Exploring Students' Experiences and the Impact of Remedial Classes in Physics in Ubungo District, Tanzania

Protaz Nyambuye Ladisalus[1], Richard J Mbaula[2], Elizabeth Sandu George[3], Faraja Idd Athuman[4], Herieth Benedict Manyikila[5], Stanslaus Peter Kashinje[6]

St. Joseph University in Tanzania, College of Engineering and Technology

DOI: https://doi.org/10.51584/IJRIAS.2026.110400046

Received: 02 April 2026; Accepted: 08 April 2026; Published: 01 May 2026

ABSTRACT

This study investigates the efficacy of remedial physics classes in enhancing academic performance among secondary school students in Luguruni area, Ubungo District, Tanzania by using the mixed method. Against a backdrop of systemic educational challenges including overcrowded classrooms, resource limitations, and persistent underperformance in national science examinations, remedial interventions emerge as critical supports for struggling learners.

Remedial physics classes are crucial for supporting students struggling with foundational concepts, yet student perspectives on these interventions are often overlooked. This study explored the lived experiences and the impact of remedial physics classes on students attending remedial physics programs for secondary schools in Luguruni area.

Guided by Constructivist Learning Theory of Piaget, Cognitive Load Theory by Sweller, and Zone of Proximal Development by Vygotsky, the research employed an embedded pragmatic design. Data were collected through questionnaires from 177 students across five secondary schools and semi-structured interviews with physics teachers.

Key findings reveal that over 94% of remedial participants (143/152 students) demonstrated measurable improvement in physics comprehension and problem-solving abilities, attributed to targeted instructional strategies such as small-group collaboration, individualized feedback, and hands-on experimentation or activities.

Crucially, a 44% performance gap was identified between students of comparable baseline ability who attended remedial classes and non-participants, underscoring the intervention's significant impact. Thematic analysis highlighted student motivation, teacher student ratio, session frequency, and peer-supported learning as primary mediators of success.

The study concludes that remedial program practices have a strong positive impact on the academic performance of learners in Physics in Luguruni area, Ubungo District and shows big performance gap between students who attended remedial classes and students who did not.

The study recommends that Schools should implement structured remedial programs tailored to the specific needs of students and increase the frequency of remedial sessions. In addition there should be smaller teacher-student ratios in remedial classes.

Keywords: Remedial class, Performance Gap, Constructivist Pedagogy, Impact of remedial class, Mixed-Methods Research.

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume XI Issue IV April 2026

INTRODUCTION

BACKGROUND OF THE STUDY

Remedial classes are supplementary educational sessions designed to help students who are struggling academically. These classes provide additional support in subjects where students are falling behind or have gaps in understanding (Schunk, 2012). Remedial education has become an essential tool in addressing academic underachievement, particularly in regions where large class sizes and limited resources hinder the learning process (Schunk, 2012). The academic performance of lower secondary school students remains a significant concern in Tanzania, particularly in urban centers like Dar es Salaam City. Factors such as inadequate teaching resources, large class sizes, and socio-economic challenges hinder students' academic progress and contribute to the poor performance seen in national exams (Twaweza, 2023). In response to these challenges, many schools have implemented remedial classes to provide additional academic support. These classes are specifically designed to help students who have fallen behind by providing extra lessons to reinforce their understanding of key subjects.

Statement of the Problem

The education system in Tanzania, particularly at the lower secondary level, has long faced issues related to academic underachievement. In Dar es Salaam City, Tanzania, a significant number of students struggle to meet academic standards due to various factors, including limited access to learning resources, overcrowded classrooms, and socioeconomic challenges (UNICEF, 2018). For instance, recent data from the Ministry of Education shows that most of students in urban areas like Dar es Salaam perceive certain challenges related to learning in mathematics and science such as lack of resources, and fail to meet the minimum national examination requirements (Twaweza, 2023). Consequently, many students underperform in national examinations, and some are at risk of dropping out of school, further exacerbating the cycle of academic failure and poverty. According to Twaweza (2023), large numbers of students in Dar es Salaam City report being disengaged from school, a factor that also impacts retention rates**.**

Remedial classes are designed to offer extra lessons aimed at reinforcing students' understanding of critical subjects, particularly in mathematics, science, and English. While remedial education has been shown to improve academic performance in some contexts, concerns have emerged regarding the additional academic pressure it places on students**.**

Objectives of the Study

GENERAL OBJECTIVE

To assess the effects of remedial classes on the academic performance of students in physics at Luguruni area in order to determine whether participation in remedial programs enhances students' understanding of key physics concepts and improves their overall performance in the subject.

SPECIFIC OBJECTIVES

i. To analyze the effects of remedial classes on students' performance.
ii. To examine the performance gap between students at remedial classes and those who are not at remedial classes.

RESEARCH QUESTIONS

i. What are the impacts of remedial classes on students' performance in the physics subject?
ii. What is the academic performance gap between students who perform remedial classes and those who do not?

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume XI Issue IV April 2026

THE SIGNIFICANCE OF THE STUDY

i. Improvement of Educational Practices: The findings from this study will provide valuable insights into the effectiveness of remedial classes in enhancing students' academic performance in physics. This can guide teachers and schools in refining their teaching strategies to better support students struggling with the subject.
ii. Informed Policy Formulation: The results can inform policymakers at the local and national levels about the potential benefits of remedial classes in improving academic outcomes, particularly in science subjects like physics. This may lead to the expansion of remedial programs in other regions facing similar educational challenges.
iii. Enhanced Learning Outcomes: By understanding the specific areas where students struggle and how remedial classes address these challenges, the study can contribute to the development of targeted interventions that improve students' understanding of physics and overall academic performance**.**

SCOPE OF THE STUDY

The scope of this study is limited to examining the effects of remedial classes on students' performance in physics within secondary schools at Luguruni area in Ubungo District. The research specifically focused on students who have participated in remedial classes in physics and compared their academic performance to those who have not attended such classes. The study assessed the impact of remedial education over a defined period, such as a semester or academic year, and primarily explored how these classes address students' challenges in understanding key physics concepts. The focus was on the teaching methods, resources, and curriculum used in the remedial classes, but the study did not address other types of educational interventions or subjects outside of physics.

