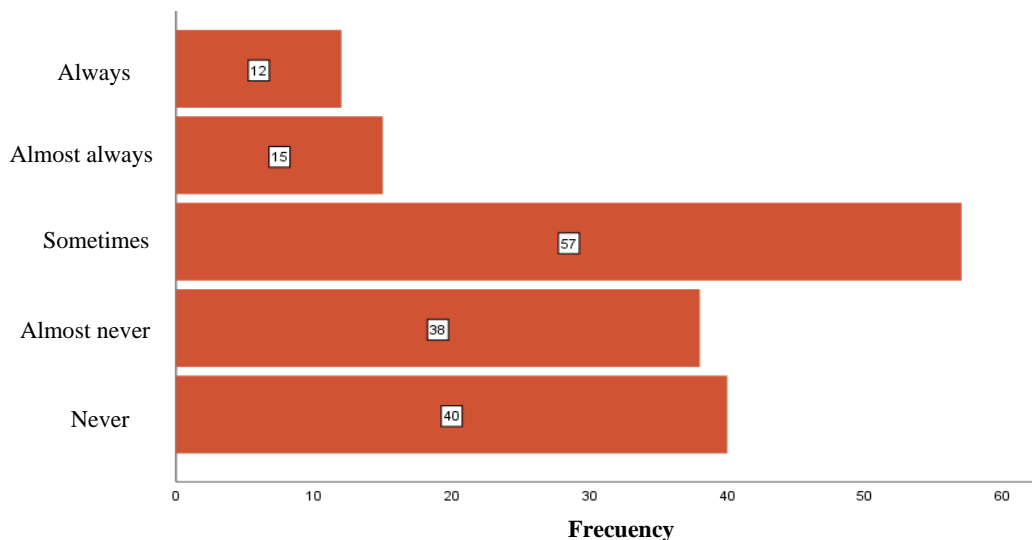


Figure 4. Assessment of the academic counseling students received

The academic counseling that students receive from the Administration Faculty in virtual education, is one of the important actions for the achievement of student learning, and they inform us in 16.7% that they almost always or always receive it from their teachers at the time they present difficulties, likewise there is a 35.2% that is of the opinion that sometimes they have received the counseling, But for 48.2% they say that they have almost never or never received counseling from their teachers in difficult times.

Table 6. Student satisfaction of the virtual education received

		Frequency	Percentage	Valid percentage	Cumulative percentage
Valid	Unsatisfied	7	4,3	4,3	4,3
	Little unsatisfied	7	4,3	4,3	8,6
	Regular	38	23,5	23,5	32,1
	Satisfied	49	30,2	30,2	62,3
	Very satisfied	61	37,7	37,7	100,0
	Total	162	100,0	100,0	

Their opinion on the satisfaction they have shown for carrying out their studies of their professional career in times of pandemic; they say in 67.9%, that they are very satisfied or satisfied with having done so, since it guaranteed the continuity of their professional training, instead for 23.5%, they stated that they are regularly satisfied, and for 8.6% of the others they show that they were unsatisfied or little unsatisfied for having studied at a distance.

