

The Relationship between Reading Speed-Visual Perception, and Academic Achievement among Primary School Students

Ashwini K. Akhani¹ & Dr. Kusum R. Yadav²

Abstract

This study investigates the relationship between reading speed and academic achievement in the English subject among primary school students of the Gujarati medium. Primary school students from different cultural backgrounds participated in the experiment, undergoing reading speed assessments and academic evaluations. The findings suggest a positive relation between reading speed and academic achievement, emphasising the importance of efficient reading skills in fostering academic success among non-English speaking primary school students.

Keywords: Academic Achievement; Primary Education; Reading Speed; Visual Perception

INTRODUCTION

Reading is a fundamental skill of any learning process that significantly influences academic success across various educational levels. The ability to read efficiently, encompassing speed, is crucial for students to comprehend and analyse complex texts, engage with course materials, and perform well in examinations. The essential skill in language learning is reading. Taylor et al. (1990) state that reading processes help to get information from the source of reading, where the brain and eye must concentrate. It means that reading becomes the primary skill that can influence other skills in language learning. At the same time, Treiman (2017) believes that reading is considered by many teachers, textbook writers, and language test constructors to be made up of different skills and components. Reading skills can help improve other language skills such as writing, speaking, and listening. In the aspect of the benefits, Sulaiman and Harpiansi (2018) state that reading is helpful for language acquisition to help students understand more or less what they read. So, reading is one of the skills that learners in English should master (Afiyah, 2022).

Furthermore, Garner (2001) has said that “reading is the process of constructing meaning through the dynamic interaction among: (1) the reader’s existing knowledge, (2) the information suggested by the text being read, and (3) the context (purpose) of the reading situation”. In summary,

reading is an activity that helps to acquire information to add to the existing knowledge obtained from the reading sources.

The reading process of a student includes visual perception, audio perception, memory, attention and language skills (Çayır and Balcı, 2017). Visual perception skills are directly related to differentiating written letters, words, and punctuation marks (Duru, 2008). There are also spatial associations and figure-ground relations in visual perception affecting reading speed. Therefore, visual perception should be considered as a strong link to successful reading speed. They involve the skill to organise and interpret the information that is seen and give meaning to it. Many researchers support the importance of visual perception skills in academic success; they state that reading would not be possible without adequate visual perception (LaBerge & Samuels, 1974; McCandliss, Cohen & Dehaene, 2013).

CONCEPT OF READING SPEED

Reading speed is the rate at which a student gets to recognise words and understands words (Oh et al., 2012). If someone wants to read quickly, the eye and brain must focus on the text (Rayner et al., 2016). Wainwright et al. (2007) said that reading speed is usually used to describe how fast a reader reads a number of words per minute (w.p.m). Konstant (2010) states that reading

¹ Research Scholar, K. S. V. University, Gandhinagar, India.  ashwiniakhani10@gmail.com

² Associate Professor, R. H. Patel English Medium B.Ed. College, Gandhinagar, India

speed is not reading words faster than what you did before. Reading speed is reading a text within a specific time, and reading without forgetting comprehension in reading. Reading speed focuses on understanding a text quickly and precisely in a relatively short time. Moreover, Humaira et al. (2017) said that speed reading should have more priority, and reading comprehension should not be ignored. When they learn speed reading, people finish what they read within the reading time and understand the text. Fitria et al. (2019) said that the standard effective reading speed must be adapted at different levels of education. Reading speed is not the same for everyone. It depends on the age, prior knowledge and cognitive level. Widiatmoko et al. (2020) said that the standard reading speed that is adequate for elementary level is 140 w.p.m, junior high school level is 140 to 175 w.p.m., senior high school level is 175 to 245 w.p.m., college-level is 245 to 280 w.p.m., and for professionals, the speed of reading can be up to 500 w.p.m. It concludes that every level of education has a different reading speed capacity. Moreover, different people may have different reading speeds. The reading speed test can reveal it. Reading speed is classified based on different readers, as in Table 1.

