

# The Effects of New COVID-19 Classrooms Construction Project Towards Students' Academic Performance in Public Secondary Schools in Lushoto District Council, Tanzania

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**Abstract:-** This study assessed the effects of COVID-19 classroom construction project towards the improvement of student's academic performance in public secondary schools in Lushoto District Council. The study used qualitative research approach. The target population comprised of District Secondary Education Officer, Ward Education Officers, Heads of Schools, teachers and school board chairpersons. Sample size for this study was 61 participants. The instruments used to collect data were interviews and focus group discussions. The collected data were analyzed through thematic analysis. The findings indicate that the new classrooms have significantly reduced overcrowding, fostering a more conducive learning environment with better individual attention, enhanced learning conditions, and improved academic performance. The reduction in student density has also facilitated social distancing, leading to increased student engagement and decreased absenteeism. Enhanced classroom conditions have positively impacted students' concentration, morale, and motivation, contributing to higher enrollment and academic success. To build on these benefits, it is recommended that education authorities continue investing in modernizing school infrastructure to address overcrowding, ensure regular maintenance, and upgrade facilities. Prioritizing interactive teaching methods and efficient resource management, along with continuous evaluation of infrastructure impacts, will further enhance student performance and guide future educational investments.

**Keywords:-** COVID-19, Classrooms, Construction Project, Students, Academic Performance, Public Secondary Schools.

## I. INTRODUCTION

The COVID-19 pandemic, first identified in Wuhan, Hubei Province, China, in December 2019, rapidly spread across the globe, significantly impacting all aspects of life. In Africa, nearly 300 million students were forced out of classrooms as schools closed, many for more than a year, according to UNICEF (2020). In East Africa, the government of Kenya confirmed its first COVID-19 case on March 13,

2020, and by April 28, 2020, the country had reported 374 confirmed cases. In response, schools and higher institutions were abruptly closed in mid-March to curb the spread of the virus (National Newsplex Team, 2020).

Tanzania also faced the challenges posed by the pandemic. The first COVID-19 case was reported on March 16, 2020, and by March 17, 2020, the government had announced a nationwide closure of all colleges and schools (United Nations, 2020). The pandemic caused widespread fear, stress, and frustration, exacerbated by lockdown measures such as limited socialization and the closure of businesses and schools (Sales, 2020). As the situation improved, educational institutions reopened on June 29, 2020, with the government implementing various measures to reduce the risk of transmission in schools (United Republic of Tanzania, 2020).

To address the socio-economic effects of the pandemic, the Tanzanian government received a concessional loan from the International Monetary Fund (IMF) to implement the Tanzania COVID-19 Socioeconomic Response and Recovery Plan (TCRP). Part of this funding was allocated to the education sector, focusing on the construction of classrooms to decongest overcrowded schools and improve learning environments (The Ministry of Finance and Planning, 2022). The construction of 15,000 classrooms using COVID-relief funds was instrumental in ensuring that all students who passed their primary school examinations in 2021 could join secondary education in 2022 (The Citizen, 2023).

This study examines the impact of the classrooms built through the TCRP on students' academic performance in Lushoto District Council, Tanga Region. While previous studies have explored the effects of the pandemic on education, including challenges in teaching and learning, the contribution of e-learning, and the implementation of curricula, this study specifically assesses the outcomes of the newly constructed classrooms in Lushoto District Council and whether the intended goals of the TCRP were achieved.

## II. LITERATURE REVIEW

### ➤ Theoretical Underpinings

Numerous studies highlight the significant impact of well-designed and well-equipped classrooms on students' academic performance. Smith *et al.* (2018) observed that a school renovation project led to notable improvements in student test scores, while Johnson (2020) conducted a meta-analysis revealing that well-designed classrooms consistently contribute to higher academic achievement. Similarly, Fisk (2017) found that improved indoor air quality could enhance students' cognitive function by up to 100%, and Allen *et al.* (2016) reported that increased ventilation rates positively affect test scores in mathematics and reading. Liu *et al.* (2023) further reinforced these findings, indicating that enhanced classroom environments significantly boost both academic performance and student engagement.

