

Students' reading preferences: An exploratory study

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Abstract

The e-book reader revolution is here already. The questions we asked ourselves were: what are the reading preferences of information science students at the beginning of the second decade of the 21st century? How do different variables such as relative advantage, comprehension and learning strategies affect students' reading preferences? The research was conducted in Israel during the first semester of the 2015 academic year and encompassed 177 LIS students in the Information Science Department in Israel. Three questionnaires were used: personal details, relative advantage, and learning strategies, and two further questions that focus on reading habits. The study showed students' preferences of printed materials. In addition, it emphasizes the importance of personal variables that may affect students' will to read electronic materials: relative advantage and comprehension.

Keywords: e-reading, reading from print, preferences

Introduction

The e-book reader revolution is here already. Many are intrigued by the question: is it going to replace the printed book? Changes in attitude over time due to technological developments are nicely illustrated by two pieces written by Jakob Nielsen. In the first one from 1998 he explains why electronic books are a bad idea, and in the second from 2009, written after using Kindle and the Kindle app on the iPhone, in which Nielsen admits that Kindle 2 changed his mind regarding e-books. Thus it is quite possible that other users experience attitude change over time. This shift from print towards digital reading is crucial mainly in higher education, as learning from digital texts becomes more common (Cargill, 2011; Heider, Laverick & Bennett, 2009; Thayer et al., 2011). The questions we asked ourselves were: what are the reading preferences of information science students at the beginning of the second decade of the 21st century? How do different variables such as relative advantage, comprehension and learning strategies affect students' reading preferences?

Literature Review

Reading Habits

Several researchers (Ackerman & Goldsmith, 2011; Foasberg, 2014) found that students prefer to read long academic texts and long-form reading in print. Moreover, Ben-Yehudah and Eshet-Alkalai (2014) have explored the influence of the annotation tools in print and digital reading texts. Results duplicate previous research reports on the inferiority of digital compared to print reading comprehension (e.g.

Ackerman & Goldsmith, 2011; Ackerman & Lauterman, 2012; Eshet-Alkalai and Geri, 2007; 2010). However, in contrast to this, Eden and Eshet-Alkalai, (2012) who explored the active-reading abilities of students, in a print and in a digital format, did not find a significant difference between the performances of participants in the two formats.

Innovation Diffusion Theory (IDT)

The Innovation Diffusion Theory (Rogers, 1995) has been used to predict individuals' adoption of new technologies and services. Rogers (1995) argues that some people are willing to try innovations more than others, and he has classified people into five adopter categories: innovators, early adopters, early majority, late majority, and laggards. In addition, Rogers (1995) identifies five attributes that influence the innovation adoption: (1): relative advantage, (2): compatibility, (3): complexity, (4): trial ability, and (5) observability. The current study uses the first attribute: relative advantage, and refers to the extent individuals perceive that the innovation is better than the traditional one.

Learning Approaches

Learning approaches are defined as "the ways in which students go about their academic tasks, thereby affecting the nature of the learning outcome" (Biggs, 1994, p. 318). The literature differentiates between a deep and a surface approach to learning (Biggs 1987; Entwistle, McCune & Hounsell, 2003; Vanthournout, Noyens, Gibels & Van den Bossche, 2014). Deep learning approach is characterized by the learner's search for the meaning of the information, and by intrinsic motivation. Surface learning approach is characterized by learners' extrinsic motivation, accompanied by the will to invest minimal time and efforts in order to achieve minimal requirements, without actually seeking for the meaning of information (Biggs, 1993, 1994).

The current study explores the reading preferences (electronic or printed) of information science students, and the research hypotheses are:

H(1): Students will prefer printed materials over electronic ones.

H(2): The higher electronic relative advantage students report, the higher their use of electronic materials; and the higher printed relative advantage students report, the higher their use of printed materials.

H(3): Deep learners will prefer both printed and electronic materials in their studies.

H(4): The higher students' electronic comprehension is, the greater their electronic preference, and the higher students' printed comprehension is, the greater their printed preference.

Method

Data collection and Analysis

The research was conducted in Israel during the first semester of the 2015 academic year and encompassed 177 LIS students in the Information Science Department in Israel. Of the respondents 52 (29.37%) were male and 125 (70.62%) were female. Their average age was 31.41 years old. As for their enrollment by educational level,

85 (48.02%) were undergraduates, and 92 (51.98%) were MA students and PhD students.

Measures

Three questionnaires were used: personal details, relative advantage, and learning strategies, and two further questions that focus on reading habits.

Results

In order to examine whether there are differences between students' reading habits a MANOVA was performed. The MANOVA revealed a significant difference between students' reading habits, $F(3,166) = 21.39$, $p < .001$, $\eta^2 = .28$. Means, standard deviations, and the MANOVA analysis are presented in Table 1. Comprehension and preference were on a scale of 1 to 7, and relative advantage on a scale of 1 to 6.

