# E-BOOK USAGE BEHAVIOR OF UNDERGRADUATE STUDENTS

#### Ratanavadee Takerngsukvatana

## Faculty of Humanities and Social Science, Suan Sunandha Rajabhat University, Bangkok, Thailand, E-Mail: ratanavadee.ta@ssru.ac.th

## ABSTRACT

This research aims to study behaviors and problems regarding e-book utilization of undergraduate students, Suan Sunandha Rajabhat University. Samples utilized in the research were 380 undergraduate students, Suan Sunandha Rajabhat University. A data collection was conducted by a questionnaire survey with 5 rating scale. Statistics utilized in the research were frequency distribution, percentage, mean and standard deviation. Data analysis was conducted by SPSS for windows. According to research results, it was found that in the learning aspect, most students primarily read e-textbook downloaded from play google.com and read e-book via mobile application and mostly read at home, secondarily at library. Problems of e-book usage were a zoom-in and out function and visual unhealthy. In this regard, university should plan the instruction based on e-book usage behavior of the students by providing several kinds of e-book and interesting e-book to offer a self-study opportunity and efficiency for them.

Keywords: Electronic Media, e-Book, Instruction Media

## INTRODUCTION

Reading is essential for human from birth to adulthood and until ageing as it provides information from around the world. Reading is for self-development and development of education, occupation and making better quality life; moreover, it modernizes and keeps people up to date and urges curiosity. Nation development needs knowledgeable and capable people; this knowledge and capability are also from the reading of information stored in the book (Chaweewan Kuhaphinon, 1999).

Book is a kind of book stored with data, news, knowledge, idea and experience derived from human expressed as writing and published as a book; it possesses permanent value. A story may end in a book or a set of book. It is media with the same story stored inside. Also, book is an intellectual property created by a man with ideas, knowledge and experience gathered inside, classified or expressed through people with characters composed into words and idioms or language and it is media leading human to be knowledgeable and create understanding, which, the knowledge and understanding can pass on other people (Phromphachon Khetdi, 1999: online, citation from Thipawan Hompul et al., 1999:14). According to the royal saying, book is an essential matter as said by His majesty, the King "Book likes a repository, a collection of story, knowledge, idea, every kind and all of technology/technologies, all of which has learned, pondered and attempted to record in writing. Wherever the books goes, the knowledge and ideas go with them, so that they is invaluable if considered them as a mankind learning source".

When discussing about book, most people tend to perceive that it is a published piece of paper laced into a book; however, with current advanced computer technology, things from the past is changed and move itself into the age of electronics continually changed and evolved; consequently, a birth of new creation with the support of computer technology is emerged. Book is scanned and still intact but with a receipt of electronic data as a picture file, the file will be converted into a text by OCR or optical character recognition i.e. using a program to convert a picture into a modifiable text. Later, the data will be transfer by an input of data (keyboard) and processed into a character and text by computer. As a result, a page will turn into a file. Given that, it is easy to publish and print. The file is called e-Book. The first generation of e-Book was in .doc, .txt, rtf, and .pdf formats. Subsequently, an emergence of HTML (Hypertext Markup Language) development, large amount of data was designed and decorated as a website or "web page" for each page of the website. Documents can be opened by web browser which is a program able to display text, image and interact via internet network.

Electronic book is an innovation extensively well-known in education field as it is an educational form according to one of educational reform approach which is enable an arbitrary information accessibility. Interestingly, its feature is an ability to link with other parts of the book, website, as well as to create interaction and reaction with leaners. Contents in e-Book is not only a text itself but image, sound and animation resulting in interesting contents; moreover, it can be printed immediately when needed and can be updated at any time. These features do not possess in a tangible book. Readers can choose according to their aptitude and what book interests them; thus, they can read without time limitation and anytime and can read multiple times in case of not understanding. To be said, e-Book is one of an innovation extensively promoting learning as needed and reader's status according to the educational reform approaches. (Kan Jandaeng, 2013 citation from Apron Chaisuwan, 2001).