DEFINITION OF KEY TERMS

a. **Remedial Classes:** These are specialized educational programs designed to help students who are struggling with certain academic subjects. In the context of this study, remedial classes were sessions aimed at improving students' understanding and skills in physics, typically focusing on foundational concepts that may be weak or unclear.
b. **Students:** Individuals who are enrolled in an educational institution and are receiving formal instruction. In this study, it referred specifically to those taking physics courses and struggling with the subject.
c. **Performance**: This refers to how well students understand, retain, and apply the knowledge or skills they have learned in physics. It can be measured through various assessments such as examinations, quizzes, assignments, and overall academic achievement in the subject.
d. **Physics**: A branch of science that deals with the study of matter, energy, and the interactions between them. In this context, the subject refers to the academic discipline being taught and assessed.

LITERATURE REVIEW

THEORETICAL LITERATURE REVIEW

CONSTRUCTIVIST LEARNING THEORY

Constructivism, a prominent theory in educational psychology, suggests that learning is an active process where students construct new knowledge based on their prior experiences (Piaget, 1972; Vygotsky, 1978). In the context of physics education, students must connect abstract concepts with real-world experiences and prior knowledge to understand the subject deeply. Remedial classes, therefore, offer an opportunity to revisit these connections and engage in more individualized and guided learning. By providing extra attention and focusing on misunderstood concepts, remedial classes align with constructivist principles, allowing students to build their understanding of physics from a more solid foundation.

COGNITIVE LOAD THEORY

Cognitive Load Theory (Sweller, 1988) posts that learning is most effective when the cognitive load placed on the learner is manageable. For many students, physics can present a high cognitive load due to its complex and abstract concepts, which often require students to integrate multiple pieces of information simultaneously. Remedial classes, therefore, can help reduce cognitive load by breaking down difficult concepts into smaller, more manageable chunks, allowing students to process the information more effectively. The focus of remedial education is to ensure that students understand the fundamental principles of physics before moving on to more advanced topics, thus preventing cognitive overload and improving their overall comprehension and retention.

THE ZONE OF PROXIMAL DEVELOPMENT (ZPD)

Lev Vygotsky's concept of the Zone of Proximal Development (ZPD) is crucial for understanding the effectiveness of remedial education. The ZPD refers to the difference between what a student can do independently and what they can achieve with the help of a more knowledgeable other, such as a teacher (Vygotsky, 1978). Remedial classes operate within this zone, providing targeted support to help students overcome specific learning challenges.

CONCEPTUAL FRAMEWORK

The dependent variable in this study is students' performance in physics, which is typically measured through test scores, grades, conceptual understanding, and problem-solving skills. The performance can be influenced by various factors, such as how well students grasp key physics concepts, apply theoretical knowledge in practical scenarios, and their ability to engage with the subject matter.

Mediating factors such as student motivation, study habits, and previous knowledge play a crucial role in determining the effectiveness of remedial classes. Motivated students may benefit more from additional support, and those with solid study habits may use the extra lessons more effectively. The quality of instruction (e.g., teaching methods, the clarity of explanations, and the individual attention students receive) and peer support can also mediate the effect of remedial classes. Students who actively engage with peers or receive feedback during remedial sessions may show more significant improvements.

Additionally, contextual factors such as the classroom environment and availability of resources (e.g., textbooks, online materials, lab equipment) play an essential role in supporting or hindering students' performance. A conducive learning environment with adequate resources may enhance the effectiveness of remedial classes, while a lack of resources or a distracting classroom setting might limit the impact.

While remedial classes are designed to improve students' performance in physics, their effectiveness depends on various interacting factors, including student characteristics, teaching methods, and the learning environment. This framework emphasizes the complex nature of how remedial interventions can lead to improved academic outcomes, illustrating the need to consider multiple influences on student success.

Review of Related Studies

EFFECTIVENESS OF REMEDIAL CLASSES IN IMPROVING ACADEMIC PERFORMANCE

Several studies have explored the impact of remedial education on students' academic performance.

Hussein (2024) conducted a study on the effect of physics placement test and remedial physics courses on performance of Engineering and Science students of University of Sharjah (UOS) in United Arab Emirates (UAE). The study showed that students who took remedial physics courses achieved higher grades as well as higher passing percentage than those students who did not, in the colleges of Science and Engineering.

Asis, Ching & Suttiwan (2023) conducted a research on increasing students cognitive absorption through remedial learning in physics. The study found that the application of remedial learning have been able to help students improve cognitive absorption from one cycle to the next.

Dancille and Andala (2024) conducted a study on The Effect of Remedial Program Practices on the Academic Performance of Slow Learners in Physics Subject in Public Lower-Day Secondary School in Rwanda. The study concludes that remedial program practices have a strong positive impact on the academic performance of slow learners in Physics.

Goulart and Oliveira (2020) conducted a study in Brazil that showed remedial classes led to significant improvements in science subjects for students who had previously underperformed. They emphasized that remedial classes not only improve grades but also boost student confidence and attitude towards the subject.

Sullivan (2018) found that remedial programs helped bridge the gap for students who struggled with basic concepts, especially in subjects like physics, mathematics, and chemistry. These programs were shown to boost understanding, retention, and application of knowledge in these subjects.

PHYSICS PERFORMANCE AND THE ROLE OF REMEDIAL CLASSES

Physics, due to its abstract concepts and complex mathematical applications, is often considered a challenging subject for many students. According to Muema and Kipsang (2019), remedial classes tailored specifically for physics helped students who initially struggled with concepts like mechanics, thermodynamics, and electromagnetism. The study highlighted that students who attended remedial classes in physics showed a marked improvement in their grades compared to those who did not participate.

In a study by Masoud (2017), it was found that after a period of remedial teaching, students in remedial classes scored higher on physics examinations than their peers. The study noted that remedial teaching methods in physics incorporated practical demonstrations**,** problem-solving exercises, and individual attention, all of which contributed to better understanding of the subject**.**

TYPES OF REMEDIAL PROGRAMS AND THEIR IMPACT

Studies also indicate that the structure of remedial programs plays a crucial role in their effectiveness. Mikre (2010) discussed the different models of remedial teaching, including one-on-one tutoring, small group sessions, and peer tutoring. The study concluded that small group sessions, when guided by a knowledgeable instructor, were the most effective model for improving students' performance in difficult subjects like physics.

