CONSTRUCTION OF CONTENT FOR VIRTUAL EDUCATION: LOCKDOWN'S CIRCUMSTANTIAL CHALLENGES

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La construcción de contenidos para la enseñanza virtual: retos coyunturales en el confinamiento

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Abstract: After the global health concern caused by COVID-19, education has been subject to epistemological, ethical, sociological, pedagogical, evaluative and even daily changes; this fact suggests focusing the reflection on virtual education *per se* and avoiding the replication of face-to-face education models in digital environments. The present article deals with the experience at Politecnico Grancolombiano and with some reference elements for education's content construction in a situation of lockdown. Education; higher education; content construction; learning scenarios.
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Keywords: Education, higher education, content construction, learning scenarios.

Resumen: Tras la situación de salubridad pública mundial a causa del COVID-19, la educación ha asumido cambios epistemológicos, éticos, sociológicos, pedagógicos, evaluativos e incluso cotidianos, que proponen centrar la reflexión en la educación virtual per se y no desde modelos replicantes de la presencialidad en entornos digitales. El presente artículo versa acerca de la experiencia del Politécnico Grancolombiano y algunos elementos de referencia para la construcción de contenidos para la educación en situación de confinamiento.

Palabras clave: Educación, educación superior, construcción de contenidos, escenarios de aprendizaje.

INTRODUCTION

Politecnico Grancolombiano, a university with 40 years of service to Colombian education, began its virtual education model in 2008 by developing a robust platform that comprises an innovative educational model and the generation of unique pedagogical content for virtual learning, it was designed for a community of over 45,000 virtual students and 9,612 face-to-face students who are distributed in 101 active academic programs (67 of which are virtual and the remaining 34 are face-to-face). Poli's challenge as a higher education institution has always been framed in the democratization of access and qualification of professionals in different areas of knowledge for regional development (Institución Universitaria Politecnico Grancolombiano, 2020).

In addition to this challenge, and unforeseeably, the global pandemic caused by SARS-CoV2, forced people throughout the world to lockdown in their homes, curbing any possibility of human contact and shocking education's epistemological, ethical, sociological, pedagogical, evaluative aspects and even its daily aspects, that resulted in a reflection of virtuality *per se*, not from the point of view of face-to-face education as technological *leitmotiv* of traditional classrooms. The pandemic's imminence made way to adjustments in curricular structures, devices for communication and reorganization of learning times, prompting changes to pedagogical models with core aspects that are based on "home education" and drift apart from traditional paradigms of "school-social institution".

The early days of the "home education" implementation in lockdown were marked by a mimesis of the "theory of chaos" (Bravo-Torres et al., 2015): "chaotic stages" pertaining technological access, related to teachers and students' devices and Internet connections, originated the reemergence of alternatives such as educational radio and television. On the other hand, "unstable stages" (Janura, Bizovska, Svoboda, Cerny, & Zemkova, 2017) were evident in diverse educational communities' digital literacy, where free teaching practices were quickly replaced by the video-based infrastructure, learning management systems -LMS-, collaborative chatrooms, virtual blackboards, among others, leading to an explosion of update courses on digital tools, audiovisual tutorials, as well as to traditionalist criticism of technology-oriented teaching-learning processes: Is learning really being attained in virtuality? Is the education's quality the correct one?

"Stable stages" took place in some institutions which displayed perseverance, dedication and systematic exercise of virtual educational practices, although some minor adjustments were required in terms of coverage, adequate experience had led to correct virtual environments and contents. In this outlook, we were lucky to have been summoned by the Ministry of National Education's "*Plan padrino IES*" (Higher Education Institution Sponsor Plan) to accompany face-to-face education processes assisted by ICT of peer institutions in chaotic or unstable stages that had failed to contemplate virtual implementations in the development of their academic processes due to their nature or modality.

