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RESEARCH ARTICLE

Extent of Head Teachers' Supervision of Teachers' Lesson Preparation Practices in Enhancing the Teaching of Mathematics in Public Primary Schools in Same District Council, Tanzania

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ABSTRACT

This study examined the extent to which head teachers' supervision of teachers' lesson preparation practices enhances the mathematics teaching in public primary schools in Same District Council, Tanzania. Guided by Hallinger and Murphy's Instructional Leadership Theory (1985), the study employed a convergent design under a mixed-methods research approach. The target population included 183 public primary schools, 183 head teachers, 183 academic teachers, and 916 Mathematics teachers, for a total of 1,283 participants. Using simple random sampling, 30 public primary schools were sampled. Criterion purposive sampling techniques were used to select 30 head teachers and 157 Mathematics teachers, while 30 academic teachers were selected through the expert purposive sampling technique, making a total sample of 217 respondents. Data collection instruments included questionnaires for Mathematics teachers and academic teachers, interview guides for head teachers, and a document analysis guide. All data collection instruments were validated by research experts from the Field of Educational Planning and Administration at Mwenge Catholic University. A pilot study was conducted in two public primary schools that were not included in the main study. The reliability of the questionnaires was established through Cronbach's alpha coefficients of 0.798 for Mathematics teachers and 0.808 for Academic teachers, while the credibility of qualitative instruments was ensured through triangulation of questionnaires, interviews, and document analysis. Quantitative data were analyzed using descriptive statistics (frequencies, percentages, and mean scores) with the aid of the Statistical Package for Social Sciences (SPSS) version 27. Qualitative data from the interview and document analysis guides were analyzed thematically. Ethical considerations were observed, including obtaining a research permit, informed consent, confidentiality, anonymity, and proper citation of data sources. The study found that head teachers' supervision of teachers' lesson preparation practices enhanced Mathematics teaching to a moderate extent, with variation in the consistency of lesson plan review, identification of weaknesses, provision of constructive feedback, and follow-up on recommended improvements. The study concluded that regular lesson plan review, constructive feedback, and follow-up were limited, resulting in a moderate contribution to the teaching of Mathematics. The study

recommended that head teachers should strengthen regular and systematic lesson plan supervision, provide constructive and timely feedback, and conduct regular follow-up on identified weaknesses to strengthen the contribution of lesson preparation supervision to the teaching of Mathematics.

Keywords: Lesson Preparation, Instructional Supervision, Supervisory Feedback, Mathematics Teaching, Public Primary Schools

INTRODUCTION

Mathematics is widely recognized as a fundamental subject for developing logical reasoning, problem-solving abilities, numeracy skills, and scientific literacy. It equips learners with competencies necessary for academic progression, personal development, and participation in science and technology-related fields. Consequently, improving the quality of Mathematics teaching remains a global educational priority, consistent with Sustainable Development Goal Four (SDG 4), which emphasizes inclusive and equitable quality education and effective teaching practices (United Nations, 2015; UNESCO, 2023).

The quality of Mathematics teaching is closely associated with teachers' preparedness and the quality of lesson planning and implementation. Teacher education and professional development provide teachers with knowledge and skills for preparing and implementing lessons, including setting clear lesson objectives, selecting appropriate teaching methods, organizing learning activities, preparing relevant teaching and learning resources, and planning suitable assessment procedures. However, possessing knowledge and skills in lesson preparation does not necessarily ensure consistent quality in their application in classroom practice**.** Head Teachers' instructional supervision therefore plays an important role in monitoring teachers' lesson preparation, providing constructive feedback and professional guidance, and following up on identified areas for improvement. Such supervision can reinforce teachers' preparation practices and support the translation of planned activities into appropriate Mathematics classroom instruction (OECD, 2023; Darling-Hammond et al., 2024).

Head teachers play a crucial role in supervising teachers' lesson preparation as part of their instructional leadership responsibilities (Hallinger & Murphy, 1985). This supervision involves reviewing lesson plans, assessing the appropriateness of lesson objectives, teaching methods, learning activities, instructional resources, and assessment procedures, as well as providing constructive feedback to improve instructional quality. Regular supervision enables head teachers to identify weaknesses in teachers' lesson preparation, offer professional guidance, and monitor the implementation of recommended improvements (Robinson, 2011). Consequently, effective supervision of lesson preparation enhances teachers' preparedness, promotes instructional effectiveness, and contributes to improved teaching of Mathematics.

Globally, evidence from high-performing education systems highlights the importance of instructional planning, teacher preparation, teaching in the content area, collaborative professional support, and instructional monitoring in strengthening classroom teaching. School leaders in countries such as Finland, Singapore, and Japan emphasize instructional planning, collaborative lesson preparation, classroom monitoring, and continuous professional support to improve teachers' instructional practices (Virtanen et al., 2021). Similarly, evidence from international education systems indicates that instructional leadership practices that emphasize teacher support, accountability, and monitoring are associated with improved classroom instruction and learner engagement (PISA, 2022). These experiences suggest that effective supervision of teachers' lesson preparation supports teachers in organizing instruction and improving the delivery of Mathematics lessons.

In Sub-Saharan Africa, improving the quality of Mathematics teaching remains a major educational concern. Despite educational reforms and efforts to strengthen school leadership, some schools continue to experience challenges related to teacher preparation, limited instructional resources, overcrowded classrooms, and instructional supervision (UNESCO, 2021; World Bank, 2022). In some contexts, supervision of lesson plans focuses mainly on checking their availability rather than assessing their quality, providing constructive feedback, and following up on classroom implementation. Such practices may limit the contribution of lesson preparation supervision to effective Mathematics teaching.

In East Africa, evidence indicates that instructional supervision by school leaders supports teachers' lesson preparation, instructional planning, and classroom implementation. Studies from Kenya, have reported that head teachers who regularly supervise lesson preparation, provide professional guidance, and monitor classroom practices contribute to improved instructional organization and teaching effectiveness (Macharia et al., 2023; Njoroge et al., 2024; Otieno, 2024). These findings underscore the importance of

effective head teacher supervision in supporting teachers in preparing adequately and implementing Mathematics lessons effectively.

In Tanzania, improving primary education quality remains a national priority. The Education and Training Policy guides effective teaching, proper lesson preparation, and instructional supervision as key components of quality education (URT, 2014). The Competence-Based Curriculum and other educational reforms also emphasize effective teaching and instructional practices. As instructional leaders, head teachers supervise teaching and learning activities, including reviewing teachers' lesson preparation and providing professional guidance to improve classroom instruction (ADEM, 2023). Effective supervision of lesson preparation is therefore expected to strengthen teachers' preparedness, improve lesson organization, and enhance the teaching of Mathematics in public primary schools**.** However, the National Examination Council of Tanzania (NECTA) examination results indicate persistent challenges in pupils' Mathematics performance, as reflected in the pass rates recorded in Same District Council. Table 1 presents Mathematics performance in Same District Council from 2022 to 2025.