Additionally, Kisangau (2015) in Tanzania, explored how interactive and participatory approaches within remedial classes led to better academic outcomes in science subjects. Students who participated in hands-on activities such as physics experiments during remedial lessons showed a greater improvement in their understanding and performance.

The Research Gap For The Study

First, while there is extensive research on remedial education globally, studies specifically focusing on remedial classes and their effects on physics performance in Tanzania are limited, especially in regions like Dar es Salaam (Ali, 2018). Additionally, most existing research on remedial programs addresses general academic performance across various subjects, with a noticeable lack of subject-specific studies, particularly in STEM fields like physics (Madden & Slavin, 1983). There is also a gap in research evaluating the long-term effects of remedial classes on students' academic performance, as many studies focus only on short-term improvements (Zimmerman, 2002). Moreover, most literature overlooks the unique educational challenges faced by students in specific regions, such as in Luguruni area, where limited resources and infrastructure may affect learning outcomes (Abdullah, 2020). Finally, while studies on remedial education exist, there is a lack of detailed analysis of teaching methods and the role of student motivation in remedial classes, particularly within the context of physics education (Sweller, 1988). This study addresses these gaps by focusing on the specific context of Luguruni area, examining both the immediate and sustained impact of remedial classes on students' performance in physics, and evaluating the teaching methods and motivational factors involved.

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume XI Issue IV April 2026

METHODOLOGY

Research Design

The embedded research design was employed for this study taking a pragmatic view (Kumar, 2011). The design allowed for the combination of qualitative and quantitative research methods and it assumes that one type of data is not enough; so then additional data set would be required to support the other one in order to strengthen the findings (Creswell and Creswell, 2017)

Study Area

The area of the study is located in Dar es Salaam region of Tanzania. The study focused on secondary schools within Luguruni area, Ubungo district, specifically those that offer remedial classes aimed at improving students' performance in physics. Luguruni area is characterized by urban schools, providing a diverse sample of students with varying access to educational resources. The study examined the effectiveness of these remedial classes in enhancing students' understanding and academic performance in physics, considering local educational challenges such as limited resources, teacher availability, and student motivation. By focusing on this specific geographic area (Figure 3.1), the study aims to offer insights into the effectiveness of remedial interventions in a Tanzanian context.

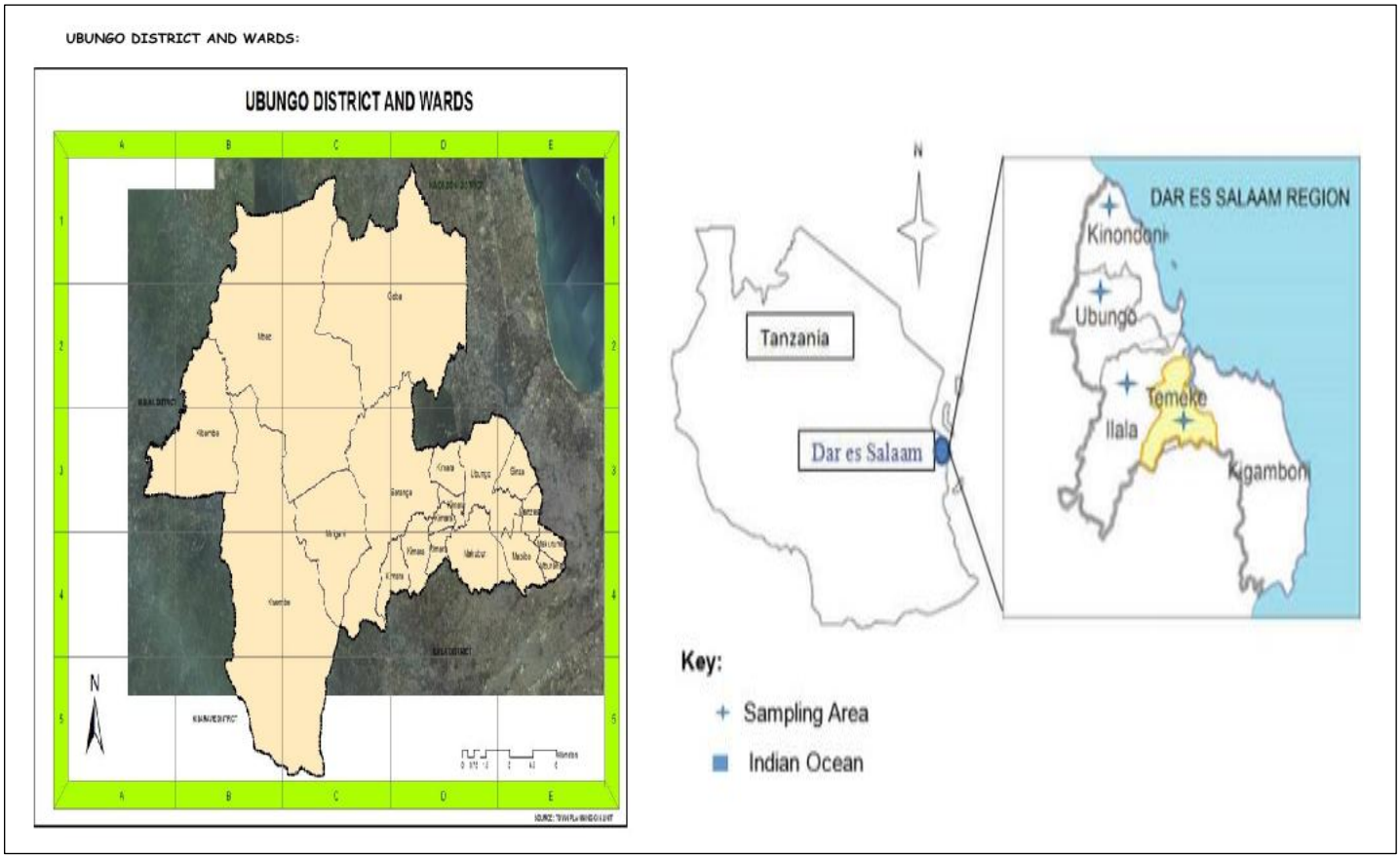

Figure 3.1: Map of Ubungo District in Dar es salaam region, Tanzania

Population Of the Study and Sample Size

POPULATION OF THE STUDY

Population of the study comprises all students in six secondary schools in Luguruni area who are enrolled in physics courses, with a particular focus on those who have participated in remedial classes. This population includes both students attending schools that provide remedial classes in physics and those who have not participated in such classes. The study involved students from selected secondary schools within Luguruni area, representing urban areas, and also included teachers who facilitate these remedial classes. The total population

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume XI Issue IV April 2026

was drawn from the schools that offer physics as a subject, and the sample consisted of students from both experimental and control groups, based on their involvement in the remedial classes.

