



REVISTA

CÁTEDRA

El enfoque de la educación virtual desde una perspectiva holístico frente a la pandemia del COVID – 19

The approach to virtual education from a holistic perspective in the face of the COVID – 19 pandemic

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Resumen

A raíz de la pandemia COVID-19, que viene aquejando a la humanidad, se determinó en diversos países que las clases se desarrollen vía online, con el propósito de no perder el año académico, ni la masiva deserción de los estudiantes universitarios. El estudio emerge de la experiencia empírica y la revisión de variados documentos científicos que enfocan sus estudios desde una visión panorámica del hombre, con el fin de determinar en qué medida el enfoque de la educación virtual cumple con impartir un aprendizaje holístico en estudiantes universitarios. Los resultados fueron analizados estadísticamente indicando la confiabilidad del instrumento aplicado a cinco dimensiones con sus respectivos ítems, en un rango elevado de 0.933, las pruebas resultaron satisfactorias. En cuanto al análisis descriptivo de las dimensiones resalta la categoría “casi siempre” con 67%, aplicado al proceso de la enseñanza - aprendizaje virtual. Se concluye que la educación virtual que se



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imparte posee una visión holístico por los efectos positivos de satisfacción encontrados en los estudiantes universitarios. Cabe resaltar que es necesario utilizar las herramientas digitales de manera inteligente, multidimensional, flexible, con disciplina y que impulse el aprendizaje activo, tomando como base el sistema asincrónico y sincrónico.

Palabras claves

Aprendizaje holístico, COVID-19, enfoque virtual, innovación tecnológica, renovación educativa.

Abstract

As a result of the COVID-19 pandemic, which has been afflicting humanity, it was determined in several countries that classes should be held online, in order not to lose the academic year, nor the massive dropout of university students. The study emerges from the empirical experience and the review of various scientific documents that focus their studies from a panoramic vision of man, in order to determine to what extent the approach of virtual education complies with providing a holistic learning in university students. The results were analyzed statistically indicating the reliability of the instrument applied to five dimensions with their respective items, in a high range of 0.933, the tests were satisfactory. As for the descriptive analysis of the dimensions, the category "almost always" stands out with 67%, applied to the process of virtual teaching and learning. It is concluded that the virtual education that is given has a holistic vision due to the positive effects of satisfaction found in the university students. It is necessary to emphasize that it is necessary to use the digital tools in an intelligent, multidimensional, flexible way, with discipline and that it impels the active learning, taking as a base the asynchronous and synchronous system.

Keywords

Holistic learning, COVID-19, virtual approach, technological innovation, educational renewal.

1. Introduction

The impact of the COVID-19 pandemic represents a challenge in advancing education as both a process and an outcome. According to data obtained from ECLAC-UNESCO (2020):

This emergency led to the massive closure of on-site activities of educational institutions in more than 190 countries in order to prevent the spread of the virus and mitigate its impact. By May, more than 1.2 billion students at all levels of education worldwide had stopped having face-to-face classes. Of these, more than 160 million were students in Latin America and the Caribbean (p.1).

According to what has been pointed out, many countries have sought different forms of teaching, with the desire that academic work not be interrupted, which led them to decide on virtual education, which over the months became a new opportunity for the development of student learning. In this sense "many colleges and universities have cancelled classes on campus, requiring online instruction to continue, this means that distance education is not a consideration but a necessity" (Abreu, 2020, p. 2).

