Chapter 12
Learning Objects in Hybrid Teaching Potential and Challenges for Their Use in the Context of Brazilian Education

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ABSTRACT

In the context of distance education, one aspect materialized by educational technology is through the use of learning objects (LO). These elements can be defined as educational digital resources that favor students' interaction with many languages and different media. This chapter aims to present two scenarios. The first one involves a case study about the production of didactic content. This study will focus on teaching and will consist of showing the rationale behind the content production method used by the company and the methodology used in the construction of learning objects in the context of a learning unit. The second scenario will consist of students' views by means of a survey conducted with more than 4 thousand students from higher education institutions (HEIs) from different regions of Brazil who consume the content and make use of the learning objects. The reflections point to the pedagogical potential of learning objects but also to concerns in view of great challenges posed by hybrid teaching within the Brazilian scenario.

INTRODUCTION

Communication and information technologies (CIT) have already become part of the educational environment. However, keeping up with the rapidly changing universe of technological innovations that involve promoting learning still poses a challenge for educators in Brazil.

The use of Learning Objects (LO) in hybrid teaching is a reality that has been growing steadily in Higher Education. The terminology surrounding the concept of hybrid teaching is also known internationally as Blended Learning. Studies such as those by Dziuban, Chuck and Graham, Charles and Moskal, Patsy and Norberg, Anders and Sicily, Nicole (2018), and Sandanayake (2019) cite research showing the effective use of hybrid teaching along with the significant contribution of technology to compose learning experiences.

Epistemologically, this chapter seeks to show the interdisciplinarity of the concepts: technology, LOs and hybrid teaching. Knowledge, research and education are three elements on which interdisciplinary areas are based upon (Santomé, 1998). In this regard, a more contemporary view by Bates (2016), Moore and Kearsley (2013) and Behar (2009, 2013; 2019) instigate us with their reflections, which address the advantages and challenges of learning through the use of technologies, as well as observing skills that may be developed from technological resources.

Based on the above, one may wonder: Is there an LO that is more suitable to promote student learning? Is the effort for the curation and production of LOs reflected in the student's satisfaction with hybrid learning? Based on this, the following objectives are outlined: to present the complex structure of production of LOs; and to understand Higher Education students' perception of the use of these LOs in their digital study modules for both fully online and hybrid teaching modalities.

In order to respond to these objectives, this chapter is divided into, in addition to this introduction, theoretical background, presentation of two studies, discussion of results and final reflections.

In the theoretical background section, we will present a brief history of the evolution of distance education in Brazil, as well as the use and production of LOs. For the terminology Education at a Distance we follow the concept by King, Young, Drivere-Richmond and Schrader (2001) as the one that composes actions to learn and teach. Finally, we seek to contextualize the countless contributions of the use of LOs in hybrid teaching.

We have chosen to present the studies in two sections. Study 1 is about a company's methodological structure and content production, and study 2 is about a survey conducted with students who use this content.

Study 1, which is called **Methodology for the development of didactic content in Sagah[1]**, will be explored based on a case study (Prodanov, 2013) about the production of didactic content carried out by a company [1] in the publishing/educational field, in the state of Rio Grande do Sul, Brazil. The option to carry out the study with this company is due to the fact that it is among one of the largest educational technology holders in Brazil. First, we will present the rationale underpinning the content production method applied by the company and the methodology used in the construction of the LOs in the context of a lesson, which will be called a Learning Unit (LU) in this chapter. For this study we adopted Carneiro's and Silveira's perspectives on the concept of LOs (2014, p.239). i.e.

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