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Lesson Plan Development And Teaching Mathematics In Kisoro District: A Case Study Of Kasoni Primary School

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Abstract

This study investigates Lesson Plan Development and Teaching Mathematics in Kisoro District with a focus on Kasoni Primary School. Using a sample size of 80 respondents, which included 40 students, 30 parents, 8 teachers, and 1 district education officer, the research aimed to achieve three key objectives: (1) to assess the extent of lesson plan development at Kasoni Primary School, (2) to evaluate the level of mathematics teaching at the school, and (3) to establish the relationship between lesson plan development and the teaching of mathematics. The study adopted a descriptive research design and utilized data collection methods such as questionnaires, interviews, and document reviews. Findings revealed that lesson planning was conducted to varying degrees, but challenges such as limited instructional resources and inconsistent monitoring hindered optimal implementation. The study also found that teaching mathematics at Kasoni Primary School exhibited significant gaps, including a lack of learner-centered approaches and minimal use of teaching aids. A strong positive relationship was identified between effective lesson plan development and enhanced teaching outcomes in mathematics. The study concludes that lesson plan development plays a crucial role in improving the teaching of mathematics. Recommendations include providing teachers with ongoing professional development in lesson planning, increasing access to teaching resources, and strengthening the supervision of lesson plan implementation. Further research is suggested to examine similar issues in other schools and districts to build on these findings.

Keywords: Lesson Plan Development, Teaching, Mathematics and Kisoro District

Background of the study

The pursuit of quality education is a global imperative, unequivocally enshrined in the United Nations Sustainable Development Goal 4, which aims to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" (United Nations, 2015). At the very heart of achieving this goal lies effective teaching and learning, processes that are fundamentally dependent on meticulous pedagogical preparation (Oromo et al., 2023). A cornerstone of this preparation is the lesson plan, which serves as a strategic blueprint for instruction. Globally, educational research consistently affirms that well-developed lesson plans are not mere administrative formalities but critical tools for enhancing teaching efficacy (Kazaara et al., 2024). They provide a clear structure, define learning objectives, anticipate potential misconceptions, and guide the selection of appropriate instructional materials and assessments (W. Godfrey et al., 2023). In the specific context of mathematics education, which is often viewed as a gateway subject for scientific and technological advancement, structured planning becomes even more crucial (Julius & Audrey, 2025). It helps in deconstructing complex concepts into teachable sequences, thereby demystifying the

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subject and fostering a positive attitude among learners (Boaler, 2016). The global discourse thus positions systematic lesson planning as a non-negotiable element of professional teaching practice, directly linked to improved student academic outcomes.

Within the African continent, the critical importance of quality education is amplified as a catalyst for economic development, poverty reduction, and social stability (S. Godfrey et al., 2023). However, the region continues to grapple with a profound learning crisis, where high enrollment rates often mask alarmingly low levels of actual learning. The World Bank (2019) reports that a significant proportion of children in Sub-Saharan Africa are in "learning poverty," unable to read and understand a simple text by age 10, with competencies in mathematics faring even worse (Julius, 2025). This crisis is multifaceted, rooted in challenges such as overcrowded classrooms, insufficient instructional resources, and often, limited teacher pedagogical content knowledge (UNESCO, 2022). While governments have invested in curriculum reforms and infrastructure, the foundational practice of lesson planning is frequently undermined by these systemic constraints (Services et al., 2023). Many teachers operate in environments with limited support, leading to a reliance on rote memorization rather than conceptual understanding, a practice particularly detrimental in mathematics (Adedeji & Olaniyan, 2019). Therefore, improving the quality of education in Africa necessitates a sharp focus on the core processes of teaching, starting with how teachers plan and structure their classroom instruction.

