


# Higher Education Student Emotions: Empirical Evidence From Online Classes Given During the COVID-19 Pandemic

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## ABSTRACT

This article presents the perception of 611 students from public universities in Mexico about online classes in pandemic times. Exploratory factor analysis was conducted. Vygotsky's contributions are taken, especially those related to emotional manifestations. It is concluded that the most important factor in this change is the emotions that are identified as an impulse to act during online classes, given the didactic and pedagogical components, resources, and supports for students that promote learning. This proposes a framework for considering the emotional aspects of positive engagement in student learning online. There is evidence of some balance between the advantages and disadvantages of online education. It also suggests that women perceive more negative emotions such as disappointment and frustration in the online education experience. The teacher, being a vicarious learning model, can innovate in education by promoting peripheral participation with other playful activities that involve abstract, applied, and situated learning.

## KEYWORDS

COVID-19, Emotions, Frustration, Higher Education, Learning, Mexico, Online Classes, Online Environment Advantages, Students

## 1. INTRODUCTION

The need to stay at home due to the coronavirus pandemic has changed educational systems, which have had to design strategies for academic activities at home: online education, also called “virtuality.” The term “virtuality” comes from ancient times. The etymology of the word dates from 1483. It defines a person endowed with virtue or power, as an intangible concept, emerged in the mid-17th century (Bennett et al., 2005). Later on, virtuality can be referenced through correspondence education in England, when Issac Pitman started a short course in 1840 (Mahnegar, 2012). Surely, receiving a letter through this service involved certain emotions. In the 1980s virtuality became a common term. It was adapted by the computer revolution coming to mean something that makes itself appear or exist through technology (Gilmore & Warren, 2007). When people use screens, “*faces are rich in information about individual identity, and also about mood and mental state*” (Sathik & Jonathan,

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2013, p. 2). The transfer of knowledge or skills using the global network as a distribution channel changes the teaching-learning process to a constructivist approach (Kumar et al., 2001).

Virtuality is just one more way to facilitate the acquisition of knowledge and a challenge for academia. The process goes beyond adapting everything to offer a virtual campus. It is about training the student to take responsibility for the personal disposition that entails cognition: the need to learn and to “appropriate” the attitude from the emotional plexus of who receives the knowledge, and who teaches. The demand for virtuality for the academy implies advancing the forefront of the changes triggered by evolution in the cognitive, technological, and emotional growth of today’s students.

Generally private universities have undertaken virtual education, making them more efficient and sustainable in global times. For instance, the California Virtual University offers about 700 courses online although no degrees. Online education has become a golden industry with the expectation of growing (Kumar et al., 2001), and it keeps growing and gaining popularity (Qiu, 2019). From a sample of 538 surveys of university students, Selim (2007) identifies four factors in this process: instructor, student, information technology, and college support. All of these must be taken into account when developing or implementing courses based on e-learning. However, it does not take account the emotional aspect.

Facial expressions are the main source of information, along with words, to determine the internal feelings of students (Sathik & Jonathan, 2013). Currently, there is a challenge that appeals to the emotional resilience of those who must face virtuality in public universities. During the Covid-19 pandemic, Koçoğlu and Tekdal (2020) analyzed the opinions of professors from public universities in Turkey. They identified that online learning interaction improves the participation of parents in the education process.

Following this idea, Pekrun et al., (2007) argue that most learning-related emotions are considered achievement emotions. Nevertheless, in the particular case of switching from a traditional model to an online one, it is worth paying attention to the students’ emotional perceptions. With the pandemic being a unique experience, we associate virtuality as a change of moods that modify the flow state of students by impacting academic performance (Goleman, 2000).

The processes, dimensions, types, and barriers of learning are characteristics that should be included in any theory of learning. On the other hand, the internal conditions of learning are characteristics that influence the student’s learning. This is because it includes not only cognitive but also emotional and social facts (Illeris, 2009). Brown and Desforges (2006) argue that Piaget’s theory is a structuralist theory: education occurs as a result of a series of stages that originally comes from physical action but moves through a complex process of reconstruction towards mental structures each time more sophisticated. Others, like Lazarus and Smith (1988), with the cognitive perspective, argue that an emotion is the product of the individual’s interpretation of the changing aspects from one moment to another of their most appreciated values and commitments. However, Vygotsky (2004) highlights the importance of the environment in children’s learning, as well as sociocultural learning framework regarding the relationships between internal psychological functioning, and intrapsychological functioning. This relationship is established by the notion of the Zone of Proximal Development (ZPD). By adjusting this concept to the context of higher education, this work replaces Vygotsky’s general idea of the role of the child-adult with that of the university student-teacher-family-classmate.

Taking Vygotsky (2004) and Pekrun et al., (2007) theoretical and emotional perspectives, the objective of this work is to highlight the emotions of public university students in Mexico, students of bachelors in administrative economics sciences. These emotions arise when they move the classroom to an online learning environment at home. In addition, the goal is to identify the variety of emotions associated with the advantages and disadvantages of online education, and patterns of association between types of emotions and gender. Due to the fact that public education includes specific non-profit services, if the university student expresses dissatisfaction with higher education it means failure in educational life, since satisfaction is akin to the perceived value of the student’s

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