Table 1. Evaluation of National Examination Standard Seven Results in Same District

Years	2022			2023			2024			2025		
Subjects	**Registered**	**Passed**	**Pass %**	**Registered**	**Passed**	**Pass %**	**Registered**	**Passed**	**Pass %**	**Registered**	**Passed**	**Pass %**
Kiswahili	7674	6272	81.7	8701	6948	79.9	5712	4402	77.1	5492	4757	86.6
English	7674	803	10.5	8701	1176	13.5	5712	1324	23.2	5492	1690	31.9
Maarifa Ya Jamii	7674	4112	53.6	8701	5391	61.9	5712	4241	74.2	5492	2977	54.2
Hisabati	7674	2142	27.9	8701	2415	27.8	5712	2097	36.7	5492	1760	31.0
Sayansi Na Teknolojia	7674	4141	53.9	8701	5010	57.6	5712	4446	77.8	5492	4251	77.4
Uraia Na Maadili	7674	5146	67.1	8701	6366	73.2	5712	4103	71.8	5492	4481	81.6

Source: Same District Education Office (2026)

According to the SDEO records presented in Table 1, the pass rate represents the percentage of registered candidates recorded as having passed Mathematics in the National Examination Standard Seven in Same District Council. The data indicate that Mathematics recorded relatively low pass rates compared with most of the other subjects presented in the table. The pass rate remained almost unchanged between 2022 (27.9%) and 2023 (27.8%), increased to 36.7% in 2024, and declined to 31.0% in 2025. These results point to a continuing concern regarding Mathematics performance in the district and suggest the need to strengthen instructional practices that support effective classroom teaching. Regular supervision of teachers' lesson preparation provides an important mechanism for identifying weaknesses in lesson planning, providing constructive guidance, and ensuring that planned instructional activities are effectively implemented during Mathematics lessons.

Despite the importance of lesson preparation in Mathematics teaching, challenges may arise when teachers do not consistently prepare, update, and implement lesson plans in accordance with the intended instructional objectives. Inadequate and incomplete lesson plans may result in unclear lesson objectives, inappropriate teaching strategies, insufficient teaching and learning resources, weak organization of learning activities, and limited opportunities to address learners' needs during Mathematics lessons. This results in inadequate learning of Mathematics. In this regard, Head Teachers' supervision is important for reviewing lesson plans, identifying preparation gaps, providing constructive feedback, and following up on recommended improvements. However, although previous studies in Tanzania have examined instructional supervision, school leadership, teacher motivation, and pupils' academic performance**,** limited empirical evidence has established the extent to which Head Teachers supervise teachers' lesson preparation practices specifically to enhance the teaching of Mathematics in public primary schools. This leaves insufficient evidence on how lesson preparation supervision supports teachers' preparedness, lesson organization, instructional strategies, resource planning, and implementation of Mathematics lessons. This gap prompted the present study to examine the extent to which Head Teachers' supervision of teachers' lesson preparation practices enhances the teaching of Mathematics in public primary schools in Same District Council, Tanzania.

Statement of the Problem

The teaching of Mathematics remains a persistent challenge in public primary schools in Same District Council, as reflected in PSLE results, which show

persistent low performance with a decline from 27.9% in 2022 to 27.8% in 2023, an increase to 36.7% in 2024, and a further decline to 31.0% in 2025 (Same District Council Education Office, 2026). Mathematics is particularly important because it develops learners' numeracy, logical reasoning, and problem-solving skills, which are essential for further education and everyday life. Moreover, Mathematics teaching requires careful lesson preparation because teachers need to plan clear concepts, appropriate teaching strategies, practical learning activities, relevant teaching and learning resources, and suitable assessment procedures. However, challenges such as inadequate resources, overcrowded classrooms, teacher shortages, and limited professional support may hinder quality Mathematics teaching (UNESCO, 2021; Mfaume & Komba, 2022; World Bank, 2023). Although Head Teachers are responsible for supervising instructional preparation through lesson plan review, feedback, and follow-up**,** limited empirical evidence shows the extent to which these practices support Mathematics teaching in public primary schools in Same District Council. This creates a need for empirical evidence to strengthen supervision of Mathematics lesson preparation. Therefore, this study examined the extent to which Head Teachers' supervision of teachers' lesson preparation practices enhances the teaching of Mathematics in public primary schools in Same District Council, Tanzania.

Research Question

This study was guided by the following research question

To what extent does the head teacher's supervision of teachers' lesson preparation practices enhance the teaching of mathematics in public primary schools in Same District Council, Tanzania?

Significance of the Study

The findings of this study provide valuable insights into the extent to which Head Teachers' supervision of teachers' lesson preparation practices enhances the teaching of Mathematics in public primary schools. The findings are useful to Head Teachers and Mathematics Teachers in understanding the importance of lesson plan review, constructive feedback, and follow-up in strengthening teachers' preparedness and classroom instruction. For education policy, the findings provide empirical evidence that can inform the implementation and strengthening of existing provisions on instructional supervision, teachers' lesson preparation, and quality teaching in public primary schools. The study also affirms the Instructional Leadership Theory by demonstrating how supervision of teachers' lesson preparation relates to the management of the instructional programme. Furthermore, the study adds empirical evidence to the existing body of knowledge on instructional supervision and Mathematics teaching in Tanzanian public primary schools and provides a reference for future researchers conducting related studies in similar educational contexts.