Peru was not exempt from this dilemma; it sought to respond adequately to the contingency from an ingenious and rapid perspective by the authorities of the Ministry of Education,



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with the aim of creating mechanisms that would ensure positive results in school continuity, mitigating dropout and narrowing the gaps in educational inequality that the country has been experiencing for decades. Despite the fact that the government took preventive measures from the beginning of the pandemic, the effects are not at all encouraging in the economy, education and health. Nevertheless, the change in education has taken a 180° turn in educational practices, starting with transforming the way teachers look at things, from the cognitive, methodological, technological and emotional points of view. The challenge was taken up and in the process the handling of digital tools was learned, despite the adverse circumstances, significant learning was prioritized, and the development of skills through various mechanisms in the e-learning platforms. The training and the search for tutorials on YouTube were necessary to learn quickly the weaving and unweaving of the strategies and technological tools of G Suite; Classroom, Meet, Gmail, Hangouts, Calendar, Drive, Sites, Forms etc, about which Sotelo (2017) states "Computers and the Internet are within the reach of everyone (children, young people and adults), learning to use them and take advantage of them is a matter of attitude, which involves overcoming the fear of technology and having the willingness to learn" (p. 40), in spite of the adverse circumstances, the step from conventional to virtual education was taken, using digital technology, to transform student learning through synchronous communication, (Webconference, chat), asynchronous (platforms, technological applications, digital resources and feedback) between teacher and student within the interconnectivity.

In the case of students, the pandemic brought with it the socioeconomic vulnerability, accentuating the risk of inequality and desertion, in those young people who have fewer resources, for example, the unemployment of their parents, malnutrition, connectivity or access to the internet and the cognitive, psychological, cultural changes they suffered to incorporate themselves to 100% online learning, despite the technological handling of some tools that students possessed, it is "a particular situation that needs to be addressed is the risk of educational disengagement and dropout of these groups most vulnerable to the effects of the pandemic and the consequent health, social and economic crisis" (UNESCO 2020, p. 15). From the above overview, the general research problem is: To what extent does the virtual education approach comply with providing holistic learning to university students? Taking as a point of view what was indicated by Gluyas et al. (2015):

Holistic education requires the integration of knowledge: knowing how to be based on self-knowledge, in order to project it into a knowledge that motivates continuous learning with a view to being reflected in a know-how that impacts the development of the immediate environment, with resonance in society and humanity (p. 3).

Will college students be educated in a holistic manner? Cubas (interviewed, 2013) states:

There is an 88% shortage of talent, due to the lack of a strategic plan in education and the inadequate professional preparation they receive in universities to face the world of work. Empirical experience shows that despite the fact that the teaching is face-to-face or virtual, the strategic objective of quality and educational excellence that the country longs for is not met (p. 5).

The general objective of the research is to determine the extent to which the virtual education approach meets the holistic learning objectives that were chosen in the face of the COVID -19 Pandemic in university students. The general objective is broken down into



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the following specific objectives: a. a. Determine the reliability of the instrument (questionnaire) to measure the approach to virtual education from a holistic perspective to the COVID-19 pandemic. b. Assess the level of impact that the COVID-19 approach had on the virtual education approach. c. Assess the level of student learning after the implementation of the COVID-19 pandemic virtual education in university students.

The purpose of the study is to highlight, from a real and objective perspective, if the classes given in a non-face-to-face way in the new virtual context favour the integral development of university students, taking into account that the teaching work must profile suitable students, capable of achieving significant learning from a holistic approach and building more complex knowledge required by the globalised advancement of science and technology.

The present work is structured in the following way: literature review, where the definitions of the variables with authority arguments are stipulated; materials and methods, it is oriented to shape the study approach, the research design, population and sample, information collection instrument; floating elements, it is oriented to the validity and reliability of the instrument, descriptive analysis, results; discussion of the results. To close the research, the conclusions and references are determined.

2. Literature review

In 2020 the world was evident of the emergence of an unimaginable pandemic, whose lethality in the first months, became a natural threat that brought to the surface the extinction of man, causing panic over the rapid spread and questioning the population; the WHO, observing the voracious advance declares the COVID 19 as a pandemic. In Peru, the first case was detected on March 15, for which President Martín Vizcarra and his ministers determined mandatory social isolation (quarantine), starting with the closing of borders and strict compliance with the health protocols imposed by the Ministry of Health, in order to mitigate the spread and the dozens of deaths per day. In this regard, Velazque et al.:

COVID-19 has changed the lives of more than 33 million Peruvians, as well as caused a crisis in higher education, closing its doors 87%, vacation classes were interrupted, students and teachers who were doing internships and exchanges nationally and internationally were cancelled (p. 204).

