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The Incidence of Information Anxiety in Virtual Education in Mexico during the SARS-CoV-2 Pandemic

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ABSTRACT

The SARS-CoV-2 pandemic that occurred at the beginning of 2020 caused education to migrate to digital platforms and environments, resulting in the modification of educational models which have had a direct impact on teaching work, in the modality of learning and how virtual teaching itself was administered, such a situation caused a rethinking of the use of digital tools and their impact on said practice. Mexico has been the country that has had the most setbacks regarding this new modality in what corresponds to North America, caused by the term known as Information Anxiety, which is defined by the saturation of information, causing a lack of understanding of what is presented by part of the students, learning barriers and misuse of the information itself. This study deals with an exploratory analysis about the consequences of this phenomenon in online education in Mexico.

Keywords: COVID 19, Mexico, Public health, Education, User centered design

INTRODUCTION

The COVID-19 health problem has caused the use of online teaching to continue with school activities, and the use of technology has contributed to these exercises. Teachers like students have been forced to adapt to it, and due to the importance of this modality, it has been assumed that it could be the best way to ensure that the teaching process moves towards the immediate future. However, the use of digital platforms such as videoconferences, virtual classrooms, digital applications, and other media, present limitations in the teaching processes since they depend on various external factors for their correct technical and operational functioning.

According to the above, there is an interest in addressing this issue with the aim of observing, in a more objective way, the characteristics of these systems and being able to evaluate them to implement them in the teaching-learning processes.

DISTANCE EDUCATION NOWADAYS

Regarding distance education today, it is necessary to highlight some data provided by the study developed for this research article, which shows that before the confinement due to COVID-19, only 15% of higher education students in Mexico had taken online courses, also stating that the main use that had been given to digital platforms has been consulting and carrying out tasks. However, the relevance that this modality has gained and its level of impact is revealed, through a sample of 1,100 students, according to surveys carried out by the same agency, that the respondents show a clear preference for face-to-face classes over those that are done remotely:

- 60% of students surveyed say that face-to-face classes provide higher quality learning.
- 36% prefer remote programs due to the flexibility of schedules.
- 50% consider that face-to-face education plans have better infrastructure.
- 17% consider that remote education is cheaper than traditional education.

These data again lead to a question regarding the possible advantages and disadvantages in the use of both systems; it is necessary to know, analyze and reflect on it to be able to discern and be able to take a stand against the possibility of using one or the other in teaching practice.

MARKER VS. CURSOS

As argued by Martín, Laura Cecilia and Roco, (2012), it should be remembered that learning is a process of construction of shared meanings that are produced through the interaction of various subjects; In this process, an individual internalizes the necessary tools to think and solve problems in a more mature way than without them. Thus, learning is more than the acquisition of the ability to think; it is the appropriation or acquisition of numerous specific aptitudes to think about a series of different things. They also refer:

> "The teacher and the students each bring to the teaching and learning situation a set of knowledge, skills, experiences, expectations and values, which they use as a frame of reference to interpret them and act in accordance with this interpretation. They are the personal frames of reference, from which the participants make a first approximation to the social structure and the academic structure of the activity."

In these processes there are not only two modalities (face-to-face and non-face-to-face), there are also endless combinations between them; however, this document is limited to studying only two of them: face-to-face and non-face-to-face, considering that they are the most representative. To begin studying them below, some concepts mentioned by García (2013) regarding the synchronous and asynchronous educational system are taken as a reference, since they are linked to the processes carried out in face-to-face and non-face-to-face education models. According to García, a synchronous system is one that allows us to communicate in real time between the participants, in this way, in the educational field, the interaction that occurs between a teacher and his students, by sharing the same space at the same

time it is synchronous, just as it happens in a classroom, but also a telephone call, a videoconference or chat can also be considered (with the exception that these are carried out remotely). The advantage of this type of communication is that they can mutually observe the reactions between teacher and student, and it is possible to answer doubts and uncertainties now.

Likewise, asynchronous communication has essentially referred to distance education (virtual), where training materials have been designed that student consult and read in a timeless manner, without physical contact with the teacher. In this modality, the student is essentially responsible for finding materials, work tools and carrying out tasks. In the current pandemic conditions, synchronous communication has been privileged under the distance modality (online) where both the students and the teacher participate in real time; Some advantages of this way of teaching classes are: the group communication that occurs and the collaborative learning that provide freedom with respect to space restrictions, conversations and class sessions can be archived and consulted at any time and in certain cases, there can be participation and interaction between people from different regions and cultures.

The way in which this modality has been implemented due to the emergency has caused major complications such as: the difficulty in viewing the contents, the visual and physical fatigue of the participants, the problem of sending messages and their immediate response since most of the participants do not know the rules of interaction to maintain an effective speech, among others. Added to this is the distraction due to interruption by environmental factors, as well as the intrusion into the privacy of individuals and their environment.