Theoretical Framework

This study was guided by the Instructional Leadership Theory (ILT) developed by Hallinger and Murphy (1985), which emphasizes that school effectiveness is enhanced when head teachers actively lead and supervise teaching and learning processes. The theory is built on three interrelated dimensions of instructional leadership: defining the school mission, managing the instructional programme, and promoting a positive school learning climate. Among these dimensions, managing the instructional programme is considered the core responsibility of instructional leaders because it focuses on supervising classroom instruction to improve teaching quality. This dimension involves reviewing teachers' lesson preparation, monitoring the implementation of instructional time, ensuring the availability and effective use of teaching and learning resources, supporting teachers' professional development, and monitoring instructional performance through continuous supervision and constructive feedback. The theory assumes that effective instructional supervision strengthens teachers' instructional competence, promotes adherence to curriculum requirements, and improves the quality of classroom teaching, thereby enhancing pupils' learning outcomes (Hallinger & Murphy, 1985; Hallinger, 2005). The theory further assumes that improving teaching quality requires head teachers to be actively involved in planning, supervising, monitoring, and supporting teachers throughout the instructional process, rather than focusing solely on administrative responsibilities. Through continuous supervision, classroom observation, professional guidance, and timely feedback, head teachers are expected to improve teachers' lesson preparation and instructional practices while ensuring that teaching aligns with curriculum expectations and learners' needs. Although the theory pays less attention to contextual factors such as socio-economic conditions, community participation, and collaborative leadership approaches that may also influence teaching quality (Spillane, 2006; Bush, 2011), it provides a strong theoretical foundation for examining how head teachers' supervision of teachers' lesson preparation practices contributes to enhancing the teaching of Mathematics in public primary schools. Therefore, Instructional Leadership Theory was considered appropriate for this study because it explains the supervisory roles of head teachers in improving lesson preparation and instructional effectiveness, which directly correspond to the study objective of examining the extent to which head teachers' supervision of teachers' lesson preparation practices enhances the teaching of Mathematics in

public primary schools in Same District Council, Tanzania.

Review of Empirical Studies

This section reviews empirical studies related to the current study. The reviewed studies are organized according to themes derived from the research questions, with a focus on head teachers' supervision of teachers' lesson preparation practices in enhancing the teaching of Mathematics in primary schools. The review also identifies gaps in existing empirical evidence that justify the current study.

The Extent to which Head Teachers' Supervision of Teachers' Lesson Preparation Practices Enhances the Teaching of Mathematics in Primary Schools

Effective supervision of teachers' lesson preparation is recognized as an important instructional leadership practice for improving lesson delivery, teachers' preparedness and instructional quality, particularly in the teaching of Mathematics. Through supervision, head teachers provide professional guidance, feedback and support that enable teachers to improve lesson planning and classroom instruction. The studies reviewed in this section examine head teachers' supervision of teachers' lesson preparation practices and their contribution to enhancing the teaching of Mathematics in public primary schools.

Robinson (2020) conducted a qualitative case study in the United States to explore the influence of instructional leadership on Mathematics teaching, involving primary school principals. Data were collected using semi-structured interviews conducted through Zoom and analyzed thematically. The study found that head teachers enhanced Mathematics instruction through practices such as collaboratively reviewing lesson plans with teachers, setting instructional goals, and providing feedback on lesson organization and content accuracy. These supervisory practices strengthened teachers' pedagogical approaches and improved learners' understanding of mathematical concepts. The study informed the current study by demonstrating that supervision of teachers' lesson preparation is an important instructional leadership practice for improving the quality of Mathematics teaching. It also provided a basis by focusing on lesson preparation supervision as the key instructional leadership practice examined in the current study. However, the study focused primarily on principals' perspectives, with limited attention to teachers' perspectives, and used a qualitative approach, which provided in-depth insights but limited the breadth of perspectives. Therefore, the current study employed a mixed-methods approach, clearly specifies the sample size and sampling techniques, includes both Head Teachers and Mathematics Teachers, and is conducted in public primary schools in Same District Council, Tanzania, to generate context-specific empirical evidence.

Ekeh and Ramsaroop (2022) conducted a quantitative descriptive survey in Nigeria to examine the roles of Mathematics supervisors in enhancing instructional quality at the pre-primary and primary school levels. The study involved 110 participants (86 teachers and 24 supervisors) selected through simple random sampling. Data were collected using structured questionnaires and analyzed using descriptive statistics. The findings revealed that supervisors who consistently reviewed lesson plans and guided teachers in setting clear learning objectives and using appropriate instructional materials significantly enhanced the teaching of Mathematics. The study informed the current study by demonstrating that supervision of teachers' lesson preparation is an important instructional leadership practice for improving the quality of Mathematics teaching. It also highlighted lesson preparation review as a key supervisory practice that supports effective classroom instruction. However, the study relied on a single data collection instrument, which may have limited opportunities to obtain an in-depth understanding of supervisory practices. Furthermore, the study focused primarily on subject supervisors, while giving limited attention to the supervisory roles of head teachers in lesson preparation practices. It also provided limited evidence on head teachers' supervisory operational planning practices related to lesson preparation. Therefore, the current study employs multiple data collection instruments, namely questionnaires, interviews, and document analysis, and focuses on both head teachers and Mathematics teachers to examine the extent to which head teachers' supervision of teachers' lesson preparation practices enhances the teaching of Mathematics in public primary schools in Same District Council, Tanzania.

Muganza (2022) employed a mixed-methods approach to examine the impact of head teachers' instructional supervision on teacher performance in 30 public primary schools in Kampala, Uganda. The study involved 330 participants (300 teachers and 30 head teachers). Data were collected through questionnaires and document reviews and analyzed using descriptive statistics and thematic analysis. The findings revealed that regular supervision of lesson preparation enhanced teachers' confidence, classroom organization, and timely syllabus coverage, which subsequently improved the teaching and learning of Mathematics. The study provided insights for the present study by highlighting the importance of teachers' lesson preparation supervision as an instructional leadership practice for improving the quality of Mathematics teaching. It also provided evidence on how effective supervision of lesson preparation strengthens teachers' instructional practices. However, the study provided limited information regarding the sampling procedures and the distribution of participants across the sampled schools,

making it difficult to assess the transparency and transferability of the findings. Furthermore, the study was conducted in an urban and relatively well-resourced educational context, which may limit the applicability of its findings to rural public primary schools where instructional conditions and resource availability differ. Therefore, the current study employs clearly defined sampling procedures, involves head teachers and Mathematics teachers from rural public primary schools, and examines the extent to which head teachers' supervision of teachers' lesson preparation practices enhances the teaching of Mathematics in Same District Council, Tanzania.

