OPEN ACCESS

Int. J. Educ. Found. 03 (02) 2026. 225-234 DOI: 10.33687/ijef.003.02.0103

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IJEF

Available Online at EScience Press
International Journal of Education Foundations
ISSN: 3078-7866 (Online), 3078-7858 (Print)
https://ijef.esciencepress.net

RESEARCH ARTICLE

Effectiveness of Instructional Materials in Promoting Reading, Writing, and Arithmetic Skills in Standard One and Two Pupils in Misungwi District, Mwanza-Tanzania

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Author's Contributions
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Article History
Received: November 22, 2025; Accepted: January 28, 2026; Published: March 14, 2026.

ABSTRACT

This study aimed to evaluate the effectiveness of instructional materials in promoting reading, writing, and arithmetic skills in standard one and two pupils in Misungwi District, Mwanza-Tanzania. The study employed mixed research approach and explanatory sequential design. Data was collected using questionnaires and interviews. Quantitative data were analyzed using SPSS version, while qualitative data were subjected to thematic analysis to identify recurring patterns. The study found that well-trained teachers, continuous professional development, and availability of age-appropriate instructional resources significantly enhance pupils' mastery of reading, writing, and arithmetic in Standard One and Two. However, challenges such as overcrowded classrooms, limited parental involvement, inadequate teaching materials, and language barriers hinder effective learning of the 3Rs. The study concluded that instructional resources and skilled teaching are essential in promoting foundational literacy and numeracy skills, but must be supported by improved learning environments and home-school collaboration. It is recommended that the government and education stakeholders invest in teacher training, resource provision, and community engagement to strengthen 3Rs mastery among early grade pupils.

Keywords: Instructional materials; reading; writing and arithmetic skills; standard one and two pupils

INTRODUCTION

Reading, writing, and arithmetic (3Rs) are essential for children's academic and lifelong success, forming the core of early education and cognitive development (Oriel, 2024). Instructional materials play a vital role in teaching these foundational skills, as they support comprehension, concept retention, and skill application. Alghazo et al. (2022) highlight how repeated exposure to texts through reading and writing activities enhances word recognition, reading speed, and comprehension. However, the effectiveness of these materials depends on how well they are adapted to pupils' needs and aligned with pedagogical strategies. During remote learning phases, such as the COVID-19 pandemic, instructional materials became even more critical, especially when in-person teaching was disrupted (Alismail, 2023). Teachers often struggled to assess and support pupils' 3Rs development due to a lack of suitable resources and limited training in remote instruction. In such situations, printed and digital instructional materials, along with support from parents and communities, were key to maintaining learning routines and reinforcing foundational skills at home (Oriel, 2024).

Globally, countries have explored different strategies and instructional approaches to improve the 3Rs. For instance, China's use of the Collaborative Integrated Reading and Composition (CIRC) model emphasizes vocabulary, comprehension, and revision, fostering active engagement with reading and writing materials (Li & Chano, 2023). In Finland, early exposure to letter names and numbers through structured pre-primary materials supports smooth decoding, although fluency challenges persist later (Mertala, 2022; Virinkoski et al., 2021). These examples show that instructional materials must be not only accessible but also tailored to cognitive development stages.

In East African countries, mastery of 3Rs relies heavily on the availability and quality of instructional materials. Assessments in Kenya and Tanzania reveal that pupils struggle with vocabulary, comprehension, and arithmetic operations, indicating the need for contextually relevant learning materials that provide clear examples and hands-on practice (Kenya National Examinations Council, 2024; NECTA, 2024). Tanzanian data show that reading has seen the most improvement, suggesting a possible link to better access or use of reading materials compared to writing and arithmetic resources.

In Misungwi district, despite national efforts to improve foundational learning, a crisis in basic literacy and numeracy remains among Standard One and Two pupils (Gedik & Akyol, 2022). Many learners continue to struggle with 3Rs despite regular attendance, partly due to insufficient or ineffective instructional materials that do not meet their learning needs (Ngussa & Mjema, 2017). This underscores the importance of investing in well-designed, engaging, and age-appropriate instructional materials to support early-grade teachers in improving 3Rs mastery and breaking down barriers to learning. Thus, this study evaluated the effectiveness of instructional materials in promoting reading, writing, and arithmetic skills in standard one and two pupils in Misungwi District, Mwanza-Tanzania.