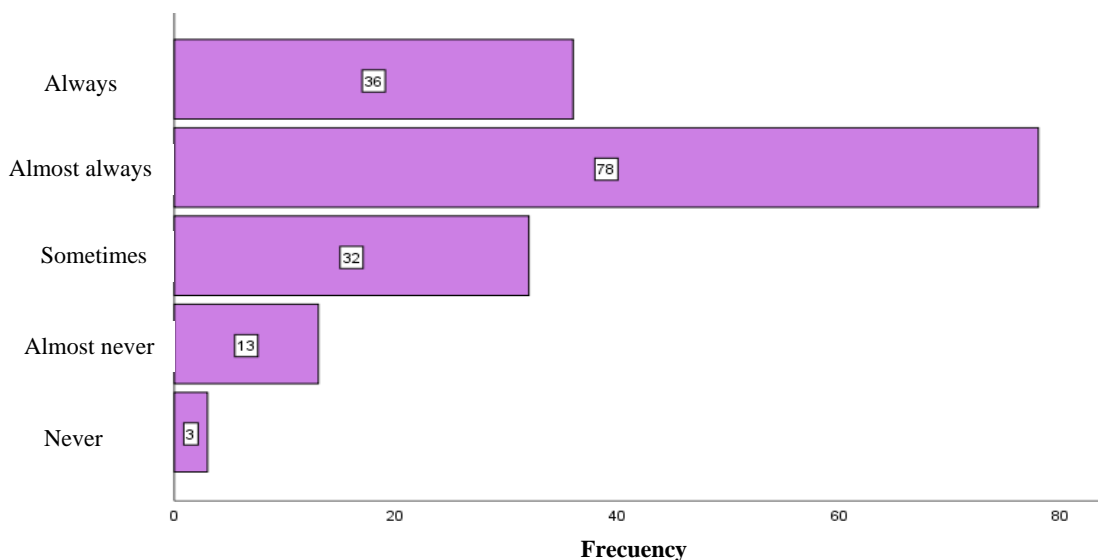


Figure 5. Results of assessments and learning achieved in academic semesters

The intervening students offer us valuable information about what they have learned in the virtual classrooms in these academic semesters, and in the opinion of 70.3% they state that always or almost always the results that they obtain their achievements from their true learning, instead for 19.8% sometimes the results are their true achievements, and for only 9.9% of the others the results never or almost never reflect their true learnings.

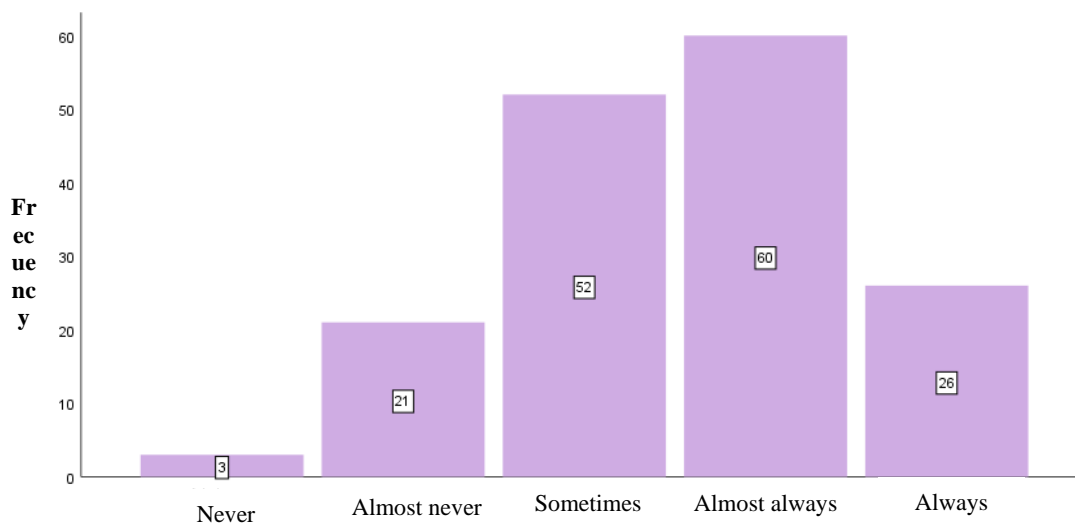


Figure 6. The work of the teacher in feedback actions of the virtual subjects

Feedback is one of the actions that improves the development of the skills and competencies of the subjects and that is an important work carried out by teachers for those students who do not show the expected performances, hence 53% think that the teacher always or almost always does it, but for 32.1% responds that this work is sometimes done by teachers, however, 14.9% are of the opinion that never or almost never the teacher does not do it.

Table 7. Student motivation and enthusiasm for the virtual platform and its asynchronous education

		Frequency	Percentage	Valid percentage	Cumulative percentage
Valid	Never	2	1,2	1,2	1,2
	Almost never	7	4,3	4,3	5,6
	Sometimes	47	29,0	29,0	34,6
	Almost always	60	37,0	37,0	71,6
	Always	46	28,4	28,4	100,0
	Total	162	100,0	100,0	

The students showed their opinions about the level of motivation and enthusiasm they demonstrate in the virtual classroom when conducting their virtual classes during the academic semester they do, and 65.4% of them state that always or almost always the interest and expectations they have in their classes are evident, while for 29% they respond that sometimes they show interest and enthusiasm, and only 5.5% say they are almost never or never interested in the virtual platform.

