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## Setting Reading Fluency Benchmark in Bangla for the Students of Grade III and Grade V

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### Abstract

Reading is one of the most significant media of learning. Reading with comprehension mostly depends on reading fluency. It is necessary to measure students' fluency through the reading rate of words per minute to know the level of comprehension. There was no benchmark in Bangla reading fluency at the primary level, which is necessary to check students' reading performances regarding the targeted level. This study aims to set a reading fluency benchmark for grade III and grade V in Bangla. This study followed quantitative approaches with a cross-sectional survey design. A total of 1536 students from both grades were selected through a multistage cluster sampling procedure. Two types of texts for each grade were developed and finalized after piloting to administer. The median method was used for setting the fluency benchmark as many countries already had used it for the same purpose. This study recommended setting the reading fluency benchmark for grade III in Bangla at 46 CWPM and 54 CWPM for grade V. It also recommended that policymakers need to take the necessary teaching-learning interventions to achieve this benchmark.

**Keywords:** Reading Fluency, Benchmark, CWPM, Language, Primary Education, Bangladesh

### Introduction

Reading acts as an essential gateway to personal and social development, and it also contributes to a great extent to economic growth (Holden, 2004). At an early stage, reading starts with decoding written symbols or letters to understand the meaning or get information. After achieving the foundation of reading, our reading depends on the sense of reasoning and pleasure, which enable us to interpret and comprehend what we have read.

Developing reading skills requires a great extent of practice reading materials, taking notes of spelling of the new words and their pronunciation and uses, and the punctuation marks that lead the reading for meaningful purposes with comprehension (Strauss, 2015). Reading skills include fluency, decoding, and vocabulary development because these are crucial to comprehending any written materials. These reading skills help readers become lifelong readers who think critically and understand the message of written texts. When an individual struggles to read, s/he cannot achieve expected competencies in his/her academic life, which also impacts their social and economic development.

In some cases, fluency becomes synonymous with just speed. Though generally reading fluency refers to the ability to read accurately at a reasonable rate and prosody. Still, comprehensively, it can be defined as *“reading fluency is the ability to accurately read at an appropriate rate while demonstrating prosody and comprehension of the text”* (Melissa, 2020). According to International Literacy Association (2018), reading fluency is the combination of rationally accurate reading, at a reasonable rate, with appropriate expression and perfect comprehension to read a text. It is well established by several research studies that there is a strong correlation between fluency and comprehension

In the National Curriculum-2012 document, it is clearly stated that students will read fluently with correct and standard pronunciation. From class 1 to 5, reading has been emphasized in Bangla language curricula, and it is expected that at the end of class 5, students will be able to read graded written materials fluently with correct and standard pronunciation (National Curriculum and Textbook Board (NCTB), 2012). Besides, in the Sustainable Development Goals (SDG) document, target 4.1.1 stated

*‘Proportion of children and young people (a) in Grade 2 or 3; (b) at the end of primary education; and (c) at the end of lower secondary education achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex. (United Nations, 2020).’*

They also suggested setting a benchmark considering the minimum proficiency level in a domain (mathematics, reading, etc.), which should be evidence-based and measured through learning assessments.

After revising the curriculum for the primary level in 2012, the government has taken different initiatives, including reading materials development, subject-based training and teacher training to develop students’ reading competencies. Various programmes were also taken to develop the students’ learning competencies, especially in the Bangla language. Last year, the government started the ‘One day, One Word’ programme to develop students’ vocabulary and reading skills. Besides, the National Students’ Assessment (NSA) has been conducted across the country to get the overall idea about students’ performances in Bangla in grade III and grade V. The NSA deals with assessing Bangla reading competencies with comprehensions only, not including reading fluency. There are several studies conducted by different organizations to find out the fluency rate of the students. There is no study for grade III and V students to discover to what extent the students can read fluently. Now, the MoPME is concerned about how well students can read fluently with comprehension. It takes initiatives to set a reading benchmark to justify students’ performance in terms of oral reading fluency in grade III and grade V. According to King & DeStefano (2015), *“A benchmark is a standard or point of reference against which things may be compared or assessed”*.



