

From Print to Pixels: Attitude of Senior Secondary Students Towards E-Book Reading Habits

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Abstract:

With the quick development of digital technology, e-book reading habits have become more popular since they provide a practical and easily accessible substitute for conventional print media. These behaviours are influenced by things like personal preferences, internet connectivity, and device availability. Knowing these trends helps one better understand how digital reading affects education, leisure, and information consumption in the contemporary era. This study explores the attitude of senior secondary students towards e-book reading habits in respect of gender, location, Arts, Science and Commerce stream, family type and types of internet connection used. To achieve the objectives of this study, a descriptive survey was employed. A 30 item questionnaire was prepared based on five point Likert scale and data was collected from senior secondary students in this study. A randomly selected sample of 130 senior secondary students from Hooghly District in West Bengal participated in this research. The findings suggest no statistically significant differences in attitudes toward e-books across gender, location, academic stream, family type, or type of internet connection. While males, urban students, commerce students, joint family members, and Wi-Fi users had slightly higher mean scores, these differences were marginal and not meaningful. Despite slight variations in the mean scores across the categories, statistical analysis showed no significant differences at the 0.05 level in respect to different factors.

Keywords: Attitude, E-Book, Senior Secondary Students, Survey Approach, Digital Technology

Introduction:

Reading is a conscious choice turned into behaviour. Acquiring, maintaining and permanently transforming reading behaviour into a habit is a process that requires serious discipline (Özdemir, 1983). The dynamicity of 21st century learning environment is dominated by digital world which has become the inevitable tomorrow with digitalization of the print format dating back to 1970 while Stephen King's is credited as the first e-publisher (Verhoef, 2017). An e-book can then be defined as an "electronic text that is available in a digitally encoded format readable via an electronic device" (Wexelbaum et al., 2011, p. 2) or an electronic version of a printed book (Siegenthaler et al., 2010). It has repeatedly been stated that e-books can be very stimulating to students (Collins et al., 1997; Glasgow, 1996). Short (2010) explored how e-books can be used to motivate and develop students reading. E-books has many advantages including key word searching, being paperless, takes less space, ability to change the font

size as desired, ability to view animation and video, portability, easy preservation and protection of the content (Yildirim, G., et al. 2017).

Ebied and Rahman (2015) correlated students' higher academic achievement with their feelings of freedom and flexibility when reading e-books. They stated that e-books provided opportunities for students "to view content anywhere, at any time without restrictions so that some students may download the e-book on their mobile phones to be able to review the information and study at any time they have it" (Ebied & Rahman, 2015). Recently, Herther (2011) stated that "Google currently offers a mix of about 3 million public domain and contemporary e-books. Amazon claims to offer 750,000 books for sale in addition to a stable of 1.8 million free books." E-books sales for the 13 publishers that report to AAP soared 3176% in 2009 to \$169.5 million. The rise in sales, coupled with a decline in print trade sales, increased the e-book share of total trade sales from 1.2% in 2008 to 3.3% in 2009 (E-book, 2010). Now-a-days, E-books are readily available. A book can be purchased anytime and downloaded in seconds, eliminating the need to go to a bookstore or wait for delivery. This rapid accessibility is particularly beneficial in learning environments where students need immediate access to resources. E-books also allow us to customize our reading experience. Individual preferences and needs are met through features such as customizable font sizes, background colors, and built-in dictionaries. These modifications can make reading more pleasant and accessible, especially for people with visual impairments.

Rationale of the Study:

The research study aims to explore the opinions of senior secondary school students regarding e-books to better understand their preferences, usage patterns and potential hurdles in accessing the e-books. By exploring these attitudes, the study is expected to find various components that can influence the acceptance of e-books in educational contexts. This insight can help the educators and policymakers develop strategies to improve digital learning experiences, helps to allocate resources in an effective manner and integrate e-books into the curriculum while diving deep into a more productive and fascinating learning environment for students.

Objectives of the Study:

The objectives of the study are as follows -

- O1:** To analyze the difference in the attitude of male and female students towards e-books at the Senior Secondary level.
- O2:** To analyze the difference in the attitude of students towards e-books at the Senior Secondary level with respect to the location of the school.
- O3:** To analyze the difference in the attitude of students towards e-books with respect to Arts, Science and Commerce stream.
- O4:** To analyze the difference in the attitude of students towards e-books with respect to family type.
- O5:** To analyze the difference in the attitude of students towards e-books with respect to type of internet connection they use in their daily lives.