SUNEDU and the Ministry of Education made the decision that the classes would be carried out in a non-presential way, using the different platforms, thus breaking with the traditional teaching and achieving the adaptability of the students to receive their classes in a virtual way and not lose the academic year. In response, Cardini et al.:

This implementation will bring with it great challenges that must be faced in order to guarantee the continuity of the pedagogical process. Such as the distribution of thematic content, through digital platforms, the expansion of access to technology, the accompaniment and strengthening of teachers' capacities in the context of isolation, and training in the use of digital technologies (p.8).

Renewal is necessary to understand reality, live together and act in times of crisis, either individually or as a team to face the new context without fear. In the face of this, "virtual education uses teaching-learning strategies that allow to overcome the limitations of space



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and time among the actors of the educational process" (Gallego, 2013, p. 157), the decision was right, knowing that education must not stop, because it seeks to empower young people to appropriate the range of knowledge and build their reality with solid foundations, promoting the development of soft and hard skills that allow them to identify and face challenges they find in the course of their personal, professional and social life. In this regard, UNESCO states that in these non-attendance classes, measures for continuity, equity and inclusion should be projected, focusing on vulnerable and marginalized populations; seeking quality and relevance of contents and programs. As well as the specialized support to the teaching staff, ensuring adequate conditions to fulfill their ideal work in distance education. In this regard, Allen and Seaman (2017) point out:

In the annual report of the state of online education in the United States, they note that 35.6% of academic leaders rated learning outcomes in blended, blended or blended education as similar to or better than face-to-face teaching. 63.3% of these leaders consider online education to be fundamental to their long-term institutional strategy, compared to 13.7% who do not (p.16-39).

In virtual classes, student performance depends on the formative pedagogical design, digital tools, strategies, resources that are necessary to promote active learning, with the precept of leading to the good conceptual, procedural and attitudinal development of young university students. According to Durall, et al.:

The main trends are: first, people want to be able to work, learn and study whenever they want and from wherever they want, second, the multitude of resources and relationships available on the Internet forces educators to review their role in the processes of meaning creation, assessment and accreditation, third, the technologies used are increasingly based on cloud computing, and the notions of support to information and communication technologies are decentralized, fourth, the changes in university education induce most universities to place teacher training as a strategic element in the quality of teaching and finally, the working environment is increasingly collaborative, which leads to changes in the way student projects are structured (p. 2).

Non-attendance education should impart a holistic learning, seen from a multidimensional conception where all knowledge is concatenated, nothing is isolated, all are needed to promote the development and welfare of humanity, in this regard Gallegos (1999) mentions:

The student is a total human being (corporal, affective, cognitive, social, aesthetic and spiritual) inserted in a social project, belonging to a community (family, school) that interacts with society, both emotionally and ideologically, and is not only an information receptor brain (p. 42).

Just as education should be "considered more than an act of transmission, repetition, and memorization of knowledge, and incorporated into the holistic process, in which knowledge is exchanged, experiences are revealed in a two-way communication between teachers and students" (López, 2018, p. 3). (López, 2018, p. 315), in accordance with the stipulations of the law, the universities are challenged to provide a quality education in spite of the adverse circumstances they face, where the teacher becomes a stimulating guide who cultivates a