## **The rationale of the study**

Reading is the most effective medium of learning and reading itself is an excellent concern for learning. To get the pleasure of reading, a person has to be a fluent reader with understanding. At the early level of learning, students learn to read, and after achieving a basic foundation of reading, the learners learn something by reading. Through reading, students can have the letter knowledge, decoding, build a vocabulary of various subjects, and later become capable of evaluating and critically thinking. When students can achieve these reading sub-skills, they can recognize the sounds of the letters and words correctly. Moreover, they can read any written materials with proper speed, accuracy, and prosody.

Fluency is essential for bridging between word recognition and comprehension. A fluent reader can focus on the meaning of a passage rather than struggle with pronouncing words and considering accuracy, decoding or rate. Fluent readers can understand the inner meaning, in line and between line meanings of the text. By this comprehension, students can relate their experience with the text's meaning. If reading fluency is poor, they sometimes face obstacles to understanding and making proper meaning, and a slow reader also suffers from fatigue (Balsiger, 2020). Non-fluent readers mostly struggle with decoding to not concentrate on the meaning or understand what the text means. Moreover, reading fluency is also important to link between early and later reading phases (International Literacy Association, 2018).

So, it is necessary to measure and compare students' fluency through the reading rate of words per minute and the level of comprehension. At present, there is no benchmark in Bangla reading fluency at the primary level. So, the government and non-government schools and other educational institutions in Bangladesh cannot measure effective reading fluency. Setting a fluency benchmark allows the concerned authority to check their students' reading performances with the targeted level. After setting the Bangla language reading fluency benchmark, the policymakers of primary education can compare students' present fluency level with the set benchmark. After comparison, it may be possible to know what portion of our students are fluent readers and need additional support for developing fluency.

## **Objectives of the study**

The main objectives of this study were to set a national benchmark for Bangla reading fluency at the primary level in Bangladesh. The specific objectives were:

1. to set a reading fluency benchmark for the students of grade III in Bangla;
2. to set a reading fluency benchmark for the students of grade V in Bangla.

## Methodology

This study followed a quantitative approach using a cross-sectional survey design to conduct the national assessment to measure oral reading fluency at the government primary schools in Bangladesh. This study was conducted only at the Government Primary Schools (GPS) in Bangladesh. A total number of 2,924,975 and 2,096,384 students of grade III and grade V, respectively (BANBEIS, 2019) were the population of the study. A multistage cluster sampling strategy was used to select the sampled students from GPSs considering divisional, geographical, types of area (urban & rural) and gender issues (Fig. 2). As the population size is large enough (greater than 20,000), the sample was determined 1536 by

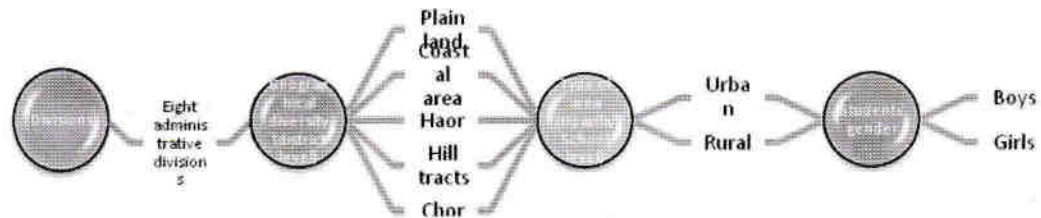


Figure 1: Sample selection at a glance

following statistical formula ( $Sample\ size = \frac{Z^2 \times P(1-P)}{e^2}$ ) considering the design effect of 4.

Table 2 shows the sampling procedure at a glance.