THE SAMPLE SIZE FOR THE STUDY

This consisted of approximately 100-150 students from selected secondary schools in Luguruni area that offer remedial classes in physics. The students were divided into two groups: the experimental group, consisting of those who participated in remedial classes, and the control group, comprising students who did not attend remedial classes but are studying physics. The sample size was large enough to ensure statistical power for comparing the performance of the two groups. Additionally, the study included 5-10 physics teachers who provided insights into the teaching methods and the implementation of the remedial classes. The final sample size was determined based on the number of eligible students and schools, ensuring a representative and meaningful analysis of the effects of remedial classes on students' performance in physics.

Sampling Techniques

This included purposive sampling and simple random sampling. First, purposive sampling was used to select secondary schools within Luguruni area that offer remedial classes in physics. This technique is appropriate because the study specifically targets schools with remedial programs in physics, ensuring the sample is relevant to the research objectives. Once the schools were identified, simple random sampling was employed to select students within these schools. This involved randomly selecting students who were either part of the experimental group (those who had attended remedial classes) or the control group (those who had not attended remedial classes). Simple random sampling ensured that each student had an equal chance of being selected, reducing bias in the sample. Additionally, teachers who facilitated the remedial classes were selected using purposive sampling to ensure that their insights were relevant to the study's focus on remedial teaching practices. This combination of purposive and random sampling techniques helped to ensure a representative and unbiased sample for the study.

Data Collection Methods And Tools

SURVEYS/QUESTIONNAIRES

To gather additional quantitative and qualitative data, students completed surveys or questionnaires designed to assess their attitudes, motivation, and impact of the remedial classes. The questionnaires included questions on the students' level of engagement, confidence in understanding physics, and the impact of the remedial classes.

INTERVIEWS

Semi-structured interviews were conducted with both students and teachers. The student interviews focused on their experiences with the remedial classes, their perceived challenges, and the strategies that helped them improve in physics. Teacher interviews explored the methods they used during remedial classes, challenges faced in delivering the program, and their assessment of student progress. Interviews provided in-depth qualitative insights that complement the quantitative data from the pre- and post-tests.

Validity And Reliability

THE VALIDITY OF THE STUDY

It was ensured through strategies aimed at enhancing both internal and external validity. Internal validity was addressed by controlling the confounding variables, such as prior academic performance and teacher qualifications to directly measure changes in students' performance, while comparing an experimental group (students who attended remedial classes) with a control group (students who did not). External validity was supported by selecting a diverse sample from both urban schools in Luguruni area, allowing for some generalization to similar contexts, though findings may be limited to the region. These strategies enhanced the validity and applicability of the study's findings.

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume XI Issue IV April 2026

THE RELIABILITY OF THE STUDY

It lies in its practical implementation within the local context of secondary schools in Luguruni area. The study was grounded in the real challenges faced by students in this region, such as limited access to resources, varying levels of teacher expertise, and the differences in student motivation. Remedial classes, as an intervention, aims to address learning gaps in physics, but their effectiveness may be influenced by factors like class size, teaching methods, and the availability of instructional materials. Additionally, the study acknowledges that the success of remedial programs can vary based on socio-economic backgrounds, with some students having more access to additional resources outside of school, which may affect their performance in physics. The reality of the study also involved logistical considerations, including obtaining consent from schools and participants, coordinating with teachers, and ensuring a balanced and representative sample. The findings were shaped by these real-world conditions, providing insights into how remedial education impacts students in the specific context of Luguruni area, and contributing to a better understanding of educational interventions in similar settings.

Ethical Considerations For The Study

It was carefully followed to ensure participants' rights and privacy are protected. Informed consent was obtained from all participants, including students, teachers, and school administrators, with clear information provided about the purpose, procedures, and voluntary nature of participation. Students were assured that their participation would not affect their academic standing, and all personal information and test results were kept confidential through anonymization. Data was securely stored, and only the research team had access to it. Participants were also informed of their right to withdraw from the study at any time without penalty. Ethical approval was sought from relevant educational authorities to ensure the research adhered to institutional guidelines for research involving human participants. These ethical practices ensured the integrity of the study while safeguarding the well-being of all participants.

Data Analysis Plan

The data analysis plan for the study "Effects of remedial classes on students' performance in physics" in Luguruni area , Ubungo, Dar es Salaam, Tanzania, involved both quantitative and qualitative analyses. Quantitative analysis included descriptive statistics to summarize test scores before and after remedial classes to determine significant differences in performance, Qualitative data from interviews and focus groups underwent thematic analysis to identify key impact and experiences regarding the remedial classes. Ethical considerations, such as informed consent and confidentiality, were upheld. Results were interpreted to understand the impact of remedial classes on students' performance, considering factors like motivation, teaching quality, and classroom environment.

Data Presentation, Analysis, Interpretation And Discussion

This section presents, analyzes, interprets and discusses the results of our research. The results of this research were collected and interpreted according to specific objectives and research questions as written in section one.

Data Presentation And Analysis

DEMOGRAPHIC INFORMATION OF RESPONDENTS.

The demographic characteristics which include: age, class level, and gender, were examined to assess their potential influence on exploring their experiences and impact of remedial classes in physics. From the 177 questionnaires distributed, all were completed, representing a response rate of 100%. This high response rate supports the study's reliability in analyzing demographics in relation to academic performance (Groves, 2018; Glaser, 2019).

Table 4.1 Demographic information of the respondents

age	class	Male	female	total
12 -17	Form I – FROM V	54	123	177

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume XI Issue IV April 2026

The pie chart in Figure 4.1 displays this information graphically.

