Chapter 2
Technology–Enhanced Learning (TEL) in Higher Education:
Where Are We Now?

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ABSTRACT

As technologies become more exciting, interactive, and reachable, various technological solutions are used in higher education. On the one hand, there is the conviction that technologies are indispensable, both for improving learning and for making learning process more effective, both in terms of learning outcomes and in terms of costs. Additionally, technology and technological solutions can provide sustainability of knowledge because students develop the competences that they will need in their future professional work. This chapter summarises the systematic literature review (SLR) carried out by the authors in analysing research that has been done on the impact of technology-enhanced learning on learning outcomes in order to understand what emerging research has been done, as the authors published a similar study one year ago. The SLR was conducted for the period of 2010 to 2018 by selecting peer-reviewed articles on specified terms. The selected articles were then analysed following sub-purposes. The descriptive analysis method was adopted for the data analysis.

INTRODUCTION

With ever-increasing technological advancement, the educational environment is transforming. Educators must introduce various technological innovations to prepare students for their professional career, where they will have to deal with different technology to make the learning process more interesting, keep students more engaged in the learning process, and, in order to improve motivation, facilitate self-directed learning. On the other hand, solutions are always being sought on using technology to make education more sustainable and to achieve Sustainable Development Goals that are put forward for education. Another important aspect is the desire to use technology to reduce the financial burden that lies on the education system by organising day-to-day activities, as well as paying for lecturers' hours of work and managing the premises in which studying takes place. Educational technologies are perceived as a means to improve student Learning Outcomes (LO) and, at the same time, optimise financial resources. In the context of this article, the authors focus more on LO without analysing aspects that may signal positive Financial Outcomes.

The study process in Higher Education (HE) is a transitional line between general compulsory education and the work environment, in which employers seek highly-qualified and innovative young specialists. This is one of the arguments in support of emerging technologies and looking for new ways to ensure that HE keeps up with the innovations and transfers accumulated knowledge. This leads to the following research questions:

1. What technologies and technological solutions have been the focus of research in the context of higher education from 2010 to 2018?
2. What are the main conclusions about the benefits of Technology-Enhanced Learning (TEL) in promoting LO in the context of HE?
3. What challenges in using TEL have been revealed through research?

To determine TEL's effectiveness in the HE discourse, this study aims to carry out a Systematic Literature Review (SLR) to analyse the articles available on the EBSCOhost web database, with the results of the research on the efficacy of TEL in the HE discourse.

Limitations

This article focuses only on full-text articles available on the EBSCOhost web search platform that were published in English in peer-reviewed journals. Selected studies were published in the period from 2010 to 2018.

BACKGROUND

One year ago, the authors published a study analysing the articles published on TEL over the period of 2010 to 2016, where it was concluded that few articles had addressed LO in the long term. In most cases, studies have been conducted with little research basis or with little research time. The principles that need to be taken into account in order make a more student-centred learning process and help achieve higher learning outcomes have not been analysed (Daniela, Kalniņa, & Strods, 2017). However,

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