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holistic learning process that generates knowledge and understands the new form of teaching, with participation, creativity, expressiveness, and management of complex thought, to then integrate it into a single system, based on a panoramic vision of the problems of education and having as a precedent that "holistics is a psychological and social phenomenon, rooted in the different human disciplines and oriented towards the search for a worldview based on precepts common to the human race" (Briceño et al., 2010, p. 74), as well as to provoke the transformation of the individual in his academic structure in an integral way, introducing the physical, mental, emotional, history, culture, politics and ideology etc. and that seeks to value practical life, science, feeling, reasoning, intuition, sensitivity, thinking that each situation he faces is an occasion to learn, unlearn and relearn. To do this teachers must be empowered with digital tools, starting from the use of the synchronous system, this will help to stimulate interaction, active participation, through the Google - Meet videoconference (Chat, videos, computer graphics etc.), and will be connected at the same time, independent of place or time with their pupils, and the asynchronous system, will help you manage content through the use of technology platforms (documents, forum, tasks, lessons, exercises, links etc.). If you comply with a strict monitoring, monitoring, advice and feedback, will be promoting a holistic learning, taking as a bastion of virtual education.

3. Methods and materials

Methodologically, the study corresponds to the quantitative approach based on the epistemological principles of the empirical-analytical paradigm and focuses on social facts and phenomena with little or no interest in the subjectivity of the researchers. Similarly, it uses the questionnaire for data collection and the responses were analyzed statistically.

The study design is non-experimental transectional correlational-causal because it describes the categorical relationships and variables in the times of pandemic of the COVID 19 (Hernández et al., 2010, p. 217). Also, the study was conducted in a specific context and data were collected at a single time or moment.

The population consisted of 720 students and the sample was 100 undergraduate students enrolled in the 2020-I non-attendance classes, belonging to the same undergraduate academic cycle, ranging from 18 to 22 years of age, 62 males and 38 females, respectively.

The instrument used was a survey designed, in Google Forms, with the aim of providing relevant information about the new virtual educational approach from a holistic perspective, which is being developed due to the COVID-19 pandemic in university students. The constitution of the instrument was of 05 dimensions: 1. Use of technological tools with 08 items, 2. teaching strategy in virtual education with 05 items, 3. training quality of the subject with 04 items, 4. individual and team work with 04 items and 5. attitudes and values in front of virtual classes with 3 items. Attitudes and values as opposed to virtual classes with 3 items. The answers were collected by means of Likert scales, where; 1. The characteristics of the questionnaire were obtained through different types of statistical analyses carried out with the help of the IBM SPSS program.

The data collection technique was through the Google form where 24 Likert-type questions were threaded, the way of evaluation was multiple section with closed answers and they were configured so that the students answered from form to compulsory. In the instructions, the reasons for the survey and the time it may take to develop such an instrument were disclosed. The questionnaire was sent to the students by e-mail, then the



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analysis and transcription of the information was made according to the interest of the research.

4. Floating elements

The results of the research show the validation of the instrument and the approach to virtual education from a holistic perspective in the face of the COVID - 19 pandemic and the descriptive and inferential results of the study.

4.1 Reliability analysis

The evaluation of the reliability of a questionnaire involves the performance of an internal consistency analysis. For this purpose, Cronbach's alpha coefficient was calculated, considering the following categorization of the reliability coefficient: 0.8- 1 (high), 0.6-0.8 (acceptable), 0.4-0.6 (regular), 0.2-0.4 (low) and less than 0.2, very low (23).

According to Table 1, a reliability analysis was carried out for each dimension or factor. In the process, no items were eliminated; the overall alpha is within the high range with 0.933. In conclusion, a valid and reliable instrument was obtained for the questionnaire of the virtual education approach from a holistic perspective to the VICD pandemic -19.

	TIE5 Indicate to what extent the presentations and discussions in the virtual classes have contributed to your learning or sparked your interest.
	AVDCO1 The new educational context has changed my view of the role of the university student
Dimension 1	AVDCO5 The virtual education has changed my attitude, in the way to face my studies
	AVDCO2 I have taken responsibility for the e-learning process, because it allows me to work at my own pace.
	TIE1 Indicate to what extent the tasks have contributed to your learning throughout the online class.
	UHT8 The non-classroom classes encouraged you to self-learn.
	TIE2 I consult other material, apart from that presented by the teacher, to deepen my knowledge.
	DREE5 If I had to describe the teacher's "feeling of closeness and motivational capacity" I would rate it as:
	UHT10 online classes facilitated knowledge transfer
Dimension 2	UHT9 They allow access to more information to increase my knowledge
	UHT11 Materials used in classes offered better presentation of content
	UHT7 Online classes make it easier to remember information and reinforce learning content.
	DREE3 Accessibility to teachers (availability, time taken to answer questions, quality of feedback...) has been