Narrowing the focus to East Africa, the member states of the East African Community (EAC) share a common commitment to harmonizing and improving their educational standards to foster regional integration and competitiveness (Brian & Jacob, 2023). Initiatives like the East African Community Common Core Curriculum Framework aim to equip learners with competencies relevant to the 21st century (EAC, 2018). Mathematics is a central pillar in this framework, recognized as essential for nurturing the scientific and technical skills needed for the region's development. Despite this political will, the implementation at the classroom level faces persistent hurdles. Studies from across the region, including in Kenya and Tanzania, have highlighted that while teachers may acknowledge the importance of lesson plans, their development is often inconsistent, perceived as a bureaucratic burden rather than a valuable professional tool (Makonye & Luneta, 2020). This gap between policy expectation and classroom reality is a critical area of concern, as it directly impacts the quality of learning outcomes that the regional integration agenda seeks to achieve (Lydia et al., 2023).

In Uganda, the government has demonstrated its commitment to education through policies such as Universal Primary Education (UPE). While this has dramatically increased access, the quality of education delivered remains a significant challenge. The 2021 National Assessment of Progress in Education report highlighted concerning deficiencies in

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numeracy skills among primary school pupils, with many learners in Primary 3 and 6 unable to perform basic mathematical operations appropriate for their grade level (Julius, 2025). The Ugandan Ministry of Education and Sports has identified teacher competence and professional practices as key levers for improvement. The National Teacher Policy (2019) emphasizes the need for continuous professional development and effective utilization of teaching schemas and lesson plans. However, contextual factors such as large class sizes, inadequate teaching aids, and high teacher absenteeism in rural areas severely constrain the ability of teachers to engage in meaningful lesson planning (Altinyelken, 2021). Consequently, the potential of a well-crafted lesson plan to transform mathematics instruction remains largely untapped in many Ugandan classrooms (Victoria et al., 2023).

Kisoro District, a remote and predominantly rural region in Southwestern Uganda, brings these global, continental, and national challenges into sharp, local relief. The district faces unique socio-economic constraints, including high poverty levels and challenging terrain, which exacerbate the general obstacles to quality education. Schools like Kasoni Primary School operate with limited infrastructure and teaching resources (Nancy & Prudence, 2024). Teachers in such contexts often work in professional isolation with minimal supervision and support, making the consistent development and use of lesson plans a formidable task. The specific challenges of teaching mathematics in this environment such as a lack of concrete learning materials, diverse learner abilities in a single class, and potentially negative pupil attitudes towards the subject make rigorous planning not just beneficial, but essential (Emmanuel et al., 2023). However, it is precisely in these under-resourced settings that the practice is most likely to be neglected. Therefore, this study seeks to investigate the nexus between lesson plan development and the teaching of mathematics at Kasoni Primary School. It aims to understand the extent to which teachers develop and use lesson plans, how this practice influences their teaching methodologies, and the specific contextual barriers they face in Kisoro District, thereby contributing a micro-level perspective to a macro-level educational challenge.

Statement of the problem

Despite the recognized global importance of structured lesson planning for effective pedagogy, a significant gap persists between this acknowledged best practice and its consistent implementation in many Ugandan primary schools, particularly in the teaching of mathematics (Julius & Kazaara, 2025). This problem is acutely manifested at Kasoni Primary School in Kisoro District. While the Ugandan government emphasizes curriculum adherence through tools like lesson plans, national assessments consistently reveal poor numeracy skills among pupils(Nelson, 2024). The core problem is that the development and use of lesson plans in mathematics teaching at Kasoni Primary School is inadequate and inconsistent, adversely affecting the quality of instruction and contributing to suboptimal learning outcomes (Christopher et al., 2022). This inadequacy is exacerbated by contextual challenges specific to the district, including limited teacher training on effective planning, a severe shortage of instructional resources, and significant time constraints due to large class sizes (Igwe & Ude, 2018). Consequently, there is a critical need to investigate the

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specific extent of lesson plan development, its perceived relationship with teaching effectiveness, and the precise obstacles teachers face at this school. Without a clear understanding of these localized factors, interventions aimed at improving mathematics education are likely to fail, perpetuating the cycle of poor academic achievement and limiting the life opportunities of the pupils.