The critical role of school infrastructure in supporting educational outcomes is also supported by Yusuph (2019), who found that improved school facilities enhance student comfort, engagement, and performance. Amadi and Chinyere (2019) emphasized the necessity of adequate physical resources, such as libraries and laboratories, for effective teaching and learning. TASB (2014) noted that classrooms with sufficient space enable flexible seating arrangements and varied teaching methods, mitigating issues related to overcrowding. This flexibility is associated with increased student engagement and learning. Tanner and Lackney (2018) demonstrated that proper lighting and acoustics improve student concentration and reduce strain, further supporting the need for optimal classroom environments.

Siocha *et al.* (2017) emphasized that a healthy, safe, and resource-rich school environment is crucial for quality education. This is aligned with findings from Bullock (2007), who noted that newly constructed or renovated school facilities in Virginia showed better student performance compared to older schools. Namusisi (2005) in Uganda and Arul-Lawrence and Vimala (2012) in Nigeria both found that well-designed classrooms enhance learning progress in key subjects such as reading, writing, and math. Osundwa (2016) in Kenya highlighted that the physical, social, academic, and cultural environments of schools significantly influence students' learning and academic achievements. In the context of Tanzania and Ghana, Sabates *et al.* (2010) found that improved school infrastructure positively affects school completion rates and overall student performance. This body of research highlights the substantial benefits of investing in quality school infrastructure, reinforcing the relevance of the current study's focus on evaluating the impact of new classrooms constructed through the COVID-19 project in Lushoto District Council.

### ➤ Maslow's Hierarchy of Needs

This study is grounded in Abraham Maslow's Hierarchy of Needs, a theory introduced in 1943, which posits that human beings must satisfy a series of fundamental needs to reach their full potential and achieve self-actualization (Maslow, 1943). According to Maslow, these needs are structured hierarchically, starting with basic physiological

needs like food, water, and shelter, and progressing to higher-level needs such as safety, social connections, esteem, and self-actualization. Maslow's theory suggests that individuals can only advance to fulfilling higher-level needs after meeting their basic survival needs, emphasizing the importance of addressing lower-level needs before pursuing more complex aspirations.

In the context of school environments, Maslow's theory highlights the necessity of meeting students' basic physiological needs, such as providing a safe, clean, and comfortable learning space (Ford, 2015). This includes ensuring well-maintained classrooms with adequate ventilation, lighting, and temperature control, as well as access to clean restrooms and safe drinking water. Meeting these basic needs allows students to focus on their education without distractions related to physical discomfort or safety concerns. Beyond these needs, the theory also emphasizes the importance of safety and security, which in schools involves implementing measures like fire alarms, emergency exits, and security personnel to create a secure learning environment (Ford, 2015).

Maslow's hierarchy further emphasizes the need for social and emotional well-being, including love and belonging, which can be fostered in schools through group work areas, social spaces, and extracurricular activities that promote a sense of community and inclusion (Ford, 2015). As students' basic needs are addressed, schools can also focus on meeting esteem needs by creating environments that encourage student participation and recognize their achievements, such as through display areas for student work and positive reinforcement from teachers (Ford, 2015). Finally, the ultimate goal of self-actualization, or realizing one's full potential, is supported by providing an environment that encourages self-discovery and creativity, with resources and opportunities for critical thinking and exploration (Ford, 2015).

This theoretical framework is highly relevant to this study as it underscores the critical role of school environments in fostering student learning and motivation. By integrating safety, health, and well-being into school design, both in new constructions and existing buildings, schools can enhance the teaching and learning process and ensure a conducive environment for student development (Ford, 2015). This study utilizes Maslow's theory to demonstrate how adequate and high-quality infrastructure can significantly impact educational outcomes, reflecting a trend observed in schools where better facilities correlate with improved academic performance.