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Dimension 3	DREE4 Teachers adapted their teaching strategies to the conditions in which the subject is developed (schedule, sequence, timing, space, material, etc.)
	DREE2 Does the teacher focus mainly on academic teaching?
	CFACV1 You found the course formatively stimulating
	CFACV2 Are activities directed at social and emotional learning to develop soft skills?
	CFACV4 The topics of the new information or problem relate to what you knew before.
Dimension 4	UHT5 Virtual classes made it easier for you to work in a team
	CFACV5 The activities proposed make me develop other cognitive skills (analysis, synthesis, criticism...) in the study
	UHT13 Increases the relationship with peers and improves the relationship with teachers.
	UHT14 Have you felt "part of" a cooperative virtual learning community with teachers and peers, despite the distance?
Dimension 5	UHT6 Virtual classes motivate you to continue learning.
	UHT2 Quick access to the synchronous system such as videoconferencing, chat. To receive your class online.

Table 1. Distribution of items according to dimensions

According to Table 2, all the dimensions cited were analyzed and an acceptable range is observed in all cases. The intention is to confirm the number of dimensions that best fits this model, and the extraction was not done for a fixed number of factors, but for all those whose self-values are greater than 1, in addition to evaluating the communality and that at least 2 items are within a single factor, being only 5 dimensions in this case that explain 65.07% of the variance. In addition, a rotation method (Varimax) has been selected.

Dimension	Alfa of Cronbach	Elements
General	0.933	24
Dimension 1	0.885	8
Dimension 2	0.855	5
Dimension 3	0.789	4
Dimension 4	0.796	4
Dimension 5	0.618	3

Table 2. Summary of reliability analysis

4.2 Quantitative validation - construct validation

Once the reliability analysis process was completed, the next step was to determine the optimal number of dimensions by means of a factorial analysis.



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According to Table 3, the value of the sample adequacy measure KMO is 0.889 (> 0.5). In addition, the significance level value of the Bartlett's sphericity test is 4.406e-7 approximately 0.

Kaiser-Meyer-Olkin measurement of sampling adequacy	0.889
Bartlett Sphericity Test Approx. Chi-square	1319.602
df	276
Sig.	0.000

Table 3. Kmo and Bartlett test

4.3 Descriptive analysis

Once the validation of the construct and the matrix of rotated components has been analyzed, it is necessary to analyze each dimension with its respective items in order to evaluate the percentage that determines to what extent the virtual education approach complies with the holistic learning that was chosen in the face of the COVID -19 Pandemic in university students. To do so, the five dimensions are shown: 1. Use of technological tools with 08 items, 2. teaching strategy in virtual education with 05 items, 3. training quality of the subject with 04 items, 4. individual and team work with 04 items and 5. attitudes and values in front of virtual classes with 3 items. Attitudes and values in relation to virtual classes with 3 items.

According to Table 4, it can be observed that the questions of dimension 1 present high percentages in "Sometimes" and "Almost always" with values higher than 40%. The item stands out: "the non-presential classes encouraged you to self-learning" with 29% in "Always". It is necessary to analyze each dimension with its respective questions to evaluate the percentage of frequency.