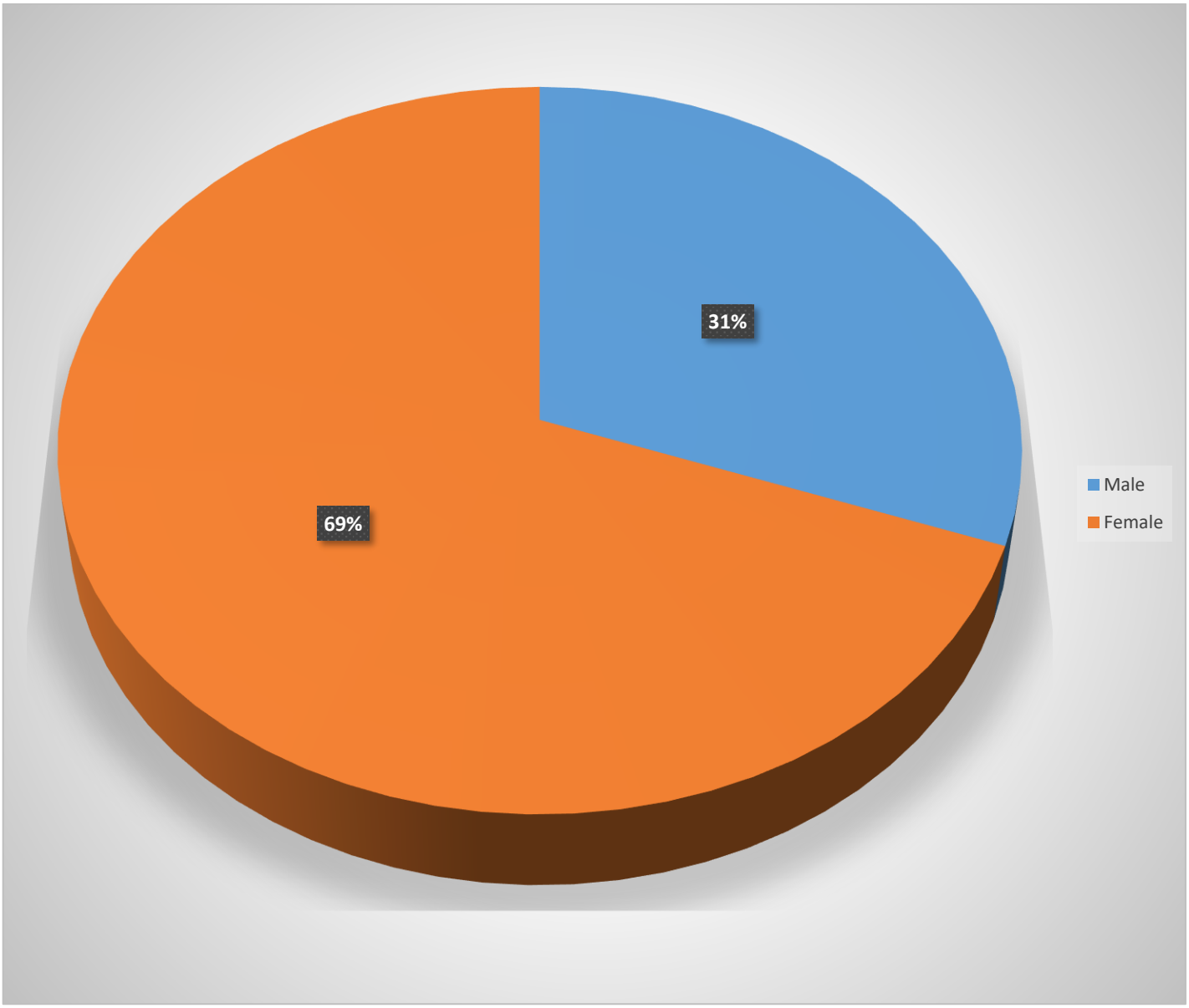

Figure 4.1 Pie chart to showing demographic information of respondents**.**

Students Who Attended Remedial Classes

This section presents students who participated in remedial classes from the five schools in which our research study had targeted. Table 4.2 shows the numbers of students in each school who attended and those who did not attend remedial classes.

Table 4.2 students' remedial attendance

School	Students attended	Students not attended
A	17	05
B	26	00
C	64	00
D	20	00
E	25	20
total	152	25