Libboo.com has conducted a survey: The tendency of reading on e-Book in USA and found that currently, e-Book is popular among USA reader resulting in the e-Book market growth in the past several years. Also, according to the group, they often read on e-Book, it demonstrated that reading on e-Book was an important factor in an ability to read more books compared to a normal one.

With the change of information technology through the needs of users who demands fast and convenient, e-Book is one of an alternative selected and used by most people, especially undergraduate students (SSRU) who are in needs of e-Book in learning, study and research.

Suan Sunandha Rajabhat University has been the one emphasizing an application of information technology in instruction by allowing the students to learn some lessons from websites of teachers. Given that, e-Book is the instruction media implementing in the learning. According to observation of website visit by SSRU students, it appeared that the students favored e-Book than printed matters.

From such context, the concept to study e-Book usage behavior of SSRU students has been acquired in order to be a guideline to develop instruction media in conformity with e-Book usage behavior of the students and an approach for the reading development, as well as a guideline in the information resource development of Academic Resources Center, SSRU.

#### METHODOLOGY

This was a quantitative research that was aimed to study behaviors and problems in e-Book usage of undergraduate students, Suan Sunandha Rajabhat University. There were five steps of this research. The first step was to study the document and other studies related to reading behavior in order to find the guideline of developing questionnaire of quantitative method. The second step was to define population and sample. The population included 29,311 undergraduate students who registered for the second semester of 2016. A Krejcie & Morgan sampling technique was performed to get a sample group that included 380 students. They were collected at 6 faculties Faculty of Education, Faculty of Industrial Technology, Faculty of Humanities and Social Sciences, Faculty of Science and Technology, Faculty of Fine and Applied Arts, and Faculty of Management. The third step was the development of tool. The tool for this survey was the questionnaire which had three major parts. The first part was designed to ask about the demographics. The second part was designed to obtain the information about behavior of e-Book utilization of student. Likert five-scale was designed to measure their behavior of e-Book utilization. The third part of the questionnaire was about problems in utilization of e-Book. The fourth step was data collection. A stratified random sampling technique was performed to obtain 380 respondents. Finally, the fifth step was data analysis. This step was performed by using SPSS. Descriptive statistics utilized in this research including percentage, mean, and standard deviation.

#### RESULTS

According to research on e-Book usage behavior of undergraduate students, Suan Sunandha Rajabhat University, it was found that the main objective of e-Book usage was academic purpose. Channels for accessing the e-Book were mobile application and notebooks utilizing them at home and library. Most of e-Books were downloaded one time per month via play google.com. As for problems in e-Book utilization, they were a zoom-in and out function and visual unhealthy. In overview, the students utilizing e-Book are in high level and experience problems in moderate level as the detail of the following tables.

Table 1      The objective of e-Book usage			
Objective	$\overline{\mathbf{X}}$	S.D.	Rank
1. Academic purpose	4.02	0.762	1
2. Enhance knowledge	3.89	0.768	2
3. Entertainment	3.72	0.981	3
4. Conversation	3.17	1.076	4
Total	3.70	0.603	

From Table 1, The highest objective of e-Book usage was academic purpose ( $\overline{\mathbf{X}} = 4.02$ ) and conversation was lowest objective ( $\overline{\mathbf{X}} = 3.17$ ).

Table 2    Channels for accessing			
Channel	$\overline{\mathbf{X}}$	S.D.	Rank
1. Mobile Application	4.21	0.933	1
2. Tablet	3.09	1.197	4
3. Computer	3.61	1.066	3
4. Notebook	3.72	1.011	2
Total	3.66	0.696	

From Table 2, The highest channel for accessing of e-Book usage was mobile application ( $\overline{X} = 4.21$ ) and tablet was lowest channel for accessing ( $\overline{X} = 3.09$ )

Table 3Type of e-Book			
Type(s) of e-book	$\overline{\mathbf{X}}$	S.D.	Rank
1. General textbook (in similar to textbook but in digital form)	3.74	0.900	1
2. Audio book (when reading, the audio can be heard)	2.99	1.118	10
3. Picture book (presentation with a still image)	3.43	1.000	3
4. Animated book (emphasizing video)	3.34	1.017	4
5. Multimedia Book	3.40	0.992	5
6. Cross-link multimedia book ( in similarity with multimedia book with more connectivity between the content)	3.48	0.906	2

