


## Chapter 6

# Transformation in the Classroom: Hybrid Education With the Use of Microcontent

**María Elena Zepeda Hurtado**

 <https://orcid.org/0000-0001-9764-5013>  
*Instituto Politécnico Nacional, Mexico*

**Claudia Angélica Membrillo Gómez**  
*Instituto Politécnico Nacional, Mexico*

**Francisco Javier Arias Candanosa**  
*Instituto Politécnico Nacional, Mexico*

### ABSTRACT

*This chapter is the result of the study of the way in which microcontents were incorporated in the hybrid modality in the first semester (January – June 2023) in the different learning units taught in the areas of institutional, humanistic, scientific, and basic technological training at the upper secondary level of the Instituto Politécnico Nacional. The research has a quantitative approach with a descriptive scope based on a comparative approach. The sample population was made up of 150 students from the second, fourth, and sixth semesters to whom the questionnaire is applied as the data collection instrument. The results indicate that teachers incorporate as main materials videos, texts, diagrams, and drawings; on the part of the students, they state that the incorporation of these favored motivation, concentration, access, and creation of content. The chapter addresses pedagogical implications and makes recommendations for the integration of microcontent in the hybrid modality.*

DOI: 10.4018/979-8-3693-0094-7.ch006

## **INTRODUCTION**

### **From Face-to-Face to Virtual Education**

Little has to be said about the origin that caused the change from face-to-face to virtual or online education, the presence of COVID-19, the health emergency, changed life in many ways, they took on educational challenges: students, teachers, parents of family and authorities so that the technology was immediately incorporated. Most establishments and institutions made incredible efforts to move their work completely online.

In the case of education, the change in the face-to-face modality was known as emergency remote education (ERE), according to González (2021), distance emergency teaching is the strategy of transferring the educational action to a virtual medium., which was originally intended for a face-to-face modality. Therefore, since the beginning of the global crisis, it was the only viable option to respond to the demand to continue teaching and learning processes around the world. (Ruz-Fuenzalida, 2021).

The ERE is installed with its limitations under improvisation and technological and pedagogical ignorance, the skills that teachers had before the pandemic were insufficient to face the challenges of education in a distance environment (González et al., 2021) which would lead us to think about other factors that were necessary, in terms of the control of the subject, its development, implementation and evaluation process, demand for support from the instructional design, development and management teams, in order to have quickly develop skills to work and teach in an online environment (Ruz-Fuenzalida et al., 2021).

Despite all this, the ERE was established as a way out to give continuity to the students' training processes, which implied, according to Peñuelas et al. (2020), that the teacher learned on the fly, improvising, and at the same time, developing creative and innovative proposals, which demonstrate the capacity for adaptation and flexibility in the face of changes.

### **From Virtual to Hybrid Education**

Upon return from confinement, known as post-confinement, the reopening of educational institutions makes physical social distancing measures palpable within the classrooms to consider the rule of "healthy distance" the groups could not appear in their entirety in the classrooms face-to-face sessions due to the number of students per group and the small spaces, depending on the number of members per group, the schools estimated that between 30% and 50% attended, which as a solution to this problem gives rise to the hybrid education. In addition to the necessary flexibility,

21 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: [www.igi-global.com/chapter/transformation-in-the-classroom/334804](http://www.igi-global.com/chapter/transformation-in-the-classroom/334804)

## Related Content

---

### Personal Analytics Explorations to Support Youth Learning

Victor R. Lee (2018). *Digital Technologies and Instructional Design for Personalized Learning* (pp. 145-163).

[www.irma-international.org/chapter/personal-analytics-explorations-to-support-youth-learning/199537](http://www.irma-international.org/chapter/personal-analytics-explorations-to-support-youth-learning/199537)

### Gaming in Education

Allison LaFalce Acevedo (2021). *Emerging Realities and the Future of Technology in the Classroom* (pp. 85-101).

[www.irma-international.org/chapter/gaming-in-education/275649](http://www.irma-international.org/chapter/gaming-in-education/275649)

### Capacity-Building for Sustainability: A Cooperative K-12 Regional Education Service Provider Case Study

Clark Shah-Nelson, Ellen A. Mayo and Patience Ebuwei (2020). *International Journal of Technology-Enabled Student Support Services* (pp. 40-54).

[www.irma-international.org/article/capacity-building-for-sustainability/255121](http://www.irma-international.org/article/capacity-building-for-sustainability/255121)

### Is Schema Theory Helpful in Teaching and Learning Based on Visualizing Research?

Xinhong Xia, Xianglan Chen, Jing Zhang, Hongliang Lou and Yachao Duan (2022). *International Journal of Technology-Enhanced Education* (pp. 1-15).

[www.irma-international.org/article/is-schema-theory-helpful-in-teaching-and-learning-based-on-visualizing-research/300332](http://www.irma-international.org/article/is-schema-theory-helpful-in-teaching-and-learning-based-on-visualizing-research/300332)

### A Bibliometric Analysis of Automated Writing Evaluation in Education Using VOSviewer and CitNetExplorer from 2008 to 2022

Xinjie Deng (2022). *International Journal of Technology-Enhanced Education* (pp. 1-22).

[www.irma-international.org/article/a-bibliometric-analysis-of-automated-writing-evaluation-in-education-using-vosviewer-and-citnetexplorer-from-2008-to-2022/305807](http://www.irma-international.org/article/a-bibliometric-analysis-of-automated-writing-evaluation-in-education-using-vosviewer-and-citnetexplorer-from-2008-to-2022/305807)