REVIEW OF LITERATURE

Theoretical Review

This study was guided by constructivist learning theory. The theory was developed by Jean Piaget in 1952. It posits that learners actively build their own understanding through direct experiences and reflection. The theory assumes that learning is most effective when new information connects to prior knowledge and occurs through social interaction, exploration, and problem-solving. Expanded by Jerome Bruner, the theory emphasizes mastery of the 3Rs (reading, writing, and arithmetic), discovery learning, and a spiral curriculum. A key strength of the theory lies in its support for pupil-centered instruction, integration of technology, continuous assessment, and community involvement, all of which enhance learning outcomes (Nino, 2023). In the context of studying the Effectiveness of Instructional Materials in Promoting Reading, Writing, and Arithmetic Skills in Standard One and Two Pupils, the theory is relevant as it underlines the importance of interactive, hands-on learning using instructional resources. However, its implementation may be challenging due to the need for extensive teacher training and the subjective, time-consuming nature of assessing learner progress.

Empirical Literature Review

Integrated instruction that combines literacy with content-area subjects like science and social studies has been shown to significantly enhance student learning. Hwang et al. (2022) found that integrated literacy and content-area instruction had significant positive effects on vocabulary and comprehension outcomes in K-5 pupils, with a notable impact on content knowledge. Although standardized vocabulary outcomes showed no significant change, the study emphasized the instructional value of this approach. Similarly, Li and Chano (2023) reported that the Collaborative Integrated Reading and Composition (CIRC) strategy significantly improved third-grade pupils' reading and writing skills in Chinese primary schools, reinforcing the importance of structured, integrated literacy strategies. Despite limitations such as small sample sizes, both studies suggest that integrated instruction can effectively enhance literacy learning.

In Cameroon, Mekumba (2023) found a strong positive correlation between the use of instructional materials and pupils' acquisition of mathematical skills, although underutilization and a lack of evaluation on material quality were noted. In northwest Nigeria, Sirajo and Abdullahi (2023) highlighted that educational materials stimulate pupils' senses and interest, leading to improved mathematics performance. Both studies underscore the importance of making instructional resources more accessible and encouraging their effective use in classrooms to enhance learning outcomes, especially in foundational subjects like mathematics.

Other research in African countries further supports

these findings while identifying areas for improvement. Okoji and Olubayo (2021) found no significant difference in the use of instructional resources based on teacher demographics in Nigeria, suggesting that broader systemic issues affect resource use. Meanwhile, Mugisha et al. (2023) observed limited engagement with instructional materials in Rwandan private secondary schools, despite their availability. Teachers primarily used these tools to introduce lessons rather than facilitate active learning. These studies point to the need for teacher training and innovative teaching practices to maximize the impact of available resources on student engagement and academic achievement.

Additional studies show how limitations in instructional materials hinder early learning and teaching quality. Bitok (2020) revealed that teachers in Kenya's Uasin Gishu County lacked access to essential digital tools and books, directly affecting preschool children's learning outcomes. Similarly, in Tanzania, Bilakwate et al. (2023) reported shortages in reference books and modern educational tools, which contributed to poor instruction quality in secondary schools. Furthermore, Pembe (2023) demonstrated that specially designed learning resources significantly improved writing abilities in Tanzanian Grade Two pupils, suggesting the need for targeted interventions. However, the limited scope of these studies, in terms of sample size and regional focus, suggests a need for broader, more inclusive research to fully understand the impact of instructional materials across diverse educational settings.

METHODOLOGY

This study employed a mixed research approach, combining quantitative and qualitative methods. It adopted an explanatory design, starting with quantitative data collection from 125 teachers through structured questionnaires, followed by qualitative interviews with 7 headteachers, 3 WEOs, and 1 DPEO to explain the patterns observed. The target population consisted of 933 stakeholders (teachers, headteachers, WEOs, and one DPEO), from which a sample of 136 participants was drawn using both probability (stratified and simple random) and non-probability (purposive) sampling techniques. Questionnaires were used for teachers to collect numerical data, while interviews with educational leaders provided in-depth qualitative insights. Quantitative data were analyzed using SPSS version, while qualitative data were subjected to thematic analysis to identify recurring patterns. The study ensured ethical compliance by securing necessary approvals from SAUT and local authorities, maintaining participant anonymity, and ensuring informed consent. Additionally, all data were securely stored and academic integrity was upheld through proper citation and honest reporting.

