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A study on Digital Reading Skills of Higher Secondary School Students

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ABSTRACT

The goal of the study was to determine how competent learners were in areas including navigation, integration, understanding, and assessment of digital texts. Quantitative method was used in the investigation. The study included a sample of 102 higher secondary school students from a various school. The data collection process involved survey method. The results showed that although students had a moderate level of competency with fundamental navigational abilities, they had difficulties with more complicated digital texts. Students struggled to understand and assess the reliability of digital texts as well as to properly integrate information from various sources. The study also revealed a number of variables that affected students' proficiency with digital reading, including prior knowledge of digital reading, access to technology, and parents and teacher assistance. Students who got encouragement from their teachers and families, as well as increased exposure to digital reading, showed better levels of competency across all areas. Based on the findings, the study suggests including explicit teaching in digital reading skills in the school curriculum. Structured programming with efficient navigation methods, methods for integrating information from many digital sources, and critical analysis of online content.

Overall, this study contributes to the existing literature on digital proficiency by emphasising the particular areas where students in higher secondary schools. It highlights the value of collaboration between schools, teachers, and parents in nurturing these skills and the necessity of focused interventions to improve students digital reading skills.

Key Words: Navigation, Integration, Evaluation, higher secondary, Students, Digital Reading

"The spread of digital technologies can empower the poor with access to information, job opportunities, and services that improve their standard of living."

-Brookings Institute

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Introduction

The way individuals seek knowledge and consume information has significantly changed in the digital era. Individuals need to have certain abilities to efficiently browse, integrate, and analyse digital material as printed books and conventional newspapers are progressively replaced by digital platforms. These skills are essential in locating accurate and relevant information, analysing it critically, and coming to good judgements. This study aims to investigate the relevance of digital reading abilities, especially navigation, integration, and evaluation, and how these affect the ability of individuals to acquire and understand digital information.

Emergence of the Problem

Reading has shifted from conventional print materials to digital platforms in the age of digital technologies. As a result, individuals need to have certain abilities in order to connect with digital texts effectively. This study aims to examine at the development of digital reading skills, particularly navigation, integration, and evaluation, among students in the XI standard.

The ability to successfully navigate through digital texts, find and access pertinent information, is known as navigation. To provide a holistic understanding, integration includes combining information gathered from many digital sources and taking into account various viewpoints. The critical examination and interpretation of digital material, which includes determining its truthfulness, objectivity, and significance, is referred to as evaluation. For students in the XI standard to improve their comprehension and critical thinking skills, it is essential to understand the current state of their digital reading skills. By identifying any challenges or gaps in these skills, educators and policymakers can develop targeted strategies to enhance digital reading skills among the students.

Digital Reading skills

Digital reading skills encompass several important aspects that enable individuals to navigate the vast and diverse digital landscape. The term "**Navigation skills**" describes the capacity of a person to efficiently search, locate, and navigate digital texts, websites, and online resources. Given the huge amount of information accessible online, good navigational skills are essential since they enable users quickly locate relevant information, save time, and effectively

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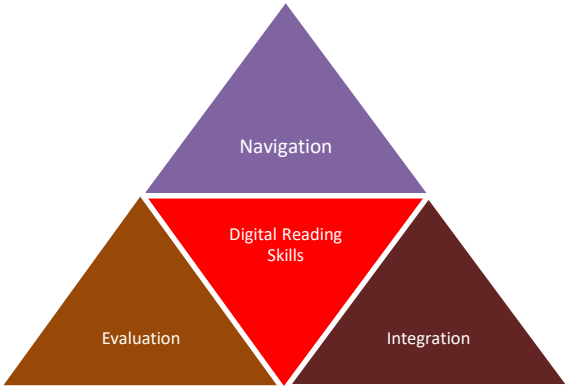
customize their search queries. Additionally, the individuals with good navigational abilities are more likely to find reliable sources and avoid fake news.

Integration skills entail the ability to synthesize and organize information from various sources into a clear and meaningful information. As individuals encounter various viewpoints, arguments, and perspectives online, they must integrate this information to form a comprehensive understanding of a topic. Strong integration skills allow individuals to identify commonalities, contradictions, or gaps in information, and critically assess its quality and reliability. These skills are essential for fostering a well-rounded understanding and enabling individuals to process and interpret complex digital texts effectively.

Evaluation skills are critical for discerning the accuracy, trustworthiness, and unfairness of digital information. In the digital realm, anyone can produce and publish content, which may not always undergo rigorous fact-checking or peer review. Consequently, individuals must develop the ability to critically evaluate digital information, considering factors such as the author's expertise, the publication's credibility, biases, and potential conflicts of interest. Effective evaluation skills enable individuals to distinguish between trustworthy and dubious sources, ensuring that the messages they receive are accurate and trustworthy.