Figure 4.2 displays this information in graphical form using a histogram

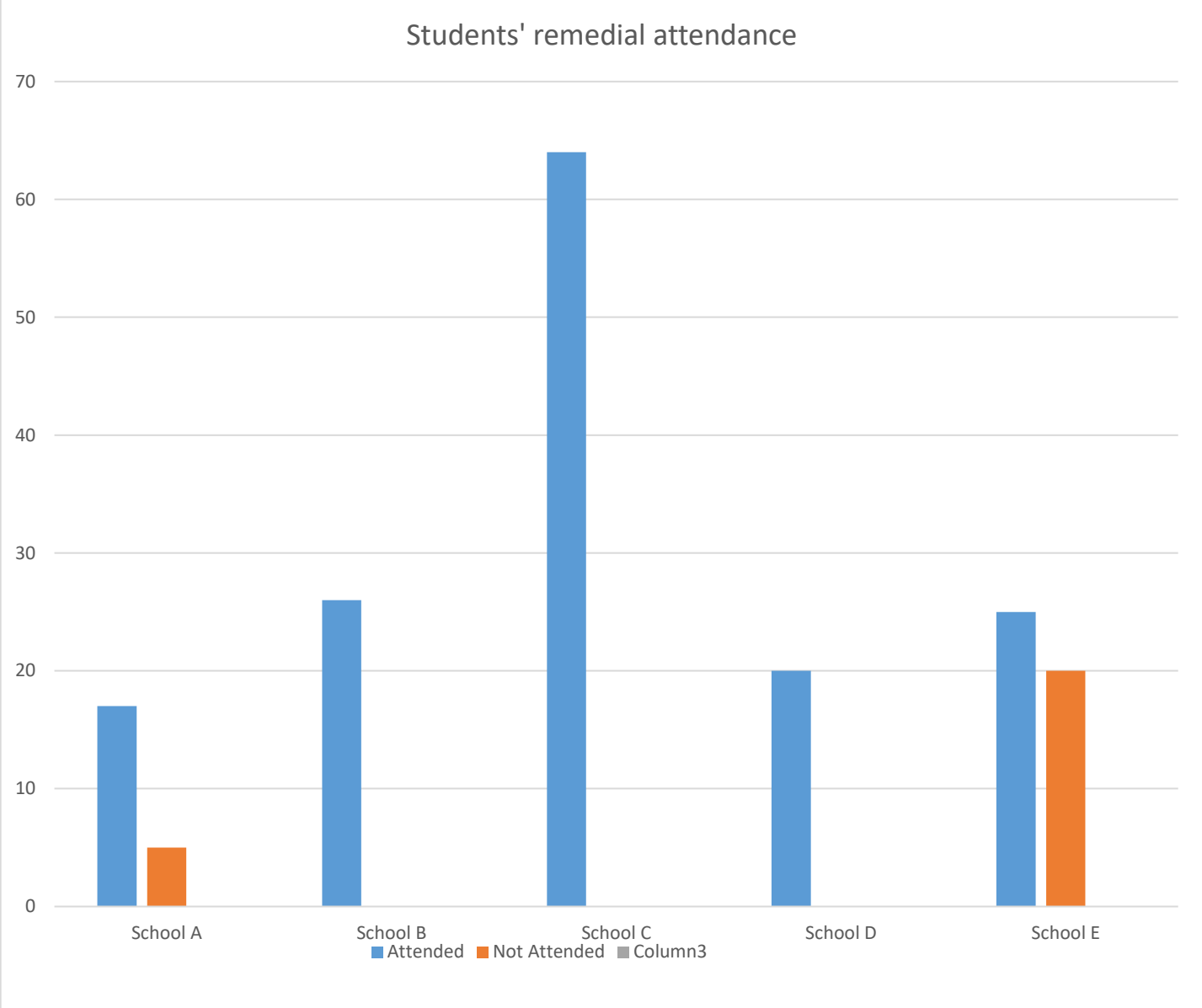

Figure 4.2 Bar graph to show students who attended and not attended remedial class from each school

The Impacts Of Remedial Class On The Performance Of Students In Physics.

The first specific objective of this research is to analyze the effects of remedial classes on students' performance. Table 4.3 shows the results of remedial programs in student's performance in physics from each school.

Table 4.3 students' performance

School	Improved	Less improve	Total
A	13	04	17
B	26	00	26
C	59	05	64
D	20	00	20
E	25	00	25
Total	143	09	152

Table 4.3 shows numbers of students who showed improvement from previous performance before attending remedial programs and who did not. These results are displayed in a histogram in Figure 4.3.

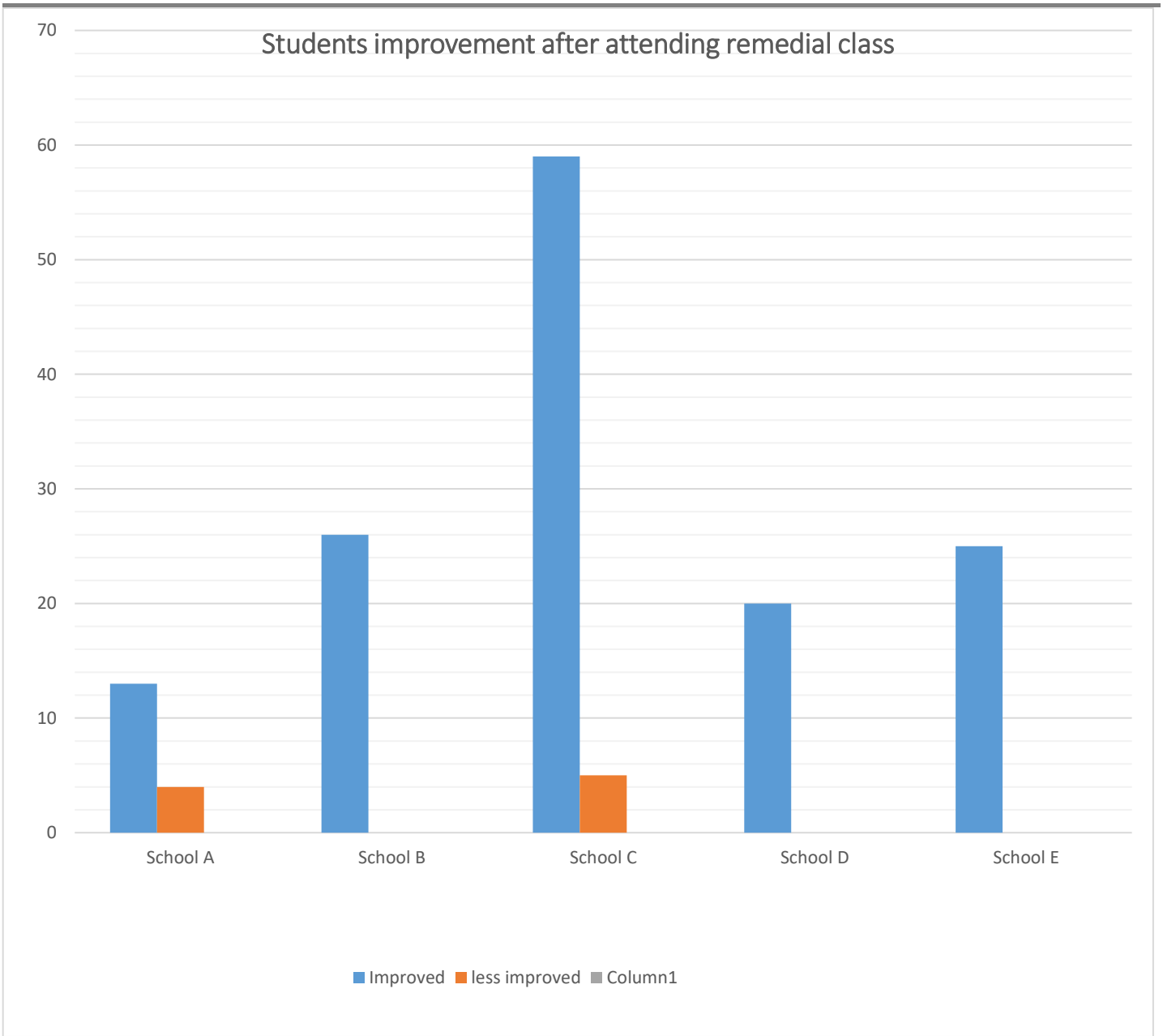

Figure 4.3 students' performance in remedial class in physics.