PRESENTATION OF THE FINDINGS

Roles of Instructional Resources in Enhancing Reading, Writing and Arithmetic in Standard One and Two Pupils

The researcher aimed to examine the roles of instructional resources enhancing the reading, writing and arithmetic in standard one and two pupils in Misungwi district. Moreover, the researcher collected data from teachers using questionnaires and headteachers, WEO and DPEO who were interviewed. Therefore, table 1 presents the data.

Table 1. Teachers' response on the roles of instructional resources enhancing the 3Rs in standard one and two pupils (n=111)

Statement	SD		D		M		A		SA	
	F	%	F	%	F	%	F	%	F	%
Well-trained teachers use effective strategies to enhance pupils' mastery of 3Rs	-	-	2	1.8	8	7.2	29	26.1	72	64.9
CPDP help teachers improve their instructional approaches in the 3Rs.	-	-	2	1.8	12	10.8	33	29.7	64	57.7
The availability of instructional resources positively impacts pupils' learning outcomes in 3Rs	8	7.2	12	10.8	18	16.2	39	35.1	34	30.6
Teachers with specialized training in early literacy and numeracy instruction are more effective in developing pupils' skills.	1	0.9	2	1.8	7	6.3	31	27.9	70	63.1
Insufficient instructional resources hinder	2	1.8	2	1.8	13	11.7	34	30.6	60	54.1

pupils' ability to develop literacy and numeracy skills.										
The use of age-appropriate teaching materials makes learning the 3Rs more effective for pupils.	-	-	3	2.7	4	3.6	25	22.5	79	71.2

Key: SD- Strongly Disagree, D-Disagree, M-Moderate, A- Agreed, SA Strongly Agree
Source: Field Data (2025)

Table 1 above presents the responses of teachers regarding the role of instructional resources and teacher training on enhancing foundational skills reading, writing, and arithmetic (the 3Rs) among Standard One and Two pupils.

Effectiveness of Well-Trained Teachers

Teachers strongly agreed 72 teachers (64.9%) and agreed 29 teachers (26.1%) that well-trained teachers use effective strategies to enhance pupils' mastery of reading, writing, and arithmetic. A smaller number moderately agreed 8 teachers (7.2%) and disagreed 2 teachers (1.8%), while none strongly disagreed. This indicates a strong consensus among teachers that teacher training significantly influences the success of instructional strategies in the early years. This highlights the critical need for well-trained teachers as a foundation for improving pupils' literacy and numeracy skills. This is supported by Ajani (2023), who emphasized that effective teacher training grounded in experiential learning enhances classroom practices and improves pupils' literacy and numeracy outcomes. Thus, investment in teacher training programs could therefore be prioritized to enhance student outcomes. One respondent interviewed affirmed that:

> Well-trained teachers are very important because they know the best ways to teach reading, writing, and arithmetic. I have seen that schools with well-trained teachers have pupils who learn faster and perform better. These teachers use different methods to meet the needs of all learners. It is important to continue training teachers so they can keep improving their skills (W 3, July 2025).

This shows that teacher training has a strong positive impact on pupil learning outcomes. Well-trained teachers can use effective strategies that help pupils understand lessons better. Continuous professional development ensures teachers stay updated with new teaching methods. Investing in teacher training is key to improving education quality and helping all pupils succeed. Li and Chano (2023) demonstrated this by training teachers using the Cooperative Integrated Reading and Composition (CIRC) approach. To measure the impact, the researchers administered literacy tests before and after the intervention, showing significant improvements in pupils' literacy abilities. This approach aligns with constructivist learning theory, which emphasizes active, social, and collaborative learning environments where pupils construct knowledge through interaction and guided support. Properly trained teachers can facilitate these rich learning experiences, promoting better understanding and skill development among pupils. Similarly, another interviewee added that:

> Well-trained teachers make a big difference in how well pupils learn the 3Rs. They understand how to teach young children and use methods that help pupils grasp reading, writing, and arithmetic. When teachers get regular training, they become more confident and effective in the classroom. Supporting teacher training should be a priority to improve learning outcomes (Interviewee D, July 2025).

This means that investing in teacher training directly improves the quality of education pupils receive. Skilled teachers can better address pupils' needs and challenges. Regular training helps teachers stay updated with best practices. Strong teacher support leads to better pupil performance and overall school success. Similarly, Mekumba (2023) found that the use of instructional materials is positively linked to pupils' mathematical skill development. Both skilled teaching and adequate resources play a crucial role in enhancing learning outcomes.

