E-BOOK USAGE OF GRADUATE STUDENTS STUDYING EDUCATIONAL SCIENCES IN TURKIYE

Res. Assist. Sakine ONGOZ
Prof. Dr. Adnan BAKI

Karadeniz Technical University
Fatih Faculty of Education,
Trabzon, TURKIYE

ABSTRACT

Today, we can say that almost everything is having "electronic" prefix and the way to access to information has changed substantially because of the many factors like fast advancements in computer technology and internet which is getting more and more widespread everyday. Although some people stick to printed resources, the fact that electronic resources offer innovation and irresistible options in terms of cost and time is obvious. The aim of this survey study is to detect some data that can be generalized about the graduate students' state of using printed and electronic resources. A questionnaire, developed by Ebrary, one of the largest e-book suppliers of the world, was used as the data gathering tool. After the studies for improving the reliability and validity of the questionnaire, a questionnaire form with 16 items was obtained. 634 questionnaires were sent to graduate students *via* e-mail, 130 of them were sent back and 125 questionnaires were evaluated for the study. Concerning all the data, it was concluded that majority of the graduate students are aware of the comfort of the e-resources and prefer to use these resources academically.

Keywords: educational sciences, graduate learning, e-book usage

INTRODUCTION

Johann Gutenberg's invention of printing machine in 1450s brought about fast advancement in book industry. By time, computer joined into the process and the book industry took its share from electronication. The electronic book (e-book) concept came forth as a result of this development process and was first released to marketplace in 1990s (Gregory, 2008).

Electronic books, first launched in the USA and was called as e-book shortly, have been getting more and more popular in Turkiye as the way in the world. E-books can be defined as, "*books, prepared to be read via computers or e-book readers and they have some additional features besides printed books' as; visuals, sound effects and interactive links*" (Borchers, 1999; Rukancı, and Anameriç, 2003).

Reviewing the recent past, it can be seen that sharing method of resources of academic researches were printed references however today lots of resources like; books, journals, encyclopedias, theses, scientific articles and reports, open to access in electronic databases in digital media.

Carrying books, the oldest and mostly used accessing information means of the mankind, to virtual media has some advantages and of course some other disadvantages as all technologies bring together. Reviewing the literature, the pros and cons of e-books can be summarized as below (Rukancı and Anameriç, 2003; Sasson, 2009):

Pros:

1. **Easy to update**
2. **Easy to share with the help of e-mail, CD-ROM and other portable devices**
3. **No storage problem,**
4. **Environment friendly,**
5. **Unknown authors can advertise their works easier**
6. **Publishing process is much faster that printed books**
7. **No printing cost**
8. **Their components (sound, visuals, video and links) can provide an interactive medium**
9. **Much cheaper to access than printed books**
10. **No problems like returning unsold copies to publishing house**
11. **E-books for the visually handicapped can be designed with the help of a speaking word processors**
12. **The comprehending level of the expressions can be increased with the help of dictionaries presented by most e-books**
13. **Thanks to laptop computers and e-book readers having background illumination, the readers can read in the dark without interrupting the others**
14. **The character size can be adjusted by the reader**
15. **With the help of e-book reader devices, it is possible to carry tens of books at once**

Cons:

1. **Since there is no an international standard in the e-book industry yet, e-books are produced with incompetent formats.**
2. **E-book should be published, advertised and marketed completely by the author.**
3. **Certain security problems may occur in the internet media (unauthorized access, security defaults *etc.*)**
4. **There is not enough number of e-books to make industry feasible to invest. For this reason, there is a content problem.**
5. **A special training is necessary for using**
6. **E-books cause headache and eyestrain in long term readings**
7. **There are contradictions in terms of copyrights of e-books in Türkiye**

20-year-old e-book industry has mostly taken part in education industry because of its nature. Rukancı and Anameriç (2003) emphasized that e-books have the largest user potential in education field. Concerning this, the question: "where exactly do experts of education field stand in this unlimited information ocean?" comes to the mind.