Halala and Seni (2022) examined teachers' frequency of lesson plan preparation and use in public primary schools in Igunga District, Tanzania, using a mixed-methods explanatory design. The study involved 69 participants, including 60 teachers, 4 head teachers, and 5 quality assurance officers, who were selected through purposive sampling. Data were collected through questionnaires, interviews, and document analysis, and analyzed using thematic analysis for qualitative data and descriptive statistics for quantitative data. The findings indicated that schools where head teachers frequently reviewed lesson plans demonstrated better instructional organization and improved learner participation, particularly in Mathematics and Science lessons. The study contributed to the current study by highlighting the importance of head teachers' supervision of lesson preparation in strengthening instructional practices and improving classroom teaching. It also provided evidence on the role of lesson plan review in supporting effective teaching and learning processes. However, the study placed greater emphasis on the frequency of lesson plan preparation and use, while providing limited evidence on how lesson plan supervision contributes to the enhancement of Mathematics teaching. However, the study focused more on the frequency of lesson plan preparation and use, with limited evidence on the quality of supervision practices such as provision of constructive feedback and follow-up, and on how such supervision specifically enhances the teaching of Mathematics. Moreover, the study was conducted in Igunga District, leaving a contextual gap regarding public primary schools in Same District Council. Therefore, the current study employs a larger and more diverse sample drawn from 30 public primary schools in Same District Council and uses multiple sampling techniques, including simple random sampling, purposive sampling, and criterion purposive sampling, to examine the extent to which head teachers' supervision of teachers' lesson preparation practices enhances the teaching of Mathematics in rural public primary schools in Tanzania.

Seraphine et al. (2022) investigated primary teachers' perceptions of head teachers' instructional supervision in the preparation of professional documents in public primary schools in Rombo District, Kilimanjaro, Tanzania. The study employed an embedded mixed-methods design and involved a target population of 142 primary schools, 142 head teachers, 1,322 teachers, and the District Education Officer. A sample of 130 respondents was selected using both probability and non-probability sampling techniques. Data were collected through questionnaires and interview guides, with quantitative data analyzed using descriptive statistics in SPSS version 27 and qualitative data analyzed thematically. The findings indicated that teachers generally held positive perceptions of head teachers' instructional supervision, and regular review of professional documents was associated with improved teacher preparedness and instructional effectiveness. The study informed the present study by highlighting the importance of head teachers' supervision of professional documents in strengthening teachers' preparedness and instructional practices. It also provided evidence on the contribution of instructional supervision to improving classroom teaching processes. However, the study mainly focused on teachers' perceptions of professional document review, while providing limited evidence on how head teachers' supervision of lesson preparation practices contributes specifically to enhancing Mathematics teaching. In addition, the study relied mainly on questionnaires and interview guides, which may have provided limited opportunities to examine actual classroom practices and the implementation of lesson preparation procedures. Therefore, the current study employs multiple data collection instruments, including questionnaires, interviews and document analysis, to examine the extent to which head teachers' supervision of teachers' lesson preparation practices enhances the teaching of Mathematics in public primary schools in Same District Council, Tanzania.

Demonstration of Research Gaps

The reviewed empirical studies demonstrate growing scholarly attention to instructional supervision and its role in enhancing the teaching of Mathematics. However, several gaps remain. Regarding the knowledge gap, studies such as Robinson (2020), Ekeh and Ramsaroop (2022), and Seraphine et al. (2022) mainly focused on instructional leadership, supervision of professional documents, and the role of mathematics supervisors, providing limited evidence on the specific contribution of head teachers' supervision of teachers' lesson preparation practices to Mathematics teaching. Concerning the methodological gap**,** Robinson (2020) employed a qualitative approach, while Ekeh and Ramsaroop (2022) used a quantitative approach, limiting methodological triangulation and the breadth of evidence. Regarding the contextual gap, studies by Robinson (2020), Ekeh and Ramsaroop (2022), and Muganza (2022) were conducted in the United States, Nigeria, and Uganda, while studies conducted in

Tanzania, such as Halala and Seni (2022) and Seraphine et al. (2022), were undertaken in contexts different from Same District Council. Therefore, this study addresses these knowledge, methodological, and contextual gaps by examining the extent to which head teachers' supervision of teachers' lesson preparation practices enhances the teaching of Mathematics in public primary schools in Same District Council, Tanzania, using a mixed-methods approach and multiple data collection instruments.

METHODOLOGY

The study adopted the pragmatist research philosophy and employed a mixed-methods approach and a convergent design, where quantitative and qualitative data were collected and analyzed concurrently (Creswell & Creswell, 2023). The target population comprised 1,282 individuals, including 183 head teachers, 183 academic teachers, and 916 Mathematics teachers from 183 public primary schools in Same District Council. A sample of 30 public primary schools (16.4% of 183 schools) was selected through simple random sampling using a lottery method, in line with the 10-30% guideline for descriptive survey studies with small and homogeneous populations (Cohen et al., 2018), to balance representativeness and manageability. From the sampled schools, 30 head teachers were selected through criterion purposive sampling based on the criterion of holding the substantive position of head teacher with overall responsibility for instructional supervision; while 30 academic teachers were selected through expert purposive sampling as key informants based on their expert role in curriculum implementation and custody of teachers' professional documents. A total of 157 Mathematics teachers were selected through criterion purposive sampling based on the criterion of currently teaching Mathematics or having taught it in the previous academic year. This yielded a total sample of 217 respondents. Data were collected using questionnaires for Mathematics and academic teachers, interview guides for head teachers, and a document analysis guide

The validity of the research instruments was established through three reviews by specialists in Educational Planning and Administration from Mwenge Catholic University (MWECAU), who assessed the relevance, clarity, and appropriateness of the instruments and recommended the necessary revisions to ensure alignment with the study objective. A pilot study was conducted in two public primary schools (1% of the sampled schools) as recommended by Anupama et al. (2023), involving 9 Mathematics teachers, 2 head teachers, and 2 academic teachers. The schools involved in the pilot study were excluded from the actual study. Reliability of the questionnaire was assessed using Cronbach's Alpha with the aid of IBM SPSS Statistics Version 27, yielding an overall coefficient of 0.794 for mathematics teachers and 0.856 for Academic teachers, indicating acceptable internal consistency (Cohen et al., 2018). Trustworthiness of qualitative data was enhanced through triangulation and peer debriefing to ensure credibility and dependability.

Quantitative data were analyzed using descriptive statistics with the aid of SPSS Statistics Version 27 and presented using frequencies, percentages, means, and standard deviations. Qualitative data were analyzed through thematic analysis by transcribing interview data, coding, generating themes, and interpreting the findings. Ethical considerations, including research clearance, informed consent, voluntary participation, confidentiality, anonymity, and avoidance of plagiarism, were observed throughout the study.

RESULT AND DISCUSSION

The study aimed to examine the extent to which head teachers' supervision of teachers' lesson preparation practices enhances the teaching of Mathematics in public primary schools in Same District Council, Tanzania. Data were collected through questionnaires administered to Mathematics Teachers (MT) and Academic Teachers (AT), interviews with Head Teachers, classroom observations, and document analysis. A five-point Likert scale was used, where 1 = Very Low Extent (VLE), 2 = Low Extent (LE), 3 = Moderate Extent (ME), 4 = High Extent (HE), and 5 = Very High Extent (VHE). The interpretation of mean scores followed Gomez and Hashim (2020), whereby scores of 1.00–2.69 indicate a low extent, 2.70–3.49 indicate a moderate extent, and 3.50–5.00 indicate a high extent.

