

IArTEM Conference Ostrava 2013

The Use of e-Textbooks: Views of Lower Secondary School Pupils

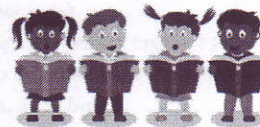
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This presentation was supported by the scholarship's fund of PdF MÚ and the project ŠKOLA 2013 (MUNI/A-0706/2012).

Background Questions

- Future of printed books?
- Do students and pupils have the opportunity to decide what kind of textbook to choose?



Structure of the Presentation

- Definition of e-textbook
- State of the art
- Research aim
- Methodology
- Results
- Conclusion & suggestions for further research

Definition of e-Textbook

- No universally accepted definition of what an e-textbook is (Bennett, 2006)
- The term e-textbook (electronic textbook) considered subordinated to the term e-book (electronic book).
- In a broader context, *e-book* can be defined as a text converted to an electronic (McKnight & Dearnley, 2003), alternatively a digital form (Reitz, 2004). It is possible to read it on the PC, tablets, smart phones or a similar device.
- An electronic equivalent of a *printed book* (Gay, 2007). In comparison with the printed book, the e-book consists of some in use features (search functions, hypertext links etc.) which are specific only for an electronic environment (Vassiliou & Rowley, 2008).
- More precisely in the school context, the e-book can be termed as *e-textbook*, which is an instructional text in an electronic (digital) form (Cutshall, Mollick, & Bland, 2009). It is superordinate to its other forms as a multimedia and interactive textbook.

State of the Art: Studies concerning the acceptance of e- textbooks

- More studies in college students
 - students considered e-textbooks more current and timely than their print counterparts (Bryant & Mims, 2012)
 - students expressed little to no preference for e-books (Nelson, 2008)
- Few studies in lower secondary school pupils
 - e-textbook widely accepted among lower secondary school pupils aged 11-12 years (Maynard & Cheyne, 2005)
 - preference of e-textbooks by 43 % lower secondary school pupils, only 16% used the e-book on a daily basis (Noor et al., 2012)

Research aim

- to investigate pupils' views on the (future) use of e-textbooks

Methodology: Research Tool

- Questionnaire
 - 7 demographic and context focused items (gender, age, grade, use of PC etc.)
 - 4 open-ended questions (advantages & disadvantages of printed and e-textbooks)
 - 10 Likert type items with a 5-point scale (agree – slightly agree – nor agree/nor disagree – slightly disagree – disagree).
 1. items focused on advantages and disadvantages of the use of printed textbooks and e-textbooks
 2. pupils' preferences for printed textbooks/e-textbooks
- reliability verified by the Cronbach's alpha coefficient: $\alpha=0,81$
- validity proved by the Factor analysis

Methodology: Sample

- 250 pupils from 7 lower secondary schools in the Czech Republic
- 24 % using e-textbooks and printed textbooks (across different subjects)
- 76 % using only printed textbooks
- aged 12 to 16 years (7th-9th grade)
- 51 % girls, 49 % boys

Methodology: Data Analysis

- t-test for investigating the statistical difference of views of the following groups:
 - Group 1: views of pupils using printed textbooks on printed textbooks
 - Group 2: views of pupils using e-textbooks on printed textbooks
 - Group 3: views of pupils using printed textbooks on e-textbooks
 - Group 4: views of pupils using e-textbooks on e-textbooks

Results: Comparing the views of pupils on printed and e-textbooks

- Pupils using only printed textbooks have similar views on printed and e-textbooks as pupils using e-textbooks
 - no significant difference between group 1 and group 2 ($t = 1.44$; $p = 0.15$), no significant difference between group 3 and group 4 ($t = 0.97$; $p = 0.33$)
 - Pupils using only printed textbooks have different views on printed and e-textbooks
 - a significant difference between group 1 and group 3 ($t = 11.43$; $p < 0,001$)
 - Pupils using e-textbooks have different views on printed and e-textbooks
 - a significant difference between group 2 and group 4 ($t = 6.55$; $p < 0,001$)
- } Different views on printed and e-textbooks within the 2 sample groups

Results: Comparing the views of pupils on printed and e-textbooks

- Rather neutral perception of the printed textbook (group 1 and 2 in fig. 1)
- More positive perception of the e-textbook both by pupils who use them and who don't (group 3 and 4 in fig. 1)

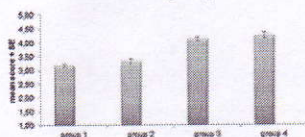


Figure 1: Comparing the views of pupils on printed and e-textbooks

Results: Pupils' preferences to e-textbooks

- 52 % would like to use the e-textbook at school, 25 % would rather use it
- 75 % like videos, audios and animations on e-textbooks
- 61 % find the e-textbook more entertaining than the printed textbook

Results: Pupils' preferences to printed textbooks

- Highest number of pupils (30 %) nor agree/nor disagree that the printed textbook is useless
- Highest number of pupils (36 %) nor agree/nor disagree that the printed textbook suits them

Conclusion & Suggestions for Further Research

Thank you for your attention

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