

## THE INFLUENCE OF ONLINE EDUCATION OVER MARKETING STUDENTS EDUCATION

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### **Abstract**

*This article aims on analysing the current educational environment in the field of economics and marketing in order to determine the influence of online education over the students educational experience in hybrid or online forms of education in comparison with physical education. The context of rapid conversion of the educational institutions educational systems based on physical attendance to an online based approach due to the pandemic of 2020 was regarded as a prime factor of the analysis that was based on case studies research, reviewing data from universities such as Netaji Subhas University and Tamaulipas Mexic University in order to obtain a global perspective of the impact of the digitalization phenomena in education. The quantitative case studies chosen offer an accurate image of the reality the university systems had to accommodate to in order to follow the process of education as well as the downsides and limitations of educational systems based on online interaction, showcasing the affinity of students towards more traditional methods of education. The technologies used in order to establish such educational systems were discussed, from hardware limitation to software key elements that made possible for students to attend online courses during the pandemic, leading for university to increase the number of online educational programs.*

**Keywords:** Education systems, Online Education, Marketing Education,

**Classification JEL:** M31

### **1. Introduction**

In the current era, we are witnessing a significant change in the way human activities are required to adapt due to innovation and technological advancements. In recent years, the use of computers and the internet has contributed to the development of online learning activities. In 1989, the University of Phoenix was the first higher education institution to use distance communication services in order to launch the first online educational programs (Sofi-Karim, Bali & Rached, 2023). Researchers have defined online education as "planned learning that normally takes place in a different location from teaching, requiring special course design and instructional techniques, with communication being transmitted through various technologies" (Sewandono et al., 2023).

#### **Context of Online Education Growth:**

During the COVID-19 Pandemic, the educational system was more focused on implementing online educational strategies so that teachers and students could continue with the teaching and learning processes. Education was affected, and educators and students had to undergo major changes to participate in activities through technology-enabled channels. Teachers, administrators, students, and their families adapted to developing content through online platforms.

Online education system is an increasingly discussed factor at present, with a large number of online platforms and applications continuously developing and supporting distance teaching and learning. The use of the internet through online studies has become a widely used source in the

educational system after the COVID-19 Pandemic period (Svihus, 2024), and the e-learning system is an essential source of information transmission to users. Therefore, the opportunities presented by technology are vast and, if utilized properly, can help revolutionize education and improve the quality of learning outcomes (Tubagus et al., 2023). Subsequently, educational institutions have been determined to equip themselves with state-of-the-art technological tools, such as laptops, tablets, smart monitors, e-books, educational software, and electronic learning platforms (Miniscalco, 2024) to increase students' interest in the online education system. Higher education institutions have begun to explore and implement online learning methods, distance learning programs, and learning management systems.

These approaches provide students with greater flexibility in terms of schedule and location, allowing greater access to higher education, especially for students living in remote areas. Additionally, educational technology has encouraged the expansion of digital resources, including virtual libraries, online guidance platforms, and automated assessment systems, with educational institutions developing strategies to leverage these tools and improve the quality of teaching and learning.

### **Implementation of Technology in Online Education Systems:**

The implementation of technology in the educational system is becoming increasingly widespread worldwide. Online courses have transformed education into a much more convenient and accessible medium for all students (Nambiar, 2020). Online education is a teaching method that allows educators and students to use a variety of specific methods and techniques due to the development of distance education, thus facilitating the process of information transmission to students through virtual platforms such as Zoom Meeting, Google Classroom, Microsoft Teams, or other internal platforms.

However, the online education system can have both positive and negative effects on students. On one hand, a study published in 2023 by Cramarenco and his colleagues analyzes students' perception of digital technology in relation to the online education system, and as a result, found that students contribute to accepting online education as an efficient, modern, and relevant learning medium (Cramarenco, Burcă-Voicu & Dabija, 2023). The integration of technology has allowed for improved access to educational resources, where educational opportunities are increasingly accessible for students and educators. Through continuous investments in technology implementation, educational institutions can utilize cutting-edge technologies, such as artificial intelligence, to develop and create more engaging learning experiences for students. By adopting the online education system, universities can create a more pleasant and interactive educational environment, aiming to improve student outcomes.

On the other hand, a number of foreign researchers highlight the fact that 65.9% of students from a sample of 358 respondents at Netaji Subhas University of Technology prefer physical classes over online ones (Chakraborty et al., 2021). This percentage is largely due to issues related to adapting to the online education environment, as not all students have equal access to the internet and necessary digital technologies. Additionally, educational institutions have shown a low digital capacity, resulting in a lack of technological equipment and gaps in educational activities (Timotheou et al., 2023). Considering that the integration of online technologies is a complex process and continuous evolution is necessary, the final decisions of educational institutions have been to identify factors that can encourage effective and efficient change in the educational sphere.

In recent years, educational institutions worldwide have increased their investments by implementing technology and prioritizing online educational processes to adapt students and educators to new changes. The digitalization of universities offers opportunities to enhance the learning process, while institutions are required to increase their level of digital capacity by establishing new policies, necessary infrastructure, as well as digital competence for both students and educators to support the integration of technology in online teaching and learning practices. Therefore, the activities and teaching methods of professors are essential for students to have a

learning experience and emotional support in the context of circumstances caused by online education.

The online education system plays an extremely important role in shaping students' vision, with online education focusing on their evolution. Students learn to be autonomous, responsible for their study hours and materials, and accountable for their progress and results. In turn, the role of the teacher is reduced, as they no longer have the opportunity to use body language during classes. Therefore, the main strengths lie in planning, organizing, presenting, and evaluating learning experiences that allow all students the opportunity to develop their skills.

