

Teaching and learning through platforms during the pandemic: An alternative resource to teaching at the university

[Enseñanza y aprendizaje por medio de plataformas durante la pandemia: Un recurso alternativo de impartir clases en la universidad]

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Resumen

La innovación tecnológica en el uso de plataformas durante la pandemia es vital en el aprendizaje. Por lo que, se investigó sobre la enseñanza y aprendizaje por medio de plataformas durante la pandemia. El objetivo fue conocer la eficiencia de la enseñanza por medio del uso de plataformas en el aprendizaje de los estudiantes universitarios. La investigación se basa en el método descriptivo con enfoque transversal para lo cual se cuestionó ¿Qué plataformas utilizan para las enseñanzas y aprendizajes? ¿Entienden los temas tratados durante las clases? y ¿Qué propuestas proponen para mejorar las enseñanzas por medio del uso de plataformas? Obtenidos los datos de cada mes, se procesaron mediante estadísticas básicas. Los resultados determinaron que en el uso de plataformas utilizadas para la enseñanza destacó con 90 % Google Meet, comprendieron las enseñanzas por medio del uso de plataformas con 90 % en junio y comunicación constante como propuesta para mejorar la enseñanza con 55 % en mayo y junio. Se concluye que, hubo eficiencia en las enseñanzas por medio del uso de plataformas como Google Meet y la constante comunicación mejora el aprendizaje del estudiante universitario.

Palabras clave: Plataformas, Enseñanza, Aprendizaje, Propuesta.

Abstract

Technological innovation in the use of platforms during the pandemic is vital in learning. Therefore, teaching and learning through platforms during the pandemic was investigated. The objective was to know the efficiency of teaching through the use of platforms in the learning of university students. The research is based on the descriptive method with a cross-sectional approach, for which it was questioned what platforms do they use for teaching and learning? Do they understand the topics covered during the classes? And what proposals do you propose to

improve teaching through the use of platforms? Once the data for each month was obtained, they were processed using basic statistics. The results determined that in the use of platforms used for teaching, Google Meet stood out with 90%, they understood the teachings through the use of platforms with 90% in June and constant communication as a proposal to improve teaching with 55% in May and June. It is concluded that there was efficiency in the teachings through the use of platforms such as Google Meet and constant communication improves the learning of the university student.

Keywords: Platforms, Teaching, Learning and Proposal.

I. Introduction

Internet connection via wired and wireless networks in hard-to-reach places and everywhere has improved in recent years with wide coverage, fast download and open access everywhere. This technological improvement has advanced at the same time with the innovation of social communication and information platforms, which has exposed the exploration of cultures, news, education, health, opinions, interaction and other aspects. According to Arab L. and Díaz G. (2015), they highlight the positive aspects of social networks that provide opportunities for learning, entertainment, socialization, skill development, creativity and enhance motivation to learn, especially among young people, adolescents and others, negative aspects such as emotional distance, loss of communication limits and the ability to listen.

Today, technological progress has improved the presentation of platforms such as download speed, presentation, data processing, information search and other technical tools that improve problem capture and resolution. Therefore, this innovation has had a positive impact on the Covid-19 pandemic; since these programs serve until now as a means for communication, information, teaching and interacting with other people in other places. This analysis is supported by Gamella-González (2020), who concludes that learning in the digital ecosystem requires a prudent and strategic use of technological tools and at the same time of language that facilitates the capture of new topics.

It is also necessary to mention that to date there are many free access platforms and it is used for virtual classes in all countries such as Moodle, Canvas, Google Classroom, MS Teams, Flipgrid, Additio, Wiris, Edmodo, Wakelet among others (De la Pena, 2020). In Peru, universities use google meet, zoom, Microsoft Teams, Cisco Webex among others, which are easy to use and have audiovisual quality, presentation of topics which favors learning according to Llesquen (2020), concludes that the Microsoft Teams Platform It has a positive effect on educational management since it has allowed organizing, planning and directing the processes of the Educational Institution in an efficient manner, satisfying the social demand to provide quality education.