Impact of Continuous Professional Development Programs

Regarding continuous professional development (CPD) programs, 64 teachers (57.7%) strongly agreed, and 33 teachers (29.7%) agreed that CPD helps teachers improve instructional approaches in the 3Rs. Moderately agreed responses were 12 teachers (10.8%), with only 2 teachers (1.8%) disagreeing. No teachers strongly disagreed. This suggests that ongoing teacher development is perceived as a vital component in sustaining effective teaching methods. CPD programs should be sustained and possibly expanded to maintain and update teachers' skills,

keeping them informed about the best instructional practices for early literacy and numeracy. One respondent indicated that:

> Continuous professional development programs have helped many teachers improve their teaching skills. Through these programs, teachers learn new methods that make lessons more interesting and easier for pupils to understand. I have seen that teachers who attend training regularly perform better in the classroom. It is important to keep these programs ongoing to support all teachers (Interviewee D, July 2025).

This shows that ongoing training helps teachers stay updated and improve their teaching quality. When teachers learn new skills, pupils benefit from better lessons and improved learning outcomes. Regular professional development is essential for keeping education standards high. Supporting these programs will help ensure all teachers be effective and confident in their work. This is supported by Munna and Kalam (2021), who emphasized that continuous training and developmental feedback enhance teachers' effectiveness and confidence, leading to improved teaching quality. In this regard, Bilakwate et al. (2023) found a significant shortage of teachers especially in science subjects which led to excessive workloads beyond policy limits. The study highlighted a lack of reference books, insufficient subject-specific textbooks, and missing modern teaching tools such as computers and projectors, all of which further challenge teachers' effectiveness. These challenges imply that alongside ongoing training, addressing resource shortages and teacher workloads is crucial to fully enhance teaching quality and student learning outcomes.

Influence of Availability of Instructional Resources

On the availability of instructional resources positively impacting pupils' learning outcomes, 34 teachers (30.6%) strongly agreed, and 39 teachers (35.1%) agreed. Meanwhile, 18 teachers (16.2%) moderately agreed. However, 12 teachers (10.8%) disagreed and 8 teachers (7.2%) strongly disagreed. Although most teachers acknowledge the positive role of instructional materials, a minority do not see their importance, possibly due to varying access or quality of resources. This finding underscores the need for equitable distribution and effective utilization of instructional materials. One interviewee emphasized that:

> Having enough teaching materials like books, charts, and writing tools makes a big difference in how well pupils learn. When resources are available, teachers can use different activities that help pupils understand reading, writing, and arithmetic better. Unfortunately, some schools still lack enough materials, which make teaching harder. We need more support to provide these important resources to all schools (Interviewee HT 2, July 2025).

This means that instructional resources play a key role in improving the quality of education. Without adequate materials, teaching and learning become less effective. Providing enough resources helps teachers deliver lessons that engage pupils and improve their skills. Ensuring all schools have the necessary materials will lead to better learning outcomes for all pupils. This is supported by Chew and Cerbin (2021), who noted that access to appropriate instructional materials plays a crucial role in overcoming learning barriers and enhancing student achievement. In the same vein, Mugisha et al. (2023) revealed that although instructional materials such as textbooks and writing tools were widely available, their usage was often limited; most teachers used these resources mainly to introduce new content rather than to encourage active student interaction. This finding highlights the importance of constructivist learning theory, which emphasizes active, hands-on learning where pupils construct knowledge through meaningful engagement with materials, rather than passive reception.

Effectiveness of Specialized Training in Early Literacy and Numeracy

For teachers with specialized training being more effective in developing foundational skills, 70 teachers (63.1%) strongly agreed, and 31 teachers (27.9%) agreed. Seven teachers (6.3%) moderately agreed, 2 teachers (1.8%) disagreed, and 1 teacher (0.9%) strongly disagreed. The majority support specialized training as key to improving pupils' literacy and numeracy. This supports the argument that targeted professional development focusing on early childhood education is essential. Schools and education authorities might consider specialized training modules as a core part of teacher education.