Table 2. Mathematics Teachers' and Academic Teachers' responses on the extent to which Head Teachers' Supervision of Teachers' Lesson Preparation Practices Enhances the Teaching of Mathematics in Public Primary Schools in the Same District Council, Tanzania (n=152, n=30)

S/N	Statements	Res	very low extent		low extent		moderate extent		high extent		Very high extent		mean
			f	%	f	%	f	%	f	%	f	%	

1	Lesson plan supervision promotes accountability among teachers in preparing mathematics lessons.	MT	12	7.9	36	23.7	19	12.5	45	29.6	40	26.3	3.43
		AT	0	00.0	8	26.7	4	13.3	3	10.0	15	50.0	3.83
2	Lesson plan supervision ensures logical sequencing of mathematics topics across grade levels.	MT	43	28.3	30	19.7	39	25.7	33	21.7	7	4.6	2.55
		AT	1	3.3	7	23.3	5	16.7	4	13.3	13	43.3	3.70
3	Head teachers guide teachers in selecting appropriate teaching methods for mathematics.	MT	0	00.0	24	15.8	34	22.4	48	31.6	45	29.6	3.75
		AT	6	20.0	13	43.3	4	13.3	4	13.3	3	10.0	2.50
4	Supervision of lesson plans enhances teachers' preparedness for teaching mathematics.	MT	10	6.6	29	19.1	18	11.8	53	34.9	40	26.3	3.56
		AT	0	00.0	4	13.3	4	13.3	10	33.3	12	40.0	4.00
5	Head teachers identify gaps in lesson plans and provide constructive suggestions for improvement.	MT	6	3.9	45	29.6	26	17.1	42	27.6	33	21.7	3.34
		AT	3	10.0	1	3.3	3	10.3	10	33.3	13	43.3	3.97
6	Lesson review fosters active student engagement in mathematics.	MT	27	17.8	42	27.6	34	22.4	27	24.3	11	7.2	2.75
		AT	7	23.3	10	33.3	8	26.7	4	13.3	1	3.3	2.40
7	Head teachers' supervision helps teachers implement effective teaching strategies.	MT	0	00.0	5	3.3	30	19.7	51	33.6	65	42.8	4.17
		AT	2	6.7	4	13.3	6	20.0	6	20.0	12	40.0	3.73
8	Lesson plan supervision ensures proper coverage of the mathematics syllabus.	MT	8	5.3	27	17.8	40	26.3	48	31.6	28	18.4	3.40
		AT	0	00.0	2	6.7	2	6.7	5	16.7	21	70.0	4.50
9	Feedback from head teachers improves the quality of mathematics lessons.	MT	1	7	7	4.6	36	23.7	52	34.2	55	36.2	4.01
		AT	0	00.0	4	13.3	7	23.3	0	00.0	19	63.3	4.13
10	Head teachers regularly review teachers' lesson plans.	MT	16	10.5	33	21.7	61	40.1	34	22.4	7	4.6	2.89
		AT	0	00.0	8	26.7	8	26.7	5	16.7	9	30.0	3.50

Grand mean for mathematics teachers = 3.39

Grand mean for academic teachers = 3.64

Source: Field Data (2026).

Key: MT = Mathematics Teachers; AT = Academic Teachers; VLE = Very Low Extent; LE = Low Extent; ME = Moderate Extent; HE = High Extent; VHE = Very High Extent; f = Frequency; % = A five-point Likert scale was used, where 1 = Very Low Extent (VLE), 2 = Low Extent (LE), 3 = Moderate Extent (ME), 4 = High Extent (HE), and 5 = Very High Extent (VHE). The interpretation of mean scores followed Gomez and Hashim (2020), whereby scores of 1.00–2.69 indicate a low extent, 2.70–3.49 indicate a moderate extent, and 3.50–5.00 indicate a high extent.

Data in Table 2 indicate that feedback from head teachers improved the quality of Mathematics lessons to a high extent among Mathematics Teachers, as reflected by a mean score of 4.01. Among Mathematics Teachers, 8 (5.3%) rated the practice at a low extent, 36 (23.8%) rated it at a moderate extent, while 107 (70.9%) rated it at a high extent. Similarly, Academic Teachers perceived that feedback from head teachers improved the quality of Mathematics lessons to a high extent, as reflected by a mean score of 4.13. Among Academic Teachers, 4 (13.3%) rated the practice at a low extent, 7 (23.3%) rated it at a moderate extent, while 19 (63.3%) rated it at a high extent. These findings indicate that a majority of respondents perceived feedback as enhancing Mathematics teaching to a high extent, as 70.9% (n=107) of Mathematics Teachers and 63.3% (n=19) of Academic Teachers rated it at a high extent, with mean scores of 4.01 and 4.13, respectively, which fall within the high extent category (3.50-4.49) according to Gomez and Hashim (2022). The slightly higher mean among Academic Teachers (M=4.13) compared to Mathematics Teachers (M=4.01) suggests Academic Teachers, as key informants, perceived feedback to be more effective, though both groups concurred on its contribution.

These quantitative findings were further supported by the interview findings from Head Teachers. A face-to-face interview with the Head Teacher of School “7” had this to say:

> *I regularly review Mathematics teachers’ lesson plans to assess their preparedness for classroom instruction. I check the lesson objectives, teaching methods, learning activities, and assessment procedures. When I identify weaknesses, I provide feedback and guidance and follow up to ensure that the feedback is reflected in classroom teaching. (Face-to-face interview with the Head Teacher, School “7”, 30th April 2026)*.

Likewise, the Head Teacher of School “6” reported that timely feedback was sometimes difficult to provide because teachers did not always submit their lesson plans before conducting Mathematics lessons. The Head Teacher explained:

> *Sometimes it is difficult to provide timely feedback because some Mathematics teachers submit their lesson plans late. Although I review them during routine supervision, late submission may delay the identification of weaknesses and guidance before the lesson is conducted. (Face-to-face interview with the Head Teacher, School “6”, 2nd May 2026)*.

The two interview responses therefore complement the quantitative findings by showing that regular review, feedback, guidance, and follow-up supported improvements in Mathematics lesson preparation and classroom instruction, although delayed submission limited timely intervention.