METHOD

The aim of this survey study was; to obtain generalisable results related to e-book using state of educational science field post-graduate students in Turkiye.

The universe of the study was composed of students taking their post-graduate degree in the field of education in Turkiye. The sample of study was 125 post-graduate students from 39 different universities in Turkiye.

Data gathering tool

A questionnaire developed by Ebrary, one of the biggest e-book suppliers of the world, in collaboration with more than 150 universities and collages was used as the data collecting tool. The aim of the questionnaire was discoursed as; to determine perceptions, needs and using states of students towards electronic resources; particularly to e-books (URL-1, 2008).

In this study, first the mentioned questionnaire was translated into Turkish. Two interpreters competent in both languages helped this translation. One of the interpreters translated the items into Turkish one by one and the other re-translated them into English. Two translations were compared and proved to be consistent. There were almost no differences in technical terms; there were only different expressions in some part of the items. The inconsistency was revealed by the cooperation of both interpreters. The first three items of the original questionnaire were about country, study field (occupation) and educational status of the interviewee. In the Turkish adaptation of the questionnaire these three questions were replaced with two questions asking program/university the interviewee is attending and educational status. In an item in the original, the interviewees were given certain resources and were asked for which purposes they use these resources (Research/class assignments, Personal use, other).

Again, in another item they were asked about how much they trust these resources (Trustworthy, Not trustworthy, don't know). However for this study, it was anticipated that it would have been more convenient to ask which resources interviewees use for academic purposes instead of asking for which purposes they use the resources and trust placed on these resources separately. For this aim, the related two questions unified into a single one and interviewees were directly asked about the resources they use for academic purposes. The final form of the questionnaire was including 16 items. Interviewees reporting that they do not use e-books at all in the 5th question were requested to answer the 6th question and end the questionnaire.

It was thought that there would be little validity problems since the content of most of the items in the questionnaire were technical terms and that their usage was universal. Nevertheless 6 representatives of the target group were requested to go through the questionnaire and it was asked whether they have any critics related to understandability of the items. The questionnaire finalized with a couple of minor edit, complying with the suggestions towards adding some explanations to some interrogative expressions.

Data gathering and analysis

The developed scale delivered to the participants via the internet. The web-pages of all governmental and private universities listed in Higher Education Council's (YoK) webpage (URL-2, 2009) were visited and e-mail addresses of research assistants taking their postgraduate degrees in education faculties were accessed.

In addition, to reach postgraduate students who are not research assistant, educational science journals and printed materials and official websites of educational science symposiums/congresses that have been held in last two years were reviewed. As the result of these studies, e-mail addresses of totally 634 postgraduate students (546 of them research assistant) was reached from 39 different universities in Turkiye. The questionnaire form was sent to all them and 130 filled forms returned. 5 of the forms were excluded from evaluation as they were filled incomplete or erroneous (continuing / stopping after question 6). Finally the evaluation was conducted based on 125 form papers.

FINDINGS

The responses given to items of the questionnaire were analyzed with respect to percent / frequency and the results were presented in tables.

The number of the participants who were objected to evaluation was 125. Based on department distribution first three major groups were; computer and instructional technologies education (15.2%), secondary school mathematics education (12.0%) and primary school mathematics education (9.6%).

Table: 1
Educational status of the participants

What is your educational status?	f	%
Taking MBA courses	14	11,2
Preparing MBA thesis	25	20,0
Taking PhD courses	30	24,0
Preparing PhD thesis	55	44,0

The data related to educational status of the participants are presented in Table 1. According to these data majority of the participants (44.0%) are at thesis phase of their doctorate. The participants were asked whether they have e-books in their libraries and obtained data were presented in Table 2.

Table: 2
The state of having e-books in university libraries

Does your library have e-books (electronic books)?	N	%
Yes	104	83,2
No	6	4,8
I don't know	12	9,6

83,2% of the participants reported that their university libraries have e-books whereas 4,8% said there were no e-books in their libraries and remaining 9,6% had no idea whether the libraries have e-books or not.