Table 1: Classification of Reading Speed

No	Reader	Speed w. p.m.
1	Slow	Less than 100
2	average	100-150
3	Excellent	150 +

Research reveals the importance of reading speed as a very crucial factor for academic achievement and language proficiency. Studies have consistently demonstrated a positive relation between reading speed and comprehension, indicating that students who read faster tend to understand and retain information more effectively and quickly (Hannon & Daneman, 2001; Ackerman & Goldsmith, 2011). Additionally, faster readers demonstrate better performance on standardised tests and academic assessments across various subjects (Lee et al., 2017; Hagtvet & Lyster, 1998). Moreover, reading speed is closely linked to reading enjoyment of the subject and motivation for the learner, as fluent readers are more likely to engage with texts and develop a lifelong reading ability (McKeown et al., 2015; Guthrie et al., 2006). Therefore, enhancing reading speed through targeted interventions and

practice can lead to improved academic outcomes and contribute to overall language proficiency among students.

Many studies have been conducted on reading speed and comprehension in the English language, but comparatively less attention has been given to the role of reading speed in academic achievement at the primary school level. This paper tries to explore the relationship between reading speed and academic achievement at the primary school level.

PROBLEM OF THE STUDY

The relationship between reading speed-visual perception, and academic achievement among primary school students.

OBJECTIVE OF THE STUDY

The study aims to examine the reading type and academic achievement of primary school students.

HYPOTHESES OF THE STUDY

The following null hypothesis was formulated for the objectives of the present study.

- Ho1** There will be no significant difference between the mean scores obtained from the reading speed-visual perception test and achievement on reading speed in the English subject.
- Ho2** There will be no significant difference between the mean scores obtained from the reading speed-visual perception test score by boys and girls having achievements in the English subject.
- Ho3** There will be no significant relation between types of readers and mean scores of reading speed-visual perception.

VARIABLES OF THE STUDY

The following variables are included in the study.

Table 2: Types and Level of Variables of the Study

Types of Variables	Variables	Levels of Variable
Independent Variables	Gender	Boys Girls
	Academic Achievement	Higher Lower
Dependent Variables	Scores on Reading Speed	-
Controlled Variable	Standard VIII Gujarati Medium	-

POPULATION AND SAMPLING

The population of the present study consists of all the standard VIII students of Gujarati medium primary schools of the Gujarat Secondary and Higher Secondary Education Board (GSHEB) school students. A convenient sampling technique was used in order to select the sample for the present study. The list of students studying in standard VIII was prepared.

The students were divided according to their academic achievement, and their last semester scores of the English subject were collated by the researcher, then the median was found. The students who have scored equal to or more than the value of the median are considered higher academic achievers, and the students whose score is less than the value of the median are considered lower academic achievers. The students selected as per the sample in this study are shown in Table 3.

Table 3: No. of the Students selected in the sample according to the variables

No	Variable	Levels	No. of Students	Total
1	Gender	Boys	29	50
		Girls	21	
2	Academic Achievement	Higher	24	50
		Lower	26	

LIMITATIONS OF THE STUDY

The present study was limited to standard VIII students of Gujarati medium primary schools of Kadi city only. In the present study, the Reading Speed test is used to collect data. So, the limitations of the tool are also the limitations of the study.

TOOLS OF THE STUDY

Reading Speed Assessment: Participants were individually assessed for their reading speed in English using standardised reading passages appropriate for their grade level. The assessment was to measure the number of words read per minute (w.p.m). The text given was from the standard VIII English subject self-learning book of GCERT, Activity no. 6, Part-1 consisting of 194 letters and Part-2 consisting of 187 letters (GCERT, 2020-21).

Reading speed-Visual perception test: Participants' academic performance was evaluated based on their achievement in the

subject of English. Teachers provided teacher-made test papers based on the Visual Perception test. The test included identifying and reading the alphabet, including words, correcting spelling, and using different symbols. Test papers' face validity and content validity were sent to experts, and the reliability test was administered to some sample school students, followed by item analysis, considering df/dv values between 0.2 to 0.8 for the finalised 40 marks achievement test.

