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Examining university students' English language loud reading fluency rate in Tanzania

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Abstract: Reading rate is one of the important components of fluency and an indicator of comprehension. This paper is in the area of reading fluency, examining reading rate among university students in Tanzania. A total sample of 311 first-year students was involved in the study, with males constituting 49.83% and females 50.16%. These participants were sampled from the Muslim University of Morogoro, the University of Dodoma, and the University of Dar es Salaam. The study adopted Competency-Based Measurement (CBM) to determine student's reading fluency rate, where each participant read aloud a given passage. The assessment was compared against 300 words per minute (WPM), the benchmark adopted in the study as proposed by Hasbrouck and Tindal. On average, the students read at a rate of 112 wpm with a standard deviation of 22.6. This means that the students are significantly below the standard rate. This situation is probably because students did not receive adequate training in English reading skills during their elementary levels. Reading rate is usually linked with comprehension; therefore, if they still struggle with reading speed, they are likely to face challenges in understanding complex texts, which are common at the university level.

Keywords: Loud reading, Reading fluency, Reading rate, Reading Speed, Tanzania

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1. Introduction

Reading is a cognitive process that involves decoding symbols in a text to infer its meaning. It encompasses word recognition, fluency, and comprehension, requiring skills such as decoding, phonics, phonetic awareness, vocabulary and fluency. According to Stein (2001), reading is a crucial skill that all learners at every grade level must be taught to

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excel academically. The purpose of this study was to examine the English language reading rate among first-year university students in Tanzania.

In the past two decades, there has been an increase in research and publications on reading behavior among students in higher learning institutions, especially as educational environments become more digital. The shift from traditional print resources to online resources has changed how university students interact with texts. Therefore, it is essential to investigate how these transformations impact general reading and reading rates in particular. The reading rate refers to the speed at which an individual can read and is a key component of reading fluency, along with reading accuracy and expression (Penner-Wilger, 2008). Reading rate involves both speed and automaticity in moving through connected text (Hudson, Lane & Pullen, 2005). It is a critical aspect of reading comprehension and literacy. However, at higher learning institutions, particularly at universities, the assessment of reading rate is often overlooked. This may be due to various factors that influence instructional priorities and pedagogical approaches. One such factor could be the educational focus on comprehension rather than speed. At the university level, the emphasis is on understanding and critically analyzing complex texts. Lecturers prioritize teaching students how to engage deeply with content and develop critical thinking skills rather than assessing how quickly they can read (Cohen, 2014). Additionally, different study fields may require different reading strategies; for example, literature students may need to read slowly and thoughtfully to grasp language nuances, while engineering students may need to skim for key information. Furthermore, traditional assessments at universities typically involve projects, essays, or examinations that assess students' understanding through writing rather than timed reading to evaluate reading speed.

Assessing reading fluency rates at universities is crucial for understanding students' proficiency in reading, which directly impacts their academic progress. The reading rate can serve as a tool to gauge a student's ability to comprehend and process information effectively. If a student reads at a very slow rate, it may hinder his or her ability to keep up with course materials, participate in discussions, and complete assignments in time. By assessing reading rates, lecturers can identify students who may need additional support or intervention to improve their reading skills. This underscores the importance of understanding the reading rate phenomenon for university students. Reading rate is calculated systematically in words per minute (WPM), mathematically computed by dividing the total number of words by the duration in seconds spent reading the passage and then multiplying by sixty.

$$\textit{Reading Rate} = \frac{\textit{Number of Words read}}{\textit{Number of Seconds to read}} \times 60$$

Essentially, it should be understood that the speed of reading aloud varies across individuals and from one language to another as they differ based on their orthographies or graphemes (Chang, Plaut, & Perfetti, 2015). Reading speed depends too on the nature of the language, every language is structured in a unique and orderly way with peculiar rules and principles (Richard, 2024). Furthermore, students' reading speed or rate tends to increase in line with age and level. The common and widely accepted loud reading rate scale was published by Jan Hasbrouck and Gerald Tindal, acclaimed researchers in the field of oral reading fluency. They established a grade-level scale that has been used to compare students with average readers at grade level. For instance, a grade 8 pupil is expected to read aloud a text with a rate of 150 - 204 words per minute (WPM). If he/she regularly reads expressively below that benchmark, immediate intervention may be required. Students have to understand how much they can read from the text in one minute. In this case, students are also recommended to know the acceptable standard of reading rate to gauge their reading. Scholars have, over the years, established standards for reading fluency rates based on age and grade level. However, there is no consensus on which standard should be used. Table 1 is a suggestion of reading fluency rate by Hasbrouck and Tindal that shows variability among high school and college students and adults.