In another item of the scale, the participants were requested to evaluate their awareness levels of electronic resources in their university library. The obtained data are presented in Table 3.

Table: 3
How many the participants aware of e-resources in their university library

How would you describe your level of awareness of electronic resources at your college or university library?	N	%
Excellent	25	20,0
Good	51	40,8
Fair	40	32,0
Poor	9	7,2

Majority of the participants discoursed that they are aware of the e-resources in their libraries. Only 7,2% them describe their awareness situation as "poor". More than a half of the participants were aware of the e-resources at "good" or "excellent" level. The data related to the participants' frequency of using e-resources in the libraries are demonstrated in Table 4.

Table: 4
E-resources using status

How often do you use e-books that your library provides?	N	%
Never	36	28,8
Less than 1 hour per week	30	24,0
1-5 hours per week	46	36,8
5-10 hours per week	8	6,4
More than 10 hours per week	5	4,0

When it comes to the participants' frequency of using e-resources in the libraries, it can be said that most of them use these resources 1 to 5 hours in a week. On the other hand the ratio of the participant who do not use e-resources in their university library was 28,8%. These participants were asked about the reason why they do not use e-books and the results are exhibited in Table 5.

Table: 5
The reasons of not using e-books

If never, why?	N	%
I don't know where to find e-books	7	19,4
I prefer printed books	21	58,3
e-books are too difficult to read	6	16,7
e-books are not available in subject areas relevant to my program	3	8,3
e-books are too difficult to access remotely	3	8,3
e-books are too difficult to use	2	5,6
My instructor requested I do not use e-books	0	0,0
I do not have access to a computer and/or internet	0	0,0
I do not trust e-books. They are not a reliable source	0	0,0
Other	8	22,2

The most extending reason put forward by 36 participants never using e-books was "I prefer printed books" with 58,3%.

The participants who previously reported that they use e-books were asked which they would prefer if they have both electronic and paperback copy of the same book. The related data are in Table 6.

Table: 6
The state of preferring electronic or paperback copies

When you have the option of using either the electronic or print version of a book, how often do you opt to use the electronic version?	N	%
Very often	8	9,0
Often	24	27,0
Sometimes	22	24,7
Rarely	27	30,3
Never	8	9,0

The participants did not indicate a clear choice between electronic and printed format. The ratio of "very often" and "never" were level (9.0%). The ratio of "often" preferring e-books was 27.0% and "sometimes" was 24.7% and "rarely" was 30.3%" The resource types the participants use in their academic studies are shown Table 7.

Table: 7
The resources used for academic purposes

What types of resources are you using for academic purposes?	N	%
e-books	76	85,4
Print books	63	70,8
Wikipedia	40	44,9
Personal websites	28	31,5
Audio books	1	1,1
Print textbooks	41	46,1
e-journals	81	91,0
Print journals	62	69,7
e-textbooks	34	38,2
Google Scholar	58	65,2
e-newspapers	27	30,3
Blogs/wikis	20	22,5
Lecture recordings	33	37,1
Print newspapers	16	18,0
Print magazines	9	10,1
e-magazines	13	14,6
Podcasts	12	13,5
Corporate websites	45	50,6
Google and other search engines	66	74,2
Social web applications (Facebook, MySpace, Friendster, etc.):	24	27,0
e-reference (online dictionaries, encyclopedias, maps)	52	58,4
Electronic databases (ProQuest, LexisNexis, JSTOR, etc.)	77	86,5
Print reference (dictionaries, encyclopedias, maps)	42	47,2
Course management systems, such as Blackboard or Sakai	5	5,6

Among the resources that postgraduate students use, the most frequently used first three are: e-research articles (91.0%), e-databases (86.5%) and e-books (85.4%).

The least used ones are audio books and (1.1%) and course management systems (5.6%).

The participants were asked whether the given expressions were valid for electronic and paperback resources. The data obtained with these questions were tabulated in Table 8.