Items	Never	Almost never	Some times	Almost always	Always
F1_AVDCO1 The new educational context has changed my view of the role of the university student	1%	4%	35%	43%	17%
F1_AVDCO2 I have taken responsibility for the e-learning process, because it allows me to work at my own pace.	1%	3%	35%	37%	24%
F1_AVDCO5 Virtual education has changed my attitude, in the way I face my studies	0%	8%	27%	45%	20%
F1_DREE5 If I had to describe the teacher's "sense of closeness and motivational ability" I would rate it as	1%	5%	27%	46%	21%



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F1_TIE1	Indicate to what extent the assignments have contributed to your learning throughout the online class.	1%	4%	32%	44%	19%
F1_TIE2	I consult other material, apart from that presented by the teacher, to deepen my knowledge.	0%	3%	30%	44%	23%
F1_TIE5	Please indicate to what extent the presentations and discussions in the virtual classrooms have contributed to your learning or aroused your interest.	3%	2%	35%	48%	12%
F1_UHT8	The non-presential classes encouraged you to learn by yourself.	1%	7%	27%	36%	29%

Table 4. Use of technological tools

According to table 5, it can be seen that the questions in dimension 2 highlight "the accessibility to teachers (availability, time taken to answer questions, quality of feedback...)" with 58% in "Almost always", and the item "Allow access to more information to increase my knowledge" with 28% in "Always".

Items	Never	Almost never	Sometimes	Almost always	Always
F2_DREE3 The accessibility to teachers (availability, time taken to answer questions, quality of feedback...) has been	1%	3%	20%	58%	18%
F2_UHT7 Online classes make it easier to remember the information and reinforce the learning contents.	2%	12%	38%	35%	13%
F2_UHT9 They allow access to more information to increase my knowledge.	0%	2%	27%	43%	28%
F2_UHT10 online classes facilitated the transfer of knowledge.	1%	7%	40%	38%	14%
F2_UHT11 The materials used in the classes offered a better presentation of the contents.	1%	0%	34%	43%	22%

Table 5. Teaching strategy in virtual education

According to Table 6, it can be observed that the questions of dimension 3 highlight the item "Teachers adapted their didactic strategies to the conditions in which the subject is developed (schedule, sequence, temporalization, space, material, etc.)" with a value of 58% in "Almost always". As well as the item "Teachers adapted their didactic strategies to the conditions in which the subject is developed (schedule, sequence, temporalization, space, material, etc.)" with a 58% value in "Almost always".



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Items	Never	Almost never	Sometimes	Almost always	Always
F3_CFACV1 You have found the course formatively stimulating	0%	5%	37%	40%	18%
F3_CFACV2 Are the activities directed at social and emotional learning to develop soft skills?	3%	4%	34%	44%	15%
F3_DREE2 Does the teacher focus primarily on academic teaching?	0%	1%	8%	67%	24%
F3_DREE4 The teachers adapted their teaching strategies to the conditions in which the subject is developed (schedule, sequence, timing, space, material, etc.)	0%	3%	19%	58%	20%

Table 6. Educational quality of the subject

According to Table 7, it can be observed that the questions of dimension 4 present high values in Almost always, as examples the items "The subjects of the new information or problem are related to those I knew before" and "The activities proposed make me develop other cognitive skills (analysis, synthesis, criticism...) in the study". It is also observed that the item "Increases the relationship with peers and improves the relationship with teachers" has a value of 56% in the category of "Sometimes"..

Items	Never	Almost never	Sometimes	Almost always	Always
F4_CFACV4 The subjects of the new information or problem are related to those you knew before.	2%	0%	30%	60%	8%
F4_CFACV5 The activities proposed make me develop other cognitive skills (analysis, synthesis, criticism...) in the study	0%	3%	17%	59%	21%
F4_UHT5 Virtual classes made teamwork easier	0%	12%	39%	39%	10%
F4_UHT13 Increases the relationship with peers and improves the relationship with teachers.	1%	14%	56%	24%	5%

Box 7. Individual and team work

According to the table 8, it can be observed that the questions of the dimension 5 presents a 63% of "Almost always" in the item "Accessed quickly to the synchronous system as videoconference, chat" to receive its class online, however it is observed a high value in the category "Sometimes" with a 44%, in addition the last item "Have you felt "integral part" of



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a virtual community of cooperative learning with the teachers and companions, in spite of the distance" has a 40% and 45% in "Sometimes" and "Almost always".