Table 1: Sample procedure at a glance

Division	District	Upazila	School	Students (Grade III)		Total Students	Students (Grade V)		Total Students
				Girls	Boys		Girls	Boys	
8	16	32	128	768	768	1536	768	768	1536
Purposive Sampling		Simple Random Sampling		Systematic Random Sampling					

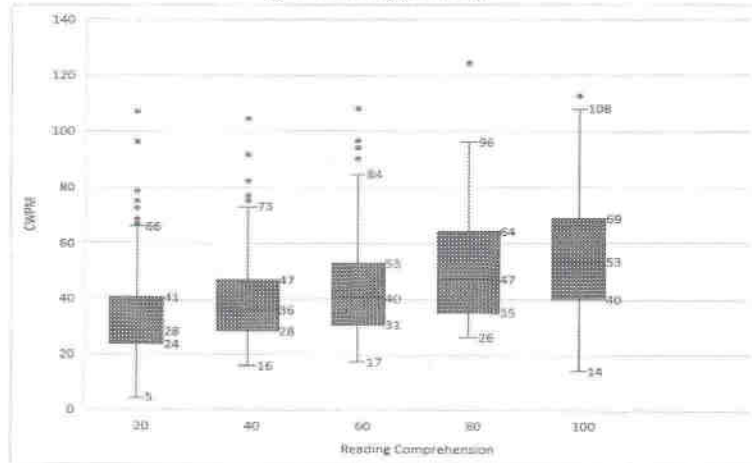
The research team arranged a workshop at NAPE to develop different types of texts for this study. After having the raw texts of each grade, the research team sent those texts to literature and linguistic experts of IER, DU, Jahangir Nagar University, RtR experts, and NAPE research experts for scrutinizing. The texts were then piloted and finalized.

The collected data were analyzed by applying quantitative data analysis procedures. According to Jukes et al. (2018), four different statistical methods were used to assess the reading fluency benchmark: mean, median, linear regression, and logistic regression. In this study, the median method was used as data supports the method.

## Data Analysis and Interpretations

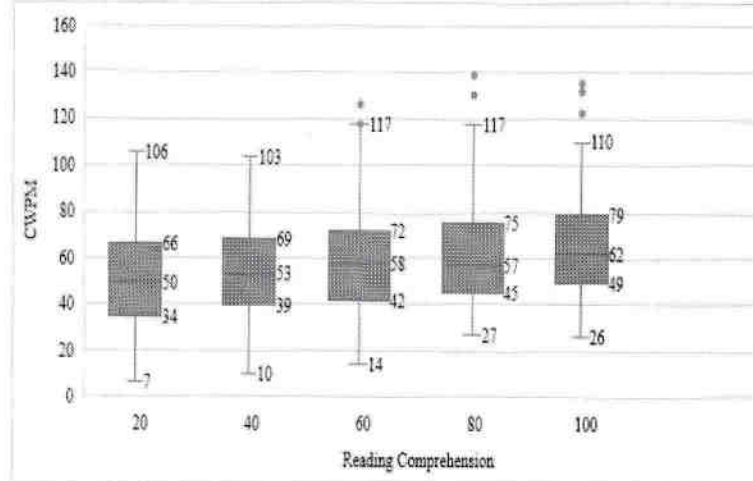
The analyzed data were presented here based on study objectives:

### Findings for grade III students in Bangla reading fluency



**Figure 2: Box plot for descriptive text**

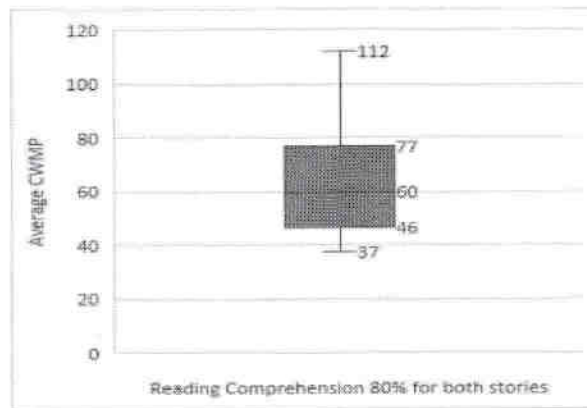
This figure shows the scenario of reading comprehension vs pronunciation of correct words per minute (CWPM) for the *descriptive text* of grade III. It is found that students who read the text with 80% comprehension had a median of 47 CWPM whereas lower 25% students read 35 CWPM or less and upper 25% students read 64 CWPM or higher.



