

E-BOOKS AND ITS EFFECT ON THE PREFERENTIAL CHANGING DIMENSIONS OF USERS' READING ATTITUDE: A CASE STUDY OF K J SOMAIYA COLLEGE OF ENGINEERING

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In this communication, the results of a systematic study on the changing dimensions and perceptual dynamics of the student users of K J Somaiya College of Engineering Library due to the advent of e-books are reported. This study is aimed at capturing the perceptual attitude of selected variables to consolidate changing behavior for which users of Engineering College Library have been chosen to assess the quantum of the impact of e-books on their approaches to reading attitudes. During the study, the responses of seventy undergraduate engineering students studying in the academic year 2016-2017 were recorded. Both the users and non-users of eBooks were included in the study. Perceptual attitudes are tabulated and analyzed in this study. Ever-changing dimensions in the publishing industry have made a predominant effect on Library users and their preferential tools and techniques to assimilate information and knowledge. The findings of the present study indicate that eBooks are being fairly used by the students but preference towards reading is not in digital format.

Keywords eBooks, e-books, electronic books, eBooks, print books, e-resources, digital format, reading, perceptual attitude, and user studies

INTRODUCTION

Reading is a mental process that involves the cognitive approach of deriving meaning (reading comprehension) by decoding symbols and texts. There are many definitions of reading, such as reading is when someone looks into a written text and starts to absorb the information from the written linguistic message.

In Longman Dictionary of Applied Linguistic (Richards, et. Al., 1985), reading is described as –

- perceiving a written text in order to understand its contents which can be done silently (silent reading) and understanding of the result is called as reading comprehension.
- reciting a written text aloud (oral reading) which can be done with or without understanding of the content.

Another definition of the reading given by Collins English Learner's Dictionary (1994) is, as an act of looking at and understanding point. This is true because reading entails the use of vision to understand several words in a sentence and make them meaningful.

Reading Comprehension is the understanding of the written word, the understanding of the content that is being read, and the construction of meanings of the text. Thus, reading is a purposeful and active process. Factors affecting reading may be divided into mental and physical factors. Mental factors include comprehension, learning disabilities, speed of interpretation, thought processes, and abilities to focus away from distractions. Physical factors include environmental such as light, quality of eyesight concerning eye health, and source of page one is reading, such as phone, TV, book, or computer.

Most of the academic readings in the colleges are done using books. A print book (pBook) is a set of printed papers bound at one end together to hinge on one side. An electronic book (eBook) is an electronic version of a print book. E-book can be read on electronic devices like dedicated eBook reader, computer, laptop, tablets, smart phone, etc.

Kraft (2015) highlighted that more light is required during reading from paper and some screens, so reading varies depending upon the availability of light and time of the day. The dependency of external light is less if read from screens or devices that produces its own light. For controlling what is on the screen (scrolling, turning the page, etc.), a touch screen or keyboard illumination further reduces the dependency on external light.

ABOUT K. J. SOMAIYA COLLEGE OF ENGINEERING (KJSCE)

KJSCE is one of the reputed and sought-after colleges in the Mumbai city. It is first self-financed Engineering college affiliated to University of Mumbai to obtain academic autonomous status. KJSCE Library is designed to support research & instructions and houses around thirty-six thousand books. It has six exclusive Kindle eBook readers to access eBooks. It also holds good number of eBooks like EBSCO eBooks, McGraw Hill Access Engineering, McGraw Hill Xpress library and Kindle version eBooks. EBSCO eBook Academic Collection for Somaiya campus is subscribed for three years since 2014. It includes thousands of eBooks with unlimited use access and titles are regularly added to it. Library subscribes to McGraw Hill Access Engineering which includes access to more than 600 eBooks. The McGraw Hill Xpress library includes more than 100 textbooks which are very much in demand and required for curriculum. It also has more than 50 Kindle version eBooks.

LITERATURE REVIEW

Several studies concerning eBooks have been carried out by the students, research scholars, and faculty members of various Universities and Institutions throughout the world. Few relevant studies on the topic have been reviewed to gain insights on eBooks.

Shettar (2017) attempted to find usage pattern of eBooks in National Institute of Technology Karnataka. It was found that tech-savvy students prefer eBooks along with other e-resources. It was also stated that eBooks are gaining popularity among Indian academic

libraries. Kodandarama & Kumar (2014) conducted usage study of students and research scholars of University of Mysore and found that eBooks as one of the popular resources. And recommended awareness training program for optimal usage of e-resources. Hasan, et al (2011) conducted a study on usage pattern of eBooks and highlighted eBooks @IIT Delhi. It was found that print books are preferred for cover to cover reading and eBooks are not very popular amongst the readers. It also highlighted eBooks as supplementary reading along with print books.

