

Original article:

A comparative study between e-text book and printed text book reading in anatomy

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ABSTRACT

With rapidly increasing technological devices the demand of e book reading is increasing in colleges. The aim of our study is to compare the acceptance of e text book and printed text books among medical students in their Anatomy course in 1st (Prof.) MBBS course. The participants were 100 undergraduate 1st (Prof.) MBBS students of NBMC. They were given printed Questionnaire at the end of 2016-2017 academic years. It is seen that still printed books are preferred and is of choice, because they are in the habit of reading printed book, it is easier to take notes & easier to eye. E book reading is an additional aid but not a replacement of printed text books.

Key words: E text books, dissection of cadavers, Histology, Laptops.

INTRODUCTION

Higher Education has many diverse fields to intrude and should not be confined in reading few books only. The field of knowledge should be vast and expanded by various means. Text books have occupied a prime tool for learning for many years. Laptop, Tablets, Smartphones, are purchased by most of the college and university students and they can easily access internet. The thirst of a student may be satisfied about a particular topic or in a particular field by search through internet which was not completed by a teacher in a particular class by a limited period of time and limited schedule of classes. E book reading is coming up and is improved in the past few years. E-textbook means textbook that are available in digital or electronic format¹. This are in two formats, page fidelity e-textbook and reflowable digital e-textbook^{2,3}. PDF file with no dynamic media, no active web links is the example of page fidelity e-textbook, whereas reflowable e-textbooks use a flexible format system that includes dynamic media, active links & interactive features³. With the advance of age and technological devices e text books has taken and important turning point in higher education⁴. Digital textbook can provide access to a wealth of information that is readily retrievable from internet⁵. It also protect the environment & children's health⁵

AIM AND OBJECTIVES

The aim of our study is to see how much of preference is there between e text books & printed textbook among undergraduate medical students. This study also investigates to explore the strategies & problems during reading e-textbook.

MATERIALS AND METHODS

Our study carried over 100 first year MBBS Students of Academic session 2016-2017 of North Bengal Medical College, Darjeeling. Printed Questionnaires were given to draw out facts about e book reading and to find out both the benefits and draw backs of e book reading. Then responses were tabulated and appropriate analysis was done.

OBSERVATION AND RESULTS

Table No. 1
Preference of reading
Total number of students = 100

Subject	Number of students	%
Online reading/ E-textbook	5	5
Printed Text book	55	55
Both	40	40

In our study majority of Medical Students (55%) preferred printed text books. Only (5%) students preferred to read electronically and 40% students prefer both the mode of reading.

Table 2
Preference of Device to read Electronic Text
Total Number of Students = 100

Device	Number of students
Mobile	20
Laptop	52
Tablet	10
I Pad	4
Kindle	8
Desktop	6

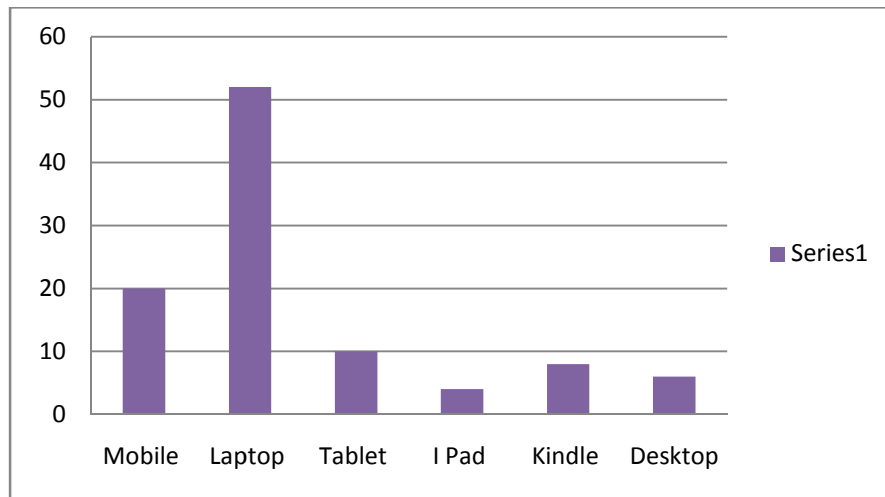


Fig. 1: Diagram showing preference of Device to read Electronic Text

The electronic device most chosen by them was laptop (52%). 20% students preferred mobile device.

In our study, 61% students said that, they not use any special software (Evernote, oneNote etc.) during reading e-textbook and 30% students sometime use special software.