Table 1: Average Reading Fluency Rate

Grade/Level	Age	Rate (WPM)
High School	14-18 yrs	200-300
Collage/University	18-23 yrs	300-350
Adult	23+ yrs	220-350

Source: Hasbrouck and Tindal, (2017)

Table 1 indicates that students at the university level are expected to attain at least 300 words per minute (WPM) to be considered fluent readers.-These figures show that students often progress through their grades, and their reading speed certainly increases. However, these figures can vary considerably based on individual reading skills, the readability of the text, and other influential factors such as motivation and interest in the material. Generally, a well-acknowledged challenge among students who are non-native speakers of the English language is that they read aloud at a low rate, possibly very slowly in the second language (L2), specifically English (Raymond & Parks, 2002). This study adopted 300 words per minute (WPM) proposed by Hasbrouck and Tindal (2017) as our benchmark. A general review

of the literature indicates that there are many university students across the globe who have demonstrated a lower level of reading fluency.

Rashid and Ar-Riyahi (2010) conducted a survey that focused on a sample of thirty (30) university students from the English department at Basra University in Iraq. Students were asked to read aloud a given text with a total of 199 words. Although the study aimed to explore the correlation between reading fluency and comprehension among the students, the nature of the assessment tool used also revealed the students' reading fluency rate. The results indicated that the students exhibited below-standard performance regarding their reading rate. The slowest reader among the non-native speakers of the English language read at a rate of 56 words per minute, while native speakers read the text at a rate of 177 to 199 words per minute. Since students demonstrated poor performance, Rashid and Ar-Riyahi suggested that immediate interventions be taken.

Another study by Papadima-Sophocleous and Charalambous (2014) provides further evidence of a low reading fluency rate among university students. The study was initiated in response to the observation that many students at universities in Cyprus were facing significant challenges in oral reading fluency. This issue was identified as a critical area requiring additional practice. The survey involved eight students enrolled in various programs, including English for Academic Purposes (EAP). The study findings indicated that the students exhibited a poor reading fluency rate. The average reading fluency rate attained was 56 Words Per Minute (WPM) for the first reading and 75 Words Per Minute (WPM) for the second reading. These figures suggest that students had a notable deficiency in their ability to read.

2. Research methodology

This study involved 311 first-year university students selected from three universities in Tanzania, namely: the Muslim University of Morogoro, the University of Dodoma, and the University of Dar es Salaam. These participants were selected through a convenient sampling technique, with a total of twenty-seven (27) programs involved as indicated in Appendix A. Furthermore, the study considered gender issues, ensuring a relative representation of participants from each university. Table 2 displays the statistical representation by gender for each university.

Table 2: Number and Percentage of Respondents by Gender (N=311)

SN	University	Male	Female	Total (%)
1	Muslim University of Morogoro	23 (46.9%)	26 (53.0%)	49 (99.9 - 100)
2	University of Dodoma	71 (51.07%)	68 (48.92%)	139(99.99-100%)
3	University of Dar es Salaam	59 (47.96%)	64 (52.03%)	123(99.99- 100%)
Total		155 (49.83%)	156 (50.16%)	311(99.99 - 100%)

Source: Field Data, 2023

The sample size was calculated using the Yamane (1967) formula. The Yamane sample size formula is a mathematical calculation developed by Taro Yamane to determine the appropriate research sample size for a study. It is commonly used in research to ensure statistical balance between the sample size and the population under study. The total number of the target population was an input into the Yamane formula to determine the sample size as follows:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n = Sample size

N = The total number of students in the three universities

e = The level of precision (0.05)

Therefore:

$$n = \frac{16{,}900}{1+16{,}900(0.05)^2}$$

$$n = 390$$

The intended sample size for the study was 390 first-year students. However, only 311 students participated fully. During data collection, it was noted that some of the sampled participants could not attend due to other commitments. Therefore, the researcher employed a convenience sampling technique to access an appropriate number of participants to fill the gap. This led to situations where only one or two participants were included in some study programs because the researcher subjectively selected participants who were willing and ready to take part in the study. The main reason for this was that during data collection, some participants, specifically from the University of Dar es Salaam and the University of Dodoma, finalizing lessons in some courses and preparing for university examinations. As a result, some respondents were not willing to participate because the process took about 5-8 minutes for each participant. The actual number of participants involved in the study was approximately 80% of the sample size, which is acceptable in research.