7. Referential book (able to link to the internal conter and external sources)	nt 3.34	0.906	6
8 . Smart book (multimedia type being able to interact with reader)	et 3.11	1.013	9
9 . Remote book (emphasizing a reference to externa sources via network system)	al 3.15	1.015	7
10. Cyberspace book (able to present data in multimedi platform and interact with readers multidimensionally	a 3.13	1.094	8
Total	3.31	0.712	

From Table 3, General textbook (in similar to textbook but in digital form) was the highest type of e-Book that students use ( $\overline{\mathbf{X}} = 3.74$ ) and Audio book (when reading, the audio can be heard)was lowest to use. ( $\overline{\mathbf{X}} = 2.99$ )

Table 4    Place for e-Book usage			
Place	$\overline{\mathrm{X}}$	<b>S.D</b> .	Rank
1. Home	4.20	0.882	1
2. Library	3.19	1.080	2
3 Book Store	2.72	1.129	3
4. Cafeteria	2.67	1.156	4
Total	3.19	0.728	

From Table 3, home was the highest place for accessing ( $\overline{\mathbf{X}}$  =4.20) and cafeteria was the lowest place for accessing ( $\overline{\mathbf{X}}$  =2.67).

Table 5        Problems in e-Book utilization				
Type of problem	$\overline{\mathbf{X}}$	S.D.	Rank	
1. Needed to zoom in and out	3.72	0.835	1	
2. Slow data loading causing a delay in page	3.56	0.849	3	
changing				
3. Visual unhealthy	3.61	0.906	2	
4. Lacking a good taste	3.19	0.956	5	
5. Breaching of intellectual property easily	3.32	1.069	4	
Total	3.48	0.603		

From table 5, it is found that the problems in e-Book utilization of undergraduate students, Suan Sunandha Rajabhat University, dividing according to the problems in e-Book utilization are in moderate level; when considering each aspect, it is found that needed to zoom in and out is the most problem ( $\overline{\mathbf{X}} = 3.72$ ), secondarily, visual unhealthy ( $\overline{\mathbf{X}} = 3.61$ ) and lacking a good taste is the least problem ( $\overline{\mathbf{X}} = 3.19$ )

## DISCUSSION

According to the results, most undergraduate students in regular course, SSRU read e-Book for academic purpose and enhance knowledge; the e-Book was downloaded one time per month via playgoogle.com. Given that, the GE (General education) subject had the e-learning instruction and e-Book in each course was provided; consequently, the students was interested in using e-Book as a textbook but in digital form primarily. In conformity with the research performed by Yuthana Phimjak (2009) to study satisfaction and utilization of e-Book in Ramkhamhaeng University's students; the results showed that the motivation influenced the students to read e-Book was the readability at any place and time via a mobile application in conformity with the research performed by Jinwara Eakasitchaiphong (2015) to study e-Book reading of worker in Pathumwan District and the research performed by Jirawat Sitthiwilai (2013) to study marketing factors affecting e-Book reading behavior; the results showed that most people read e-Book via a mobile application. Furthermore, the research was similar to the one performed by Siriporn Poolsuwan (2017), the result demonstrated that most SSRU students utilized electronic media via a mobile phone. Considering the difficulties in reading e-Book, it was found that most SSRU students encountered the zooming in and out and visual unhealthy when reading in conformity with the research performed by Phanida Nikaji (2013) to study a comparison of satisfaction in reading e-Book with a book of SSRU students; the results showed that when reading e-Book, the mobile phone screen was small causing an inconveniency to zoom in and out and in case of reading for a long period of time, this would cause the eyestrain. Also, it was found that most SSRU students read e-Book at home; on the other hand, according to the research performed by Yuthana Pimjak (2009), the results were at the institute (Ramkhamhaeng University's students). Given that, the computer network of the university was not stable and has encountered power breakdown for many times causing the students to read e-Book at home.