Therefore, as a teaching-learning process that takes place through virtual platforms, online education is characterized by the different location of the teaching framework and the student, which does not prevent them from communicating and exchanging information. Due to this distance learning system, the student has a greater responsibility in the learning process, as the situation requires them to self-manage their learning. However, the quick access to information, the daily updated study content, the entire information stored in a storage space, and the numerous advantages of technology provide full support to the student. Additionally, the perception of students at the Autonomous University of Tamaulipas-Mexico towards virtual education has been positive, with the majority of students considering that online teaching has facilitated their learning (Gómez, Cantú & Escamilla, 2024).

### **Case Study on how Online Education Influences Scientific Competencies:**

#### *1. Research Problem and Objective*

**Research Problem:** The primary question for this case study is: How does online education influence the scientific competencies of students in a specific academic context?

**Research Objective:** To explore the impact of online education on students' abilities in scientific competencies such as critical thinking, problem-solving, data analysis, scientific writing, and conceptual understanding of scientific concepts.

#### *2. Formulating Hypotheses*

*H1: Online education improves students' ability to conduct scientific research and critical analysis compared to traditional classroom-based education.*

*H2: Students participating in online education programs publish more scientific papers than students who undergo classic education.*

*H3: Online education enhances students' understanding and application of scientific concepts more effectively when combined with interactive and practical learning*

#### *3. Sampling and Data Collection*

100 responders to the questionnaire, graduates of bachelors programs or masters programs in sciences, 50 undergoing classic physical attendance education, 50 undergoing only online education programs.

The questionnaire was structured in 13 closed questions that aimed at checking if the graduates published scientific papers, conducted scientific research or worked in the academic/scientific field.

#### *4. Results*

It is shown that 26% more students that have undergone online education have published articles in scientific journals than the ones who have completed a study program physical presence based.

The study showcases that 30% more students that have undergone a BA or MA program online have conducted scientific researches outside the study program compared with the students that finished the classic physical presence programs.

**Graduates who work in the academic field**

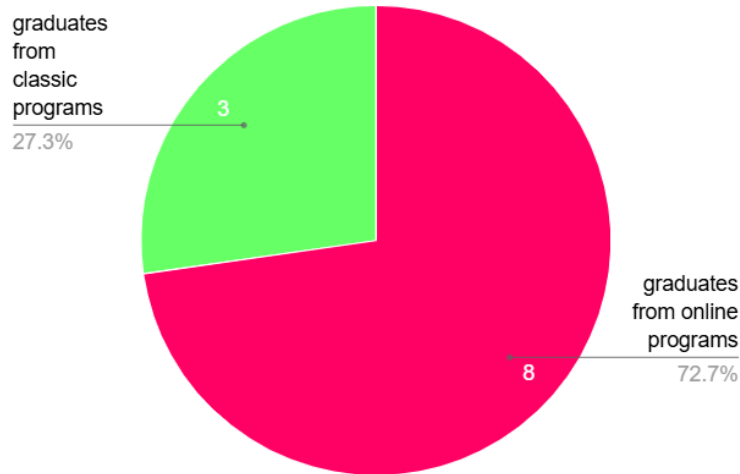


Fig.1 Graduates who work in academic field

**Graduates who work in scientific field / research**

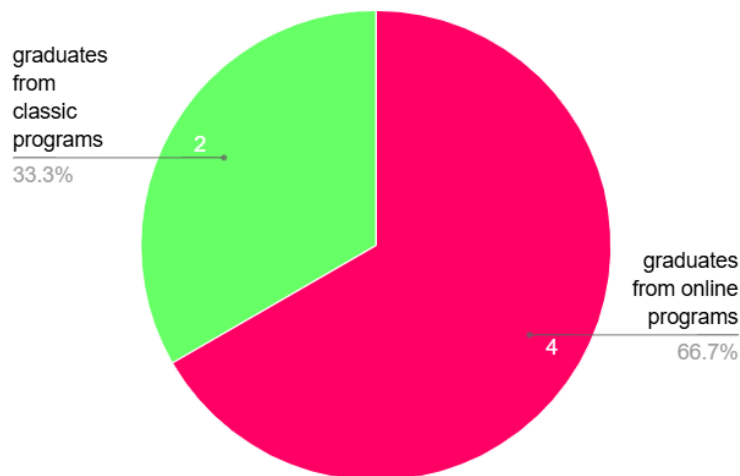


Fig.2 Graduates who work in the scientific field/ research field

As we can see, more graduates from the online studies tend to work in the academic field as well as the research field, proving greater scientific skills than the ones who have completed a classic education program.

Concluding the case study, all 3 hypotheses being confirmed by the results showcased by the respondents.

## 2. Conclusions

In conclusion, the online education system in the students' perspective represents a key factor in the era of technological advancement. This virtual teaching system, along with various platforms such as Zoom Meeting, Google Classroom, Microsoft Teams, or other internal platforms within universities, has positively impacted students by enhancing their development due to the necessity of adapting to the resources provided by educational institutions.

Adding up, Online education improves students' ability to conduct scientific research and critical analysis compared to traditional classroom-based education, quantified by the amount of scientific papers published by the graduates who undergone an online based program compared with a classic education based one. On the other hand, the number of students that work in academic field / scientific field after graduation is much higher when analysing the numbers from online programs compared to the education programs that required a physical presence.

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