The assessment of individual reading rates was conducted using the Curriculum-Based Measurement method (CBM) with a multidimensional fluency scale or passage assessment. This method is commonly used to assess an individual's reading rate, accuracy, and prosody (Papadima-Sophocleous & Charalambous, 2014).

CBM provides a precise indicator of a student's reading rate. Initially, CBM was developed to assess students' proficiency rates in special education (Stecker et al., 2005). However, today CBM is used in both formative and summative evaluations of students' skills acquisition. The assessment involves instructing individual students to read aloud a passage in one minute while recording the number of words read correctly and incorrectly (Hosp & Hosp, 2003).

In the same vein, Deno and Marston (2006) argue that oral reading fluency is a process of counting the number of words that a student reads correctly in one minute when reading a grade-level text. The researcher selected a grade-level passage consisting of a total of 464 words. The text selected was a generic passage that had not been seen before by participants. Using a generic passage for the assessment of reading proficiency is well recommended (Hosp & Hosp, 2003) because it provides reliable and valid information.

2.1. Text assessment

The text underwent a readability analysis using an online application to determine its level of difficulty. It is crucial to assess the readability of the text to ensure that it is suitable for the student's grade level, leading to optimal outcomes. A readability analysis was conducted on a selected passage to determine its readability. Although the study utilized the Dale-Chall Readability Formula, specifically the revised version (Dale & Chall, 1995), it was important to validate the results using other readability scoring systems such as the Automated Readability Index, Flesch Reading Ease, Gunning Fog Readability, Flesch-Kincaid Grade Level, Coleman Liau Readability Index, Smog Index Readability Score, and Linsear Write Readability. The overall readability index for the text was 6.91, indicating that the text is somewhat less difficult but suitable for ESL learners. Table 3 presents the readability analysis results.

Table 3: Text Readability Analysis

	Gunning Fog	**Flesch Reading Easy Score**	**Flesch Kincaid**	**Coleman-Liau**	**SMOG Index**	**Linsear Write**	**Automated Readability**
Index or Scale	12.1	65	9.18	8.87	8.62	12.28	10.2
Reading Difficulty	Difficulty	Standard	Slightly difficulty	Slightly difficulty	Slightly difficulty	Difficulty	Somewhat Difficulty
Grade Level	12nd Grade	8th &9th Grade	9th Grade	9th Grade	9th Grade	12th Grade	10th Grade
Age Range	17-18 Years	13 – 15 Years	14 -15 Years	14-15 Years	14-15 Years	17-18 Years	15-16 Years

Source: https://shorturl.at/wyzl8

The average reading level consensus of the text readability indices indicated the following results: index score: 10, reading difficulty: somewhat difficult, grade level: tenth grade, and age range: 15-16 years old. In this case, the text was essentially easy for first-year university students whose English is their second language.

2.2. Data analysis

The study employed a quantitative approach, the statistical data were organized, coded, and imported into Microsoft Excel (MS Excel) for processing. The summary of statistical data calculated was used to outline the students' scores using descriptive statistics, including maximum and minimum scores, standard deviation, and means. The data was also presented in tables and figures.

The descriptive statistics presented in Table 4 indicate that all students involved in the study (N=311) exhibited a reading fluency rate below the adopted benchmark. The findings revealed that respondents from all three universities failed to attain the anticipated reading rate as adopted from Hasbrouck and Tindal (2017). Specifically, the Muslim University of Morogoro had an average score of 100.3 words per minute, the University of Dodoma had 112.3 words per minute, and the University of Dar es Salaam had 115.4 words per minute. Even the highest performance among the assessed first-year university students was 194 WPM, still falling significantly below the standard reading rate adopted.