The Constructivist Learning Theory emphasizes that learners build their understanding actively through experiences and social interaction. Specialized training helps teachers design lessons that encourage pupils to explore, experiment, and construct knowledge rather than passively receive information. In early literacy and numeracy, creating hands-on, meaningful activities

connect new concepts to pupils' existing knowledge. The specialized teacher training grounded in constructivism enables more effective support of foundational skill development. Supporting this, Likesie, Sirajo, and Abdullahi (2023) found that students' ability to learn mathematics is influenced by the accessibility and use of educational materials, as these tools engage students' senses and increase their interest in the subject.

Challenges of Insufficient Instructional Resources

Regarding insufficient instructional resources as a hindrance, 60 teachers (54.1%) strongly agreed and 34 teachers (30.6%) agreed. 13 teachers (11.7%) moderately agreed, while 2 teachers (1.8%) disagreed and another 2 teachers (1.8%) strongly disagreed. This clearly shows most teachers recognize resource shortages as a major barrier. This strong consensus indicates that lack of resources is a significant barrier to effective learning. Policymakers and school administrators should prioritize resource allocation to ensure adequate learning materials are available. One respondent interviewed indicated that:

> If we lack enough books, writing materials, or teaching aids, learning becomes very difficult for teachers to explain the lessons clearly. Pupils miss out on important practice because there aren't enough resources for everyone. This makes learning slow and some pupils fall behind. We really need more supplies to help teachers teach and pupils learn better (Interviewee HT 6, July 2025).

This shows that lack of instructional resources seriously limits effective teaching and learning. Without enough materials, pupils cannot practice or engage fully with lessons. This results in slower progress and lower achievement levels. Similarly, Byiringiro (2024) found that insufficient teaching aids directly impact pupils' understanding and mastery of subjects, emphasizing the need for adequate resources to improve learning outcomes. Providing sufficient resources is essential to support both teachers and pupils for better educational outcomes. Correspondingly, Mugisha et al. (2023) asserted that while instructional materials were available in some schools, their limited use and lack of integration into active learning restricted their effectiveness. This implies that beyond simply providing materials, schools must also ensure they are used purposefully to promote active, meaningful learning.

Use of Age-Appropriate Teaching Materials

On the use of age-appropriate teaching materials making learning more engaging and effective, 79 teachers (71.2%) strongly agreed and 25 teachers (22.5%) agreed. 4 teachers (3.6%) moderately agreed and 3 teachers (2.7%) disagreed. No teachers strongly disagreed, demonstrating a strong consensus on the importance of materials tailored to pupils' developmental stages. This demonstrates the importance of using teaching materials suited to pupils' developmental stages. Providing such resources can improve engagement and learning efficiency, suggesting that curriculum designers and teachers should focus on age-appropriate content. This is supported by Likewise, Sirajo, and Abdullahi (2023), who found that the use of appropriate educational tools stimulates learners' interest and improves their understanding, particularly in mathematics. Similarly, Mugisha et al. (2023) emphasized that instructional materials, when used effectively, promote active learning and the development of essential skills. This aligns with constructivist learning theory, which holds that learners build knowledge through active engagement with materials and experiences suited to their developmental stage.

Furthermore, teachers were given open ended question to show the challenges that students in lower primary face in mastering 3Rs. Their responses are presented as follows.

Teachers explained that many pupils join Standard One without any pre-literacy or numeracy skills, such as identifying letters, numbers, or writing their names. This lack of school readiness makes it difficult for pupils to grasp even the most basic concepts in reading, writing, and arithmetic. As a result, teachers must spend extra time building foundational skills, which delays curriculum coverage and slows overall class progress. Teachers also pointed out that many parents are not actively involved in supporting their children's learning at home. Parents often lack the knowledge or resources to help with homework or reading practice. This leads to limited reinforcement of classroom learning at home, which affects the pupil's ability to master the 3Rs consistently.

This aligns with Motshusi et al. (2024), who found that although parents value involvement during the foundation phase, obstacles such as lack of time and uncertainty about how to help limit their engagement despite their willingness to participate. This concern is supported by Messo (2023), who found that inadequate parental involvement and a lack of social competence development practices hindered early reading skill

acquisition. Without reinforcement at home, pupils struggle to consistently master the 3Rs, limiting their long-term academic development. One of the WEOs respondents added that:

> It is true that many children enter Standard One without knowing how to read letters or count numbers. This puts a lot of pressure on teachers because they have to start from the very basics. I've also noticed that some parents do not support learning at home, either because they're too busy or they do not know how. We need more awareness programs to help parents understand their role in early learning (Interviewee W 3, July 2025).