## III. METHODOLOGY

The study utilized a qualitative research design to capture the nuanced experiences and perceptions of respondents, offering a deeper understanding of human behavior and organizational dynamics (Creswell, 2014; Patton, 2002). The target population included District Secondary Education Officers, Ward Education Officers, Heads of Schools, teachers, and school board chairpersons,

with a sample of 61 participants from 4 public secondary schools in Lushoto District Council. Purposive sampling was used for selecting key informants with relevant expertise, while simple random sampling ensured representative data from students and teachers (Mugenda & Mugenda, 2003; Cochran, 1977). Data were collected through interviews and focus group discussions, analyzed thematically to identify key patterns and themes, thereby providing a comprehensive understanding of the participants' insights (Braun & Clarke, 2006).

#### IV. FINDINGS

The study aimed at investigating the effects of new COVID-19 classrooms construction project towards students' academic performance in public secondary schools in Lushoto District Council, Tanzania. Findings of this study are presented below: -

##### ➤ *Reduced Overcrowding*

In many schools, overcrowded classrooms pose a significant challenge to effective teaching and learning. The construction of new classrooms as a response to the COVID-19 pandemic has alleviated this issue, creating a more manageable and productive learning environment. One teacher explained,

*“The new classrooms have significantly reduced overcrowding, allowing us to focus more on individual students' needs. This has led to noticeable improvements in their academic performance.”*

Overcrowding in classrooms is a significant barrier to effective teaching and learning. With too many students packed into one space, individual attention is limited, and distractions are more frequent. The construction of new COVID-19 classrooms has provided much-needed space, enabling teachers to manage classes more effectively. This reduction in student density allows for better monitoring of individual progress, more personalized instruction, and targeted interventions. As a result, students can receive the support they need to excel academically, leading to observable improvements in their performance.

The findings concur with study by TASB (2014) which shows that, classrooms with enough space to expand allow teachers to configure seating arrangements and allow for varied teaching methods. They also create private study areas and smaller learning centers that reduce visual and hearing interruptions. Overcrowding has always been linked to increased student aggression, decreased engagement, and lower levels of learning. Classrooms that offer flexibility and reconfiguration are associated with increased student engagement and learning (TASB, 2014).

##### ➤ *Enhanced Learning Environment*

Creating a safe and conducive learning environment has become more critical than ever due to the COVID-19 pandemic. New classrooms have played a vital role in ensuring this safety while also enhancing the overall learning experience for students. One teacher commented,

*“With the new classrooms, we have been able to maintain social distancing, which has not only kept the students safe but also created a better learning environment. The students are more attentive and engaged in their studies.”*

Maintaining social distancing within the classroom setting is crucial for health and safety, especially during the COVID-19 pandemic. The new classrooms have made it possible to implement these measures effectively, reducing the risk of virus transmission. A safer learning environment naturally leads to increased attentiveness and engagement among students. Without the fear of contracting the virus, students can focus better on their studies, resulting in improved academic performance.

The findings concur with study by Cash (1993) which found that, a well-planned school with clean and safe learning environment are important for academic achievement.

##### ➤ *Improved Concentration*

A conducive learning atmosphere is essential for students' concentration and academic success. The construction of new classrooms has significantly improved the learning conditions, benefiting students' focus and performance. One teacher expressed,

*“The construction of new classrooms has provided a more conducive learning atmosphere. Students now have proper ventilation and space, which has positively impacted their concentration and overall performance.”*

Proper ventilation and ample space are critical components of a conducive learning environment. The new classrooms offer these benefits, which in turn help students to concentrate better. Good air quality and comfortable spacing reduce distractions and discomfort, allowing students to focus on their lessons. Enhanced concentration naturally leads to better understanding and retention of material, contributing to higher academic achievement.

The findings concur with study by Tanner (2022) which focused on the impact of lighting and acoustics in classrooms on students learning outcomes. The study indicated that the proper lightings conditions, including natural light and adjustable artificial lighting, contributed to better concentration and reduced strain among students.