Although all students exhibited a slow reading rate, the University of Dar es Salaam performed better than the University of Dodoma and the Muslim University of Morogoro. It was further observed that the performance of the University of Dar es Salaam and the University of Dodoma is quite close, with a mean difference of only 3.3 WPM. These two universities are public institutions where basic requirements are provided by the government. Furthermore, these universities set high admission criteria and therefore enroll better students than private institutions, which admit students with minimum criteria due to the need for more students to meet all related university costs. In this case, it is expected to see a difference in terms of students' performance between public institutions and private ones, as indicated in Table 4.

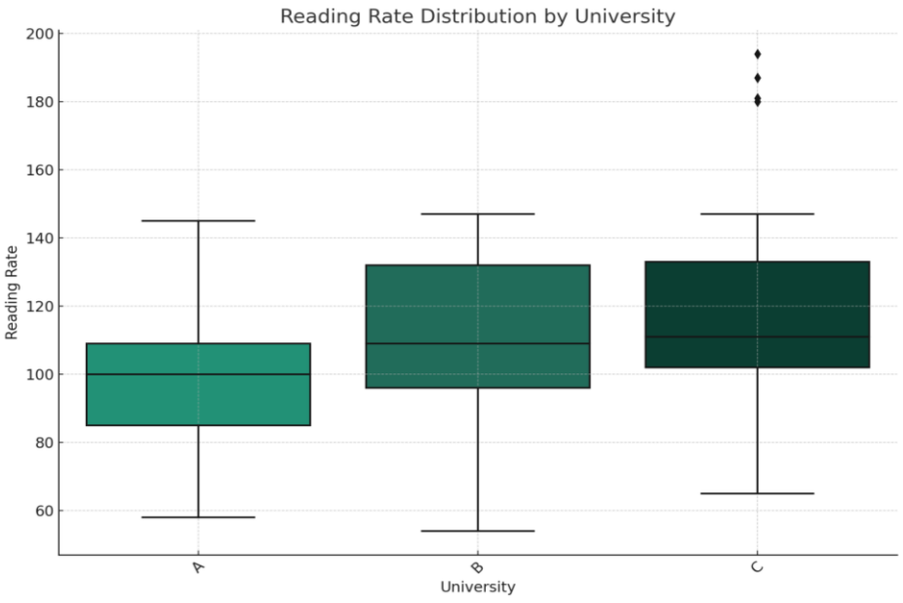
Table 4: Reading Rate Score and Word Recognition Automaticity

SN	**University**	**Mean WPM**	**Minimum WPM**	**Maximum WPM**	**Std deviation**
1	Muslim University of Morogoro (A)	100.3	58.0	145.0	21.12
2	University of Dodoma (B)	112.1	54.0	147.0	21.92
3	University of Dar es Salaam (C)	115.4	65.0	194.0	22.27

Source: Field data, 2023

The findings presented in Table 4 can be visualized effectively using a box plot to display the performance in reading rates across universities, as indicated in Figure 1.

