Student Experience and Expectation with E-Learning Modality in Times of Pandemic

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Abstract—Due to the COVID-19 pandemic, several educational institutions needed alternatives to continue the processes of teaching and learning. As an alternative, we can mention E-Learning that uses Information and Communication Technologies promoting online learning. In this sense, a group of students at a Brazilian university was asked whether they know this modality and the experiences, they have lived cause positive expectations for the resumption of the school term remotely. Most students who know E-Learning feel more optimistic, while the others who do not know that the lack of experience with the sport leaves them in a more challenging situation. The main challenges identified are excessive asynchronous activities and short deadlines. Therefore, it is believed that planning combined with teacher training in E-Learning can contribute to educational processes.
Keywords: Remote teaching, COVID-19, online courses

1. Introduction

Information and Communication Technologies are tools that are currently being used to teach and learn, as these resources can mediate educational processes, placing students as active beings in their learning. In the 21st century, the explosion of these technologies increases the use of devices for many purposes in the world of work and in formal and non-formal education, so that technology is playing a role in requiring professionals, educators and students to reflect on their basic beliefs a in order to use for the redesign or reengineering of the education and training system, obtaining more advantages [1].

The advancement of Communication and Information Technology has made it easier for humans to interact quickly, easily and accessible to almost everyone, and this development is very influential in the innovation of learning models [2]. As people are involved in a technological scenario, using these resources for teaching and learning is a way to generate interaction and active participation. The intersection betwen student, teacher and multimedia provides the interactive learning process [3].

With the advancement of Information and Communication Technologies, new teaching and learning models have been developed and one of them is E-Learning that can be understood as an online learning modality that can use synchronous or asynchronous activities. E-Learning is explained as a network affinity group that shares its information, knowledge, proficiency and provides education to many students geographically in the same or diversified [4].

E-Learning uses computer and internet technologies to provide a wide range of solutions to enable learning and improve performance, providing accessibility, flexibility and pedagogy of lifelong learning, being considered relatively the cheapest way of education in terms of less cost of transport, accommodation and the general cost of institution-based learning [5]. This model does not require physical interaction and can reach any environment that has internet access without the need to transport participants. Due to the advantages of e-learning, more and more universities and schools are adopting this modality to offer education, better experience and streamlined in the teaching and learning processes [6].

With the pandemic of COVID-19, schools and universities were closed to prevent or reduce the spread of the virus and, therefore, educational innovations were necessary to continue school terms. In this sense, online learning has become an alternative to the challenges posed by the pandemic. The pandemic has raised significant challenges for the education community worldwide and one of these challenges has been the urgent and unexpected request for courses taught in person previously, to be offered online [7]. The spread of the new Coronavirus swept the world with incendiary speed, transforming economies, health services and education, leading to the closure of schools and the traditional delivery of teaching in classrooms changed overnight to remote teaching [8].

E-learning solutions are replacing the traditional learning environments generating motivation due to visually pleasing contente [9]. So, a learning model as an alternative that could be used to organize the online learning process during the Covid-19 pandemic was E-Learning, as it can facilitate flexibility in the learning process because learning can be done at any time and anywhere, without being limited by space and time [10]. The situation experienced by educators led to the dissemination and development of E-Learning. In order to optimize real-time interaction in learning management, a teleconference-driven system is proposed and there are better

results for attractiveness, insight, performance, reliability and stimulation [11].

E-Learning is included as a learning style done with computer-aided learning, done remotely and online learning, which with the Covid-19 pandemic, ends up having an impact on the learning process that is carried out electronically [12]. In order to identify the principles of high impact practice in online higher education, a case study is reproduced in similar situations and six strategies are presented to improve student concentration and engagement, which are listed below: making preparation plans for emergencies for unexpected problems; divide the content into smaller units to help students focus; emphasize the use of voice in teaching; work with teaching assistants and get online support; strengthen students' active learning capacity outside the classroom; and combine online learning and offline learning effectively [13].

Understanding that several institutions have resumed teaching periods using the online format, this paper seeks information on the experiences and expectations of students enrolled in the discipline of administration and entrepreneurship, which is a curricular component in engineering courses.

2. Methodology

To identify and understand the vision of students, a questionnaire was applied to the thirty-three participants of the discipline administration and entrepreneurship, which is a curricular component of engineering courses at the Federal Rural University of the Semi-arid, located in northeastern Brazil, which had the first 2020 academic semester remotely resumed in October.

The questionnaire was applied in the first month after the resumption of classes through Google Forms. Google Forms is an integrated web-based application that facilitates the design of online surveys, questionnaires and tests, in which the teacher can submit a series of questions through the form and students' answers can be compiled into a spreadsheet for analysis and differentiation [14]. These forms are being widely used, as they facilitate interaction and access to the research subjects.