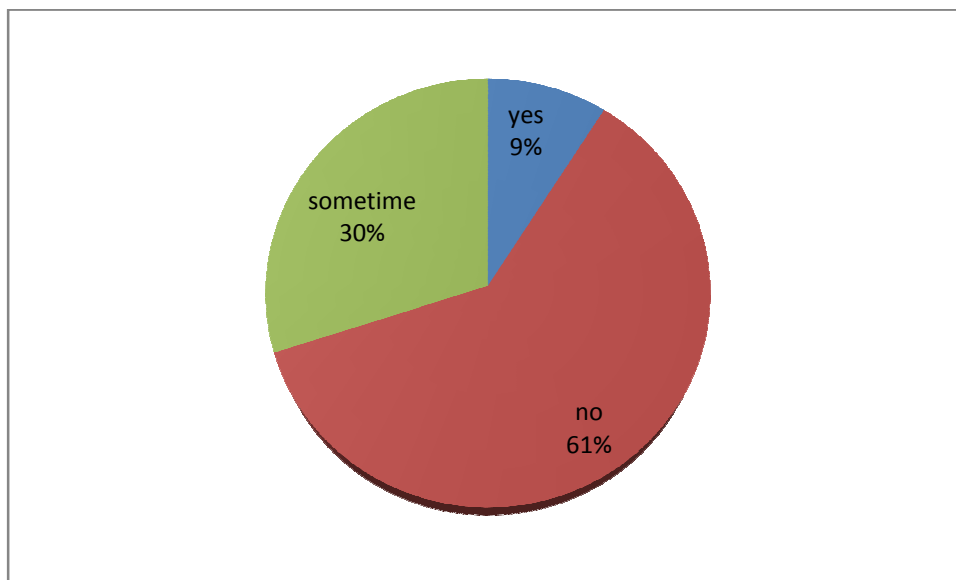


Fig. 2: Pie diagram showing that any special software use during reading e-textbook (evernote, oneNote etc.) by students.

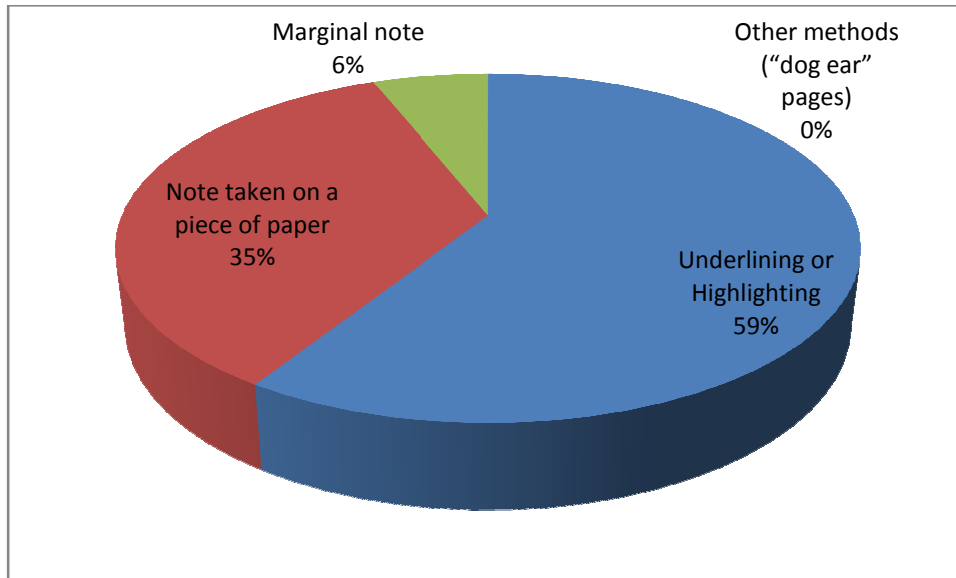


Fig. 3: Pie diagram showing that preference of methods to retain information while reading printed textbook. Preferred strategy to retain information is **Underlining or Highlighting (59%)** while reading printed textbook, whereas 46% of the medical student found that it was easier to **takes notes on a separate piece of paper** during reading electronically.