Specific objectives

1. To find out the extent of Lesson Plan Development at Kasoni Primary School, Kisoro District.
2. To find out the level of Teaching Mathematics at Kasoni Primary School, Kisoro District.
3. To find out the relationship between Lesson Plan Development and Teaching Mathematics at Kasoni Primary School, Kisoro District.

Methodology

The research was guided by a descriptive research design, understood as the overarching framework for planning and conducting a study. This design was selected as it was deemed most appropriate for the nature of the variables under investigation, as it facilitates the production of data required for both qualitative and quantitative analysis, allowing for a simultaneous description of views, perceptions, and beliefs at a single point in time. The study was geographically situated in Kisoro District, with a specific focus on Kasoni Primary School as a case study. The target population for this research was an aggregation of 100 residents associated with Kasoni Primary School. From this total population, a sample size of 80 respondents was determined using Slovene's formula for sample size determination to ensure the study's feasibility and representativeness. Prior to the main data collection, a rigorous pilot study was conducted to evaluate the survey instruments (Olanrewaju et al., 2021). The questionnaires were tested with students and a research supervisor from Metropolitan International University to check for content, structure, sequence, and clarity, thereby assessing their reliability and validity before final distribution.

The sampling procedure involved a combination of techniques to select respondents (Maiga et al., 2021). A simple random sampling method was employed to ensure that individuals in the broader groups, such as farmers, community members, parents, students, and teachers, had an equal and independent chance of being selected, with specific attention paid to including both male and female respondents. Concurrently, a purposive sampling technique was used to deliberately select key informants, specifically the LC1 Chairperson and the District Education Officer, based on their unique knowledge and positions relevant to the study's objectives (Abiodun et al., 2022). This technique was chosen for its efficiency in reaching a targeted sample quickly and for its utility in situations where proportionality is less critical than accessing specific, information-rich sources. For data collection, the study utilized a mixed-methods approach, employing both questionnaires and interviews to gather primary data. Structured questionnaires, consisting primarily of closed-ended questions, were distributed to students, parents, and teachers (Anwar et al., 2022). These

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were supplemented with face-to-face interviews guided by a set of questions aligned with the study's objectives, which allowed for the collection of deeper, qualitative information from the key informants.

To ensure the quality and accuracy of the data, stringent control measures were implemented, focusing on the validity and reliability of the instruments. Validity, which refers to the extent to which the instruments measured what they were intended to measure, was established through expert judgment, where research experts assessed the relevance of the questionnaire items, and a Content Validity Index was calculated. Reliability, denoting the consistency of the instruments, was determined through a pilot test and computed using the split-half method with the aid of the Statistical Package for the Social Sciences (SPSS) (Nelson et al., 2022). Following data collection, a comprehensive management and processing procedure was undertaken, which included editing, coding, and tabulation of the responses. Data analysis involved both quantitative and qualitative techniques; the quantitative data were analyzed using descriptive statistics such as frequencies and percentages with the help of SPSS, while qualitative data were subjected to content analysis, where responses were categorized into thematic areas for a coherent narrative. Presentation of the findings was accomplished through tables, figures, and charts.

Results

Table 1: Extent of Lesson Plan Development

Criterion	**Frequency (F)**	**Valid Percentage (%)**
Fully Developed and Regularly Updated	**25**	**31**
Partially Developed	**35**	**44**
Rarely Developed	**20**	**25**
Total	**80**	**100**

Source: Primary Data, 2024

The data presents a compelling yet nuanced picture of the relationship between lesson plan development and the teaching of mathematics, revealing both a recognized value in planning and significant practical hurdles that impede its ideal implementation. The state of lesson planning itself, as shown in Table 1, is characterized by inconsistency. While a promising 31% of respondents reported using fully developed and regularly updated lesson plans, a larger plurality of 44% indicated that their plans were only partially developed. This suggests that for nearly half of the educators, the planning process is incomplete, potentially lacking detailed learning activities, differentiation strategies, or formal assessment links. Furthermore, the fact that a quarter of the respondents rarely develop lesson plans points to a substantial gap in fundamental instructional preparation within the sampled group.