Exploring The Performance Gap Between Students At Remedial Classes And Those Who Were Not At Remedial Classes.

This study intended also to examine the performance gap between students who attended remedial classes and those who did not attend. Our study used teachers' questionnaire from each school to analyze the performance gap as shown in table 4.4.

Table 4.4 teachers' response on the performance gap

Teachers' response from each school	Number of teachers	Performance gap (%)
A	1	45
B	1	50
C	1	35
D	1	48
E	1	42

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume XI Issue IV April 2026

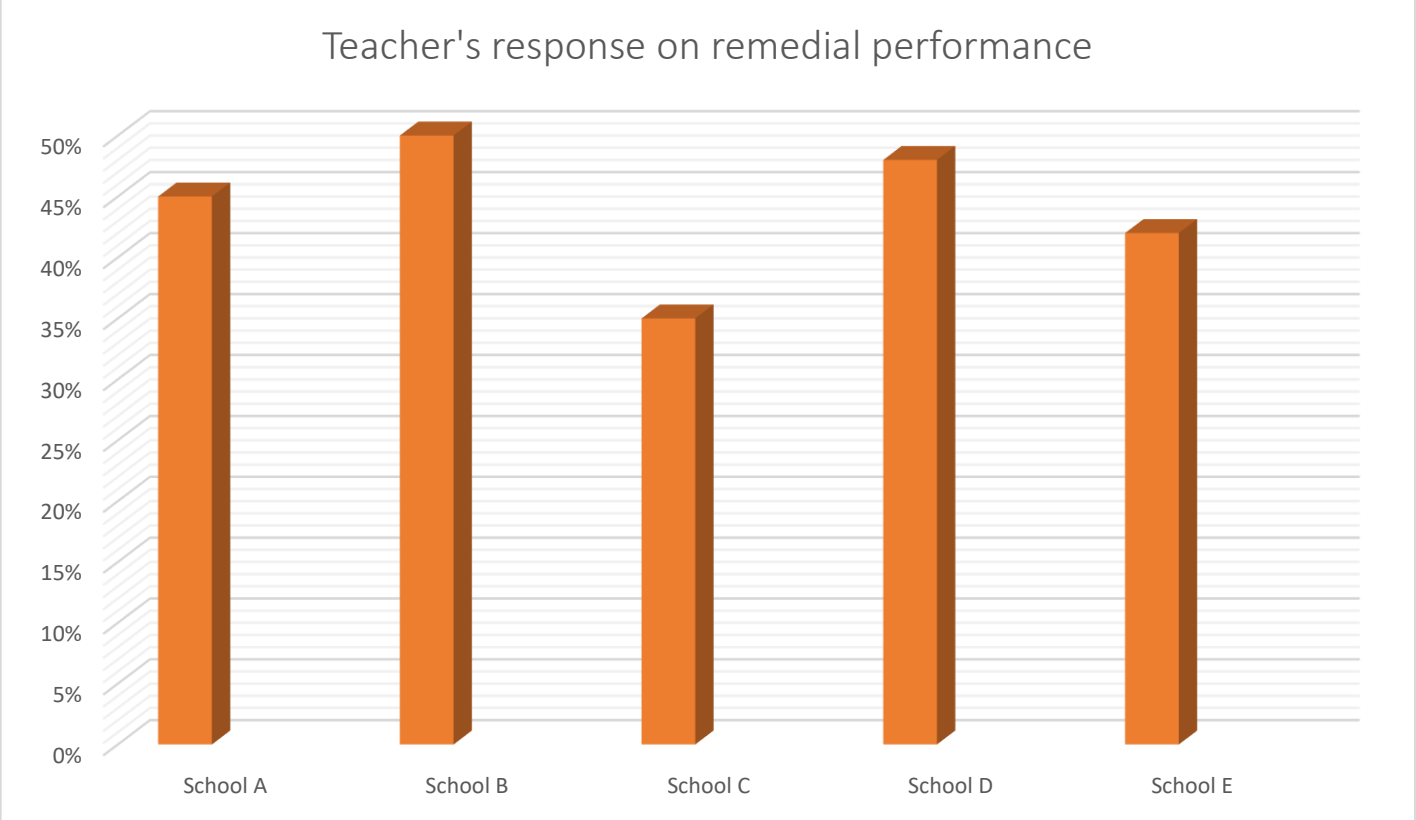

Figure 4.4 teachers response on the performance gap

Table 4.4 shows the performance gaps in different schools, while Figure 4.4 displays the results graphically.

Data Interpretation

Figure 4.1 shows that 69% of respondents in our study were girls and 31% were boys.

Figure 4.2 above shows that School C has highest peak showing that it had many students who attended a remedial class than all the other schools. Schools such as B, C, and D had no students who didn't attend a remedial class. This is due to the reason that remedial classes from those schools were compulsory. On the other hand, in schools such as A and E remedial classes were only for those students who had lower performance in the physics subject.

Figure 4.3 above shows the performance of students after attending a remedial class. It shows that almost all students improved their performance in physics after attending a remedial program. For example all remedial class takers from Schools A, D and E improved in performance. Except very few students from Schools A and C who showed very little improvement.

From the figures above, it shows that there exists a big performance gap between students of same baseline ability who attended remedial class and those who did not. Our research attempts to find the average performance gap as follows:

Average of performance gape = $\frac{\sum x}{N}$

$$= \frac{45\%+50\%+35\%+48\%+42\%}{5}$$

$$= 44\%$$

Thus, according to our research this implies that the performance gap between students of the same baseline ability who attended a remedial class and those who did not is approximately 44%.

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume XI Issue IV April 2026

DISCUSSION

Our findings show that remedial classes enhanced student's performance in physics. These improvements were supported by effective teacher-student ratio, frequent sessions, group activities, peer collaboration, good quality of instructions, and comfortability of students in class, motivation and support, frequent feedback on performance, additional practice and problem solving, but also flexible teaching style that accommodates learner needs.