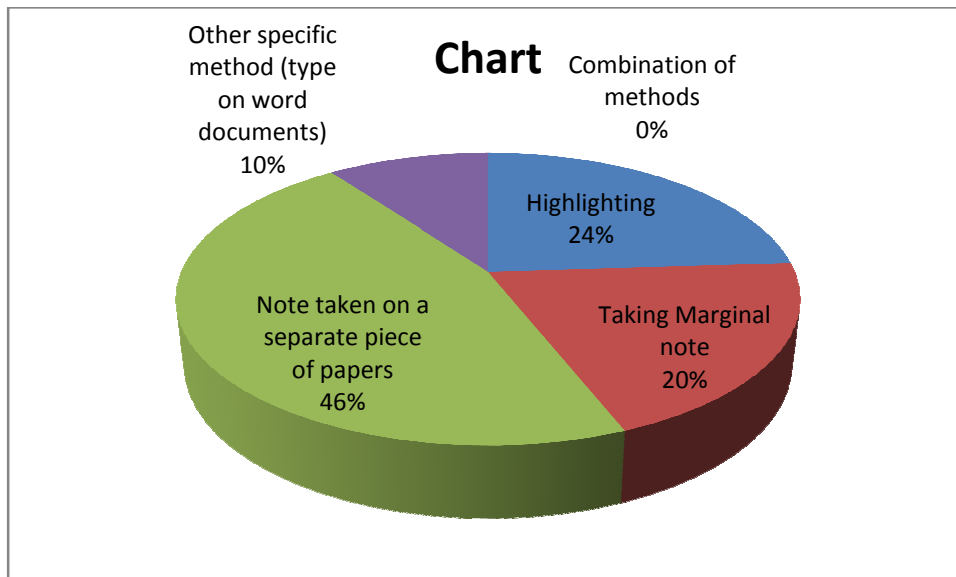


Fig. 4: Pie diagram showing that preference of methods of taking notes while reading E-text book.

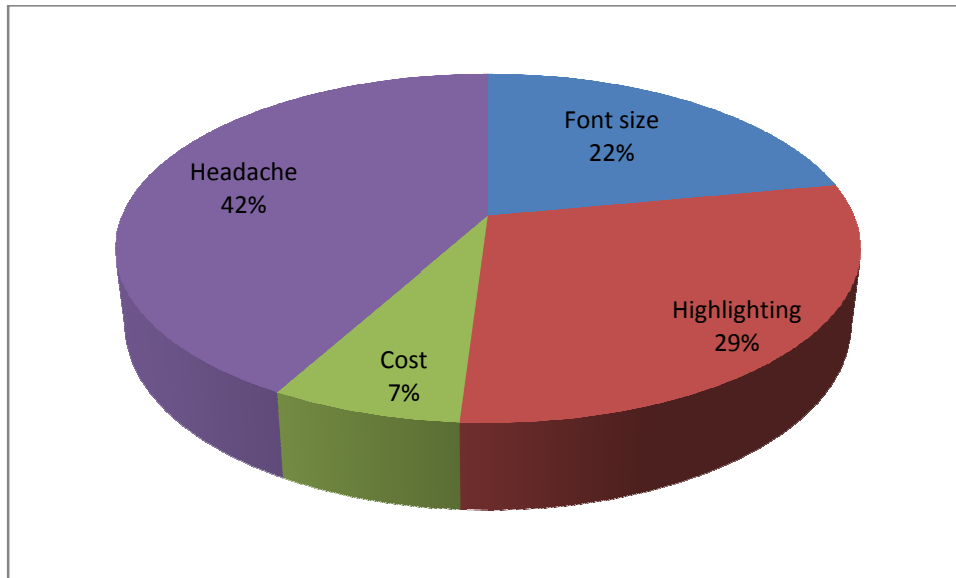


Fig. 5: Pie diagram showing that problem in E-book reading

In our study, we found that the main problem in e- book reading is headache (42%). Others are highlighting (29%), font size (22%) and cost(7%).

Table No. 3

Preference of reading Gross Anatomy through

Methods	Number of student
1. Only book	0
2. Seeing dissection of cadavers and reading book	90
3. Through laptop, tablet	3
4. Both of 2 & 3	7

Table NO. 4

Preference of histology reading methods.

Methods	Number of students
Direct through microscope + text book	64
E book reading	3
Both	33

In our study, 90% students preferred to see dissection of cadavers and reading book during reading gross anatomy. 64% students preferred to see histological slides under microscope with reading printed textbook during histology reading.