These interview views were further supported by document analysis. At School “7”, lesson plans contained detailed teaching strategies, step-by-step activities, teaching aids such as number lines and geometric shapes, and assessment strategies, together with Head Teachers’ comments such as “use group work” and “add practical example”. At School “6”, earlier lesson plans mainly used lecture and question-answer methods, while later plans showed greater variation in teaching strategies following supervision. These findings suggest that supervisory feedback contributed to improving teachers’ lesson preparation and the quality of planned Mathematics instruction.

The quantitative and qualitative findings indicate that feedback from Head Teachers improved the quality of Mathematics lessons to a high extent among Mathematics Teachers (M = 4.01) and Academic Teachers (M = 4.13)**.** This finding is consistent with Mwaura et al. (2023), who found that active instructional supervision and regular monitoring of instructional planning supported effective lesson preparation. The finding is also supported by Instructional Leadership Theory (Hallinger & Murphy, 1985), particularly the management of the instructional programme, which emphasizes supervision, evaluation, and monitoring of instruction. In this study, feedback from Head Teachers which is part of leadership operational planning enabled teachers to identify weaknesses, improve teaching strategies, and strengthen classroom instruction.

Data in Table 2 indicate that Head Teachers’ supervision helped teachers implement effective teaching strategies to a high extent among Mathematics

Teachers, as reflected by a mean score of 4.01. Among Mathematics Teachers, 8 (5.3%) rated the practice at a low extent, 36 (23.8%) rated it at a moderate extent, while 107 (70.9%) rated it at a high extent. Similarly, Academic Teachers perceived that Head Teachers' supervision helped teachers implement effective teaching strategies to a high extent, as reflected by a mean score of 4.13. Among Academic Teachers, 4 (13.3%) rated the practice at a low extent, 7 (23.3%) rated it at a moderate extent, while 19 (63.3%) rated it at a high extent. These findings indicate that a majority of respondents perceived Head Teachers' supervision as supporting the implementation of effective teaching strategies to a high extent, as 70.9% (n=107) of Mathematics Teachers and 63.3% (n=19) of Academic Teachers rated it at a high extent, with mean scores of 4.01 and 4.13 respectively, which fall within the high extent category (3.50-4.49) according to Gomez and Hashim (2022). The slightly higher mean among Academic Teachers (M=4.13) compared to Mathematics Teachers (M=4.01) suggests Academic Teachers, as key informants, perceived supervision to be more effective in supporting teaching strategies, though both groups concurred on its contribution.

These quantitative findings were further supported by the interview findings from Head Teachers. A face-to-face interview with the Head Teacher of School "7" had this to say:

> *I regularly review Mathematics teachers' lesson plans to assess their preparation for classroom instruction, including lesson objectives, teaching methods, learning activities, teaching aids, and assessment procedures. When weaknesses are identified, I provide feedback and guidance on appropriate teaching strategies and follow up during classroom supervision to ensure their implementation. In this way, supervision helps improve the teaching of Mathematics. (Face-to-face interview with the Head Teacher, School "7", 30th April 2026)*.

In the same vein, the Head Teacher of School "6" reported that late submission of lesson plans sometimes constrained the timely supervision and implementation of recommended teaching strategies.

> *Sometimes, providing timely guidance on Mathematics teaching strategies is challenging when lesson plans are submitted late. Late submission may reduce the time available for reviewing planned activities, teaching aids, and assessment methods before lessons are implemented, thereby limiting opportunities for timely supervisory feedback and guidance. (Face-to-face interview with the Head Teacher, School "6", 2nd May 2026).*

The two interview reviews complement the quantitative findings by showing that supervision supported the implementation of effective teaching strategies through lesson plan review, guidance, and follow-up, although late submission of lesson plans sometimes limited timely guidance.

These interview findings were supported by document analysis. At School "7", lesson plans included detailed teaching strategies, step-by-step activities, teaching aids, assessment strategies, and Head Teachers' comments such as "use group work" and "add practical example". At School "6", earlier plans mainly used lecture and question-and-answer methods, while later plans showed greater variation in teaching strategies following supervision.

The quantitative and qualitative findings indicate that Head Teachers' supervision supported the implementation of teaching strategies to a high extent among Mathematics Teachers (M = 4.01) and Academic Teachers (M = 4.13). This finding is consistent with Mwaura et al. (2023), who found that active instructional supervision and regular monitoring of instructional planning supported the use of effective teaching approaches. The finding is also supported by Instructional Leadership Theory (Hallinger & Murphy, 1985), particularly the management of the instructional programme, which emphasizes supervision, evaluation, and monitoring of instruction. In this study, lesson plan review enabled Head Teachers to guide teachers in selecting teaching methods, using teaching aids, organizing learning activities, and applying appropriate assessment procedures.

Data in Table 2 indicate that lesson plan supervision ensured proper coverage of the Mathematics syllabus to a moderate extent among Mathematics Teachers, as reflected by a mean score of 3.40. Among Mathematics Teachers, the minority, 35 (23.2%) rated the practice at a low extent, 40 (26.5%) rated it at a moderate extent, while 76 (50.3%) rated it at a high extent. In contrast, Academic Teachers perceived that lesson plan supervision ensured proper coverage of the Mathematics syllabus to a very high extent, as reflected by a mean score of 4.50. Among Academic Teachers, 2 (6.7%) rated the practice at a low extent, 2 (6.7%) rated it at a moderate extent, while 26 (86.7%) rated it at a high extent. These findings indicate that a majority of respondents perceived lesson plan supervision as supporting Mathematics syllabus coverage to a moderate to very high extent, as 50.3% (n=76) of Mathematics Teachers and 86.7% (n=26) of Academic Teachers rated it at a high extent, with mean scores of 3.40 and 4.50 respectively, which fall within the moderate extent category (2.50-3.49) and very high extent category (4.50-5.00) according to Gomez and Hashim (2022). The higher mean among Academic Teachers (M=4.50) compared to Mathematics Teachers (M=3.40) suggests Academic Teachers, as key

informants, perceived syllabus coverage supervision more positively than Mathematics Teachers.

The interview findings from Head Teachers further supported these quantitative findings. A face-to-face interview with the Head Teacher from School "7" indicated that lesson plans were reviewed to assess whether lesson objectives, teaching methods, learning activities, and assessment procedures were properly planned. The Head Teacher explained:

> *I supervise Mathematics teachers' lesson plans to assess preparedness, including objectives, teaching methods, learning activities, and assessment procedures. However, accountability remains challenging because some teachers prepare plans mainly for administrative requirements. I therefore conduct regular monitoring and follow-up to ensure lesson plans guide classroom teaching. (Face-to-face interview with the Head Teacher, School "7", 30th April 2026)*.