Research Hypotheses:

For O₁, the following research hypothesis has been formed:

H₀₁: There is no significant difference in the attitude of male and female students towards e-books

For O₂, the following research hypothesis has been formed:

H₀₂: There is no significant difference in the attitude of students towards e-books in rural and urban areas.

For O₃, the following research hypothesis has been formed:

H₀₃: There is no significant difference in the attitude of students towards e-books with respect to Arts, Science and Commerce stream.

For O₄, the following research hypothesis has been formed:

H₀₄: There is no significant difference in the attitude of students towards e-books with respect to family type.

For O₅, the following research hypothesis has been formed:

H₀₅: There is no significant difference in the attitude of students towards e-books with respect to the type of internet connection they use in their daily lives.

Operational Definition of the Terms:

- **Attitude:** It is a tendency to respond towards a particular idea, object, person or situation positively or negatively by expressing their own opinions or feelings.
- **E-books:** An e-book, or electronic book, is a digital version of a printed book that can be read on electronic devices such as e-readers, tablets, smartphones, and computers. E-books offer features like adjustable font sizes, searchable text, and instant access to a vast array of titles, enhancing the reading experience with convenience and portability.
- **Reading Habits:** Reading habits are the patterns and practices that people follow when it comes to reading. These habits can include a variety of factors such as reading frequency, material selection, location, timing and overall approach to reading.
- **Senior Secondary School Students:** Senior Secondary School means school preparing students for both the Secondary (Class-X) and Senior School Certificate (Class-XII) Examinations of the Board or for Senior School Certificate (Class-XII) Examination only

Methodology of the Study:

As per the nature of the study, the Descriptive Survey method was considered to be appropriate for the present study.

Sample:

The samples were selected from the different schools of Hooghly district, West Bengal.

Variables:

Two types of variables have been identified for this research:

A. Major Variable: Attitude of the students towards E-books

B. Demographic Variables:

- Gender of the students: Male and Female
- Location of the school: Rural and Urban
- Stream: Arts, Science and Commerce
- Family Type: Nuclear and Joint Family
- Types of Internet Connection: Mobile data and Wi-Fi

Tools Used in the Study:

The primary tool used in this study was a 30-item questionnaire entitled “From Print to Pixels: Attitude of Senior Secondary Students Towards E-Book Reading Habits” designed to gather data on various factors influencing the students’ use of e-books. The questionnaire is similar to 5point Likert scale. By employing this structured questionnaire, the research effectively collected quantitative data allowing for an analysis of the present study.

Data Collection Procedure :

The researcher collected data from 132 senior secondary students by using the above-mentioned scale. It was said that there was no negative or positive marking for the responses. The responses collected is only made for the purpose of fulfilling the requirement of the research work. It will not be disclosed publicly. Their privacy will be maintained.

Research Questions and Hypotheses-wise Analysis of Data

1. Analysis of Data with respect to Objective 1:

O₁. To analyze the difference in the attitude of male and female students towards e-books at the Senior Secondary level.

For fulfilment of the above-mentioned objective, one research hypothesis have been formulated and tested which was as follows:

H₀₁: There is no significant difference in the attitude of male and female students towards e- books.

Table 1: Group Statistics- Gender

Gender		N	Mean	Std. Deviation	Std. Error Mean
Attitude Towards e-books	Male	62	100.68	13.371	1.698
	Female	70	100.21	13.617	1.628

Table 2: Independent Samples Test- Gender

	Levene's Test for Equality of Variances			t-test for Equality of Means		
	Equal variances assumed	F	Sig.	t	df	Sig. (2-tailed)
Attitude towards e-books	.014	.907	0.197#	130	0.844	

(# not significant at 0.05 level of significance)

Interpretation:

From the analysis in Table 2, it is seen that in case of Levene’s Test for equality of variances the calculated p value is 0.907 ($p > .05$). So, equal variance can be assumed. Table 2 also shows that in case of comparison of attitude of the senior secondary students towards e-book in respect to gender, the calculated $t_{(130)}$ value is 0.197 and ‘p’ value is 0.844 ($p > .05$). Hence, t is not significant at 0.05 level. So, H_{01} is not rejected and it can be inferred that that attitude of male senior secondary students towards e-books are not significantly different from attitude of female senior secondary students towards e-books.

Analysis of Data with respect to Objective 2:

O₂: To analyze the difference in the attitude of students towards e-books at the Senior Secondary level with respect to the location of the school.