Table 2: Level of Teaching Mathematics

Level	**Frequency (F)**	**Valid Percentage (%)**
Level	**22**	**28**

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Effective	**30**	**38**
Neutral	**18**	**22**
Ineffective	**7**	**9**
Very Ineffective	**3**	**3**
Total	**80**	**100**

Source: Primary Data, 2024

A majority (38%) rated mathematics teaching as effective, while 28% rated it as very effective. The findings suggest that teachers' commitment to lesson planning significantly influences teaching outcomes (Nelson et al., 2023).

Relationship between Lesson Plan Development and Teaching Mathematics

The relationship between lesson plan development and teaching mathematics was assessed by analyzing how structured planning impacts lesson delivery and student performance.

Table 3: Relationship between Lesson Plan Development and Teaching Mathematics

Relationship Level	Frequency (f)	Valid Percentage (%)
Strongly Positive	**45**	**56**
Positive	**25**	**31**
Neutral	**10**	**13**
Total	**80**	**100**

Source: Primary Data, 2024

A majority of respondents (56%) identified a strongly positive relationship between lesson plan development and teaching mathematics, reinforcing the importance of structured planning in achieving better learning outcomes.

Challenges in Lesson Plan Development and Teaching Mathematics

Respondents identified various challenges, including limited training, inadequate resources, and time constraints.

Table 4: Challenges in Lesson Plan Development and Teaching Mathematics

Challenge	Frequency (f)	Valid Percentage (%)
Lack of Training	25	31
Limited Resources	**30**	**38**
Time Constraints	**15**	**19**
Others	**10**	**12**
Total	**80**	**100**

Source: Primary Data, 2024

The discrepancy between the recognized importance of planning and the inconsistent reality of its practice is explained by the significant challenges detailed in Table 4. Here, a lack of training (31%) and limited resources (38%) emerge as the most formidable obstacles. This implies that teachers may not only lack the time but, more critically, the

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necessary skills and materials to create comprehensive lesson plans. Without adequate professional development on effective planning techniques and access to quality instructional resources, educators are likely constrained to developing plans that are only "partially developed." The time constraints (19%) further compound this issue, creating a scenario where teachers understand the value of a detailed lesson plan but are pragmatically limited in their ability to create one due to systemic and logistical barriers. Therefore, the data collectively tells a story of a teaching corps that is effective despite these challenges, but one that also strongly believes its efficacy in teaching mathematics could be significantly enhanced through more robust support systems that address training, resources, and time, thereby enabling the consistent development of the lesson plans they know are vital.

Conclusions

The study concluded that while lesson plan development is practiced at Kasoni Primary School, there is a need for consistent training and monitoring to enhance its effectiveness. A well-structured lesson plan directly contributes to improved teaching outcomes and student understanding.

The research established that the level of mathematics teaching at Kasoni Primary School is moderately effective but could improve with the provision of additional teaching resources and ongoing teacher training.

The study concluded that there is a positive and significant relationship between lesson plan development and the teaching of mathematics. Teachers who effectively planned their lessons were better able to address students' learning needs and improve their academic performance.

Recommendations

To the Government

The government should provide schools with resources such as teaching aids, updated curriculum materials, and professional development programs to support teachers in lesson planning and mathematics instruction.

To the District Education Office

The district education office should establish regular workshops and training sessions to equip teachers with skills in lesson plan development and innovative mathematics teaching method

To the Teachers

Teachers are encouraged to prioritize lesson planning and adopt interactive and student-centered teaching methods. They should also utilize available resources and seek support from the district education office for continuous improvement.

To the Parents

Parents should actively support their children's learning by providing a conducive environment for homework and practice at home. Additionally, they should collaborate with teachers to address challenges faced by their children in mathematics learning.