This means that pupils' poor school readiness and low parental involvement make it harder for teachers to teach and for pupils to progress. Without a strong foundation, pupils struggle with reading, writing, and arithmetic. Supporting parents through training and awareness can improve learning at home. This will help pupils start school better prepared and perform well in the 3Rs. In the same way, Okoji and Olubayo (2021) found that the use of instructional resources in teaching mathematics did not significantly vary based on teachers' qualifications or experience, suggesting that access to resources and parental support may have a greater influence on pupil outcomes than teacher background alone.

This aligns with Constructivist Learning Theory, which emphasizes that meaningful learning occurs through active participation and social interaction. Engaging parents and providing supportive learning environments both at home and school helps pupils build essential early skills more effectively. This implies that enhancing parental involvement and ensuring access to supportive learning environments may be just as crucial as teacher qualifications in improving pupils' foundational skills. This is supported by Motshusi et al. (2024), who emphasized that despite parents' willingness to engage, obstacles like lack of time and uncertainty hinder their involvement, underlining the need for more effective support systems to boost pupil learning.

Another major challenge highlighted was 'overcrowded classrooms', where a single teacher handles a large number of pupils, sometimes more than 60 in one class. This makes it hard to provide individual support to learners who struggle, especially in reading and arithmetic. As a result, some pupils are left behind, and their learning difficulties go unnoticed, contributing to long-term learning gaps. Teachers also reported a lack of adequate teaching and learning materials, such as textbooks, flashcards, or math manipulatives. Without these tools, it becomes difficult to deliver effective and engaging lessons, making it harder for pupils to understand and retain key concepts in the 3Rs. Also, Mugisha (2023) supports these concerns, noting that while some instructional materials may be available, their limited use and poor distribution reduce their impact on learning outcomes especially in large, under-resourced classrooms. Additionally, Bilakwate et al. (2023) revealed that shortage of teachers leads to excessive workloads that exceeded policy guidelines. Additionally, schools lacked reference books and sufficient subject-specific textbooks and modern teaching tools like computers and projectors were also missing.

Language barriers and irregular attendance are key challenges that hinder early learning. Many pupils speak local languages at home, but instruction is often in Kiswahili or English, making it difficult for them to understand lessons, especially in reading and writing. Irregular attendance caused by poverty, illness, or domestic responsibilities also leads to missed lessons, making it harder for pupils to catch up, particularly in numeracy where concepts build progressively. A respondent noted that "children who do not understand the language of instruction or miss school frequently struggle to follow lessons and keep up with their peers" (Interviewee D, July 2025). Addressing these issues by using local languages in early grades and supporting families with basic needs can improve both attendance and comprehension. As Messo (2023) also found, language barriers and inconsistent attendance significantly hinder early learning.

Incorporating mother tongue instruction alongside community support has been shown to improve pupil engagement and achievement. Teachers gave suggestions that should be considered to overcome those challenges. Their responses are shown as follows:

To help pupils start school with basic reading, writing, and math skills, parents should be encouraged to take their children to pre-primary classes. Attending pre-primary education exposes children early to letters, numbers, and foundational concepts, which significantly reduces their struggle when they enter Standard One and supports smoother mastery of the 3Rs. This early introduction helps build confidence and readiness, ensuring pupils have a solid base for learning more complex skills in primary school. Schools

should also engage parents by teaching them how to support learning at home. For example, by reading with their children or helping with simple homework. When parents actively support learning outside the classroom, children tend to improve faster and perform better academically. This is supported by Pembe (2023), who found that using specially designed learning materials during remedial classes significantly improved pupils' writing abilities, with teachers regularly using these resources to support learners and reduce grade repetition. This approach aligns with constructivist learning theory, which emphasizes that children learn best through active engagement with meaningful materials and social interaction, making early childhood education, parental involvement, and tailored resources essential for effective mastery of the 3Rs.

To reduce overcrowded classrooms, more teachers should be hired and more classrooms built to ensure pupils receive individual attention. Adequate teaching and learning materials like books and writing tools help make lessons more engaging and improve understanding of the 3Rs. Atwebembeire (2018) found that effective use of instructional materials enhances teacher performance. Senyagwa (2021) reported that large class sizes lead to challenges such as low teacher motivation, poor student performance, and limited teacher-student interaction. Chew and Cerbin (2021) also highlighted that overcrowded classrooms and insufficient resources negatively affect teaching effectiveness. These findings align with constructivist learning theory, which stresses the importance of active learning supported by manageable class sizes and adequate resources.

