The use of e-textbooks

ABSTRACT

E-textbooks also known as electronic or digital books are defined in the literature as the digital content which is developed for teaching and learning purposes and which can be read from various types of electronic devices. They should be lower cost and user-friendly. The purpose of this literature review was to determine the frequency of use of e-textbooks in elementary and secondary schools and at universities, in European Union (EU), United States (USA) and in the rest of the world. Motivation for this research was the implementation of a computer-based teaching program, including e-textbooks, that is in progress in Croatian schools. The literature review was conducted by researching the database ProQuest Central for published content for the last ten years. The search strategy was based on keywords: e-book, e-textbook, students, school, adoption and the use of include and exclude filters to eliminate unwanted hits. The results are sorted by three major categories: EU, USA and the rest of the world and subcategories elementary and secondary schools, and universities. The research was carried out in December 2018. This research included 138 studies about e-textbooks. Most of them were conducted in the USA with university students and in the UK also with university students. Less research was conducted in secondary and primary schools, in all three major categories. More research is carried out with university students probably because researchers work at the universities where research is more common.

Keywords: e-book, e-textbook, students, school, adoption

1 INTRODUCTION

E-textbooks, electronic or digital books are the digital content which is developed for teaching and learning purposes for use with various types of electronic devices (laptop, tablet, smartphone, e-reader) (Wei-Hsi, et al., 2018). Traditional textbooks could be written in some word processor and then printed, but digital books or e-textbooks should be only in digital format and they are user-friendly, with included individual widgets and also with feedback mechanisms (Bokhove, 2017). First versions of e-textbooks were a digitized version of printed, traditional books (PDF), without any interactive add-ons (Choi & Lam, 2018).

The purpose of this literature review was to determine the frequency of use of e-textbooks in elementary and secondary schools and at universities, in European Union (EU), United States (USA) and in the rest of the world for the last ten years. The motivation for this paper was the
implementation of a computer-based teaching program (e-learning) that is in progress in Croatian schools. This implementation includes the use of different digital tools and also e-textbooks. The literature review mentioned that there are many benefits of e-textbooks e.g., usability and effectiveness of textual content, enhanced effective utilization of an information system (Khan & Qutab, 2016). As well as e-textbooks, online library services have many positive features. They are up-to-date and accurate, have useful attention to information needs, and users have the ability to quickly find and use information at their own discretion thereby saving time and travel costs (Oghenere et al., 2018, 16). The assumption of this research is that e-textbooks are widely accepted and increasingly being used over the last ten years, mostly in the developed areas.

2 METHODS

The research in this literature review was conducted with searching the database ProQuest Central for published content for the last ten years. The goal of the research was to find the content about the use of e-textbooks in the world. The search strategy was based on keywords e-book, e-textbook, students, school and adoption. During the research filters (language, publication date, index term and subject) were applied to eliminate unwanted results. The results are selected and exported to PDF document for a detailed offline analysis. The results were sorted by the three major categories: EU, USA and the rest of the world and subcategories elementary and secondary schools, and universities. The data is analyzed using the Microsoft Excel. The research was carried out in December 2018.

3 RESULTS AND DISCUSSION

The literature review research included 138 studies about e-textbooks applied with Generation Z students. Generation Z students is a common name for students who have attended school in the past ten years and who were born approximately between 1995 and 2009 (Whitt & Willard, 2012). They use the Internet continuously and have access to various forms of digital technology since an early age (Whitt & Willard, 2012).

Figure 1 shows the results of the literature search in the ProQuest Central base. Most studies were conducted in the USA (53%) with 45% university students and with elementary and secondary students together 8%. In the USA there are approximately 670 million portable digital devices with screens what is probably the reason for most conducted studies in that area (Mitchell et al. 2017). The number of studies about e-textbooks in the ProQuest Central base for the EU is almost half size of the studies in the USA. The rest of the world has the least studies in this base.

In all three major categories, most studies are conducted with university students probably because researchers work at universities where research is more common. All studies have shown the significant potential for e-textbook adoption in schools and at universities.
4 CONCLUSIONS

Most papers say that e-learning is increasing in the last few years, which does not mean that the traditional form of textbooks is still not used. Replacing textbooks with e-textbooks is happening slowly but e-textbooks are becoming more popular. The use of that kind of digital technologies makes education more accessible, personalized and user friendly so students like to use it.

During the e-learning implementation in the next few years, most students will be Generation Z and therefore the potential of e-textbooks will be growing because it offers multiple possibilities with new generations of students that will accept this kind of learning (de Oliveira, 2014). It would be interesting to repeat the same research in the future to confirm the predictions about the growing popularity of e-textbooks.

5. LITERATURE


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