RESEARCH METHOD

The descriptive method was used as a method in this research. The descriptive method describes the result of the reading speed and achievement of standard VIII students. The research design in this research is correlational. Concerning Creswell (2012), correlation is a statistical test to determine the tendency or pattern for two (or more) variables or two sets of data to vary consistently. So, the purpose of this descriptive research was to create a systematic explanation of factual information on the nature of the facts and the area of interest.

DATA COLLECTION

The permission was sought from the principals of the selected Gujarati medium primary schools of Kadi city for data collection. The researcher prepared a data sheet for each student with their previous classes' English marks. The lower achievers and higher achievers were also mentioned. Thereafter, two main data points were collected in the study: i) Reading speed of the students. Reading speeds of the students were measured by the words they read in a minute of the text and their visual perception in English with the visual perception test.

DATA ANALYSIS AND INTERPRETATION OF DATA

Statistical analyses, including correlation coefficients and regression models, were conducted to examine the relationship between reading speed and academic performance in the English subject, and the controlling demographic variables.

Reading speed of the students with the minute unit (60 seconds), academic achievement levels with the percentage of English subject marks (%), and evaluation of reading speed-academic achievement level relationship were analysed with a point unit. The difference between the test

scores of students was analysed with a dependent groups t-test, and the difference according to gender was analysed with an independent group's t-test. The level of significance was taken as 0.05 in the statistics.

In the present study, the data of the obtained scores of students on the academic achievement test and the study of speed test were entered into the Excel Programme of Microsoft Office first. Then all the numerical calculations were done with the Excel Programme. Reading speeds and mean scores of achievement levels, evaluation score average and independent groups t-test results of the students according to the gender variable are indicated in Table 4.

Table 4 shows that the mean score of boy students was 25 with a standard deviation of (4.44). The mean score of the girls from the experimental group was (24) with a standard deviation of (4.55). The t-value is 0.27063. The p-value is 0.787839 ($p < 0.05$). The result is not significant at $p < .05$. So, the data shows there is no significant difference between boys and girls in reading speed.

Table 4: Comparison according to gender

	Boys	Girls
N	21	29
Mean	25	24
S.E.	0.97	0.85
S²	19.79	20.72
SD	4.44	4.55
t-value	0.27063	
p-value	0.787178	

**Note: Level of Significance is 0.05.

Table 5: Comparison according to achievement

	Lower achievement	Higher achievement
N	23	27
Mean	24.39	33.41
S.E.	471.48	228.52
S²	21.43	8.79
SD	4.63	2.97
t-value	-8.32055	
p-value	0.00001	

**Note: Level of Significance is 0.05.

Table 5 shows that the mean score of lower-achievement students was (24.39) with a standard deviation of (4.63). The mean score of the higher achievement students was (33.41) with a standard deviation of (2.97). The t-value is -8.32055. The p-value is 0.00001 ($p > 0.05$). The

result is significant at $p > 0.05$. So, the data shows there is a significant difference between lower achievers and higher achievers with regard to reading speed.

Table 6: Comparison according to types of readers

No	Reader	N	Mean scores
1	Slow	12	15
2	Average	27	22
3	Excellent	11	33

Table 6 shows that the mean score of different types of readers was different. Slow readers' visual perceptions were low compared to average readers. And also excellent readers show high performance in visual perception test scores. It means visual perceptions are good, so reading speed is also currently good.

FINDINGS

The following are the major findings of the present study.

- There was no significant difference between the mean scores obtained by boys and girls on the reading speed test. So, it can be said that there is no effect of gender on the reading speed ability of the students.
- There was a significant difference between the mean scores obtained by the students having higher academic achievements and lower academic achievements on the reading speed ability test, which was in favour of the students having higher academic achievements. So, it can be said that the students having higher academic achievements read faster than the students having lower academic achievements.
- There was a significant difference between the mean scores obtained by the students having reading speed-visual perception test scores and reader types; slow readers achieved low scores, and fast readers achieved high scores.