The form sought to identify whether the knowledge and experience that students have already taken in courses in the E-Learning modality, contribute to the challenges of resuming the semester remotely. Then, it was asked whether the students have already taken courses with electronic learning or any discipline remotely in supplementary semesters and whether the experiences acquired generate positive expectations for the challenges of the semester resumed without physical interaction.

3. Results

In what follows are presented the students' perceptions and experiences regarding the E-Learning model. Initially, it was asked if they had already taken any course in this modality. Figure 1 shows the graph of the answers to these questions.
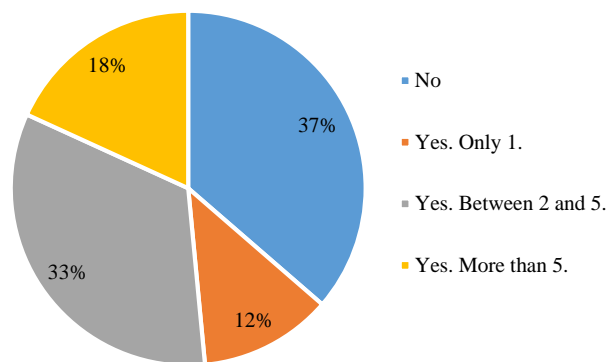

Fig. 1. Online courses.

Of all respondentes, 37% said they had not taken any course in this model, while the others took at least one course and it is highlighted that 33% took between two and five courses.

The next two questions were directed according to the answers obtained previously. In this sense, the twelve students who never tried E-Learning were asked if this fact left them in a more challenging situation for the remote semester that was resumed. Figure 2 shows the data.
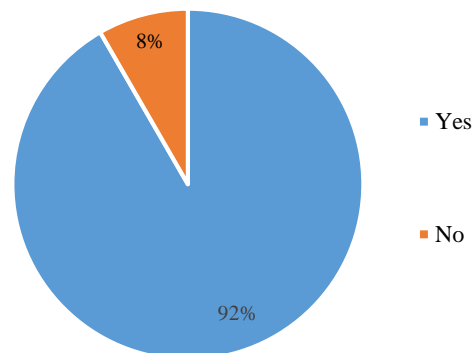

Fig. 2. Challenging situation due to lack of knowledge of E-Learning.

As can be seen, of the twelve students, eleven affirm that the lack of experience with the sport, leaves them in a more challenging situation. To the twenty-one students who have some experience with the online learning format, it was asked if the fact of having taken online courses puts them in a situation of positive expectations for the remote semester. Figure 3 shows the data.
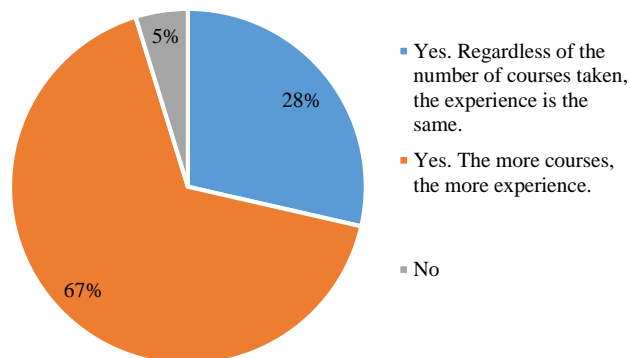

Fig. 3. Positive expectations due to experience with E-Learning.

Of the twenty-one students, only one claims that the experience of online courses does not create positive

expectations for the resumption of the remote semester. Some believe that the expectation is independent of the number of courses taken, while the majority attributes a direct relationship between the expectation and the experience.

In the months of June and July, the university offered an additional semester in which each student could take up to two disciplines. Thus it was asked if they took any discipline in this period. Figure 4 shows the data.
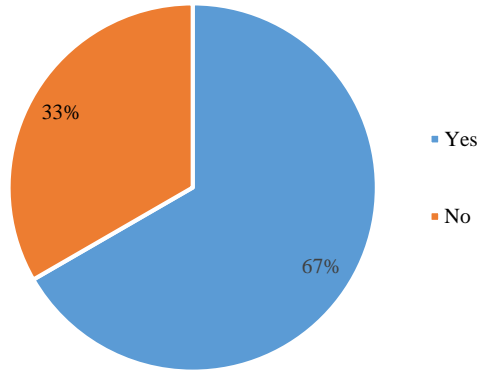

Fig. 4. Supplementary semester.

Of the total of thirty-three students, eleven said they had not taken courses in the supplementary semester. The next two questions were related to the answers presented in Figure 4.