Table: 8
Comparison of e-books and paperback books with respect to certain criteria

Please indicate if the following statements are true for e-books, print books or both	e-books		print books		both	
	N	%	N	%	N	%
Environmentally friendly	76	85,4	2	2,2	10	11,2
Anytime, anywhere access	63	70,8	11	12,4	10	11,2
Easy to search and find information	72	80,9	1	1,1	16	18,0
Easy to share	77	86,5	1	1,1	10	11,2
Easy to store	66	74,2	4	4,5	19	21,3
Good for quick reference	72	80,9	3	3,4	12	13,5
Easy to browse	40	44,9	29	32,6	19	21,3
Easy to use multiple documents at once	70	78,7	1	1,1	15	16,9
Easy to organize	76	85,4	1	1,1	10	11,2
Information is current	54	60,7		0,0	33	37,1
Easy to print or photocopy	45	50,6	8	9,0	34	38,2
Easy to cite	57	64,0	2	2,2	29	32,6
Easy to use	35	39,3	16	18,0	38	42,7
Clear graphics and images	41	46,1	8	9,0	39	43,8
Ability to highlight	40	44,9	15	16,9	33	37,1
Ability to take notes	28	31,5	29	32,6	32	36,0
There is a wide selection of titles in my program of study	35	39,3	1	1,1	49	55,1
Easy to read	11	12,4	48	53,9	29	32,6
Good for cover-to-cover reading	11	12,4	46	51,7	29	32,6

The most extending property of the e-books was that they are "easy to share" with the ratio of 86.5%. It was followed by "easy to organize" with 85.4% and "environmentally friendly" with the same ratio.

Paperback books only preferred in "easy to read" item with the ratio of 53.9%. The most extending property that the participants thought both formats have was "There is a wide selection of titles in my program of study" expression with 55.1%.

The participants were asked why they use e-resources related to their field. The data were presented in Table 9.

Table: 9

E-book preference reasons of the participants

What do you feel would make e-book usage more suitable for use in your area of study?	N	%
More titles available in my subject	46	51,7
Better e-book readers	18	20,2
Multimedia capabilities	45	50,6
More current titles	41	46,1
Better training and instruction	13	14,6
PDA accessibility	16	18,0
Less restrictions on printing and copying	44	49,4
Other	5	5,6

The most popular reasons for which the participants chose e-books related to their fields were "More titles available in my subject" with 51.7% and followed by "Multimedia capabilities" with 50.6% and "Less restrictions on printing and copying" with 49.4%.

The participants were asked whether they consider training was important in finding and using information resources they need. The related figures were presented in Table 10.

Table: 10
The participants' views about the importance of training for finding resources

How important is instruction or training in finding and using information resources to your research and learning?	N	%
Very important	76	85,4
Somewhat important	12	13,5
Not important	0	0,0

An important majority of the participants as 85.4% consider training important for finding information resources they need.The most effective support and training tools for finding and using e-books according to the participants were presented in Table 11.

Table: 11
The participants' ideas about support and training tools to find and use e-books

What do you think are the most effective support and training tools for learning how to find and use e-books?	N	%
Online tutorials	38	42,7
Online help pages	22	24,7
Training videos	22	24,7
Online chat	7	7,9
In-person instruction	43	48,3
Paper guides (i.e. user guides)	18	20,2
Other	9	10,1

48.3% of the participants thought that learning by themselves was the best way of learning how to find and use e-books. 42.7% of them had the idea that online tutorials would be helpful.

The participants were asked to evaluate how important they perceive some features of e-books. The obtained data were presented in Table 12.

According to these data, the top three important features of e-books were; anytime access (93.3%), Off-campus access (92.1%), multi session feature (ability for more than one student to use an e-book at the same time) (91.0%).

