University Students' User Expectations Concerning E-Textbook Features

Norbert Erdmann, University of Turku, Finland
Mirjamaija Mikkilä-Erdmann, University of Turku, Finland
Sari Yrjänäinen, University of Tampere, Finland
Roope Raisamo, Univesrity of Tampere, Finland

Abstract
The purpose of this study is to investigate how university students evaluate the importance of specific features and applications within e-textbooks for their learning process. Participants were 92 future teachers on primary level. A questionaire consisting of Likert-scale questions was used in this study. The results indicate that the students found the features which they already know from the traditional textbook most important. Our study is in line with previous studies which indicate that the shift to an active e-learning culture is in the early stages among higher education students. Future studies are needed which investigate what kind of support students need while studying with e-textbooks to promote more efficient design.

Keywords: E-learning, e-textbook, user expectations, higher education, preservice teachers

Introduction

E-textbooks are becoming more and more part of the teaching and learning process also in higher education. An e-learning environment such as e-textbooks can offer a great deal of new active learning possibilities to the students. According to the constructivist learning model learner actively creates knowledge on his or her own way. So the adaptiveness of e-textbooks can offer support as an essential learning tool on all levels (e.g. Rockinson et al. 2013). But the acceptance among students seems to be quite low and they often prefer the traditional paper format textbooks (Marques, 2012; Daniel & Woody, 2013). Hence, the purpose of this study is to investigate how university students evaluate the importance of specific features and applications within e-textbooks for their learning process. By features we refer to possibilities direct related to the e-textbook like taking notes, high lightning, looking for additional information from the Internet in form of video clips or virtual simulations. On the other hand we are interested in how students consider the collaborative possibilities within e-textbooks. What kind of features in e-textbook are considered as important among future teachers?

Methods

The participants of this study were preservice teachers (n = 92). Future primary school teachers can be considered as important target group for future implementation of next generation e-textbooks. The students took part in an intervention study (Mikkilä-Erdmann et al. 2014) and used e-textbook for Ipad. After the intervention a questionnaire was given which consisted of 24 statements on seven-point likert scale. Students had to evaluate how important specific features are for their learning. Seven point likert scale concerning the level of importance was used: From 1 (Not at all important), 2 (Low important), 3 (Slightly important), 4 (Neutral), 5 (Moderately important), 6 (Very important), to 7 (Extremely important).

Results

The results indicate four different levels of importance concerning e-textbook characteristics. The features which are typically used while studying with traditional paper books like underlining, writing comments in the text and using notebook for making notes in all kind of forms have the highest importance (M = 5.74, Sd =1.09) for future teacher. Students found moderatly important features which are dealing with review questions (M=5.29, SD=1.59) as well as to make a printout from the text (M=5.03, SD=1.53). Searching further information on topic (M=4.98, SD=1.41) was also moderately important. Additional explanations on the topic through games, or virtual labs or a video clips are considered moderately important (M=4.52, SD=1.27). Students rated more or less important (neutral) the features which help to manage knowledge, e.g. to search, evaluate and arrange links (M=4.07, SD=1.27) as well as the the possibility to communicate with other students or with the teacher (M=4.36, SD=1.52). The least important features for the students are voice services, like the device which is reading out the text (M=2.9, SD=1.55).

Conclusion

The study indicates that the students require from e-Textbooks traditional features like underlining words, making notes and using the index, what is very common from the former experience learning with paper books. The students rather like to stay inside the text. If the eTextbook is nicely organized students seem to accept links as extra knowledge sources, but are not willing to manage knowledge on their own. It seems that the students like a rather closed and linear learning environment relating to the e-Textbook. Other possibilities for example to integrate more flexible information into the e-Textbook have sparce importance. New possibilities to learn via games and virtual labs were not found very important among teachers students. It can be assumed that the text and dealing with the text is considered as the main and the most efficient tool for learning.

Even collaboration and communications possibilities face to face or virtually are not seen relevat for future teacher students regarding e-Texbooks. Maybe learning with the e-Texbook is seen as a special individual phase of learning with a certain knowledge and on own time and rhythms, so that questions and communication are seen more disturbing than helping them to learn. Our study is in line with previous studies (e.g. Daniel & Woody, 2013) which indicate that the shift to an active e-learning culture is in the early stages among higher education students. Future studies are needed which investigate what kind of support students need while studying with e-textbooks to promote more efficient design.

References

Daniel D.B., Woody W.D. (2013). E-textbooks at what cost? Performance and use of electronic v. Print texts. *Computer & Education, 62,* 18-23.

Rockinson-Szapkiw A. J., Courduff, J., Carter, K., Bennett, D. (2013). Electronic versus Traditional Print Textbooks: A Comparison Study on the Influence of University Students' Learning; *Computers & Education, 63,* 259-266.

Marques, S. (2012). E-Textbooks Usage at Andrews University: A study of Attitudes, Perception, and Behaviours. *Proceedings of the IATUL Conferences.* Paper 32.

Mikkila-Erdmann, M. (2014). E-textbook as a tool for promoting conceptual learning in science- looking for novel design and empirical evidence. In J. Viteli & M. Leikomaa (Eds.), *Proceedings of EdMedia: World Conference on Educational Media and Technology 2014 ,* 2092-2097. Association for the Advancement of Computing in Education (AACE).

Contact email: nwmerd@utu.fi