Regarding the aforementioned, it is highlighted that the use of platforms as virtual tools in education at the primary, secondary and university levels is freely accessible, interacts through writing, audio and image, stores information, searches for data and other points. , which improves student learning in different subjects of their academic schedule. According to Cuantidíoy et al. (2020) mention that the interaction of users with the virtual platform in the exploration phases of course classification, course presentation, exploration times, would allow obtaining user information and by applying the advantages of artificial intelligence for the sake of to shape the user's profile with respect to their learning style.

In the case of university education, virtual platforms are very helpful to teach classes on a synchronized schedule, interact in the place where the student and the teacher are. This has benefited in reducing the spread of Covid-19, the cost of transportation and at the same time has

improved teaching; because the topics that are exposed are appreciated live with clarity and sharpness, which favors the student to learn the topics of the programmed courses. This analysis is based on Fernández-Pampillón, C. (2009) who mentions that the purpose is to contribute to having a clearer vision of the concepts that we consider key to understanding these educational platforms and their use in one of the currently most popular application contexts. extended that are the university virtual campuses. Likewise, Gallegos et al. (2021) conclude that, to promote emotional learning in university students, the teacher must carefully choose the virtual tools, since they must be in tune with those who must use them and enhance their emotional intelligence. Regarding the aforementioned, research was carried out on teaching and learning through virtual tools during the pandemic, as an alternative resource to teaching at the university. The objective was to know the efficiency of teaching through the use of platforms in the learning of university students. Likewise, it is important to affirm that the purpose of this research is to know the improvement of the learning of university students through the use of platforms and what proposals can be implemented to optimize the efficiency of these virtual programs. Once these results are obtained, they will serve as a diagnosis for new implementations to improve the teachings and a base source for other investigations.

II. Materials and Methods

Type of investigation

The research is descriptive; since it was quantified through observations and academic attitudes about the use of platforms and the improvement of the learning of university students. The data was taken into consideration of the learning of the courses of the school schedule. The research was cross-sectional; since it was performed only once and applied the mixed method for analysis and interpretation.

Population and sample

The population is 13,193 students from the José Faustino Sánchez Carrión National University, enrolled according to the last census (INEI, 2016). The sample is 20 students from an academic year of the Faculty of Engineering whose academic attitudes were evaluated during the course of teaching.

Data collection techniques and instruments

For data collection, the survey technique was used, which consists of 3 questions.

Statistical analysis

Collected the data of the evaluations during the teaching of the academic semester, they were processed by means of basic statistics and tables and figures were designed that were interpreted and analyzed.

Procedure

The evaluation data was made as follows:

- A representative sample of 20 students from an academic cycle of the Faculty of Engineering was taken.
- The learning of academic subjects was evaluated during the course of the academic schedule. Teaching was through platforms.
- The evaluations were made taking into account the following techniques such as: the approach of questionnaires on what platforms do they use for teaching? Do they understand the topics covered during the classes? And what proposals do you propose to improve teaching through the use of platforms?

- Regarding which platforms the students use, the last month was considered as a representative result; since, this answer is in accordance with what they used during the development of classes.
- Once the data for each month was obtained, it was processed using basic statistics, then tables and figures were prepared, interpreted and analyzed.

III. Results

Use of Platforms

According to the results of the use of platforms used for teaching detailed in table 1, it can be seen that 90% of the students used the virtual tool Meet Google (see figure 1). This result shows that this program is considerable, due to its easy access, image presentation, interactive videoconference and easy download. What served in improving the uptake of teachings and interactivity. This analysis is supported by Cedeño-Escobar, M. et al. (2020) who conclude that the Classroom and Meet Google applications are free, simple and easy-to-use options that allow the main actors in education to interact asynchronously; teachers and students, making productive use of time and dedication in the acquisition of valid knowledge according to the interests and needs of the student, strengthening the teaching-learning process.