A study to compare the usage of eBooks and eBooks received at University of Manitoba's preferred YBP approval plan was conducted (Horner, 2017) to examine cost per use for the approval eBooks and eBooks. It was found that overall eBooks were used more than eBooks but when examined by subject discipline, no significant difference was found. Fuentes Cuinas & Moreno (2017) conducted a qualitative and quantitative research at UADE Foundation to analysis trends of reading eBooks as compared to traditional eBooks. It was found that young and adults preferred eBooks as compared to people older than 50, who preferred eBooks. It was also found that level of spending on eBooks was found very less.

Ramaiah (2012) conducted a study to find out the acceptance of eBooks in India. It covered wide range of ages, subject backgrounds, computer experience, occupations, and comfort in using computers in their daily life. The study revealed that although the willingness towards use of eBooks exists still preference is given to eBooks. Awareness about advantages and disadvantage about eBooks is good amongst the readers. And close to half of the users are ready

to pay the same or slightly lesser price as compared to eBooks. Rajan et al. (2012) attempted to find user interest of eBook collection in Mahatma Gandhi University Library and found that accessibility and availability is important for usage of eBooks. Also, eBooks are used mainly for academic content and it is required to develop the collection accordingly. Morgan (2010) conducted a four-usage study in an academic medical library whose clients included clinicians to identify trends of print usage, trends of electronic usage, a comparison of electronic usage with print usage of the same title in the reserve collection and general collection. It was found that eBooks usage is substantial as compared to eBooks and usage of eBooks both on reserve and in the general collection has decreased over time. The author concluded that eBooks can replace eBooks in reserve.

Kumar et al. (2009) surveyed faculties, librarians and publishers and revealed that libraries should stock eBooks for its ease of use, 24/7 availability, simultaneous access, etc. It also highlighted issues of multiple languages used in country India. Anuradha (2006) attempted to find the popularity of eBooks among the users of Indian Institute of Science and found that use of eBooks is done by students more than staff and faculty and mainly for subject specific content requirement. Kananen et al. (2006) conducted two surveys about the use of all types of library services & resources by all user groups of the Kuopio University and Kuopio University Hospital libraries in Finland. Analyzed data showed that the library use is divided half-and-half between the traditional use of printed material & library premises and the modern use of digital

materials via the Web. Although there is 30% increase in use of eBooks, the use of traditional books is still maintained. E-books are fascinating technology and comes with benefits and the eBook industry promises advantages over print books (Rao, 2004).

AIMS AND OBJECTIVES

Students have to do lot of reading during their course/curriculum. This study explores whether the medium matters during reading.

The objectives of the present study are to:

1. assess the awareness and use of eBooks by students.
2. ascertain relationship between availability of digital devices and usage of eBooks.
3. find out preferred medium for accessing eBooks.
4. investigate effects of eBook on reading.
5. ascertain relationship between cost of eBooks and its procurement preference.
6. identify the reasons for not using eBooks.

SCOPE AND METHODOLOGY

In this study, physical factors are only considered; mainly medium of the information/page i.e. eBooks and eBooks. A survey method was adopted for which structured questionnaire was designed using google forms and served to seventy undergraduate students of K J Somaiya College of Engineering, Mumbai studying in academic year 2016-2017. Both users and non-users of eBooks are included in the study. The variables are so selected to represent the entire gamut of various domains of the engineering science and technologies being studied by the seventy samples. It is also to indicate that the

balanced scientific representation has been adopted to justify and draw the inferences

DATA ANALYSIS AND INTERPRETATION

Out of 70 questionnaires, 65 filled in questionnaires were received from students of K J Somaiya College of Engineering i.e. 93% responses were received. Responses were entered in the google form for proper tabulation. Representation of responses received is presented in below table.

Table 1. Response rate of the respondents

Particulars	Response rate n (%)
Respondents	65 (93)
Non-Respondents	5 (7)
Total	70 (100)

Access to digital devices

Digital content consumption in India is on rise and so is the digital media segment. And it will continue to increase as there are early adopter of technology and mainly young tech-savvy users.