Figure 1: Reading Rate and Word Recognition Automaticity



Source: Field data, 2023

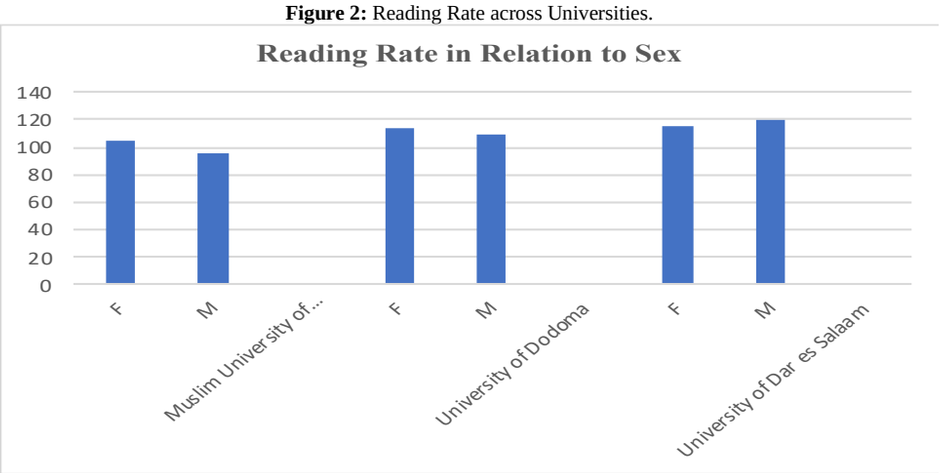
The slow reading rate may be influenced by several factors, one of which is the struggle of a reader for comprehension. At this juncture, a reader's cognitive attention is devoted to both comprehension and decoding, resulting in a decline in reading speed (Jenkins et al., 2003). The second factor influencing slow reading may be the immersion of foreign language experience (Fraser, 2007). English, which is a foreign language to all students involved in the study, may have affected their reading rate either in terms of processing speed or proficiency. The fact that participants apparently use Kiswahili language for almost all of their communication except during lessons and that their instructors also predominantly use Kiswahili language, with their use of English mainly being receptive, implies that the foreign language factor may affect word recognition and processing, resulting in a low reading rate and word recognition automaticity. Therefore, the adopted reading standard should not be used for ranking countries but rather as a means to determining the magnitude of disparities that can be considered for improvement. Notwithstanding the lower reading rates, this study explains a relationship between word decoding automaticity and overall reading fluency. In this study, all students were recorded below the expected standard rate of 300 WPM as suggested by Hasbrouck and Tindal. About 81 students (26.04%) read assessment text at a rate ranging between 54 WPM and 99 WPM, which, according to Hasbrouck and Tindal (2017), is appropriate for lower grades. These results suggest that more attention to reading rate as an important aspect of reading fluency is required for improvement.

3. Findings and Discussion

In this study, Curriculum-Based Measurement (CBM) was used to determine reading rates among university students in Tanzania. The general analysis of the research findings, as presented in Table 4, shows that students exhibit a low reading rate. Statistical data were analyzed with respect to sex and the study program.

Firstly, reading rates by sex across all three universities were examined. The findings revealed significant differences in reading ability between males and females, with the latter demonstrating a better reading rate. Figure 1 illustrates a comparative analysis between males and females.

Figure 2: Reading Rate across Universities.