Table 1. Use of platforms used for teaching (%)

	Meet google	Zoom	Microsoft Teams	Cisco Webex
Use	90	85	75	70
Not use	10	10	15	20
Not opinion	0	5	10	10
Total	100	100	100	100

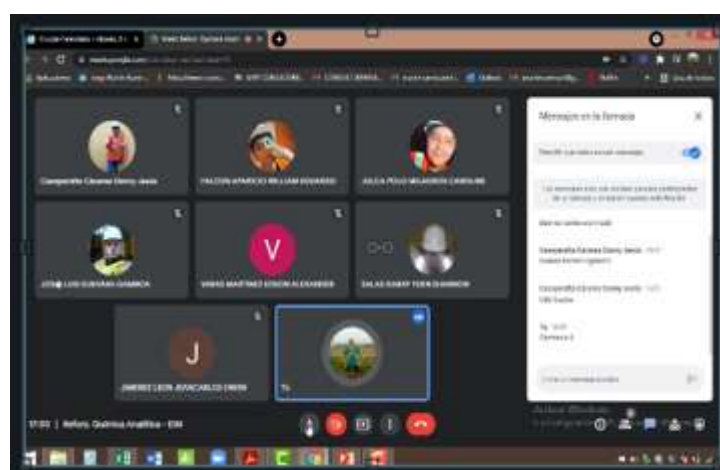


Figure 1. Student classes through the Google Meet platform.

They understood the teachings on the platforms

Regarding the Understanding of the teachings through platforms that are detailed in table 2, it is indicated that 85 to 90% on average capture the message of the educational topics programmed

in the schedule. This result is due to the fact that Google Meet is a virtual tool that is freely accessible, has an orderly presentation and is easy to use. What improves the presentation of the topics to be discussed, interact and schedule the class time (reminder). This analysis is based on Esquerre Cabrera, A. (2022), who concludes that it was determined that, if there is a relationship between variables, we can conclude that Google Meet is significantly related to university teaching in education students of a university Private of Lambayeque, 2021.

Table 2. They understood the platform teachings (%)

	April	May	June	July
Understand the teaching	80	85	90	85
Not understand the teaching	15	10	10	5
Not opinion	5	5	0	10
Total	100	100	100	100

Proposal to improve teaching through platforms

Regarding the proposal to improve teaching through the use of platforms indicated in table 3, it is observed that an alternative that improves teaching in the use of virtual tools is the constant communication that stands out in the month of July. with 55%. Therefore, constant communication and interactivity in the class are analyzed, improving teaching, obtaining positive results in learning the topics covered within the schedule. The analysis is based on Tapia Márquez, C. (2021), who concludes that it was determined that there is a significant relationship between the use profile of Google Meet and academic performance in the area of communication, reaching a moderate correlation of 0.669 and a level of significance of 0.000, which implies that there is a moderately significant relationship.

It is also mentioned that figure 2 shows the use for slides, which is usual for classes.

Table 3. Proposal to improve teaching through platforms (%)

	April	May	June	July
Constant communication	50.0	55.0	55.0	50.0
Interactivity	35.0	25.0	25.0	30.0
Create a family atmosphere	10.0	15.0	20.0	10.0
Not opinion	5.0	5.0	0.0	10.0
Total	100.0	100.0	100.0	100.0



Figure 2. Presentation of classes by slide by Google Meet

IV. Conclusions

It was determined that there was efficiency in the understanding of the teachings through the use of platforms with an average of 90%, which indicates that the use of this virtual tool improves the presentation of the class, favors communication and is easily accessible. Therefore, the use of this software improved learning in university students.

The platform used by most students was also determined to be Google Meet. This preference is due to the characteristics of easy access, image presentation, allows continuous interaction, simple and practical handling; being ideal for student learning.

It is concluded that constant communication during class development stands out as a proposal for improving teaching through the use of platforms. Since, the capture of the themes, participation and interactivity strengthens the learning of university students.

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