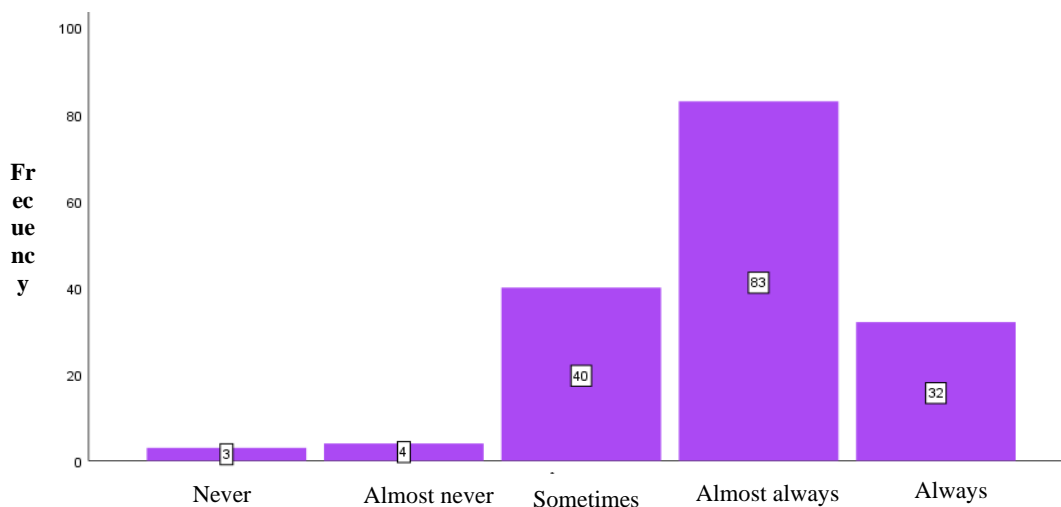


Figure 7. The Laurasia virtual platform and the development of virtual classes

The information that summarizes the statistical figure if students know well the virtual platform that allows them to carry out their virtual education in each academic semester, and 71% tell us that they have always or almost always managed to develop their virtual classes better with the management of the virtual platform, however, 24.7% is of the opinion that sometimes the platform has allowed them to improve their academic work, and 4.4% answer that it is never or almost never possible to adapt to digital changes.

7. Results Discussion

The present study allowed us to validate the hypotheses of the research, as well as its research objectives, based on the reliability and objectivity of the research instrument, within the results are that the motivation and enthusiasm to carry out their academic semester remotely 65.4% of students state that they always or almost always agree with the realization of their virtual classes corroborating what has been arrived by (Moghadam, Saeedi, & Bahreini, 2022) that explained that the academic satisfaction of students varies according to the context of each country where it is executed, considering that online learning can be considered a practical strategy for university education. In addition, we contribute that the teaching performance has improved having new strategies in virtual work by 73.5%, with the purpose that the student feels satisfied, challenged and motivated.

Regarding the performance of the teacher in his e-teaching we contribute that 53% of the students respond that always or almost always the teacher performs his work of mentoring, of feedback with them, to improve their student performances and thus their university didactics is strengthened, with a new facet of the teacher in search

that the student can achieve their learning, and that allowed with these results to validate what Manzanares, et al. said, where his study revealed that student satisfaction in the educational process increased. (2022)

The covid-19 pandemic, marked important milestones in university education, since many universities carried out their training of new professionals in person, and the current times with confinement of students and teachers is adopted by an asynchronous modality of studies, showing that the administration student is 85.2% is always or almost responsible for their punctual attendance at their virtual academic work, in the academic process of teaching classes, evaluations and other actions increasing academic satisfaction with responsibility and commitment, thus corroborating the conclusions of their research by Gelineau-Morel and Dilts (2021)

Another significant result obtained is that the student states that online learning in 55.6% are always or almost always satisfied with what they have obtained from one semester to another from the 2020 academic year, and that they are important, which allows them to be used later in other subjects as well as strengthen their leadership skills, of decision-making and mentoring that would later lead him to use them in professional performance, findings that validate those obtained by Dastidar (2021) that in his research found differences in online learning and academic satisfaction of students, this is a contrast with what I conclude Carhuaz, 2020 where academic satisfaction is low in terms of students' online achievements.

CONCLUSIONS

- It is concluded that virtual education is significantly related to the Academic Satisfaction of the San Luis Gonzaga National University students, 2022, evaluating the resources of virtual learning, accompaniment and didactics of the teacher the same that it was possible to verify that virtual learning that 74.1% respond that sometimes or almost always or always they are satisfied academically.
- The achieved results allow us to explain that virtual learning procedures are directly related to the Academic Satisfaction of San Luis Gonzaga National University students, 2022, having a diversity of electronic resources for it, such as video conferences, electronic educational materials, digital libraries.
- The accompaniment in the achievement of learning by their mentors in the development of the subjects in the academic semester is relevant, being able to describe that virtual mentoring is significantly related to the Academic Satisfaction of the San Luis Gonzaga National university students, 2022.
- The virtual didactics of the teacher is directly related to the Academic Satisfaction of the San Luis Gonzaga National University students, 2022, being able to analyze each of the components of the university didactics for the achievement of learning.

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