As sociologists dedicated to educational reflection, we were able to validate (during the progression in lockdown) the configuration of methodologies aimed at virtual training support dependent on the construction of ecosystems or "scenarios", LMS and a shift in ideas regarding the teachers' daily task. This includes ideas of Training Team (*directors-teachers-students*) in the suggestion of challenges to consolidate collective knowledge. (To delve into this ideas, we suggest reviewing authors such as Dewanti, 2016; Geertshuis & Liu, 2016; Meza-Bolaños, Compañ, & Satorre, 2019; van de Heyde & Siebrits, 2019; Veiga, Campos, Braga, & David, 2016; Cortes et al., 2019; Daza-Orozco, 2015b, 2015a, 2019).

CIRCUMSTANCES AND TEACHERS' TASKS

Given this situation, a review of the circumstance's mandatory virtualization faced us with the fact that academic tasks could not turn into a factor that adds emotional load to households. In order to balance dedication and load of different subject's activities it was necessary to review the academic load and the way in which we are doing things.

Understandably, the dynamic of students doing virtual work must be overwhelming for teachers, thus, they have forgotten that the face-to-face classes planning was set for classes in the school's schedule. If teachers are requested to use innovation and pedagogy without communicating with their peers, the result can be a blast of activities that aim at appropriating the goal set by an individual subject. But clearly, the amount of requested work may overflow the classroom's hours to which everyone is used to in the face-to-face modality; this context makes us wonder about several situations that our discussion needs to address.

Constructing virtuality-oriented content cannot be achieved in a short period of time, it requires planning, construction and development, all of which had not been foreseen for these circumstances. Based on the current pandemic, recent schools of thought ponder whether teacher training programs should emphasize on preparing students for online learning and on the long-term consequences of education teaching (Varea & Gonzalez-Calvo, 2020).

The pedagogical approach embraces cognitive psychology and constructivism. The cognitive psychology perspective (Piaget, 1962, 1968, 1973, 1986) rests on Piaget's view, understood as the forming a knowledge structure to generate new and appropriate information. Constructivism gathers Piaget's concept in terms of interaction with knowledge objects, as well as Vygotsky's suggestion of interaction with others; and different authors indicate the importance of meaningful interactions (Jumaat et al., 2019; Riestenberg, 2020; Shin, Kim, & Song, 2020). So the tutor must relate pedagogy, communication and online mediation in order to achieve a balance (Vygotsky, 2013).

LEARNING SCENARIOS AND RESOURCES

Designing activities for virtual learning education requires a cautious selection of structures and routes that guide students to information management and interaction in favor of knowledge management. It is also indispensable to have permanent and active synchronous and asynchronous communication, for which teachers need tutorial, didactic and technological competences, including communicative and interpersonal competences in each of the aforementioned categories (Institucion Universitaria Politecnico Grancolombiano, 2017, p.5).

> We have understood that digital scenarios require multimedia elements and it is thus necessary to speak multiple 'languages'. Not only students have learned in this long road of virtual education. We at Politecnico Grancolombiano have also acquired significant experience that has helped us consolidate the dream of providing access to quality education for Colombians. (Norman-Acevedo, 2018)

Content virtualization proposes a new paradigm of ICT-assisted education, its goal is to facilitate the process of undertaking activities in any academic context with the support of information devices and bearing in mind social relationships between the students and the tutor to drive knowledge. This vision calls for means to bolster shared experiences, taking advantage of the communication and computing skills of online devices, leaning on direct communication or on tapping available technological tools (Bravo-Torres et al., 2015). This is challenging for educators, it implies a shift in the way things are done.

This way, our responsibility as trainers, aside from the appropriation of content planned for our face-to-face exercise, must focus on a new conceivable and methodological effort that is shared with students to foster didactic and appropriation processes.

Perhaps in the future this experience gives a new meaning to society, to the way things are done in the classroom, with the likelihood of appropriating new resources and experiences, all of which could turn us into teachers 2.0 and students 2.0 with novel skills and dexterities amidst a blended and enhanced environment.