References

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Vol. 4 Issue 10, October- 2025, Pages: 142-151

Abiodun, N. L., Matovu, M. S., & Olanrewaju, R. O. (2022). Statistical Powers of Univariate Normality Tests: Comparative Analysis of 2016 Election Process in Uganda. *European Journal of Statistics*, *2*, 1–9. https://doi.org/10.28924/ada/stat.2.6

Anwar, S. M., Komal, S., Cheema, A. N., Abiodun, N. L., Rasheed, Z., & Khan, M. (2022). Efficient Control Charting Scheme for the Process Location with Application in Automobile Industry. *Mathematical Problems in Engineering*, *2022*. https://doi.org/10.1155/2022/2938878

Brian, W., & Jacob, K. (2023). *Impact of Tax Education on The Public Sector - A Case Study of Lwakhakha Town Council , Namisindwa District Local Government*. *7*(4), 176–184.

Christopher, F., Moses, N., Enosh Muhindo, M., & Ruth Komunda, T. (2022). Employee Training and Organizational Performance: A Case Study of African College of Commerce and Technology in Kabale District, South Western Uganda. *International Journal of Academic Pedagogical Research*, *6*(5), 1–7. www.ijeais.org/ijapr

Emmanuel, E., Rebecca, N., Kazaara, A. G., & Nicholas, K. (2023). *The Effects Of Job Training On Performance Of Local Government Employees In ganda : A Case Study Of Molo Sub- County , Tororo District* . *7*(2), 65–73.

Adedeji, S. O., & Olaniyan, O. (2019). *Improving the conditions of teachers and teaching in rural schools across African countries*. UNESCO.

Altinyelken, H. K. (2021). Policy reforms and teacher practice in Ugandan primary education. *International Journal of Educational Development, 83*, 102395. https://doi.org/10.1016/j.ijedudev.2021.102395

Boaler, J. (2016). *Mathematical mindsets: Unleashing students' potential through creative math, inspiring messages and innovative teaching*. Jossey-Bass.

East African Community (EAC). (2018). *East African Community common core curriculum framework*. Arusha: EAC Secretariat.

Hattie, J. (2012). *Visible learning for teachers: Maximizing impact on learning*. Routledge.

Makonye, J. P., & Luneta, K. (2020). Teachers' use of lesson plans in mathematics classrooms: A comparative study in South Africa and Kenya. *African Journal of Research in Mathematics, Science and Technology Education, 24*(2), 215–227. https://doi.org/10.1080/18117295.2020.1763391

Marzano, R. J. (2017). *The new art and science of teaching*. Solution Tree Press.

Uganda National Examinations Board (UNEB). (2021). *National Assessment of Progress in Education (NAPE) 2021: The achievement of primary school pupils in numeracy and literacy*. Kampala: UNEB.

UNESCO. (2022). *Global education monitoring report 2022: Education in a post-COVID world*. Paris: UNESCO.

United Nations. (2015). *Transforming our world: The 2030 agenda for sustainable development*. New York: United Nations.

World Bank. (2019). *Ending learning poverty: What will it take?* Washington, DC: World Bank.

Godfrey, S., Matovu, K., & Ismail, L. (2023). *Effect Of Youth Unemployment And Crime Rates In Uganda , A Case*

Received: 10.10.2025 **Accepted: 14.10.2025** **Published on: 30.10.2025**

Study Of Mityana Distrist . *7*(3), 325–334.

Godfrey, W., Silvia, N., Kazaara, A. G., Nelson, K., Christopher, F., Deus, T., Micheal, T., & Catherine, M. (2023). *The Effect Of Teacher ' s Instructional Methods On The Learners Academic Performance In Mathematics Subject In Secondary Schools , A Case Study Of Buwesswa Secondary School In Manafwa District*. *7*(2), 100–107.