Items	Never	Almost never	Sometimes	Almost always	Always
F5_UHT2 Quick access to the synchronous system as video conference, chat. To receive your class online.	0%	1%	17%	63%	19%
F5_UHT6 Virtual classes motivate you to continue learning.	1%	16%	44%	29%	10%
F5_UHT14 Have you felt "part of" a virtual community for cooperative learning with teachers and classmates, despite the distance?	2%	5%	40%	45%	8%

Table 8. Attitudes and values towards virtual classes

5. Discussion

The results of the research, demonstrate that the approach of virtual education complies with a holistic learning that was chosen in the face of the COVID -19 Pandemic in university students. Since the end of the last decade, UNESCO has emphasized that education must be comprehensive to cover all aspects of life, with scientific knowledge (learning to know), professional skills (learning to do), human values and principles (learning to be), and the exercise of civic responsibility (learning to live together). Based on this idea, the dimensions of the instrument (survey) were developed: use of technological tools (learning to know), teaching strategy in virtual education (learning to live together), educational quality of the subject (learning to know), individual and team work (learning to do), attitudes and values in virtual classes (learning to be), in order to provide reliable information on the subject exposed in the research and to encourage university students to act assertively, independently, critically and creatively, showing their skills and potential to join the changing arm of society.

In conclusion, a reliability analysis was carried out for each dimension or factor; in the process no item was eliminated, the general alpha is in a high range of 0.933.

For the questionnaire of the virtual education approach from a holistic perspective to the COVID - 19 pandemic, in the reliability analysis, the item UHT2 was found (It quickly accessed the synchronous system as videoconference, chat, to receive its online class.) with a corrected total-element correlation less than 0.4. It is therefore suggested to remove it.

Within the descriptive analysis is the dimension 1 that shows high values in the categories "Sometimes" and "Almost always"; it is followed by the dimension 2 with a similar behavior. In dimension 3, the item "Does the teacher focus mainly on academic teaching" highlights the category "almost always" with 67%. However, it shows similar values in the items "Have you found the course formatively stimulating" and "Are the activities directed at social and emotional learning to develop soft skills?"



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The last 2 dimensions do not usually show similar behavior, but the values are distributed in all categories. Therefore, the most representative dimensions are the 1 and 2.

6. Conclusion

The structure of the questionnaire was analyzed by performing a factorial analysis to determine the validity and reliability of the instrument (questionnaire) in each of the dimensions with their respective items. The tests to which they were submitted were satisfactory, so it is recommended that they be used in future research related to variables such as the approach to virtual education and holistic learning.

According to the research, it is demonstrated that the approach of virtual education fulfills to give a holistic learning, which was chosen in front of the COVID -19 Pandemic in university students, as it is shown in the hypothesis raised at the beginning of the study and in the tables elaborated around the topic. There is no similar research or similar to the study yet.

In digital education, according to the empirical experience, it is necessary to plan the actions that will be developed, during the non-presential classes (the content, interaction, learning activities, evaluation and the technological tools), in order to promote an active learning, where the student becomes a constructor of his own learning (generates ideas, discusses, argues, manages learning with autonomy, builds, creates, generates knowledge, solves problems, etc.). To do this it is essential to build communication networks (synchronous, asynchronous), between the teacher and student, as well as being in constant renewal with the strategies and techniques.

The future goal is to promote a safe, active learning space with the appropriate digital tools that incorporate the student to research (seek knowledge based on innovation, formulate opinions with original ideas, promote divergent thinking and risk taking), social responsibility (promote self-control, ethical attitude, proactive, and inclusive vision), and leadership (lead disciplinary or multidisciplinary teams, demonstrate empathy, respect, etc.), with the intention of preparing them to face a globalized world, which with giant steps incorporates the human being to competitiveness and meritocracy. Likewise, the commitment of the authorities of the university bodies, must guarantee the training in virtual competences to the teachers, so that they can become virtual residents and provide the students with an excellent academic formation.



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