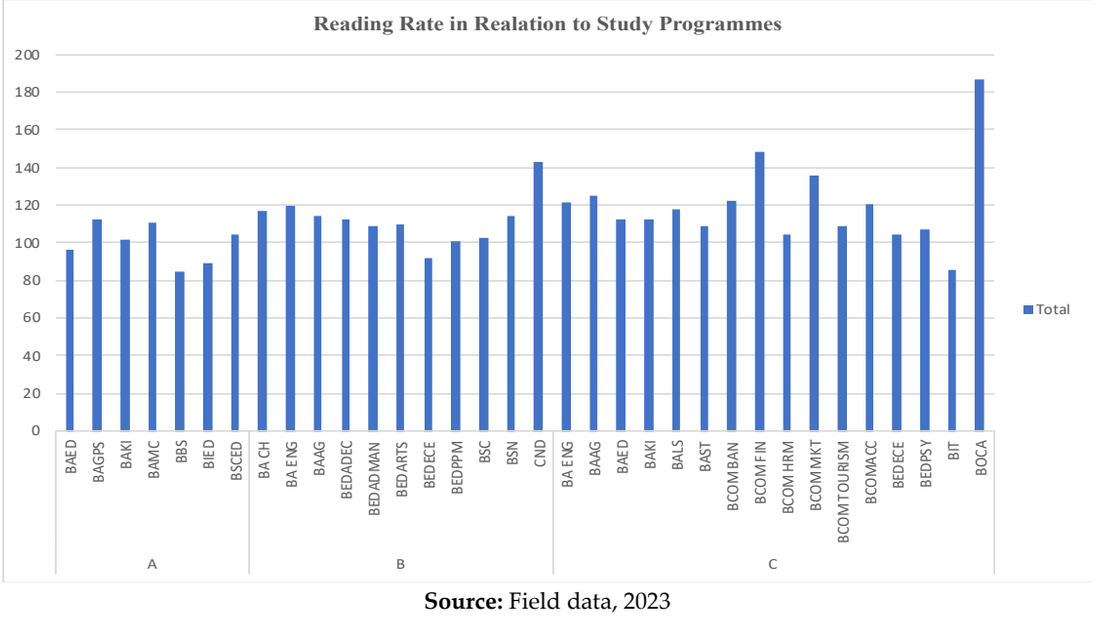


Source: Field data, 2023

The average reading rate for males was 108.4 WPM, while females scored 111.3 WPM. This difference is not very significant but is notable in comparative analysis. This finding concurs with other empirical studies on reading speed, such as Emam and Youssef (2012), which also found that females read better than males. In their study, Reilly, Neumann, and Andrews (2019), females attained significantly higher reading scores compared to males across all levels involved in the study. The difference in achievement in Reilly et al. (2019) indicates that women outperformed males even beyond what the study by Hyde and Grade (2008) had established. However, it is reported that gender differences in reading slowly diminish or completely disappear as individuals enter adulthood (Kutner, 2007). Classical scholars in this field have been examining gender disparities in cognitive abilities for decades (Ellis et al., 2013). Various studies have consistently reported that males demonstrate more variability in cognitive achievement, including quantitative, verbal, and non-verbal abilities. (Lohman & Lakin, 2009). Similarly, females tend to exhibit minor variability, with achievement clustering closer to the mean. Some studies have shown that the higher variability in males' achievement results in an over-representation of females below the distribution list, leading to a larger number of males identified as having a learning challenge (Deary et al., 2003; Lohman & Lakin, 2009). Essentially, while a few studies have investigated gender differences in reading fluency, it appears that gender has a minimal effect on reading performance. Research on other aspects of reading fluency has also indicated that gender plays no significant role. The study findings in this work align with Limbrick et al. (2011), suggesting that gender is not a consistent or key predictor of one's reading ability. This difference does not seem to be a function of intelligence but rather of a general language superiority in women. According to Mohammed and Amponsah (2018), the existing discrepancy between males and females is less important, and efforts should be focused on helping both males and females become fluent readers with an acceptable reading rate.

Finally, the study examined reading rates across different study programs and came up with findings as summarized in Table 5 (Appendix B) and illustrated in Figure 3.

Figure 3: Reading Rate across Universities



Source: Field data, 2023

The findings for reading fluency rates at the Muslim University of Morogoro show that the Bachelor of Arts in Geography and Population Studies (BAGPS) scored the highest (112.7WPM) among all the study programs involved in the study, while the Bachelor of Business Studies scored the lowest (85 WPM). Similarly, at the University of Dodoma, the Bachelor of Science in Clinical Nutrition and Dietetics (CND) performed better than any other study program, with an average reading rate of 114 WPM, while the Bachelor of Education in Early Childhood Education scored the lowest at 92.2 WPM.

The findings on reading rates of students' study programs at the University of Dar es Salaam indicate that all programs are significantly below the adopted benchmark. However, the Bachelor of Commerce and Accounting (BOCA) program achieved a considerably higher average reading rate (187 WPM) compared to other programs, although it still falls short of the benchmark. Whereas the Bachelor of Business Information and Technology (BIT) program scored the lowest (86 WPM).

It is surprising to find that students pursuing education courses such as Bachelor of Arts with Education, Bachelor of Islamic Studies with Education, and Bachelor of Science with Education, who are essentially future teachers, exhibit substandard reading skills. This deficiency can have a significant impact on their students and the overall educational system. A teacher who struggles with reading fluency is unable to effectively model proficient reading behavior for their students, potentially leading to academic underachievement and long-term literacy challenges (Zutell & Rasinski, 1991). Students often look upon their teachers as role models for reading behavior, so if teachers face difficulties with reading fluency, they may struggle to provide effective fluency-oriented reading instruction, as observed by researchers (Kuhn et al., 2006; Stahl & Heubach, 2005). The issue of teacher incompetence in

reading proficiency has also been highlighted by Botha et al. (2008), indicating a negative impact on the quality of teaching and learning in the realm of reading. Numerous studies have linked poor reading performance to the shortcomings of teachers (Adebayo, 2008; Lindner, 2008; Nile, 2013; Mohammed and Amponsah, 2018; Harrington, 2001). The quality of teachers, particularly in terms of reading proficiency, is a crucial factor in students' reading abilities. Therefore, students in these education programs may be at risk of experiencing similar challenges.