Learners should be taught in the language they speak at home, especially in their early years. This will help them understand lessons better and learn to read and write more easily. Also, schools should work with families to make sure pupils come to school every day. Giving school meals or helping with uniforms help reduce absenteeism. This makes children stay in school and keep learning. One interviewee said that:

> Teaching young pupils in the language they speak at home helps them understand lessons more easily. When children learn in a language they know, they become more confident and active in class. Many pupils miss school because of poverty or lack of support at home. Schools ought to work closely with parents and provide things like school meals or uniforms to keep children coming every day (Interviewee W 3, July 2025).

This shows that using familiar languages in early learning improves understanding and builds a strong foundation in reading and writing. At the same time, reducing absenteeism by supporting families helps pupils stay in school and avoid falling behind. When children attend regularly and understand lessons, they are more likely to succeed in the 3Rs. These efforts together can greatly improve learning outcomes and reduce dropout rates. In this perspective, Mugisha et al. (2023) emphasizes that using the language that is known like Kiswahili and family support to reduce absenteeism significantly enhance pupils' engagement and achievement in foundational skills. Similarly, Li and Chano (2023) highlight that integrating supportive strategies, including parental involvement and consistent attendance, positively influences pupils' literacy and numeracy development.

Overall, the instructional resources in schools are not very good. Many teachers say that there are not enough textbooks, teaching aids, and modern tools like computers and projectors. Mugisha et al. (2023) found that even when some resources are available, teachers often do not use them enough, which makes it hard for students to learn well. Bilakwate et al. (2023) also said that many schools lack enough teaching materials and tools, which are very important for good lessons. Another problem is that classrooms are often very crowded, with too many students for one teacher. This makes it difficult for teachers to give individual help to students who need extra support, as noted by Senyagwa (2021). Also, many students speak their local language at home, but lessons are taught in Kiswahili or English, which can make understanding harder. Sometimes, students miss school because of sickness, poverty, or family problems, which affects their learning. All these issues show that schools need more resources and better support to help students improve in reading, writing, and math (Li & Chano, 2023; Mugisha et al., 2023).

CONCLUSION AND IMPLICATIONS

The findings of this study underscore the crucial role that instructional resources and teacher training play in enhancing reading, writing, and arithmetic (3Rs) among Standard One and Two pupils in Misungwi District. Well-trained teachers and continuous professional development programs significantly contribute to effective teaching practices, while the availability and proper use of instructional materials enhance pupils'

learning outcomes. However, challenges such as overcrowded classrooms, insufficient teaching aids, language barriers, and lack of parental support hinder pupils' mastery of foundational skills. Addressing these barriers is essential to ensure that all learners, especially those in early grades, receive equitable and effective education that sets a strong foundation for future academic success.

The study implies that educational stakeholders including government bodies, school administrators, and development partners must prioritize investments in teacher training, provision of adequate instructional resources, and improvement of the learning environment. Policies should focus on reducing class sizes, integrating mother-tongue instruction in early grades, and promoting parental involvement to reinforce learning at home. Additionally, consistent monitoring and support for the use of instructional materials in classrooms are essential to improve teaching quality and pupil engagement. These strategies, aligned with constructivist learning principles, will foster more inclusive and effective foundational education, leading to better literacy and numeracy outcomes for pupils in lower primary school.This study evaluated the influence of Montessori classroom design on learners' self-directed learning behavior in private pre-primary schools in Mwanza City, using the lens of self-determination theory. Based on the study's findings, it is evidenced that a well-prepared Montessori environment with accessible manipulative, choice opportunities, orderly layout, and a facilitative teacher role significantly contributes to the development of learner autonomy, competence, relatedness and intrinsic motivation. In turn, these motivational conditions underpin self-directed learning behaviors among young children, including initiative, problem-solving, self correction and responsibility. The study's conclusion and findings led to the following suggestions. The pre-primary schools should adopt Montessori-inspired classroom designs that promote self-directed learning by creating child-centered, well-organized and aesthetically appealing environments. Additionally, training programs should emphasize the role of the teacher as facilitator rather than director, focus on creating for learners the conditions of autonomy, competence and relatedness, and support children's self directed behaviors through appropriate scaffolding and gradual release of responsibility.

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