**Figure 3: Box plot for imaginative text**

This figure shows the scenario of reading comprehension vs correct word per minute (CWPM) for the *imaginative text* of grade III. It is found that students who read the text with 80% comprehension had a median of 57 CWPM whereas lower 25% students read 45 CWPM or less and upper 25% students read 75 CWPM or higher.



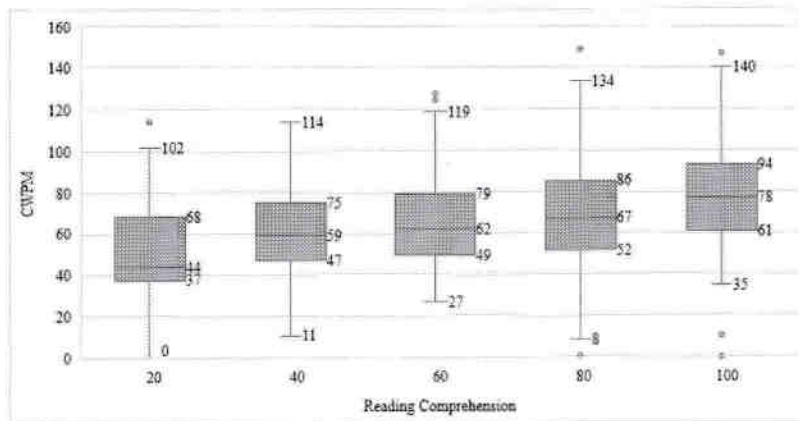


**Figure 4: Box plot for both texts**

This figure shows the scenario of reading comprehension vs correct word per minute (CWPM) for both descriptive and imaginative texts of grade III. Students who read both texts with 80% comprehension are plotted here. The mean of CWPM of two texts is calculated and shown on the 'Y' axis.

It is found that students who read the text with 80% comprehension had a median of 60 CWPM whereas lower 25% students read 46 CWPM or less and upper 25% students read 77 CWPM or higher. It is seen from the figure that the minimum CWPM with 80% comprehension was 37 from which it can be inferred that the minimum level of oral reading fluency is 37 CWPM with 80% comprehension for grade III.

### Findings for grade V students in Bangla reading fluency



**Figure 5: Box plot for descriptive text**



This figure shows the scenario of reading comprehension vs correct word per minute (CWPM) for the *descriptive text* of grade V. It is found that students who read the text with 80% comprehension had a median of 67 CWPM whereas lower 25% of students read 52 CWPM or less and upper 25% students read 86 CWPM or higher.