Many studies have emphasized the significance of digital reading skills and how they affect the ability of individuals to acquire and understand digital information. In a study of secondary school students' digital reading abilities, Leu et al. (2011) found a link between students' levels of comprehension and their navigation, integration, and evaluation skills. Similar findings were made by Arnold and Vasilyeva (2017) when they looked at the influence of digital reading abilities on school students' academic achievement. They showed that effective navigation, integration, and assessment skills were linked to greater academic performance and higher marks.



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Literature Review

Navigation:

Navigation skill is essential to handle the vast amount of information available on the digital, to ensure that readers construct a clear picture of the issue while avoiding interruption and becoming lost in cyberspace. This competency includes not just looking up and scanning for material that is relevant to the goals, but also consecutively navigating to that information through hyperlink selections (Cho, 2014).

Search engines assist users in navigating the vast volumes of online information and locating content relevant to their current information requirements. However, readers still require choosing between a large number of alternatives for which only sparse (mostly text-based) information, namely a title, an excerpt from the respective web page, and its URL (uniform resource locator), are provided (Rieh, 2002; Wirth, Böcking, Karnowski, & von Pape, 2007). Future judgements regarding the relevance and reliability of the accessible materials must be made based on this information (Rieh, 2002).

Integration

Integration of textual and visual information will improve readers' comprehension. But the benefits of multimedia learning seem to rely on a careful design of the learning material (Paas & Sweller, 2014), whereas the more or less random mix of modalities presented on the web increases the cognitive load of readers attempting to synthesize information across different sites. One of Mayer's design principles (Mayer, 2005) is, for example, to eliminate external distracters such as extraneous words, pictures, and sounds (Issa et al.,2011). While searching for information resources on the web such distracters seem hard to avoid. Thus, dealing with multiple forms of representations on the web requires more cognitive effort than processing information in a well-designed multimedia learning environment. The multimedia effect, assumed to positively affect readers' integration of info, may turn out to hamper integration when readers attempt to integrate information across more or less random information resources on the Web.

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Evaluation

Digital readers evaluate the reliability of sources using that information, and when they do, they frequently rely on superficial cues like a professional-looking design (see, for example, Brem, Russell, & Weems, 2001; Eastin, Yang, & Nathanson, 2006; Halverson, Siegel, & Freyermuth, 2010; Gerjets, Kammerer, & Werner, 2011; Strms, Brten, Britt, & Ferguson, 2013). This behaviour is not the result of a knowledge gap because many readers, especially those in high school, can think of or define appropriate standards to follow when evaluating online content. These include source characteristics, such as the expertise or intentions of a source, the date of publication, and the extent to which information accuracy is assured through editorial quality checks (Kammerer & Gerjets, 2014b; Keck, Kammerer, & Starauschek, 2015; Paul, Macedo-Rouet, Stadtler, & Rouet, 2016). However, students often fail to apply these criteria when facing the complexity of reading online (Walraven, Brand-Gruwel, & Boshuizen, 2009).

Need and Significance of the study

In today's technologically advanced environment, being able to read digitally is crucial. Higher secondary students must master three critical skills: navigation, integration, and evaluation as digital information becomes more widely available. This study intends to investigate the relevance and necessity for upper secondary students to acquire digital reading abilities by investigating their effects on information literacy, critical thinking, and academic achievement.

Navigation abilities are the capacity to navigate digital texts efficiently, find particular information, and follow hyperlinks. The ability to synthesise data from several sources and incorporate it into a comprehensive knowledge is referred to as integration abilities. The critical evaluation of digital material, including its veracity, authenticity, and bias, is the main emphasis of evaluation skills. For pupils to successfully access, comprehend, and critically analyse massive volumes of digital information, these three abilities are interrelated and essential.

The increased use of digital resources for instructional reasons has necessitated this research investigation. The COVID-19 pandemic's transition to online education has brought attention to the significance of digital reading abilities for kids' academic progress. Additionally, acquiring these abilities is essential for kids to become digitally literate individuals who can

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navigate the abundance of online information, identify reliable sources, and steer clear of false information.

Empirical research supports the significance of digital reading skills. According to research by Leu et al. (2013), students with greater levels of digital reading competency performed better in class in terms of reading comprehension and writing ability. Additionally, when students learn to assess the validity and legitimacy of digital material, competency in digital reading has been connected to enhanced critical thinking abilities (Leu et al., 2014).