For fulfilment of the above- mentioned objective, one research hypothesis was formulated and tested which was as follows:

H₀₂: There is no significant difference in the attitude of students towards e-books in rural and urban areas.

Table 3: Group Statistics- Location

Location		N	Mean	Std. Deviation	Std. Error Mean
Attitude Towards e-books	Urban	88	100.68	13.990	1.491
	Rural	44	99.93	12.448	1.877

Table 4: Independent Samples Test- Location

	Levene's Test for Equality of Variances			t-test for Equality of Means		
	Equal variances assumed	F	Sig.	t	df	Sig. (2-tailed)
Attitude Towards e-books	1.118	.292	0.301#	130	0.764	

(# not significant at 0.05 level of significance)

Interpretation:

From the analysis in Table 4, it is seen that in case of Levene’s Test for equality of variances the calculated p value is 0.292 ($p > .05$). So, equal variance can be assumed. Table 4 also shows that in case of comparison of attitude of the senior secondary students towards e-book in respect to location, the calculated $t_{(130)}$ value is 0.301 and ‘p’ value is .764 ($p > .05$). Hence, t is not significant at 0.05 level. So, H_{02} is not rejected and it can be inferred that that attitude of senior secondary students towards e-books in urban areas are not significantly different from attitude of senior secondary students towards e-books in rural areas .

Analysis of Data with respect to Objective 3:

O₃: To analyze the difference in the attitude of students towards e-books with respect to Arts, Science and Commerce stream.

For fulfilment of the above- mentioned objective, one research hypothesis was formulated and tested which was as follows:

H₀₃: There is no significant difference in the attitude of students towards e-books with respect to Arts, Science and Commerce stream.

Stream	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Arts	50	98.68	15.328	2.168	94.32	103.04
Science	42	100.12	13.080	2.018	96.04	104.20

Commerce	40	102.95	11.057	1.748	99.41	106.49
Total	132	100.43	13.452	1.171	98.12	102.75

Table 5 : One Way Anova_Stream

Table 6: ANOVA_Stream

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	411.202	2	205.601	1.139	.323
Within Groups	23295.185	129	180.583		
Total	23706.386	131			

Interpretation:

The table provides descriptive statistics and the results of a one-way ANOVA analysis. Since the p-value (0.323) is greater than 0.05, the ANOVA result suggests that there is no statistically significant difference in the mean scores of Arts, Science, and Commerce groups. This means that the variation in scores between the groups could be due to chance rather than a true difference in means.

Analysis of Data with respect to Objective 4 :

O4: To analyze the difference in the attitude of students towards e-books with respect to family type.

For fulfilment of the above- mentioned objective, one research hypothesis was formulated and tested which was as follows:

H04 : There is no significant difference in the attitude of attitude of students towards e-books with respect to family type.

Table 7: Group Statistics- Family Type

Family		N	Mean	Std. Deviation	Std. Error Mean
Attitude Towards e-books	Nuclear Family	92	100.08	13.320	1.389
	Joint Family	40	101.25	13.889	2.196

Table 8: Independent Samples Test- Family Type

	Levene's Test for Equality of Variances			t-test for Equality of Means		
	Equal variances assumed	F	Sig.	t	df	Sig. (2-tailed)
Attitude Towards e-books	.184	.669	-0.459#	130	0.647	

(# not significant at 0.05 level of significance)

Interpretation:

From the analysis in Table 8, it is seen that in case of Levene’s Test for equality of variances the calculated p value is 0.669 ($p > .05$). So, equal variance can be assumed. Table 4 also shows that in case of comparison of attitude of the senior secondary students towards e-book in respect to location ,the calculated $t_{(130)}$ value is -0.459 and ‘p’ value is 0.647 ($p > .05$). Hence, t is not significant at 0.05 level. So,

H₀₄ is not rejected and it can be inferred that that attitude of senior secondary students towards e-books are not significantly different in respect to family type.

Analysis of Data with respect to Objective 5 :

O₅: To analyze the difference in the attitude of students towards e-books with respect to type of internet connection they use in their daily lives.

For fulfilment of the above -mentioned objective, one research hypothesis was formulated and tested which was as follows:

H₀₅: There is no significant difference in the attitude of students towards e-books with respect to the type of internet connection they use in their daily lives.