Table: 12
Importance perceptions of the participants about the attributions of e-books

How important are the following features to e-books?	very important		somewhat important		not important	
	N	%	N	%	N	%
Searching	77	86,5	9	10,1	0	0,0
Anytime access	83	93,3	6	6,7	0	0,0
Off-campus access	82	92,1	7	7,9	0	0,0
Ability for more than one tudent to use an e-book at the same time	81	91,0	8	9,0	0	0,0
Downloading to laptop	76	85,4	12	13,5	1	1,1
Copying and pasting	79	88,8	8	9,0	2	2,2
Printing	68	76,4	19	21,3	2	2,2
Zoom and scale	60	67,4	26	29,2	5	5,6
Highlighting	52	58,4	30	33,7	7	7,9
Automatic citations	63	70,8	20	22,5	6	6,7
Ability to email text	44	49,4	31	34,8	14	15,7
Annotating	49	55,1	32	36,0	8	9,0
Book reviews	46	51,7	41	46,1	2	2,2
Multimedia	62	69,7	24	27,0	3	3,4
Ability to share notes	61	68,5	25	28,1	2	2,2
Downloading to hand held device	79	88,8	9	10,1	0	0,0
Collaborative tools	41	46,1	43	48,3	3	3,4
Personal bookshelves	53	59,6	30	33,7	6	6,7
Shared bookshelves	55	61,8	31	34,8	3	3,4

Searching, downloading to laptop computers, copy and pasting, downloading to handheld device were other extending features with percentiles of greater than 80%. The participants reported converting to e-mail feature as the most unimportant feature with 15.7%.

The participants were asked about how they reached to e-books and responses were tabulated in Table 13.

Table: 13
The participants' accessing ways to e-books

How do you usually find and access e-books (i.e. what is your starting point)?	N	%
Library website	57	64,0
Library catalog	28	31,5
Google Scholar:	45	50,6
Google or other search engines	50	56,2
Course management systems, such as Blackboard	2	2,2
Vendor or publisher website	6	6,7
Other	3	3,4

While 64.0% of the participants reported that they use library web sites to reach e-books, 56.2% of them use search engines and 50.6% of them use Google Scholar.

The participants were asked how they get information about how to use e-books. The results were put in Table 14.

Table: 14
How the participants inquire about using e-books

How did you learn about e-books?	N	%
Librarians	26	29,2
Library catalog	19	21,3
Instructors	28	31,5
Peers	45	50,6
Training sessions	14	15,7
Posters and other promotional materials	0	0,0
Library website or blog	19	21,3
Google or other search engines	33	37,1
Library orientations	3	3,4
Departmental web pages	12	13,5
Email notifications from the library	11	12,4
Other	7	7,9

Table 14 tells that half of the participants (50.6%) discoursed that they got information from colleagues about using e-books.

The ratio of the ones who got information from Google and such search engines were 37.1% and from trainers were 31.5%.

The participants were asked about how they assess the reliability of the source of information and answers presented in Table 15.

Table: 15
How the participants determine whether a source of information is trustworthy

How do you determine if a source of information is trustworthy?	N	%
If my instructor recommends it	59	66,3
If my peers recommend it	48	53,9
If it's from a well-known publisher	65	73,0
If it's available in print	1	1,1
If it's available through my library or the librarian recommends it	23	25,8
If it's available through Google or another search engine	10	11,2
Information is information – I do not worry about the source	3	3,4
Other	29	32,6

Most of the participants (73.0%), attribute a reliable source of information to be a source by a good (well-known) editor or publisher. Instructor or advisor recommendation was the first runner up (66.3%).

RESULTS

The results of this survey can be summarized below:

1/5 of the questionnaires sent to the participants turned back and 125 of them were included in the evaluation. In terms of educational status distribution, the ratios ranked: master's degree course phase, master's degree thesis phase, and doctorate course phase and doctorate thesis in ascending order. The postgraduate student participants at doctorate thesis phase answered the questionnaire with the greatest ratio.

Most of the participants were somehow aware of the e-resources in their libraries. Only 7.2% of the participants had no information about e-resources in their libraries.

E-books were 3rd frequently applied resources by postgraduate students in their academic researches. The first was e-articles and the second was e-databases. The reason mostly put forward to explain preferring e-books was their thought that e-books contain lots of titles related to their fields.