##### ➤ *Decreased Absenteeism*

Regular attendance is a key factor in students' academic success. The new classrooms have not only improved the physical learning environment but also encouraged more consistent attendance among students. One teacher stated,

*“Since the new classrooms were built, we have seen a decrease in absenteeism. Students are more motivated to attend school regularly, which has had a positive effect on their academic achievements.”*

A significant factor in academic performance is regular attendance. The new classrooms have created a more appealing and safer environment, motivating students to attend school more consistently. Reduced absenteeism means that students do not miss important lessons and are more likely to keep up with the curriculum. This consistent attendance is directly linked to better academic outcomes as students are continuously engaged in their learning process.

The findings were supported by focus group discussion among students from school A which highlighted that regular attendance is a crucial factor in academic success, and the new classrooms have significantly contributed to this. Students agreed that the improved physical learning environment, with its modern amenities and comfortable settings, has made attending classes more appealing. This positive change has encouraged more consistent attendance, as students feel more motivated and eager to participate in the enhanced learning experience.

The finding aligns with a study by Chan-Anteza (2020) which indicate that well-designed and safe learning environments foster a conducive atmosphere for learning, leading to higher attendance levels among students. These findings underscore the importance of investing in infrastructure upgrades, like new classrooms, to support students' academic journey by providing an environment that encourages regular attendance and active participation in educational activities.

#### ➤ Personalized Attention

Smaller class sizes facilitate more personalized attention, which is crucial for effective learning. The new classrooms have enabled teachers to provide individualized support, significantly impacting students' academic performance. One teacher stated,

*"The project has allowed us to split larger classes into smaller groups, providing more personalized attention to each student. This change has been reflected in their improved test scores and class participation."*

The findings were supported by a Head of School A in an interview who states,

*"With a class having few students, our teachers can truly focus on the individual needs of each student, fostering a more supportive and effective learning environment."*

Smaller class sizes are known to enhance the quality of education by allowing teachers to provide more individualized attention. With the new classrooms, teachers can now split larger classes into smaller, more manageable groups. This setup facilitates a more interactive and personalized learning experience, where teachers can address the specific needs of each student. The result is improved test scores and greater participation in class activities, as students feel more supported and engaged.

#### ➤ Increased Enrollment and Performance

The assurance of safety and improved facilities in new classrooms has attracted more students to school, positively influencing their academic achievements. One teacher explained,

*"The new classrooms have facilitated the implementation of COVID-19 safety measures, giving parents peace of mind. As a result, there has been a steady increase in enrollment and students' academic performance has improved."*

The assurance of safety provided by the new classrooms has encouraged more parents to enroll their children in school. This increased enrollment is a testament to the trust parents place in the school's ability to protect their children. With more students attending school regularly in a safe environment, academic performance has seen a marked improvement. The ability to maintain health protocols effectively ensures that students can learn without interruption, further contributing to their academic success.

The finding aligns with study Kassel (2024) highlight that parental perceptions of school safety and infrastructure play a crucial role in enrollment decisions. Research has shown that when parents feel assured about their children's safety within school premises, they are more likely to enroll and encourage consistent attendance.

#### ➤ Boosted Morale

The introduction of modern and well-equipped classrooms has had a positive effect on the morale of both students and teachers, leading to better academic outcomes. One teacher explained,

*"Having modern, well-equipped classrooms has boosted the morale of both students and teachers. The enhanced learning environment has translated into better academic outcomes for our students."*

The quality of the physical learning environment plays a crucial role in the morale of both students and teachers. Modern, well-equipped classrooms provide a positive atmosphere that fosters enthusiasm for learning. When students and teachers are in a pleasant environment, their motivation and commitment to education increase. This positive change in attitude and morale directly impacts students' academic outcomes, as they are more likely to engage actively and perform better in their studies.

The findings were supported by students in a focus group discussion from school B which revealed a consensus among students that the introduction of modern and well-equipped classrooms has significantly boosted the morale of students. Students expressed increased enthusiasm for attending classes, noting that the improved learning environment has made lessons more engaging and interactive.



The finding aligns with study Barrett *et al.* (2017) which highlight the impact of well-maintained and supportive learning spaces on the overall educational experience. Research indicates that conducive environments enhance student engagement, motivation, and academic performance while also fostering positive teacher attitudes and job satisfaction.