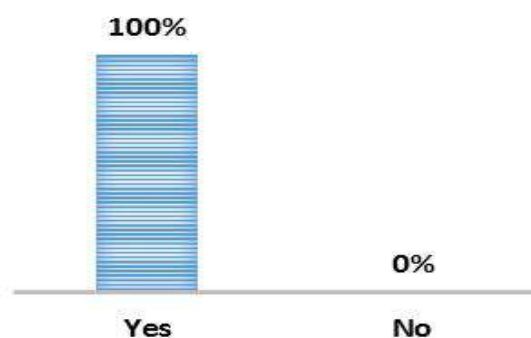


Fig. 1: Owning a Smart Phone

Due to availability of 3G and 4G broadband and inexpensive smartphones, there is a big leap of accessing information from traditional to

online resources. A question regarding the owning of a smartphone, owning of dedicated eBook reader and access to digital devices was asked

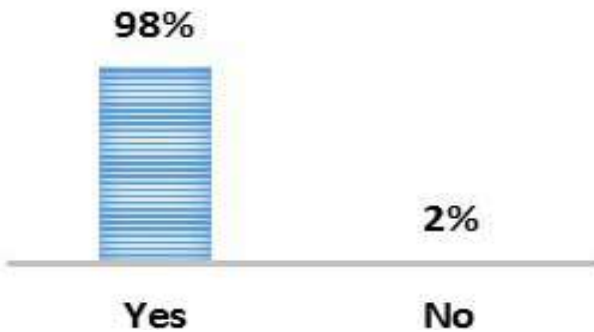


Fig. 2: Access to Digital Devices

Figs. 1, 2, and 3 reflects that 100% students owned a smart phone that could be an Android, iOS, Windows phone. Also, 98% students had access to any of the digital devices like computer, laptop, tablet or phone. But, 91% of students do not own any dedicated eBook Reader used only to read books.

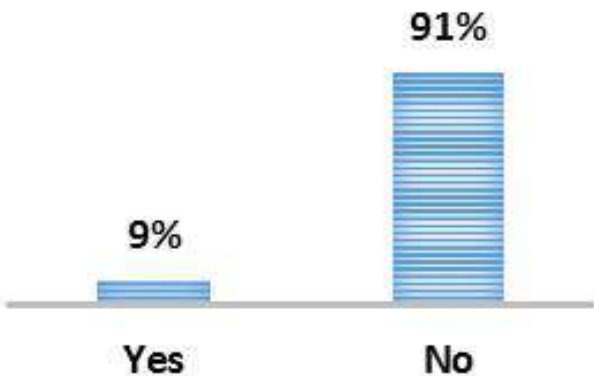


Fig. 3: Owning eBook Reader

Awareness and users of eBooks

Due to changing pattern of publishing and availability of eBooks format, libraries are maintaining collection of eBooks. It is very important to create awareness about the resources

available in the library for their effective utilization.

Table 2: Awareness about Library eBooks

Sl. No.	Awareness	Respondents (%)
1	Yes	36 (55)
2	No	7 (11)
3	Don't Know	22 (34)
	Total	65 (100)

Table 2 shows that only 55% of users were aware about the availability of eBooks collection in the library. K J Somaiya College of Engineering subscribes to McGraw Hill Access Engineering which has 600+ eBooks, McGraw Hill Xpress library which has 100+ textbooks and around 50+ Kindle version eBooks.

Table 3: eBook Users

Sl. No.	eBook Users	Respondents (%)
1	Yes	38 (58)
2	No	27 (42)
	Total	65 (100)

From Table 3 it was found that only 58% of students uses eBooks. And out of the 42% of non-users of eBooks, half of them are not aware about the availability of the eBooks in the library.

Preference of eBook users

Further, the eBook users were asked to give details about the access, preferred medium, genre and frequency of use of eBooks. Table 4 shows that 89% students use eBooks which has open access/ free, 42% students use eBooks from library and only 3% students procured personal copies.

Table 4: Type of eBooks used

Sl. No.	Type of eBooks are used	Respondents (%)
1	eBooks which have Open access & are Free	34 (89)
2	eBooks available from library	16 (42)
3	eBooks personally purchased	1 (3)

Table 5: Preferred medium for using eBooks

Sl. No.	Medium	Respondents (%)
1	eBook Reader	1 (3)
2	Computer	10 (26)
3	Laptop	15 (39)
4	Tablet	6 (16)
5	Smart phone	32 (84)
6	Other	0 (0)

Table 5 indicates that most preferred medium to access eBooks is smart phone 84% responding to the same, followed by 39% from laptop, 26% from computer, 16% from tablet and only 3% from eBook Reader.

Genre and frequency of eBook usage

Users of eBooks were asked regarding the frequency of access of eBooks and the genre of eBooks used.

Table 6: Genre of eBooks used

Sr.	eBook genre	Respondents (%)
1	General Reading (Fiction, Non Fiction, Self help, etc)	18 (47)
2	Subject oriented	30 (79)
3	Other	0 (0)

Table 6 indicates that mostly eBooks are used to access subject oriented information 79% responding to the same and 47% students' uses it for general reading purpose.