When we looked at e-book using ratios, most of the participants used e-books in their libraries in low, medium or high level. Most of the participants seemed to use e-books 1 to 5 hours weekly.

The participants thought that e-books have some advantages over printed books. According to them, the most extending advantages of e-books were their being easy to share and organize. Additionally, most of the participants admitted that e-books are environment friendly.

Majority of the participants consider training to reach required information resources as an important point. However there was an accumulation in the number of the participants thinking that the most effective way of finding and using e-books is self learning.

The participants took many of e-features important. The most important of them were; anytime access, off-campus access, ability for more than one student to use an e-book at the same time, in book search feature, ability to download on laptops, copying and pasting, carrying with hand held devices.

Based on the data, it is apparent that the most chosen method for inquiring about e-book usage is colleague interaction and the most popular way to access e-books is library website, which is followed by search engines and Google Scholar.

No clear preferences were asserted by the participants on reading electronic or paperback version of the same book. This situation can be taken as the indicator of e-books have begun to be accepted as much as printed books at least by postgraduates studying on educational science field in different universities in Turkiye.

BIODATA and CONTACT ADDRESSES of AUTHORS

Sakine ÖNGÖZ was born in Trabzon, Turkiye in 1979. She has been working as a research assistant in the Department of Computer Education and Instructional Technology, Fatih Faculty of Education, Karadeniz Technical University, Trabzon, Turkiye, since 2002. She earned his master of education degree on learning management system design in Computer Education and Instructional Technology, Karadeniz Technical University in August 2005. She is a doctoral student at the same university for 4 years. Her research interests are interactive learning environments and distance learning.

Research Assistant Sakine ÖNGÖZ
Karadeniz Technical University, Fatih Faculty of Education,
Department of Computer Education and Instructional Technologies
Trabzon, Söğütlü, 61335, TURKIYE
Phone:(0462) 3777120
Emails: sensoys@gmail.com or ssensoy@ktu.edu.tr

Adnan BAKİ was born in Trabzon, Turkiye in 1960. He completed his bachelor's degree in mathematics education at Fatih Faculty of Education, Karadeniz Technical University. He completed his master on curriculum and instruction at University of New Brunswick in Canada, 1990. He completed his doctoral studies (Ph.D.) on teacher education and computer based mathematics teaching at University of London, U.K, 1994. The title of his doctoral research is "Breaking with tradition in mathematics education: Experiences of Student Teachers within a Computer-based Environment". He has been working as a full-time faculty member, Prof. Dr., in the Department of Secondary Science and Mathematics Education, Fatih Faculty of Education, Karadeniz Technical University, Trabzon, Turkiye, since 2004. His research interests are mathematics education, instructional technology, teacher education and distance learning.

Prof.Dr. Adnan BAKİ
Karadeniz Technical University, Fatih Faculty of Education,
Department of Secondary Science and Mathematics Education
Trabzon, Söğütlü, 61335, TURKIYE
Phone:(0462) 3777188
Email: abaki@ktu.edu.tr

REFERENCES

Borchers, J. O. (1999). Electronic Books: Definition, Genres, Interaction Design Patterns, http://hci.rwth-aachen.de/materials/publications/borchers1999c.pdf

Gregory, C.L. (2008) "But I Want a Real Book" An Investigation of Undergraduates' Usage and Attitudes toward Electronic Boks. Reference and user services quarterly, vol: 47, no: 3, pp. 266-273.

Rukancı, F., Anameriç, H. (2003). E-Kitap Teknolojisi ve Kullanımı, Türk Kütüphaneciliği 17 (2): 147-166. http://acikarsiv.ankara.edu.tr/fulltext/164.htm

Sasson, R. (2009). The Benefits and Advantages of Ebooks, http://ezinearticles.com/?expert=Remez_Sasson

URL-1: 2008 Global Student E-book Survey, http://www.ebrary.com/corp/collateral/en/Survey/ebrary_student_survey_2008.pdf

URL-2: Higher Education Council, http://www.yok.gov.tr/content/view/527/222/lang,tr_TR/, 15.08.2009