#### **CONCLUSION AND FUTURE WORK**

According to the study, SSRU students are interested in information and communication technology advancement affecting the behavior of e-Book usage in learning, especially e-textbook which is the core learning media to transfer knowledge to them and to offer an opportunity to access several knowledge sources by themselves efficiently. Should the e-Book is developed qualitatively, to attract student's attention, the learning may be more in efficient way.

From the research, it is concluded that e-Book usage behavior of SSRU students are in high level. In order to develop the e-Book utilization of undergraduate students in learning, the university should emphasize matters as follows: First, the university should encourage the students to read e-Book for learning and arrange activities to promote reading of e-Book in faculties i.e. a training center. Second, Academic Resource Center should provide e-Book in several types i.e. both Thai and English to attract student's attention. Third, teachers should adjust their instruction to be conform to the e-Book reading behavior of the students.

## ACKNOWLEDGEMENTS

I would like to express my sincere thanks to Suan Sunandha Rajabhat University for invaluable help throughout this research.

## REFERENCES

- [1] Akaradej Srimaniphun, (2004). Development of multimedia instructional materials for "usage of instructional media training". Bangkok: Kasetsart University.
- [2] Chaweewan Kuhaphinon, (1999). Reading and Promotion. Bangkok: Silaphabanphakan.
- [3] Jirapan Theema, (2002). Electronic book. Academic Resources Center's journal, 13(1),1-18.

- [4] Jiranan Thongpun, (2012). E-book, the book of digital age. Retrieved on 8<sup>th</sup> March, 2012 from https://www.gotoknow.org/posts/493184.
- [5] Jinwara Eakasitchaiphong and Phatthitra Wachanachan, (2015). E-book reading of working people in Pathumwan district. Bangkok: Rajabhat Suansunandha University.
- [6] Jirawat Sitthiwilai, (2013). Marketing factors affecting E-book reading behavior. Thesis of Master of Business Administration, Faculty of Business Administration, Rajamangala University of Technology.
- [7] Kamolthip Ka-la, (2013). A study on factors affecting e-book purchase. Independent study report, Master of Science, Technology Management Program, College of Innovation, Thammasat University.
- [8] Kanada Malithong, (1996). A description of internet-multimedia computer terms. Bangkok: Chulalongkorn University Printing House.
- [9] Kanokkan Wirachananan, (2013). Factors affecting intentional E-book reading in Thailand. Thesis of Master of Liberal Arts. Management Information System Program, Thammasart University.
- [10] Office of Computer, Kasetsart University. (2000). Definition of E-book. Retrieved on 5<sup>th</sup> February 2015 from <u>http://www.ku.ac.th/magazine\_onlne/ebook.html</u>
- [11] Phanida Nikaji and Aphisak Phetchawet, (2014). A comparison of E-book and book reading satisfaction of SSRU students. Bangkok: Rajabhat Suansunandha University.
- [12] Praphaphan Hirawatcharaphreuk, (2003). E-book: an electronic book as the information resource.
  Online: Journal of Academic Resources Center, Bansomdejchaopraya Rajabhat University, 3(2),43-44.
- [13] Phatcharin Phumlumjiek, (2013). Causal effect influencing E-book reader behavior in Bangkok. Thesis of Master of Business Administration, Rajamangala University of Technology Thanyaburi.
- [14] Siriporn Poolsuwan, (2017), Internet usage on mobile phone of university students, Humanities and Social Sciences Review, vol. 7, No.1, pp.212-218.
- [15] Thipawan Hompul et al. (1999) citation from Phromphachon Khetdi. (2009). Definition of book. Retrieved on 13<sup>th</sup> November, 2014 from <u>http://www.gotoknow.org/Posts/307128</u>.
- [16] Yuthana Phimjak, (2009). Satisfaction and utilization of E-book in Ramkhamhaeng University's students, Thesis of Master of Liberal Arts, Mass Communication Technology Program, Ramkhamhaeng University.