DISCUSSION

The findings suggest a clear positive relationship between reading speed, visual perception and achievement, indicating that students who read faster tend to perform better academically and visual perception is also high. However, it is essential to see that reading speed-visual perception is not the sole determinant of academic success, as factors such as domain-specific knowledge and critical thinking skills also play significant roles. While strategies to improve

reading speed exist, individual differences in visual perception and learning styles necessitate taking care of approaches, methods and learning techniques in instruction.

IMPLICATIONS OF THE STUDY

Different areas can be explored through language, where many points are highlighted for implications as below:

- **Curriculum Design Enhancements:** The study highlights the importance of integrating reading speed and visual perception training into the primary school syllabus. Educational policymakers and National Curriculum framework makers should incorporate reading exercises and visual perception activities, which are followed by enhancing their overall academic performance.
- **Personalised Learning Approaches:** There was a significant difference in reading speed and visual perception among students, calling for personalised learning strategies. Teachers need tools to assess individual student capabilities and incorporate reading evaluations accordingly. Slower readers should receive additional support, while faster readers should be challenged with more complex texts to maintain their attention and progress.
- **Professional Development for Teachers:** Teachers' Training to enhance reading speeds and visual perception is crucial. Professional development programmes should include workshops on effective reading instruction techniques, reading speed strategy, and exercises to improve visual perception. Empowering teachers with these skills enables them to better support diverse learning needs in the classroom.
- **Specialised Instructional Materials:** Developing instructional materials is essential. Educational publishers should create resources catering to various reading speeds and visual perception levels. Include interactive digital platforms and adaptive learning software for learning.
- **Multisensory Learning Approaches:** Incorporating activities that engage multiple senses can enhance reading comprehension and reading speed. Schools should invest in resources that support multisensory learning, ensuring a comprehensive educational experience.

- **Policy Implications:** Policy makers should set benchmarks for reading speed and visual perception at various school levels. Policies mandating regular assessments can ensure students receive the necessary support. Additionally, teachers should consider individual differences in students' reading abilities and incorporate instruction accordingly to maximise effectiveness.

CONCLUSION

In conclusion, this research paper has highlighted the importance of reading speed, especially visual perceptions, for academic achievement. The findings underscore the need for teachers to prioritise the development of efficient reading speed and reading speed among students to increase their academic achievement. This suggests that by developing strategies and acknowledging individual differences in different reading abilities, teachers can empower students to become proficient readers and fulfil the demands of academic performance effectively.

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EDITORIAL TRANSITION NOTE

The *Journal of English Language Teaching* (JELT) and the English Language Teachers' Association of India (ELTAI) place on record their **sincere appreciation to Prof. Neeru Tandon**, Professor and Head, Department of English, VSSD College, Kanpur, India, for her dedicated service as Editor-in-Chief from January 2021 to April 2025. Throughout her tenure, Prof. Tandon upheld the scholarly integrity of the journal, streamlined the peer-review process, and offered insightful editorials that added depth to each issue. Her commitment to academic rigour and editorial excellence has significantly contributed to the growth, reach, and reputation of the journal. We extend our heartfelt thanks to her for her exemplary leadership and service to the academic community and to ELTAI.

We are equally pleased to **welcome Prof. Chitra V. R.**, Former Professor, Department of English, University College, Thiruvananthapuram, Kerala, India, as the new Editor-in-Chief of JELT for the term May 2025 to April 2027. A seasoned academic with a strong background in research and publishing, Prof. Chitra brings to this role a deep understanding of English language teaching and editorial practice. We are confident that under her stewardship, the journal will continue to maintain its high standards while striving towards greater academic visibility, wider indexation, and a stronger engagement with current developments in the field.

The journal remains committed to supporting English language teachers, researchers, and practitioners through the dissemination of quality scholarship and the promotion of ethical and inclusive publication practices.

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