Another factor that considerably affects is the amount of information that is displayed through this activity in online mode. Two points to consider from this point of view are the instructions to develop a task or the reference material of the course itself, such as evaluation rubrics, technical sheets, summaries of the contents, among others. This has caused that both the student does not know how to handle these large amounts of information, which could be tedious, ambiguous, or even repetitive, which directly affects their levels of stress and anxiety regarding how to solve their own class tasks and effectively understand what the course material shares. This phenomenon of stress and anxiety is related to Information Anxiety.

INFORMATION ANXIETY

The term Information Anxiety is coined by Navedd and Anwar (2019) citing Bawden and Robinson (2009:6) as "a stress condition caused by the inability to access, understand or make use of the necessary information".

According to Blundell and Lambert (2014) the people who face this phenomenon, in a study implemented by the same authors called Project Information Literacy carried out in 2012, which sought to understand the burden of Information Anxiety that incoming students experienced when faced with large volumes of information, they reported feeling "anxious", "frustrated", "confused", "stressed", "tired", "overwhelmed", among other qualifying adjectives. These remarks of an emotional nature are related to high levels of anxiety, which is related to the position developed in previous sections.

Wurman (1984, p. 34) approaches the definition of Information Anxiety relating it directly to the conceptualization of the idea that what information poses and what it really is has been understood, quoting the author, Information anxiety is what is the result of what is "produced by the widening gap between what we understand and what we think we should understand. That black hole between data and knowledge, and it happens when the information doesn't tell us what we want or need to know."

Information Anxiety is caused by not having enough information, information overload, dealing with poorly organized information, and lack of understanding or inability to find information in digital news media (Bawden & Robinson, 2009; Kennedy 2001).

EXPERIMENT

The nature of this research is exploratory and non-experimental in nature, since based on what Hernández-Sampieri (2018) establishes, given that variables are not deliberately manipulated (these have already occurred and cannot be manipulated, there is no direct control over them) in addition, already existing situations and not caused intentionally are observed. Starting from this fact, we continue establishing that this study aims to find out if information anxiety is presenting itself within the practice of online education. For this, a questionnaire was implemented through the Google Forms platform, consisting of taking general data such as age, gender with which the surveyed user identified, university in which he was studying, the career and the semester he was currently studying, the device that the user used to take online classes and do their homework, the average time they spent doing tasks or activities in their course and 10 items, which were: 1) How much time do you spend on average each day on your homework? and deliveries during this online education modality?, 2) From your perspective, how effective has your learning been in the distance mode due to the COVID 19 pandemic?, 3) The information that is provided to you in your courses, do you consider that it contributes to effective learning of the contents of your class? 4) When you have to carry out a task or activity in this online education modality, does the information provided through the platforms to upload course content help you to satisfactorily complete said task or activity? through the platforms to upload course content is it clear and easy to understand?, 6) If the information that was provided to you to carry out an activity is not clear, what do you do?, 7) When you face a lot of information to do any activity or task, have you found yourself needing to read said information more than once in order to carry out said task or activity? that the activity had to fulfill? 8) To what do you attribute the fact of not fulfilling some criteria requested to carry out the activity or task? 9) When you are faced with a lot of ambiguous and confusing information, having the task of doing a task or some activities, how do you feel? and 10) How stressful is distance learning for you during the COVID-19 pandemic?

This evaluation instrument was applied to a sample of 372 university students who were active in the online modality of distance education, regardless of their gender or age, the university they were studying at or the career. This

sample is of an exploratory and convenient nature, since it responds to the nature of the research, which was raised in previous sections, however, it can be considered as a reference for future studies on the subject.