Igwe, N. N., & Ude, A. O. (2018). Project Planning and Implementation in Niegria: Revisiting International Best Practices. *European Scientific Journal, ESJ*. https://doi.org/10.19044/esj.2018.v14n14p152

Julius, A. (2025). *Discipline as the Unseen Catalyst : Fostering Innovation and Creativity in Ugandan Universities through Structured Integrity*. *9*(8), 201–207.

Julius, A., & Audrey, A. (2025). *Integrity at a Crossroads : " Sex for Marks ," " Money for Marks ," and " Hypothetical Marks " Eroding Confidence in Ugandan Higher Education*. *9*(8), 367–373.

Julius, A., & Kazaara, A. I. (2025). *The Concrete Foundations of Learning : Infrastructure , Facilities , and Their Impact on Teaching Quality and Service Delivery in Ugandan Private Universities*. *9*(8), 360–366.

Kazaara, A. I., Kazaara, A. G., & Julius, A. (2024). *International Trade Nexus Economic Growth In Uganda . Empirical Evidence of Kampala District*. *8*(4), 132–137.

Lydia, N., Ariyo, D., Kazaara, G., Kazaara, A. I., Brenda, T., Moses, N., & Bafaki, G. (2023). Promotion of Small-Scale Industries and Development of Business. A Case Study; Masafu Subcounty (Busia). In *International Journal of Academic Multidisciplinary Research* (Vol. 7). www.ijeais.org/ijamr

Maiga, I. H., Abiodun, N. L., & Mageto, T. (2021). Analyzing the Effects of Flexible Exchange Rate Regime on the Malian Economy Using a Dynamic Stochastic General Equilibrium Model. *International Journal of Mathematics Trends and Technology*, *67*(12), 9–20. https://doi.org/10.14445/22315373/ijmtt-v67i12p502

Nancy, M., & Prudence, K. (2024). Capacity Building programs and their impact on employee performance. A case study of Metropolitan International University. *Researchgate.Net*, *8*(4), 23–27. https://www.researchgate.net/profile/Metropolitan-University/publication/380909234_Capacity_Building_programs_and_their_impact_on_employee_performance_A_case_study_of_Metropolitan_International_University/links/665576b30b0d2845745e0182/Capacity-Building-p

Nelson, K. (2024). *Teachers Qualifications and its impact on Pupil ' s Academic Performance among selected Government Primary Schools In Kanungu District . An empirical Evidence of Nyakatare Primary School , Karuhinda Primary School and Kirima Primary school*. *8*(4), 3–9.

Nelson, K., Christopher, F., & Milton, N. (2022). *Teach Yourself Spss and Stata*. *6*(7), 84–122.

Nelson, K., Kazaara, A. G., & Kazaara, A. I. (2023). *Teach Yourself E-Views*. *7*(3), 124–145.

Olanrewaju, R. O., Lukman Abiodun, N., Muse, A. H., & Barry, T. S. (2021). Stochastic modelling of the dynamics

Received: 10.10.2025 **Accepted: 14.10.2025** **Published on: 30.10.2025**

of the SARS-CoV-2 epidemic: an Africa perspective. *American Journal of Mathematics and Statistics*, *2021*(2), 41–48. https://doi.org/10.5923/j.ajms.20211102.03

Oromo, O. D., Julius, A., & Nelson, K. (2023). *Effect of Covid-19 Lockdown on Household Income in Uganda A Case Study of Kitoro Parish , Entebbe Municipality*. *7*(4), 107–117.

Services, S. F., Branch, K., Kazaara, A. G., & Julius, A. (2023). *The Impact of Electronic Banking on Customer Sustifaction towards the Financial Institutions in Uganda . Acase Study of*. *7*(3), 146–153.

Victoria, N., Nelson, K., Kazaara, A. G., & Kazaara, A. I. (2023). *The Impact Of Staff Development On The Pupils ' Academic Performance In Primary Schools In Kimaanya Sub-County , Masaka District A Case Study Of Kimaanya Sub-County , Masaka District*. *7*(3), 179–186.

Received: 10.10.2025 **Accepted: 14.10.2025** **Published on: 30.10.2025**