#### ➤ *Interactive and Engaging Teaching*

The new classrooms have provided the space needed for more interactive and engaging teaching methods, which have greatly benefited students' enthusiasm and academic progress. One teacher stated,

*"The additional space provided by the new classrooms has enabled us to introduce more interactive and engaging teaching methods. Students are more enthusiastic about learning, which is evident in their academic progress."*

The findings were supported by Head of School who reveal the following,

*"The new classrooms have provided the space needed for more interactive and engaging teaching methods, which have greatly benefited students' enthusiasm and academic progress."*

The availability of additional space in the new classrooms allows for a variety of interactive and engaging teaching methods. Teachers can now implement group activities, hands-on projects, and other dynamic teaching strategies that were previously difficult to conduct in cramped settings. These interactive methods make learning more enjoyable and stimulating for students, leading to.

#### ➤ *Better Resource Management*

Effective resource management is essential for providing quality education. The new classrooms have eased the strain on resources, enabling better support and attention for students. One teacher commented,

*"The construction of new classrooms has alleviated the strain on our resources. With fewer students per classroom, we can offer more support and attention, leading to higher academic performance."*

Resource management is crucial in delivering quality education. The new classrooms have eased the burden on existing resources, ensuring that each student receives adequate support. With fewer students per classroom, teachers can allocate their time and resources more effectively, providing better educational services. This optimized resource management results in higher academic performance as students benefit from more focused and individualized attention.

The finding aligns with study by Ford (2016) which shows that, ample classroom space supports innovative pedagogical approaches, such as collaborative learning activities, hands-on experiments, and multimedia presentations. Research highlights how physical space

influences teaching effectiveness by accommodating different instructional styles and encouraging active student participation.

#### ➤ *Pride and Motivation*

A well-maintained and attractive learning environment can significantly boost students' pride and motivation, which positively impacts their academic performance. One teacher explained,

*"The project has not only improved the physical learning environment but also instilled a sense of pride and motivation among the students. This positive change is clearly reflected in their academic results."*

A well-maintained and attractive physical environment can instill a sense of pride and motivation in students. The new classrooms have transformed the learning environment, making students proud of their school. This pride translates into increased motivation to learn and succeed. When students take pride in their school, they are more likely to be diligent in their studies and strive for academic excellence, which is reflected in their improved academic results.

The findings were supported by focus group discussion with students in school C which revealed a unanimous agreement that a well-maintained and attractive learning environment significantly boosts their pride and motivation. Students expressed that the clean, organized, and aesthetically pleasing classrooms make them feel valued and respected, which enhances their sense of school pride. This positive atmosphere translates into greater enthusiasm and dedication to their studies, ultimately leading to improved academic performance.

The finding concurs with study by Goodwin (2013) which found that, that aesthetically pleasing and well-kept school settings significantly enhance students' attitudes toward their education. Research indicates that such environments not only boost students' self-esteem and school satisfaction but also contribute to improved academic performance and lower absenteeism.

## V. CONCLUSION

The study investigated the impact of new COVID-19 classroom constructions on students' academic performance in public secondary schools in Lushoto District Council, Tanzania. The findings reveal that the new classrooms have substantially alleviated overcrowding, creating a more conducive learning environment. This reduction in student density has improved individual attention, enhanced learning conditions, and contributed to better academic performance. Additionally, the new facilities have facilitated social distancing, leading to increased student engagement and reduced absenteeism. Improved classroom conditions have also positively influenced students' concentration, morale, and motivation, resulting in higher enrollment and academic achievements.

## RECOMMENDATIONS

To sustain and further enhance these benefits, it is recommended that the education authorities continue investing in modernizing school infrastructure to address overcrowding and create more engaging learning environments. Ensuring regular maintenance and upgrading of classroom facilities will support ongoing improvements in student performance. Additionally, incorporating interactive teaching methods and optimizing resource management should be prioritized to maximize the benefits of the new classrooms. Continuous evaluation of the impact of these infrastructure improvements on educational outcomes will be essential in making informed decisions for future educational investments.

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