Objectives of the Study

- To find out the Digital reading skills of higher secondary school students.
- To find out the Digital reading skills of higher secondary school students with respect to Gender, Type of School.

Hypotheses of the study

- There is no significance difference between the Digital reading skills of Higher Secondary school students owing to difference in Gender.
- There is no significance difference between the Digital reading skills of Higher Secondary school students owing to difference Type of School.

Methodology

The determination of this study was to identify the Digital reading skills of Higher Secondary school students. The questionnaire consisted of 11items and it was measured through a five-point ranging from ‘strongly Agree’ (5) to ‘Strongly Disagree’ (1). Normative Survey Method is used in this study. The survey method is used for gathering data from higher secondary students. The investigators use Google forms to collect the data from the higher secondary students in and around Chennai.

Tool

Digital Reading Skill tool is prepared by the Investigator.

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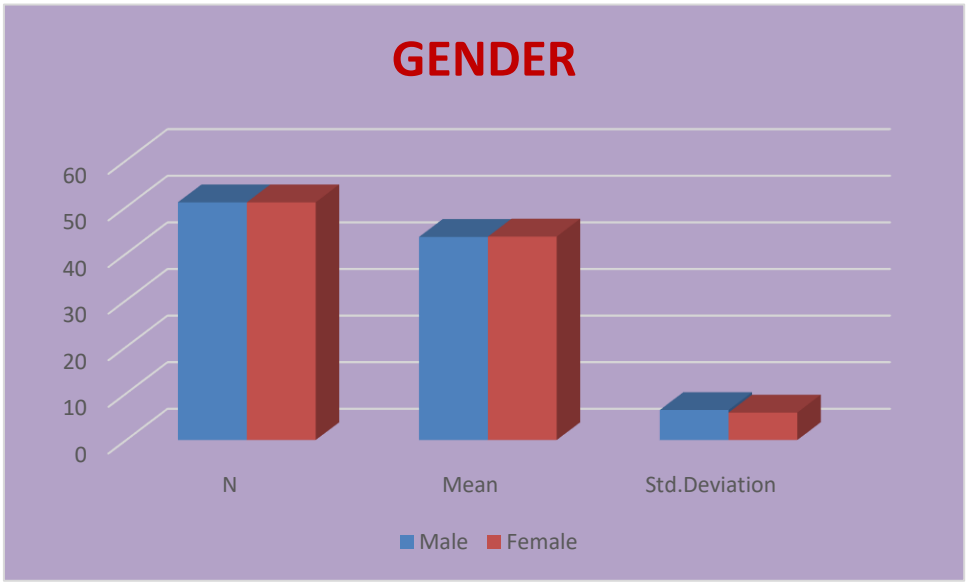
Analysis and Interpretation

Hypothesis 1: There is a significance difference between the Digital reading skills of Higher Secondary school students owing to difference in gender.

Table 1: showing the difference in Digital reading skills of Higher Secondary school students owing to Gender.

Gender	N	Mean	Std.Deviation	t-value	Df	Sig.Level
Male	51	43.57	6.435	0.64	100	.949
Female	51	43.65	5.888	0.64		

Fig1: showing the difference in Digital reading skills of Higher Secondary school students owing to Gender.



From table 1, the above table shows that the mean scores and standard deviation and 'p' value of gender. Here the 'p' value of gender is 0.94 which is greater than 'p' value at 95% confidence level (0.05) with degrees of freedom 100. The hypothesis assumed that the there is no significant difference in the Digital reading skills of Higher Secondary school students owing

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to difference in gender is accepted. Therefore, it is concluded there is no significant difference in the Digital reading skills of Higher Secondary school students owing to difference in gender.

Hypothesis 2: There is a significance difference between the Digital reading skills of Higher Secondary school students owing to difference in Type of School.

Table 2 showing the difference in Digital reading skills of Higher Secondary school students owing to Type of School.