In the same vein, the Head Teacher of School "6" reported that irregular submission of lesson plans limited timely review and guidance.

> *I occasionally review teachers' lesson plans before Mathematics lessons because some are submitted late. Although I check them during routine supervision, irregular submission limits consistent review. Consequently, some preparation gaps may remain unidentified, reducing opportunities to provide timely feedback and guidance before Mathematics lessons are conducted. (Face-to-face interview with the Head Teacher, School "6", 2nd May 2026)*.

The response suggests that inconsistent lesson plan submission limited regular supervision and timely identification of preparation gaps, affecting systematic implementation of planned Mathematics content. Document analysis supported this finding: School "6" had some incomplete lesson plans, while School "7" had relatively complete and updated documents, indicating variations in lesson preparation and supervision across schools.

The quantitative and qualitative findings indicate that lesson plan supervision supported Mathematics syllabus coverage to a moderate extent among Mathematics Teachers (M = 3.40) and a high extent among Academic Teachers (M = 4.50)**.** This finding is consistent with Mwaura et al. (2023), who found that active instructional supervision and regular monitoring supported teachers' lesson preparation. The finding is also supported by Instructional Leadership Theory (Hallinger & Murphy, 1985), particularly the management of the instructional programme, which emphasizes supervision, evaluation, and monitoring of instruction. In this study, lesson plan review enabled Head Teachers to monitor planned Mathematics content and follow up its implementation

Data in Table 2 indicate that supervision of lesson plans enhanced teachers' preparedness for teaching Mathematics to a high extent among Mathematics Teachers, as reflected by a mean score of 3.56. Among Mathematics Teachers, 39 (26.0%) rated the practice at a low extent, 18 (12.0%) rated it at a moderate extent, while 93 (62.0%) rated it at a high extent. Similarly, Academic Teachers perceived that supervision of lesson plans enhanced teachers' preparedness for teaching Mathematics to a high extent, as reflected by a mean score of 4.00. Among Academic Teachers, 4 (13.3%) rated the practice at a low extent, 4 (13.3%) rated it at a moderate extent, while 22 (73.3%) rated it at a high extent. These findings indicate that a majority of respondents perceived lesson plan supervision as enhancing teachers' preparedness for Mathematics teaching to a high extent, as 62.0% (n=93) of Mathematics Teachers and 73.3% (n=22) of Academic Teachers rated it at a high extent, with mean scores of 3.56 and 4.00 respectively, which fall within the high extent category (3.50-4.49) according to Gomez and Hashim (2022). The slightly higher mean among Academic Teachers (M=4.00) compared to Mathematics Teachers (M=3.56) suggests Academic Teachers, as key informants, perceived lesson plan supervision as more effective in enhancing preparedness, though both groups concurred on its contribution.

These quantitative findings were further supported by the interview findings from Head Teachers. A face-to-face interview with the Head Teacher of School "7" had this to say:

> *I supervise Mathematics teachers' lesson plans to assess their preparedness for classroom instruction. I review lesson objectives, teaching methods, learning activities, and assessment procedures, while conducting regular monitoring and follow-up to ensure lesson preparation documents are properly and effectively implemented during Mathematics classroom teaching consistently. (Face-to-face interview with the Head Teacher, School "7", 30th April 2026).*

Similarly, the Head Teacher of School "6" reported that irregular submission of lesson plans sometimes limited timely review of teachers' preparation.

> *I occasionally review teachers' lesson plans before Mathematics lessons, but late submission makes consistent review difficult. Consequently, some preparation gaps may not be identified early, limiting opportunities to provide timely feedback and guidance before classroom*

> *instruction. (Face-to-face interview with the Head Teacher, School "6", 2nd May 2026)*.

Thus, the interview reviews complemented the quantitative results by showing that regular lesson plan review strengthened teachers' preparation, while delayed submission reduced timely supervisory support.

Document analysis further supported these findings. At School "7", lesson plans contained detailed objectives, learning activities, teaching aids, and assessment strategies, indicating adequate preparation before classroom instruction. In contrast, some plans at School "6" were incomplete filled, showing variations in the consistency of lesson preparation across schools.

The quantitative and qualitative findings indicate that lesson plan supervision enhanced teachers' preparedness for Mathematics teaching to a high extent among Mathematics Teachers (M = 3.56) and Academic Teachers (M = 4.00). This finding is consistent with Seraphine et al. **(**2022), who found that regular review of teachers' professional documents was associated with improved teacher preparedness and instructional effectiveness. The finding is also supported by Instructional Leadership Theory (Hallinger & Murphy, 1985), particularly the management of the instructional programme, which emphasizes supervision and evaluation of instruction. In this study, lesson plan review enabled Head Teachers to assess teachers' preparation, identify weaknesses, and provide guidance before Mathematics lessons.

Data in Table 2 indicate that Head Teachers identified gaps in lesson plans and provided constructive suggestions for improvement to a moderate extent among Mathematics Teachers, as reflected by a mean score of 3.34. Among Mathematics Teachers, 51 (33.6%) rated the practice at a low extent, 26 (17.1%) rated it at a moderate extent, while 75 (49.3%) rated it at a high extent. In contrast, Academic Teachers perceived that Head Teachers identified gaps in lesson plans and provided constructive suggestions for improvement to a high extent, as reflected by a mean score of 3.97. Among Academic Teachers, 4 (13.3%) rated the practice at a low extent, 3 (10.0%) rated it at a moderate extent, while 23 (76.7%) rated it at a high extent. These findings indicate that a majority of Academic Teachers and nearly half of Mathematics Teachers perceived Head Teachers as identifying gaps and providing improvement suggestions to a moderate to high extent, as 49.3% (n=75) of Mathematics Teachers and 76.7% (n=23) of Academic Teachers rated it at a high extent, with mean scores of 3.34 and 3.97 respectively, which fall within the moderate extent category (2.50-3.49) and high extent category (3.50-4.49) according to Gomez and Hashim (2022). The higher mean among Academic Teachers (M=3.97) compared to Mathematics Teachers (M=3.34) suggests Academic Teachers, as key informants, perceived the identification of gaps and provision of suggestions more positively than Mathematics Teachers.