Our findings agree with numerous previous researches which were conducted by;

Dancille and Andala (2024) who concluded that remedial program practices have a strong positive impact on the academic performance of slow learners in Physics.

Moreover, Hussein (2024) showed that students who had to take remedial physics course achieved higher grades as well as higher passing percentage than those students who meet the cut score of the quality of education in the colleges of Science and Engineering.

On top of that, Goulart and Oliveira, (2020) conducted a study in Brazil that showed remedial classes led to significant improvements in science subjects for students who had previously underperformed.

Muema and Kipsang (2019), in their study highlighted that students who attended remedial classes in physics showed a marked improvement in their grades compared to those who did not participate.

Masoud (2017), found that after a period of remedial teaching, students in remedial classes scored higher on physics examinations than their peers.

All the studies noted that remedial teaching methods in physics incorporated practical demonstrations**,** problem-solving exercises, teacher-student ratio, frequent sessions, and individual attention all of which contributed to better understanding and performance.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The study concludes that remedial program practices have a strong positive impact on the academic performance of learners in Physics in Luguruni area, Ubungo District and shows big performance gap between students who attended remedial classes and students who did not.

Key factors include effective remedial teaching methods, frequent sessions, favorable teacher-student ratios, frequent feedback, motivation and support, and active student participation. Student participation is the strongest predictor of success, followed by session frequency, individualized attention from teacher-student ratios, and tailored teaching methods.

These findings align with prior research, underscoring the value of structured, frequent, and engaging remedial programs for enhancing both retention of physics concepts and test scores. The study advocates for a holistic approach that combines these elements to improve outcomes for students, emphasizing the need for tailored, interactive, and supportive learning environments to foster academic success.

Recommendations

The research presents the following recommendations to enhance the academic performance of students in physics through effective remedial programs.

- Schools should implement structured remedial programs tailored to the specific needs of students and increase the frequency of remedial sessions to support continuous learning and retention of concepts.

- Maintain smaller teacher-student ratios in remedial classes to allow for individualized attention, while creating engaging learning environments that encourage active student participation to promote collaboration and peer interaction.
- A well-structured and relevant curriculum that incorporates diverse teaching methods should be utilized to cater for various learning styles.
- Ongoing professional development for educators is essential to enhance their instructional skills and familiarity with effective strategies.
- Establish a system to monitor and evaluate the effectiveness of remedial programs in order to identify areas for improvement, and fostering collaboration among teachers, parents, and stakeholders which will create a supportive learning atmosphere.
- The policy maker or ministry of education and vocational training should ensure that remedial classes are well planned and clearly stated by educational curriculum of Tanzania.

ACKNOWLEDGEMENTS

We would like to thank the management of St Joseph University in Tanzania for providing this opportunity, to do the project work as part of curriculum.

We would be failing in our part if we do not acknowledge tutors, heads of schools, teachers and students for their cooperation during our study.

REFERENCES

1. Abdullah, M. (2020). The role of remedial education in improving academic performance: A case study in secondary schools. Journal of Educational Research, 45(2), 234-245.
2. Ali, M. (2018). Remedial teaching and its effects on student performance: A comparative study. International Journal of Education, 12(3), 45-57.
3. Asmawati Asis, Chin Peng Ching, Witsanu Suttiwan (2023) Increasing Students' Cognitive Absorption Through Remedial Learning in Physics. Schrödinger:Journal of Physics Education, Vol. 4, No.3, pp. 86~91
4. Creswell. J.W. and Creswell, J.D. (2017) Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. 4th Edition, Sage, Newbury Park.
5. Glaser, B. G. 2013. No preconceptions: The grounded theory dictum. Mill Valley, CA: SociologyPress
6. Goulart, L. F., & Oliveira, F. P. (2020). Impact of remedial education on science performance: Evidence from Brazil. International Journal of Educational Research, 35(1), 67-78.
7. Groves Andrew (2018) 'Worth the test?' Pragmatism, pill testing and drug policy in Australia; Groves Harm Reduction Journal 15:12
8. Hussein M.E (2024). Remedial physics courses on performance of Engineering and Science students, University of Sharjah (UOS), United Arab Emirates (UAE).
9. Kumar, R. (2011) Research Methodology: A Step-by-Step Guide for Beginners. 3rd Edition. Sage, New Delhi.
10. Madden N. A., & Slavin, R. E. (1983). The effectiveness of remedial education programs for at-risk students: A synthesis of the research. Journal of Educational Psychology, 75(3), 319-329.
11. Masengesho Dancille, and Hesborn Andala (2024). "The Effect of Remedial Program Practices on the Academic Performance of Slow Learners in Mathematics Subject in Public Lower-Day Secondary School in Rwanda: A Case of Kirehe District: Remedial Program". African Journal of Empirical Research 5 (4):945-56.
12. Masoud, M. S. (2017). Improving students' performance in physics through remedial education. Journal of Science Education, 28(3), 110-121.
13. Mikre, F. (2010). Remedial education strategies in science and mathematics education. African Journal of Educational Studies, 15(2), 47-59.
14. Muema, E. G., & Kipsang, K. A. (2019). Effectiveness of remedial classes on student performance in physics: A case study of Kenya. Journal of Physics Education, 22(4), 99-112.
15. Piaget, J. (1972). The psychology of the child. Basic Books.

ISSN No. 2454-6194 | DOI: 10.51584/IJRIAS |Volume XI Issue IV April 2026

16. Schunk, D. H. (2012). Social cognitive theory. In K. R. Harris, S. Graham, & T. Urdan (Eds.), Theories, constructs, and critical issues: Vol. 1. Educational psychology handbook
17. (pp. 101–123). Washington, DC: American Psychological Association.
18. Sullivan, S. (2018). Remedial education and its role in improving student performance in science subjects. Journal of Education and Development, 21(4), 155-170.
19. Sweller, J. (1988). Cognitive load during problem solving: Effects on learning. Cognitive Science, 12(2), 257-285.
20. Twaweza East Africa (2023) Annual Report and Financial Statements for the year ended 31 December 2023
21. UNICEF, (2018) UNICEF Tanzania – Annual Report for the year 2018
22. Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes. Harvard University Press.
23. Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. Theory into Practice, 41(2), 64-70.