FINDINGS

The results obtained through the application of the instrument that was used for the collection of the present study were the following: 54% of the respondents belong to an age range between 18 to 20 years, 55.6% are studying the first 5 semesters of their university career, 87.7% of the sample studied at public universities, in addition to the fact that 69.9% of those surveyed say they use the laptop as a tool to take classes and do activities in the distance education modality. As for item 1, which corresponds to the question "How much time do you spend on average each day on your homework and deliveries during this online education modality?" 26.1% of the sample stated that they spent between 6 and 8 hours a week doing homework and school deliveries and 40.1% stated that they spent between 3 and 6 hours on this activity. Regarding reagent 2, which refers to the question "From your perspective, how effective has your learning been in the distance mode due to the COVID 19 pandemic?", 53.2% of those surveyed say that they consider moderately effective their learning in the distance education modality is effective. As for item 3, which asks the question "Do you consider that the information that is provided to you in your courses contributes to effective learning of the contents of your class?", 73.9% agree that the information that It is provided as part of the content of the subject, it helps your learning to be effective in the distance education modality. In item 4, where the question is asked "When you must carry out a task or activity in this online education modality, does the information that is provided to you through the platforms to upload course content help you to satisfactorily complete said task or activity?" homework or activity?", 55.1% help you to satisfactorily complete the delivery and completion of school tasks. According to reagent 5 of the questionnaire, the one that asks the question "When you have to carry out a task or activity in this online education modality, the information to carry out said deliveries that is provided to you through the platforms to upload course content Do you find it clear and easy to understand?", 52.2% agree that said information is clear and easy to understand. Regarding reagent 6, corresponding to the question "If the information that was provided to you to carry out an activity is not clear, what do you do?", 39.5% say that they turn to a classmate to clear up any doubts they have and the 30% indicate that they try to resolve doubts on their own based on an internet search. In item 7, where the question is asked "When you are faced with a lot of information to do some activity or task, have you found yourself needing to read said information more than once to carry out said task or activity?", 50.3 % indicate that they must read the instructions and information provided once again to carry out said activity or task. Regarding item 8, the question "How often have you made a mistake in carrying out a task or activity because you did not satisfactorily complete some criterion that the activity should meet" is established, 46.2% of the respondents say that the frequency with which he is

wrong corresponds to the option "sometimes". From reagent 8, sub-reagent 8.1 emerges, where the respondent is asked "What do you attribute the fact of not meeting any criteria requested to carry out the activity or task?", 29% answered that they attribute this failure to that did not read the instructions of the delivery or activity in detail, on the other hand, 28.8% say that the information provided was not enough to complete said task and another 22.8% indicate that the information provided was a lot, I feel These are the causes to which they are attributed having some type of fault in compliance with the criteria to be evaluated in school delivery. According to item 9, the question "When you face a lot of ambiguous and confusing information, having the task of doing a task or some activities, how do you feel?" is found, and within the adjectives most indicated by respondents were: "frustrated", "overwhelmed", "confused", "stressed", "anxious", "pressured", "sad" and "angry". Finally, based on item 10, the question was asked "How stressful is distance education for you during the COVID-19 pandemic?", 39% of the students indicated that this type of educational modality turns out to be very stressful for them and 35.5% of the study participants say that it represents a normal load of stress.

DISCUSSION

As mentioned above, the phenomenon that corresponds to Information Anxiety generates in those who are involved in it that the information conjugated with a mirage of poor information solutions and apparent understanding is not clearly understood. In addition, it generates stress, anxiety and frustration when faced with large amounts of information that is ambiguous, confusing and lacks coherence.

Based on the results and findings of the data collection instrument, we can show that students who are in this online education modality are affected by this phenomenon, since they believe they understand the instructions and information that is shared with them. through the platforms they use to carry out this activity, however, this is not reflected in the effectiveness of their own school deliveries, since the frequency of getting the tasks right and completing them is below 46.2% of those surveyed , in addition to the fact that the main causes of this failure is attributed to information that is not clear or sufficient to complete said activities, tied to this and consequently, the fact of having to read the information provided more than once to execute said resolution action. As well as, that the respondents shared having feelings such as frustration, confusion, stress, and anxiety, typical of the Information Anxiety phenomenon.

CONCLUSION

There are many aspects that intervene in the educational context to achieve an effective education, and it is necessary to understand the plot where the practice of teaching and student learning takes place, since the role of the teacher is essential; Both parties must feel involved and committed to their own objectives, as well as those set out in their own educational center. The

various methods and systems that can be used to achieve this can change according to your needs; but, due to the problems caused by COVID 19, at this time, a trend is emerging that makes almost all institutions coincide regarding the use of technological tools to continue developing their teaching activities; Although the use of this resource solves the problem immediately – and apparently effectively– it is necessary to analyze and evaluate whether the non-face-to-face model –(going distance and/or virtual)– is indeed the ideal one for meaningful learning, it is also It is relevant to question to what extent said model is preferable to the traditional one – face-to-face – given that each of them has its own peculiarities and advantages.

It is not possible to affirm that any of these models may be the best, only the participants -teachers, students and directors- responsible for educational training are invited to reflect on what they can or should use in their teaching practice, in order to to give the best result.

Finally, in this perspective, an instructional design should be considered that avoids ambiguity in the information that is presented and shared with students for the completion and execution of their school tasks, seeking to point out what is sought as clearly as possible. and is expected from each of these activities. It would also be worth implementing a common format to perhaps standardize the instructional practices of problem solving and development of activities, prioritizing this phenomenon that is mainly coined to concepts of mental health of students.

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