Table 1. Means, standard deviations and MANOVA analysis on each measure separately of students' reading habits

Measures	Printed Materials		Electronic Materials		$F(168,1)$	Eta^2
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Advantage	3.83	1.17	3.16	1.15	39.27***	.19
Comprehension	5.15	1.91	3.64	1.77	52.96***	.24
Preference	5.18	1.89	4.19	1.95	13.87***	.08

*** $p < .001$

Table 1 shows significant differences concerning students' reading habits. It seems that students prefer printed materials more than electronic ones, their perceived level of comprehension is higher with printed materials and their level of relevant advantage is also higher when dealing with printed materials.

Pearson correlations were performed to examine the relationship between electronic relative advantage, printed relative advantage, electronic comprehension, printed comprehension, and printed and electronic preferences and are given in Table 2.

Table 2. Pearson correlations between electronic innovation, printed innovation, electronic comprehension, printed comprehension, and printed and electronic preferences ($n = 177$)

<i>Measures</i>	Electronic Relative Advantage	Printed Relative Advantage	Printed Compr.	Electronic Compr.	Printed Pref.	Electronic Pref.
Electronic Relative Advantage						
Printed Relative Advantage	.30 **					
Printed Comprehension	-.24***	.46 ***				

Electronic Comprehension	.41 ***	-.02	-.00			
Printed Preference	-.23**	.42 ***	.62 ***	-.25***		
Electronic Preference	.47 ***	-.24***	-.42***	.50 ***	-.62***	

** $p < .01$, *** $p < .001$

Table 2 shows that significant positive correlations were found between electronic relative advantage and printed relative advantage, electronic comprehension and electronic preferences. Hence, the higher level of electronic relative advantage, the higher students' level of printed relative advantage, electronic comprehension and electronic preference. Significant negative correlations were found between electronic relative advantage and printed comprehension and printed preference. Thus, the higher students' level of electronic relative advantage, the lower their printed comprehension and printed preference. In addition, significant positive correlations were found between printed relative advantage and printed comprehension and printed preference. It seems that the higher level of printed relative advantage the higher students' level of printed comprehension and printed preference. A significant negative correlation was found between printed relative advantage and electronic preference. In other words, the higher level of printed relative advantage students have, the lower is their electronic preference. Further, a significant positive correlation was found between printed comprehension and printed preference.

Therefore, we may conclude that the higher level of printed comprehension students have, the more they prefer printed materials. Moreover, significant negative correlation was found between printed comprehension and electronic preference. In other words, the higher level of printed comprehension students have, the less they prefer electronic materials. Furthermore, significant negative correlation was found between electronic comprehension and printed preference, thus, the higher students' level of electronic comprehension, the lower their printed preference. In contrast, a significant positive correlation was found between electronic comprehension and electronic preference. We may understand that the higher students' level of electronic comprehension, the greater their electronic preference. Another negative significant correlation was found between printed and electronic preferences. Thus, the higher students' level of printed preference, the lower their electronic preference is. Pearson correlations were also performed to examine the relationship between learning strategies, and printed and electronic preferences and are given in Table 3.

Table 3. Pearson correlations between learning strategies, and printed and electronic preferences ($n = 177$)

<i>Measures</i>	Electronic Relative Advantage	Printed Relative Advantage	Printed Compr.	Electronic Compr.	Printed Pref.	Electronic Pref.
Deep	.55***	.60***	.11	.14	.10	.07

Learning						
Surface Learning	.43***	.45***	.12	.12	.06	.05

*** $p < .001$

Table 3 shows that significant positive correlations were found between electronic relative advantage and deep and surface learning. Thus, the higher students' level of electronic relative advantage, the higher their deep and surface learning strategies are. In addition, significant positive correlations were found between printed relative advantage and deep and surface learning. Therefore, the higher students' level of printed relative advantage, the higher their deep and surface learning strategies are.

Discussion

H(1) was accepted echoing previous studies (Ackerman & Goldsmith, 2011; Foasberg, 2014) indicating that students prefer printed materials over electronic ones. H(2) was also accepted and can be associated with Roger's theory (1995), revealing that when students perceive the relative advantage of the electronic or print the quicker adopters they will be. Surprisingly H(3) was rejected. We assumed that deep learners would like to use both printed and electronic materials to deepen their understanding. However, no correlation was found between learning strategies and reading preferences. H(4) was accepted too, revealing a correlation between the two different kinds of comprehension and two kinds of reading preferences. In other words, students that understand better printed materials prefer this kind of reading and vice versa.

Summing up, the current study showed students' preferences of printed materials. In addition, it emphasizes the importance of personal variables that may affect students' will to read electronic materials: relative advantage and comprehension. Thus, when students see higher relative advantage of e-reading, the more they perceive the benefits of electronic materials, and when they understand the electronic learning materials, they will probably use them in their learning process.

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