Table 7: Frequency of usage of eBooks

Sl. No.	Usage frequency	Respondents (%)
1	Always	1 (3)
2	Frequently	9 (24)
3	Occasionally	17 (45)
4	Rarely	5 (13)
5	Very Rarely	6 (16)

It was found from Table 7 that 45% students use eBooks occasionally, 24% use frequently and only 3% students use eBooks regularly.

Preference for eBooks

Students were asked about number of books procured in last year and their preference of reading books.

Table 8: Procurement of eBooks

Sl. No.	eBooks did you purchased last year	Respondents (%)
1	0	31 (82)
2	1-3	5 (13)
3	4-6	1 (3)
4	7-9	1 (3)
5	10 & Above	0 (0)

Table 9: Preference for reading

Sl. No.	Preference of Reading	eBook n (%)	pBook n (%)
1	Cover to cover Reading	7 (18)	31 (82)
2	Medium length reading	16 (42)	22 (58)
3	Short length reading	26 (68)	12 (32)
4	Quick reference reading	29 (76)	9 (24)

Table 8 shows that 82% students did not procure any eBooks and only 19% students procured some eBooks. Table 9 shows that 82% students prefer to read pBook if whole book is to be read and 76% prefer eBooks for quick reference reading. This indicates that as the

number of pages' decreases or the duration of reading decreases then preference is given to eBooks. Originally eBooks users are pBooks readers and as the eBook lack the presence of spatial landmarks, which makes it difficult to plan to read, for long durations or a greater number of pages pBooks is preferred.

Reading experience with eBooks

Students were asked about their experience while reading eBooks. From fig. 4 it was found that 47% did not find reading eBook less effective.

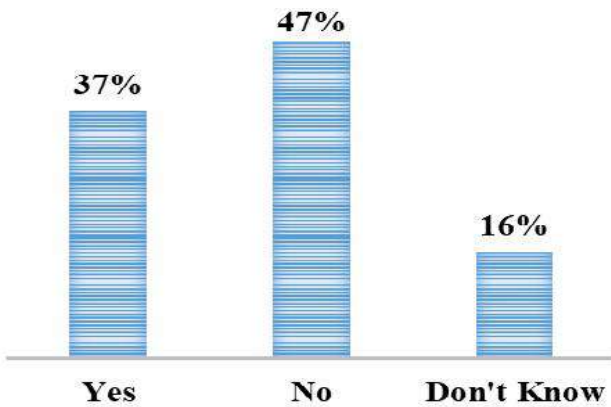


Fig. 4: eBook reading is less effective

However, fig. 5 shows that 76% students find a difference between reading an eBook and pBook and fig. 6 indicates that 79% students remember and understand more if read from a pBook.

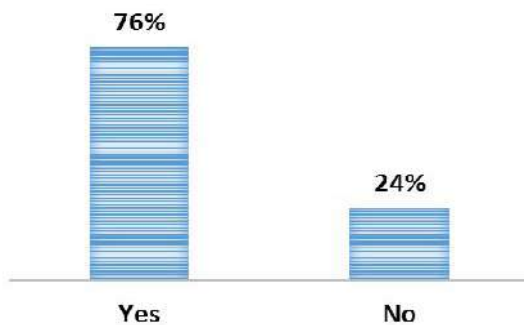


Fig. 5: Difference in reading eBook or pBook

P-books provide reference point to recall the memory as against the eBooks which often show percentage of read material, making it less effective to remember information.

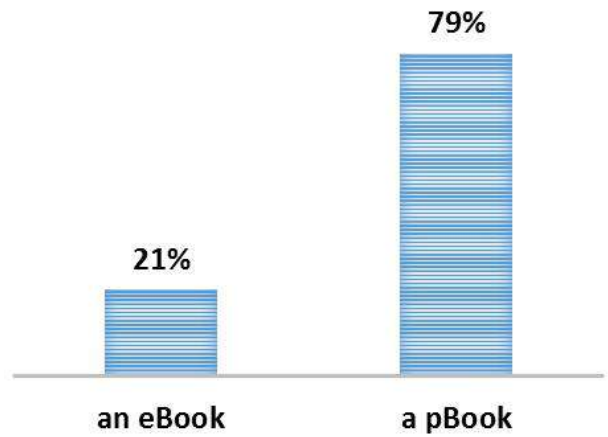


Fig. 6: Effective recall of information

Also, the luminance from e-readers causes vision fatigue if read for longer duration of time.