The eleven participants who did not take courses in the supplementary semester were asked whether this fact put them in a challenging situation. Figure 5 shows the data.
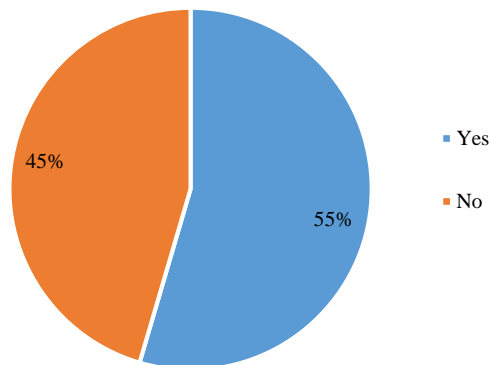

Fig. 5. Challenging situation due to lack of experience with the supplementary semester.

Opinions were divided between the challenges from the experienced semester and opinions are also divided when questioned those who attended the supplementary semester (Figure 6).
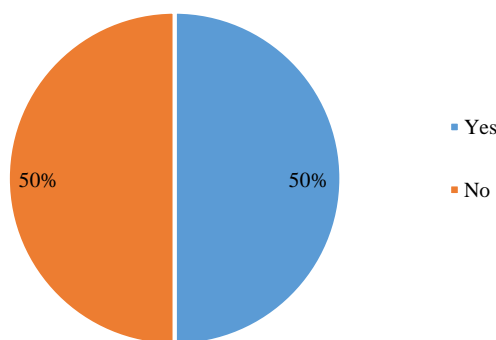

Fig. 6. Expectations due to experience with the supplementary semester.

The data presented in figures 5 and 6 are justified by the fact that the institutions offered face-to-face courses and had little time to adapt to the new modality, while the courses already offered in E-Learning can offer more interactivity giving more expectation to the student as seen in Figure 3. Regarding the challenges expected for the remote semester, the students presented some and are listed in Figure 7.
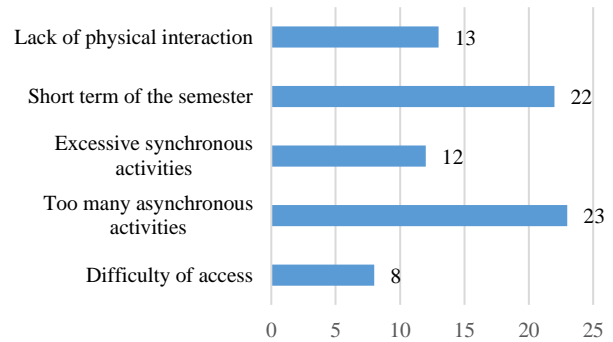

Fig. 7. Challenges of the remote semester.

The challenges most pointed out by the students are the excess of asynchronous activities and your deadline, as well as short term of the semester. The excess of asynchronous activities may be associated with the term of the semester, which has only nine academic weeks. These challenges can be solved with planning and organization on the part of everyone involved in the educational process.

Regarding the discipline of administration and entrepreneurship, it was asked whether the expectation of learning is the same as if it were in the face-to-face modality. The data are in figure 8.
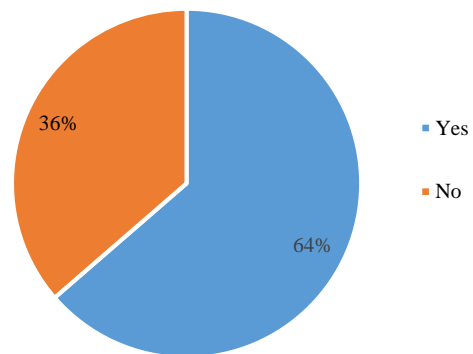

Fig. 8. Expectation of learning about administration and entrepreneurship.

Twenty-one students claim to have less expectation with the discipline offered remotely. This data can be associated with the challenges presented above and can be improved if teachers and students are more familiar with E-Learning.

4. Conclusions

E-Learning has been a methodology that integrates Information and Communication Technologies to promote electronic learning. In this work, their concepts were discussed in order to investigate the student perception at a Brazilian university regarding their experiences with E-Learning with a view to the challenges of continuity of school term remotely.

Due to the social isolation imposed by the COVID-19 pandemic, several institutions have had their teaching periods interrupted and online learning has become the alternative for continuity. In a class, the students were asked about their experiences and perspectives. Most report having already taken courses online and that this experience puts them in a situation of positive expectations while the others who did not take these courses, feel in a challenging situation.

The main challenges pointed out are excessive activities and short term for the academic semester. Due to these and other challenges, 64% of the class believes in less satisfactory learning than if they were in person.

The data presented provoke a reflection on the planning and possibilities of teacher training in order to offer support in Information and Communication Technologies and, in particular, E-Learning, to promote satisfactory online learning meeting educational expectations.

As a future perspective, it is proposed to analyze the current semester in order to verify if the challenges were overcome and expectations were met, as well as to propose e-learning situations in engineering courses.

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