

Extent of the Heads of Schools' Supervision in Improving Collaborative Learning Among Students in Public Secondary Schools in Arusha District Council, Tanzania

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Abstract: The study examined the extent to which heads of schools' instructional supervision enhances collaborative learning among students in public secondary schools in Arusha District Council, Tanzania. The study involved 11 public secondary schools and 525 participants, comprising 11 Heads of Schools, 152 teachers, and 362 students. Instructional Leadership Theory guided the study. The study employed a convergent design under a mixed-methods research. Quantitative data were collected using teachers' and students' questionnaires, while qualitative data were collected through an interview guide administered to Heads of Schools. The validity of the data collection instruments was established through review by three experts in Educational Planning and Administration from Mwenge Catholic University (MWECAU). A pilot study was conducted in one public secondary school that was not included in the actual study. The reliability of the Likert-scale items was determined using Cronbach's Alpha, which yielded coefficients of 0.933 for the teachers' questionnaire and 0.783 for the students' questionnaire, indicating high internal consistency and acceptable internal consistency, respectively. The trustworthiness of the qualitative data was enhanced through data triangulation and peer debriefing to establish the credibility and dependability of the findings. Quantitative data were analyzed descriptively using frequencies, percentages, and means with the aid of the Statistical Package for the Social Sciences (SPSS) Version 27, whereas qualitative data were analyzed thematically following Creswell's six-step process. Ethical considerations were observed through obtaining research clearance, securing informed consent, maintaining confidentiality and anonymity, and avoiding plagiarism. The findings revealed that heads of schools' instructional supervision enhanced collaborative learning among students to a moderate extent through classroom observation, instructional feedback, monitoring of teaching practices, and continuous professional support for teachers. The study concludes that heads of schools' instructional supervision enhances collaborative learning among students to a moderate extent by strengthening teachers' capacity to facilitate group discussions, cooperative problem-solving, project-based learning, and student participation. The study recommends that Heads of Schools should strengthen instructional supervision through regular classroom visits, provision of instructional feedback, and follow-up support to enable teachers to effectively implement collaborative learning strategies.

Keywords: Collaborative Learning, Instructional Leadership, Supervision, and Teacher Support.

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I. INTRODUCTION

Education is widely recognized as an important driver of sustainable development, economic growth, and social transformation because it equips individuals with knowledge, skills, values, and competencies required for personal, national, and global development (UNESCO, 2021; World

Bank, 2021; UNDP, 2022). However, achieving quality education depends not only on access to schooling, educational policies, and adequate resources, but also on the quality of teaching and learning practices implemented in classrooms. Education systems increasingly emphasize learner-centred approaches that enable students to participate actively in learning, communicate ideas, work with peers,

solve problems, and take shared responsibility for learning. Collaborative learning is one of these approaches, whereby students work together to exchange ideas, construct knowledge, solve problems, and accomplish shared learning tasks, different education systems indicates continued reliance on teacher-centred approaches and limited opportunities for students to engage in meaningful interaction and collaborative learning activities. This situation raises concern about the extent to which schools are providing classroom environments that enable students to develop the collaborative competencies expected in contemporary education.

Globally, evidence indicates that the implementation of learner-centred and collaborative instructional practices remains uneven. The concern is particularly important because effective collaborative learning requires teachers to organize meaningful group activities, facilitate student discussions, encourage peer learning, guide group problem-solving, and provide opportunities for students to share knowledge and take collective responsibility for learning. These practices require appropriate instructional competence as well as continuous professional and instructional support. Heads of school have an important role in providing such support through instructional supervision, including classroom observation, monitoring teaching practices, constructive feedback, instructional coaching, and follow-up with teachers. UNESCO's Global Education Monitoring Report (2024/25) indicates variation across education systems in the extent to which school heads are expected to provide feedback to teachers based on classroom observations and promote teacher collaboration. Similarly, findings from the OECD Teaching and Learning International Survey (TALIS) 2024 indicate that, although classroom observation is widely used, the provision of useful feedback and effective monitoring of teachers' performance varies across education systems. OECD (2024) further reports that only a relatively small proportion of teachers observe other teachers' classes and provide feedback on a monthly basis, suggesting limited engagement in deeper forms of professional collaboration. These findings indicate that the implementation of instructional supervision and professional collaboration is not uniform, raising concern about the extent to which teachers receive the support required to consistently implement interactive and collaborative classroom practices.