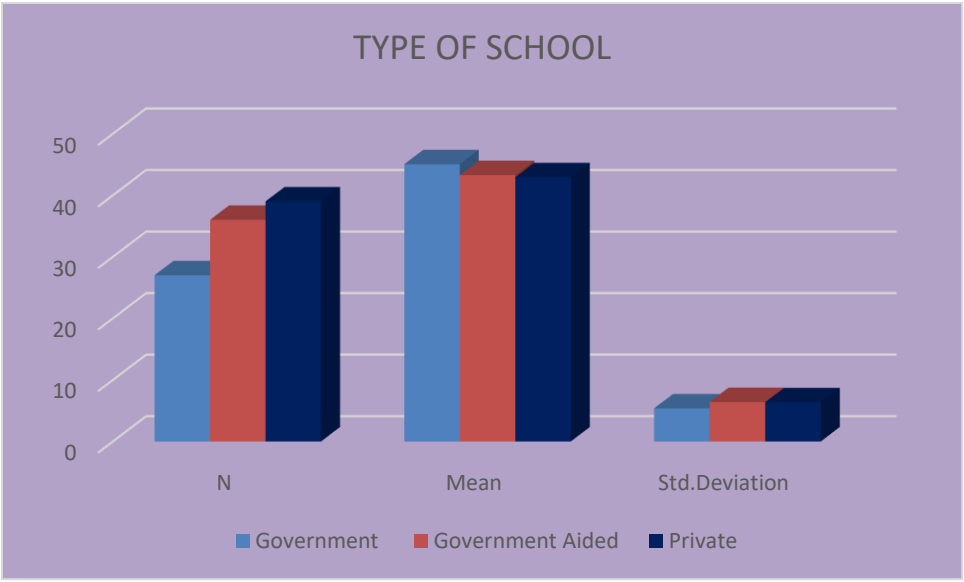
Type of School	N	Mean	Std.Deviation
Government	27	45.04	5.374
Government Aided	36	43.28	6.406
Private	39	42.92	6.363

One way ANOVA Table 2a showing in Digital reading skills of Higher Secondary school students owing to Type of School.

Variable	ANOVA	Sum of Squares	df	Mean Square	'F'	Sig.Level
Type of School	Between Groups	77.359	2	38.680	1.027	0.36
	Within Groups	3726.954	99	37.646		

The above table 2 and 2a shows that the mean scores and standard deviation and 'p' value of Type of School. Here the 'p' value of Type of School is 0.36 which is greater than 'p' value at 95% confidence level (0.05) with degrees of freedom 100. The hypothesis assumed that the there is no significant difference in the Digital reading skills of Higher Secondary school students owing to difference in Type of school is accepted. Therefore, it is concluded there is no significant difference in the Digital reading skills of Higher Secondary school students owing to difference in Type of school.

Fig2: showing the difference in Digital reading skills of Higher Secondary school students owing to Type of School.



Findings of the study

Gender

The acceptance of null hypothesis in table 1 showed that there is no significant difference in Digital Reading Skills of higher secondary students owing to the difference in gender. These findings infer that Digital Reading Skills of higher secondary students of male and female are the same. the finding infers that Digital reading skills of Higher secondary school students of male and female are the same. The present is in agreement with the study conducted by Rye, et al. (2018) found that there is no significant gender-based difference in access to technology among high school students. In today's digital age, access to technology plays a crucial role in developing digital reading skills. If both male and female students have similar access to devices such as smartphones, tablets, or computers, they are likely to develop similar levels of digital reading skills and the Higher secondary students, regardless of their gender, tend to have similar exposure and experience with digital devices. They have likely grown up in an era where digital technologies are prevalent in their daily lives. Therefore, both male and female students may have been exposed to reading digital content from a young age, leading to similar levels of digital reading skills (Kajtoch, 2015).

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Type of School

The acceptance of null hypothesis in table 1 showed that there is no significant difference in Digital Reading Skills of higher secondary students owing to the difference in Type of School. These findings infer that Digital Reading Skills of higher secondary students of Government, Government Aided and Private schools are the same. Nowadays Government, Government aided and Private schools have better access to technology and resources. They may have more computers, internet connectivity, and digital reading materials, enabling students to develop and enhance their digital reading skills. This research can inform policymakers on the need to integrate digital literacy programs into educational curricula to ensure students are adequately prepared for the demands of the digital world.

Limitation of the Study

- The data is collected from Chennai only
- The data is collected from the population of higher secondary students only.

Educational Implications of the study

Digital reading abilities to improve the ability of students to think critically, assess arguments and facts, detect trends and relationships between things, and create significant ideas. Learners as well as educators may utilise this critical thinking ability in their daily lives and in the outside world by becoming familiar with them. In order to boost student engagement and, as a result, raise retention and graduation rates, seminars, workshops, and training programmes are organised for the students to improve their academic excellence and to explore emerging technologies. More digital reading strategies and resources will be included in teaching and learning thanks to excellent instructional design, which will be advantageous to both instructors and students.

Conclusion

Digital reading skills such as navigation, integration, and evaluation among higher secondary students is both necessary and significant. Such research will provide valuable insights into the impact of these skills on academic success, critical thinking, and information literacy, enabling educators and policymakers to enhance education and better prepare students for the digital age.

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