The interview findings from Head Teachers further supported these quantitative findings. A face-to-face interview with the Head Teacher of School "7" had this to say:

> *I supervise Mathematics teachers' lesson plans to assess their preparedness for classroom instruction. I review lesson objectives, teaching methods, learning activities, and assessment procedures. I also conduct regular monitoring and follow-up to ensure effective implementation of lesson plans during classroom teaching. (Face-to-face interview with the Head Teacher, School "7", 30th April 2026).*

In a similar manner, the Head Teacher of School "6" reported that delayed submission of lesson plans sometimes hindered early identification of teachers' preparation gaps.

> *I occasionally review teachers' lesson plans before Mathematics lessons because teachers do not always submit them on time. Although I check lesson plans during routine supervision, irregular submission makes consistent review difficult. Consequently, some preparation gaps may go unidentified early, limiting timely feedback and guidance before Mathematics lessons. (Face-to-face interview with the Head Teacher, School "6", 2nd May 2026)*.

The two interview responses therefore complement the quantitative findings by showing that identifying gaps and providing suggestions depended on timely review of lesson plans. These interview findings were further supported by document analysis of Mathematics teachers' lesson preparation documents. At School "7", lesson plans contained comments such as use group work and add practical example indicating specific suggestions for improvement. At School "6", earlier lesson plans mainly used lecture and question-answer methods, while later plans showed greater variation in teaching strategies following supervision. These findings suggest that lesson plan review helped Head Teachers identify weaknesses and guide teachers in improving lesson preparation.

The quantitative and qualitative findings indicate that Head Teachers identified gaps in lesson plans and provided constructive suggestions to a moderate extent among Mathematics Teachers (M = 3.34) and a high extent among Academic Teachers (M = 3.97). This finding is consistent with Ekeh and Ramsaroop (2022)**,** who found that reviewing lesson plans and guiding teachers on learning objectives and instructional materials contributed to improved instructional quality. The finding is also supported by

Instructional Leadership Theory (Hallinger & Murphy, 1985), particularly the management of the instructional programme, which emphasizes supervision and evaluation of instruction.

Generally, the findings revealed that Head Teachers' supervision of teachers' lesson preparation practices, which is one of the head teacher's instructional leadership duties, contributed to enhancing the teaching of Mathematics to a moderate extent among Mathematics Teachers (M = 3.39) and to a high extent among Academic Teachers (M = 3.64). Supervision supported teachers' preparedness, lesson organization, identification of preparation gaps, teaching strategies, and syllabus coverage. However, some inconsistencies were observed in timely feedback, professional guidance, lesson plan submission, and follow-up supervision**.** These findings converged with interview and document analysis, which showed variations in the completeness and quality of lesson preparation documents. Therefore, Head Teachers should strengthen regular lesson plan supervision, timely feedback and follow-up to further enhance the teaching of Mathematics.

CONCLUSION

Based on the overall findings, the study concludes that Head Teachers' supervision of teachers' lesson preparation practices supported the teaching of Mathematics to a moderate to high extent in public primary schools in Same District Council. The extent of support varied across the aspects of lesson preparation and between Mathematics Teachers and Academic Teachers, indicating that the practice was not consistently implemented across the sampled schools. Overall, lesson plan supervision provided an important basis for supporting Mathematics teaching through teachers' lesson preparation.

Recommendation for Further Action

Based on the study findings, it is recommended that head teachers strengthen regular and systematic supervision of Mathematics teachers' lesson preparation by reviewing the quality and completeness of lesson plans, providing constructive and timely feedback, and conducting regular follow-up on identified weaknesses. Academic Teachers and School Management Teams should support head teachers in monitoring the implementation of recommended improvements and addressing challenges that limit effective lesson preparation supervision. These actions may strengthen teachers' preparedness and the contribution of lesson preparation supervision to the teaching of Mathematics in public primary schools in Same District Council.

REFERENCES

ADEM. (2023). Instructional leadership and school management manual. Agency for the Development of Educational Management.

Cohen, L., Manion, L., & Morrison, K. (2018). Research methods in education (8th ed.). Routledge.

Creswell, J. W., & Creswell, J. D. (2023). Research design: Qualitative, quantitative, and mixed methods approaches (6th ed.). SAGE Publications.

Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2024). Effective teacher professional learning: Research and practice. Learning Policy Institute.

Hallinger, P., & Murphy, J. (1985). Assessing the instructional management behavior of principals. The Elementary School Journal, 86(2), 217–247.

Halala, P., & Seni, J. (2022). Instructional supervision practices and teachers' job performance in public primary schools in Tanzania. East African Journal of Education and Social Sciences, 3(2), 120–131.

Macharia, J., Mwangi, P., & Wanjiru, S. (2023). Instructional supervision practices and teachers' lesson preparation in Kenyan public primary schools. International Journal of Educational Research, 11(2), 45–58.

Mfaume, H., & Komba, S. C. (2022). Challenges affecting mathematics teaching in Tanzanian primary schools. Journal of Education and Practice, 13(8), 56–68.

Muganza, A. (2022). Instructional supervision and teachers' classroom practices in public primary schools in Uganda. African Educational Research Journal, 10(3), 245–255.

Njoroge, P., Kariuki, J., & Wambui, M. (2024). Head teachers' instructional leadership and teachers' lesson preparation in Kenyan primary schools. Journal of Educational Leadership and Policy Studies, 8(1), 33–49.

OECD. (2023). PISA 2022 results (Volume I): The state of learning and equity in education. OECD Publishing.

Otieno, D. (2024). Head teachers' instructional supervision and classroom instruction in Kenyan public primary schools. International Journal of Educational Studies, 12(1), 71–84.

Robinson, V. M. J. (2020). Student-centered leadership (2nd ed.). Jossey-Bass.

Seraphine, M., Mushi, A., & Mwakalonge, J. (2022). Supervision of professional documents and teachers' instructional effectiveness in Tanzanian public primary schools. East African Journal of Education and Social Sciences, 3(4), 95–107.

UNESCO. (2021). Reimagining our futures together: A new social contract for education. UNESCO.

UNESCO. (2023). Global education monitoring report 2023: Technology in education-A tool on whose terms? UNESCO.

United Nations. (2015). Transforming our world: The 2030 Agenda for Sustainable Development. United Nations.

United Republic of Tanzania (URT). (2014). Education and Training Policy. Ministry of Education and Vocational Training.

Virtanen, T., Niemi, H., & Toom, A. (2021). Teacher collaboration and instructional improvement in Finnish basic education. Scandinavian Journal of Educational Research, 65(7), 1120–1136.

World Bank. (2022). Collapse and recovery: How COVID-19 eroded human capital and what to do about it. World Bank.

World Bank. (2023). Education sector support and learning recovery in Sub-Saharan Africa. World Bank.