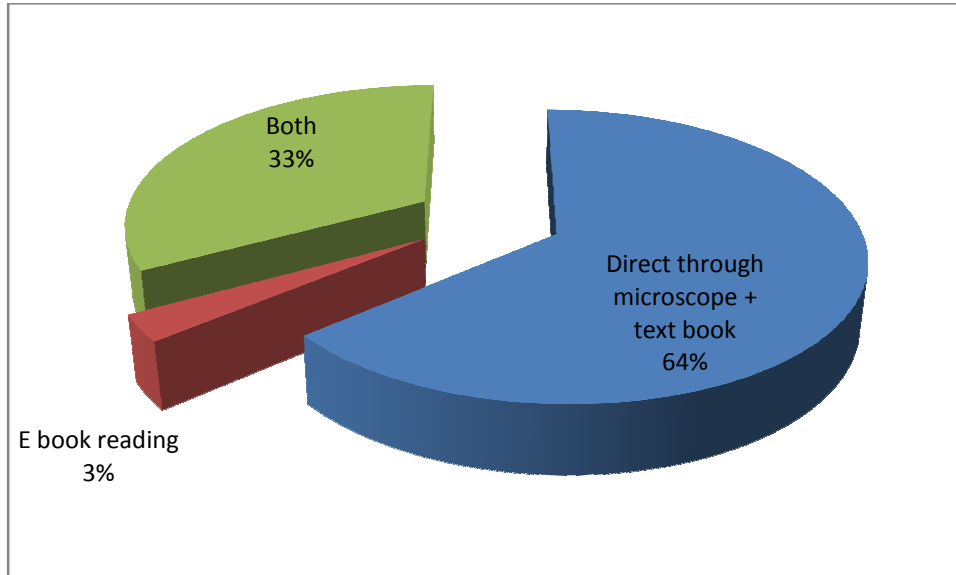


Fig. 6: Pie diagram showing that preference of histology reading methods by students.

According to some of our medical students the importance of e-textbook (e book) was that:

1. Some terminology not understood by them was very easily accessed through e- textbook and adequate information was available from it.
2. Vast information could be accessed through 'e' book which was their choice for preferring e book.
3. Portability was one reason for choice of 'e' books and feeling of studying at 'International standard'. The choice of this student was '*Dual Mode Hybrid*' (*Laptop – cum – I Pad*) and he used special software (*Abode – Acrobat*) and it was his suggestion that it was a better way of improvement of their 1st professional curriculum.
4. Along with text book it would be a beneficial method as it gave better visual impression.
5. All books could not be purchased and 'e' book reading was a means of accessing a vast knowledge.
6. Improvement in their MBBS curriculum was thought to be achieved as e book reading was a reference source.
7. Visualizing with sound animation had more retentive effects on brain.

Choice of paper based 'text book' reading by some of the medical students are stated below-

1. Multiple books provide various information.
2. Reading online was not in habit from the very childhood.
3. Paper based documents gave them a better spatial understanding of where they were in the text.

One of the students gave a choice of both printed text book reading and on lines reading as he stated, **3D** concepts are better understood online and printed books are helpful for written explanation.' He thought it was a means for improvement as 3D concept could be revised though online reading.

DISCUSSION

Reading printed text book has become a habit among students from the very childhood and it is very difficult for the students to switch over to E book reading at a higher education level. So the strategy is that e-book reading is an additional tool that is taken by the students. Podlisky T. & Soiferman K. observed 91.23% students thought paper based textbook help studying and retaining information better⁶. According to Vernon (2006), his students complained that reading online caused anxiety about not being able to underline, headache & temptation to do other things like check email⁷, which was similar to our study. Paper based reading is of choice among medical students till date and students are reluctant of changing their habit by which they have gained achievement so far, which was similar to Vernon (2006) study⁷. Students who are more computer savvy do not use e -text book as the sole means of reading.⁸ Interest can be developed among students who are not doing well, through internet search in order to excel(improve reading capability)⁸. Though technology has advanced a lot electronic textbook reading has slow progress⁸. The change from printed text book reading to electronic reading will not happen so easily⁹. Morton et al study indicates that students preferred e-book as a self-study tool, but preferred paper for note taking¹⁰. Medical student prefer to use both electronic and print for different purposes¹⁰. Ugaz and Resnick compared the use of print and electronic textbooks in the medical sciences library and found that the total use of electronic text was dramatically higher than the print text¹¹. In our study, the electronic device most chosen by them was laptop (52%). 20% students preferred mobile device. This result is similar to Amanda J. et al study¹². Sakine Ongoz & Adnan Baki observed in their study that, Electronic textbook increased interest in the course¹³.

CONCLUSION

It is seen in our present study among medical students that printed books are not replaced by electronic text book. . Paper based reading is a habit from childhood, switching to a new method requires more time. The current generation of students embraces technology, but research suggests that for academic purpose, students prefer to read printed textbook. Our study is based on a limited number of students and should it be more extended to draw a more specific conclusion.

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