Reasons for not using eBooks

Non user of eBooks were asked about the reasons for non-usage and their plan for using eBooks in near future.

Table 10: Reasons for not using eBooks

Sl. No.	Reason for not using eBooks	Respondents (%)
1	I prefer reading the print book as I like the look & feel of it	17 (63)
2	I am not comfortable reading eBooks	10 (37)
3	I am not comfortable using eBook reading devices	6 (22)
4	Deep Reading is not possible	6 (22)
5	It cause strain on eyes if read for longer duration	15 (56)
6	Required titles are not available	1 (4)
7	I do not have an eBook reader	7 (26)
8	My library do not have any eBooks	1 (4)
9	Others	0 (0)

From Table 10 it was found that main reason for not using the eBook is preference for reading the pBook as the look and feel is liked by 63% students, followed by 56% students says eBooks cause strain on eyes if read for longer duration, 37% students are not comfortable reading eBooks, 26% do not own an eBook reader, 22% students find deep reading is not possible and eBook reading devices are not comfortable and so on.

Table 11: Plan to use eBooks in near future

Sl. No.	Plan to use eBooks	Respondents (%)
1	Yes	14 (52)
2	No	5 (19)
3	Don't Know	8 (30)

However, from Table 11 it was identified that 52% students plan to use eBooks in near future, 19% students are not willing to use eBooks and 30% students are uncertain about using eBooks.

Opinion about eBooks

All students, eBook users and non-users were asked to give their preference of buying eBooks when compared with the cost of pBooks and opine about eBooks in future.

Table 12: Preference of eBook procurement

Sl. No.	Preference	eBook (%)	pBook (%)
1	Price of an eBook < pBook	43 (66)	22 (34)
2	Price of an eBook = pBook	17 (26)	48 (74)
3	Price of an eBook > pBook	4 (6)	61 (94)

Table 13: Opinion about eBooks replacing pBooks

Sl. No.	Opinion	Respondents (%)
1	Yes	26 (40)
2	No	22 (34)
3	Don't Know	17 (26)

From Table 12 it was found that 66% students would prefer to buy eBooks if its price is less than pBook. However, if the price of eBook is equivalent or more than pBook than the pBook is preferred. It indicates that cost effectiveness is looked into while buying book, but when the price is equivalent then pBook is preferred, indicating it as the most preferred medium for reading. Table 13 shows that 40% students feel that eBooks will replace pBooks, while 34% students feel that it won't and 26% are not certain about it.

RECOMMENDATIONS

Based on the findings, the study recommends the following:

- a) Awareness regarding use of eBooks to satisfy the academic information needs should be developed.
- b) Light reading eBooks collection should be developed, so as to increase eBooks usage for pleasure reading.
- c) Study indicates that awareness regarding the availability of library eBooks is required to increase usage of eBooks.
- d) The library professionals should be trained to provide awareness amongst the students for using eBooks.
- e) It is essential to conduct orientation and hands-on training for students to optimize the eBooks usage.

- f) Library should use latest web 2.0 techniques like regular email alerts, Push messages, RSS feeds, etc. to promote usage of eBooks.

CONCLUSIONS

Reading is an assimilation of thought processes by the reader which is generated by the authors to propagate and disseminate their tacit/implicit knowledge to wider community. To enhance the knowledge base, one needs to read and understand the prevailing research done in particular domain of knowledge. The advent of printing press made revolutionary changes in the field of printing and publishing industry. The impact of computing technology brought in another milestone and accelerated the publishing activities. Latest trends and the ICT tools invariably applied and used in every sphere of human activities made immanent influences on human behavioral aspects so also on reading habits. Digital revolution is another predominant factor dominated the perceptual changes in reading habits. Multifaceted affordable tools and techniques are facilitated to bundle out digital divides. Ever-changing dimensions in publishing industry has made predominant effect on Library users and their preferential tools and techniques to assimilate information and knowledge.

Overall, considering the findings of the present study it can be confirmed that eBooks are being fairly used by the students. Although students have a smart phone and have access to digital devices, but preference towards reading is not in digital format. For quick and short reference study eBooks are preferred and for long duration reading eBooks are preferred. Main reasons for not using eBooks are preference

towards reading eBooks and vision fatigue. There are many advantages with eBooks but still there are occasions when eBook is preferred and found comfortable by the students for better understanding.

EBooks in the libraries are going to increase and the libraries will have hybrid environment including both eBooks and eBooks. Libraries should play an active role in creating awareness about availability of eBooks. With better eBook readers, overcoming shortcomings of spatial landmarks and additional features, will increase the use of eBooks.

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