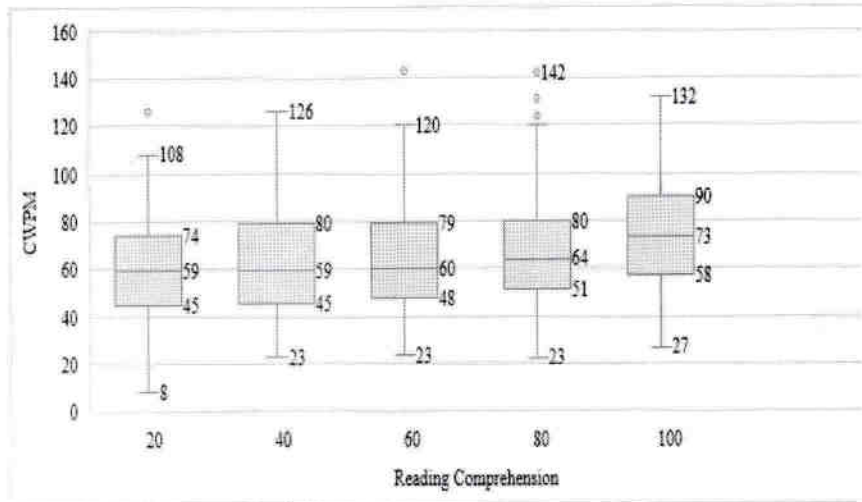


Figure 6: Boxplot for imaginative text

This figure displays the scenario of reading comprehension vs correct word per minute (CWPM) for the *imaginative text* of grade V. It is found that students who read the text with 80% comprehension had a median of 64 CWPM. In contrast, lower 25% of students read 51 CWPM or less, and the upper 25% read 80 CWPM or higher.

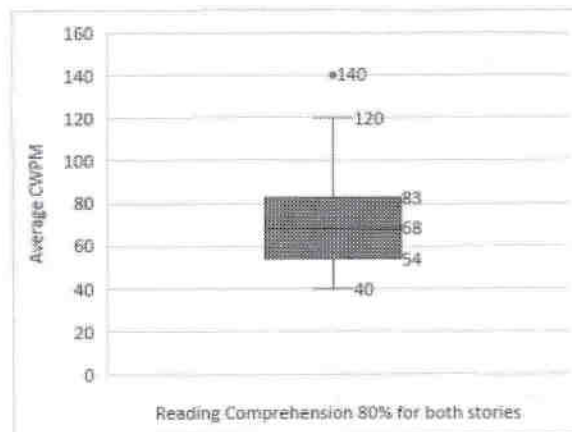


Figure 7: Box plot for both texts

This figure presents the scenario of reading comprehension vs correct word per minute (CWPM) for both descriptive and imaginative texts of grade V. Students who read both texts with 80% comprehension are plotted here. The mean of CWPM of two texts is calculated and shown on the 'Y' axis.

It is found that students who read the text with 80% comprehension had a median of 68 CWPM whereas lower 25% students read 54 CWPM or less and upper 25% students read 83 CWPM or higher. It is also evident from the figure that the minimum CWPM with 80% comprehension was 40 from which it can be inferred that the minimum level of oral reading fluency is 40 CWPM with 80% comprehension for grade V.

## Findings

The major findings are:

- For grade III, the students who can read 46 Correct Word Per Minute (CWPM) of grade-level text with 80% comprehension could be labeled as fluent readers for the Bangla language. That is why it is recommended that the reading fluency benchmark for grade III students in Bangla is 46 CWPM.
- For grade V, the students who can read 54 Correct Word Per Minute (CWPM) of grade-level text with 80% comprehension could be labeled as fluent readers for the Bangla language. That is why it is recommended that the reading fluency benchmark for grade V students in Bangla is 54 CWPM.

## Recommendations

- Using this benchmark, a baseline study is needed to identify the present situation of students' reading fluency of Grade III and Grade V. Necessary interventions should be taken based on the baseline study to achieve the targeted benchmark.
- A year-wise situational analysis study needs to be conducted to measure the level of students' achievement to compare with the benchmark and choose the appropriate interventions for achieving the targeted CWPM.
- The initiative is needed to conduct a comprehensive study for setting the benchmark for Grade I and Grade II.
- It needs to update the reading fluency benchmark periodically, following the context of students' learning needs.

## Conclusion

This national-level study was done with the prior permission of MoPME. For the first time, the reading fluency benchmark is set for grade III and grade V, the teachers needed to know the standard reading fluency rate to assess their students' language learning progress. This study finds that at present major part of the students are below the standard level. So, it is essential to take the necessary steps by following the recommendations of the study immediately.

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