Finally, the most alarming finding is that the reading rate attained by students pursuing language courses such as Bachelor of Arts in English Language, Bachelor of Arts in Kiswahili, and Bachelor of Arts in Chinese Language was below expectations. These students are specializing in languages, so excellence in vocabulary was anticipated. This observation suggests several underlying issues, including poor decoding skills, inadequate learning support, and a lack of reading motivation (Hamra & Syatriana, 2010). The reading rate scores obtained by these language students indicate that instructors and other relevant departments need to take immediate interventions.

4. Contributions of the Study

This study holds several contributions in the field. Among others is that, there is absence of established standards for reading rate and accuracy in the country, which hinders the ability of individuals to gauge their reading development accurately. In this case, the results from this study will address this issue by providing a framework that can be utilized for setting effective reading benchmarks in higher learning levels. For example, a 250 wpm reading rate and 180 wcpm reading accuracy. Similarly, the study. Since reading fluency is associated with comprehension as reported by scholars such as Makebo, Bachore, and Ayele (2022), the assumption is that mastery of reading rate, accuracy, and prosody enhances comprehension. Therefore, finding out the challenges learners face in comprehending a text will help to solve the challenges connected to reading.

5. Conclusion

The study involved 311 first-year students from three universities in Tanzania: the Muslim University of Morogoro, the University of Dodoma, and the University of Dar es Salaam. The research provided valuable insights into the reading fluency rates of university students. The main aim was to assess reading rates using a Competence-Based Measurement (CBM) approach, where students read a text aloud for evaluation.

The findings indicate that the participants achieved an average reading rate score of 112 words per minute (wpm). This score is notably below the benchmark established by Hasbrouck and Tindal (2017), suggesting that these students may not meet the expected standards for reading fluency. Such a performance level raises concerns about their readiness for academic demands, especially in an educational context where effective reading skills are essential. Additionally, gender differences were observed in the results, with female students generally outperforming their male counterparts in terms of reading rate.

It is of great concern that students enrolled in education and language courses performed poorly against expectations. These fields are typically associated with higher literacy and communication skills, making such outcomes alarming. Immediate interventions, such as curriculum review or enhanced support mechanisms, are needed to improve reading fluency rates among these students. The study highlights significant challenges in reading rates among university students in Tanzania. The overall performance suggests a gap between the current reading abilities and the requirement, particularly in critical fields of study such as reading fluency. Addressing these issues is crucial in ensuring that future educators and language professionals attain the necessary skills to excel academically and professionally.

References

Adebayo, O. (2008). The impact of mother tongue on students' achievement in English language in Junior Secondary Certificate Examination in Western Nigeria. *Journal of Social Sciences*, *17*(1): 41-49.

Chang, L., Plaut, D. C., & Perfetti, C. A. (2015). Visual complexity in orthographic learning: Modelling learning across writing system variations. *Scientific Studies of Reading*, *20*(1), 64-85.

Cohen, A. D. (2014). *Strategies in learning and using a second language*. Routledge.

Common Core State Standards Initiative. (2010). National Governors Association Center for best Practices and Council of Chief State School Officers. *Retrieved December*, *20*, 2014.

Deary, I. J., Thorpe, G., Wilson, V., Starr, J. M., & Whalley, L.J. (2003). Population sex differences in IQ at age 11: The Scottish Mental Survey 1932. *Intelligence*, 31, 533- 542.

Deno, S. L., & Marston, D.B. (2006). Curriculum-based measurement of oral reading: An indicator of growth in fluency. In S.J. Samuels & A.E. Farstrup (Eds.), *What research has to say about fluency instruction* (pp. 179–203). Newark, DE: International Reading Association.

Ellis, L., Hershberger, S., Field, E., Wersinger, S., Pellis, S., Geary, D., ... & Karadi, K. (2013). *Sex differences: Summarizing more than a century of scientific research*. Psychology Press.

Emam, A., & Youssef, A. E. (2012). Do Females Read Faster than Males? An Empirical Study Using Eye Tracking Systems. *International Journal of Computer Science Issues (IJCSI)*, *9*(3), 232.

Fraser, C. A. (2007). Reading Rate in L1 Mandarin Chinese and L2 English across Five Reading Tasks. *The Modern Language Journal*. *91*(3), 372-394.

Hasbrouck, J, & Tindal, G. (2017). An Update to Compiled ORF Norms. Technical Report No. 1702. *Behavioral Research and Teaching*.