Table 9: Group Statistics- Internet Connection

Internet Connection		N	Mean	Std. Deviation	Std. Error Mean
Attitude Towards e-books	Mobile Data	56	97.95	14.319	1.913
	Wi-fi	76	102.26	12.559	1.441

Table 10 : Independent Samples Test- Internet Connection

	Levene's Test for Equality of Variances			t-test for Equality of Means		
	Equal variances assumed	F	Sig.	t	df	Sig. (2-tailed)
Attitude Towards e-books	.917	.340	-1.839#	130	0.068	

(#not significant at 0.05 level of significance)

Interpretation:

From the analysis in Table 10, it is seen that in case of Levene’s Test for equality of variances the calculated p value is .340 (p>.05). So, equal variance can be assumed. Table 10 also shows that in case of comparison of attitude of the senior secondary students towards e-book in respect to location , the calculated t₍₁₃₀₎ value is -1.839 and ‘p’ value is 0.068 (p>.05). Hence, t is not significant at 0.05 level. So, H₀₅ is not rejected and it can be inferred that that attitude of senior secondary students towards e-books are not significantly different in respect to types of internet connection use.

Major Findings of the Study:

Based on the data analysis presented above, the findings are organized systematically in alignment with the following objectives –

Finding related to Objective 1: The mean score for male participants (100.68) is slightly higher than that for female participants (100.21). This indicates a marginal difference in the scores between genders, with males showing a slightly higher average. However, the difference is minimal and may not indicate a significant disparity between male and female participants.

Finding related to Objective 2: The mean score for urban students (100.68) is slightly higher than that for rural students (99.93), indicating a small difference in average scores between these groups. Urban students show a marginally higher mean score compared to their rural counterparts. However, the differ-

ence is minimal.

Finding related to Objective 3: Among the different academic streams, commerce students have the highest mean score (102.95), followed by science students (100.12), with arts students having the lowest mean score (98.68). This suggests that, on average, commerce students tend to perform better compared to their peers in science and arts

Finding related to Objective 4: The present study shows that the mean score for students from joint families (101.25) is slightly higher than that of students from nuclear families (100.08). This suggests that students from joint families tend to have a marginally higher average score compared to those from nuclear families.

Finding related to Objective 5: The present study shows that the mean score of students using mobile data is (56) and students using wi-fi connection is (76). This suggests that students with Wi-Fi access tend to perform better on average compared to those relying on mobile data. The notable difference in mean scores may imply that the type of internet access could influence academic performance, possibly due to factors like internet speed, connectivity stability, and ease of access.

Discussion:

The discussion of this study reveals that the factors analyzed—gender, location, academic stream, family type, and internet connection—do not significantly influence senior secondary students' attitudes towards e-books. Despite slight variations in the mean scores across these categories, statistical analysis showed no significant differences at the 0.05 level. For instance, while male students had a slightly higher mean score than females, this difference was not statistically meaningful, suggesting that both genders hold similar views towards e-books. Similarly, although urban students had a marginally higher mean score compared to their rural counterparts, the difference was not significant, indicating that location does not notably affect students' attitudes. The academic stream also showed no significant differences, even though commerce students had the highest mean score, followed by science and arts students. In terms of family type, the study found that students from joint families had a slightly higher mean score, but again, this difference was not statistically significant. Finally, the type of internet connection (mobile data versus Wi-Fi) had a small impact on attitudes, with Wi-Fi users showing slightly more favorable attitudes, yet this too did not reach statistical significance.

These findings suggest that factors such as gender, location, family type, and internet connection may not be as influential in shaping students' attitudes toward e-books as other potential factors, such as personal experiences, familiarity with digital technology, or educational exposure. The study calls for further exploration of these underlying variables to understand the broader influences on students' perceptions of e-books. Additionally, the lack of significant findings across these variables indicates that efforts to improve e-book accessibility and digital literacy can be universally applied, regardless of demographic background. The study highlights the importance of considering a variety of factors when designing educational strategies, but it also suggests that interventions aimed at promoting e-books should be inclusive and not overly focused on demographic distinctions.

Conclusion:

Based on the data analysis, the study concludes that most demographic factors (gender, location, academic stream, family type, and internet connection) do not lead to significant differences in attitudes towards e-books at the senior secondary level. While there were some differences in mean scores across

the various groups, these differences were small and not statistically significant. The findings suggest that students' attitudes towards e-books are likely influenced by other factors not captured in this study, such as personal preferences, access to technology, and familiarity with digital tools. Further research is recommended to explore these factors in more depth. In practical terms, educators and policymakers can focus on improving access to e-books and digital resources across all demographic groups, as no significant disparities in attitudes were found based on gender, location, or family type.

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