Hosp, M. K., & Hosp, J. L. (2003). Curriculum-based measurement for reading, spelling, and math: How to do it and why. *Preventing School Failure: Alternative Education for Children and Youth*, *48*(1), 10-17.

Hudson, R. F., Lane, H. B., & Pullen, P. C. (2005). Reading fluency assessment and instruction: What, why, and how? *The Reading Teacher*, *58*(8), 702-714.

Hyde, J. S., & Grabe, S. (2008). *Meta-analysis in the psychology of women*. Greenwood Publishing Group.

Jenkins, J. R., Fuchs, L. S., van den Broek, P., Espin, C., & Deno, S. L. (2003). Sources of individual differences in reading comprehension and reading fluency. *Journal of Educational Psychology*, *95*, 719-729.

Kuhn, M. R., Schwanenflugel, P. J., Morris, R. D., Morrow, L. M., Woo, D. G., Meisinger, E. B., ... & Stahl, S. A. (2006). Teaching children to become fluent and automatic readers. *Journal of literacy research*, *38*(4), 357-387.

Kutner, M., Greenberg, E., Jin, Y., Boyle, B., Hsu, Y. C, & Dunleavy, E. (2007). *Literacy in everyday life: Results from the 2003 National Assessment of Adult Literacy*. Washington, DC: National Center for Education Statistics.

Limbrick, L., Wheldall, K., & Madelaine, A. (2011). Estimating gender ratios of poor reading using large-scale assessments. *Australian Journal of Education*, *54*(2), 190-222.

Lindner, A. B. (2008). Informational Text Reading Strategy instruction and Relationship towards science. Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download

Lohman, D. F., & Lakin, J.M. (2009). Consistencies in sex differences on the Cognitive Abilities Test across countries, grades, test forms, and cohorts. *British Journal of Educational Psychology*, 79, 389-407.

Mohammed, I., & Amponsah, O. (2018). Predominant factors contributing to low reading abilities of pupils at Elsie Lund Basic School in the Tamale Metropolis, Ghana. *African Educational Research Journal*, *6*(4): 273-278.

Papadima-Sophocleous, S., & Charalambous, M. (2014). Impact of iPod Touch-supported repeated reading on the English oral reading fluency of L2 students with specific learning difficulties. *The Euro CALL Review*, *22*(1), 47-58.

Penner-Wilger, M., & Anderson, M. L. (2008, July). An alternative view of the relation between finger gnosis and math ability: Redeployment of finger representations for the representation of number. In *Proceedings of the 30th annual meeting of the Cognitive Science Society, Austin, TX* (pp. 1647-52).

Rashid, B. I., & Ar-Riyahi, A. A. (2010). An investigation of the effects of oral reading fluency on the comprehension of Iraqi learners at the university level. *ADAB AL-BASRAH*, *2*(54).

Raymond, P., & Parks, S. (2002). Transitions: Orienting to reading and writing assignments in EAP and MBA contexts. *Canadian Modern Language Review*, *59*(1), 152-180.

Reilly, D., Neumann, D. L., & Andrews, G. (2019). Gender differences in reading and writing achievement: Evidence from the National Assessment of Educational Progress (NAEP). *American Psychologist*, *74*(4), 445.

Richard, B. (2024). Variation in the structure of complex sentences in English and Ịzọn languages. *Journal of Languages, Linguistics and Literary Studies*, *4*(1), 17-24.

Stahl, S. A., & Heubach, K. M. (2005). Fluency Oriented Reading Instruction. Journal of Literacy Research 37, n° 1, (25-60).

Stein, J. (2001). The neurobiology of reading difficulties. In M. Wolf (Ed.), *Dyslexia, fluency, and the brain* (pp. 4-21). Timonium, MA: York Press.

Taguchi, E., Takayasu-Maass, M., & Gorsuch, G., (2004). Developing reading fluency in EFL: How assisted repeated reading and extensive reading affect fluency development. *Reading in a Foreign Language, 16*(2), 1–19. Retrieved from http://nflrc.hawaii.edu/rfl/October2004/taguchi/taguchi.html

Zutell, J., & Rasinski, T. V. (1991). Training teachers to attend to their students' oral reading fluency. *Theory into practice*, *30*(3), 211-217.