In Africa, the challenge of translating learner-centred educational policies into consistent classroom practice has also been documented. In Kenya, the implementation of competency-based curriculum reforms, which emphasize cooperative learning, group discussion, project-based learning, and problem-solving, has been reported to face implementation challenges, including inadequate instructional supervision and professional support for teachers (Ochieng & Wanjohi, 2021; Wambugu et al., 2022). In Rwanda, Mbonyumugenzi and Mukamazimpaka (2022) reported a strong positive relationship between head teachers' instructional supervision and teachers' classroom performance ($r = 0.913$, $p < 0.01$), demonstrating the relevance of school-level supervision to instructional practice, these studies suggest that the challenge in African

education systems is partly associated with the inconsistent implementation of instructional support practices that enable teachers to translate learner-centred policies into classroom practice. Thus, the African context provides a basis for examining how school-level instructional supervision supports the implementation of collaborative learning.

In Tanzania, the concern is also reflected in evidence regarding classroom instructional practices. The Government of Tanzania has emphasized learner-centred education, strengthened school leadership, and improved teachers' professional capacity as important strategies for enhancing the quality of education through the Education Sector Development Plan III (2021/22–2025/26) (URT, 2021). Despite these policy efforts, evidence from School Quality Assurance indicates continued reliance on teacher-centred instructional approaches. Approximately 59% of observed lessons in 2022, 58% in 2023, and 55% in 2024 were reported to rely largely on teacher-centred methods, with limited interaction and opportunities for collaborative learning (URT, 2023). Evidence suggests that the policy emphasis on learner-centred instruction has not yet been consistently translated into classroom practice. competencies are closely related to the skills that collaborative learning seeks to develop through student interaction, peer learning, group work, and shared problem-solving. Therefore, the continued presence of teacher-centred instructional practices and reported weaknesses in collaborative competencies provide evidence of a problem that requires further investigation. Within the Tanzanian education system, heads of schools are expected to provide instructional guidance, monitor teaching and learning, support teachers' professional development, and create conditions that facilitate effective classroom practices (URT, 2021). However, studies have reported weaknesses in the regular implementation of classroom observation, feedback, coaching, mentoring, and other forms of school-based professional support (Mkumbo et al., 2023; Zadock, 2023). Examining this is particularly important because the existence of learner-centred policies alone cannot demonstrate that the intended classroom practices are being effectively implemented.

Within Arusha District Council, the concern is particularly relevant because public secondary schools are required to implement national curriculum and instructional policies within their respective school contexts. Although collaborative learning is consistent with Tanzania's broader emphasis on learner-centred education, the extent to which students in public secondary schools regularly experience opportunities for group discussion, peer learning, knowledge sharing, collaborative tasks, and joint problem-solving requires empirical attention. Similarly, the extent to which heads of schools regularly observe classroom instruction, monitor teaching practices, provide constructive feedback, coach teachers, and offer professional support specifically for collaborative learning remains insufficiently documented in Arusha District Council. Existing studies in Tanzania have examined instructional leadership in relation to school planning, goal setting, resource management, and teacher professional development (Mwandosya & Mlewa, 2023; Ngatuni, 2024; Nyanza & Peter, 2024). However, these

studies provide limited empirical evidence on how heads of schools apply instructional supervision specifically to support collaborative learning at classroom level, there is a need to examine whether and to what extent instructional supervision practices are contributing to the implementation of collaborative learning among students in public secondary schools in Arusha District Council.

Therefore, the present study examined the extent to which heads of schools' instructional supervision contributes to collaborative learning among students in public secondary schools in Arusha District Council, Tanzania.

➤ *Statement of the Problem*

Despite successive educational reforms aimed at promoting learner-centred pedagogy through the Secondary Education Development Plans (SEDP I and II), the Education Sector Development Plan III, and the competency-based curriculum, the implementation of collaborative learning remains inadequate in some public secondary schools in Arusha District Council. Evidence from School Quality Assurance monitoring reports indicates that approximately 59% of lessons observed in 2022, 58% in 2023, and 55% in 2024 continued to rely predominantly on teacher-centred instructional methods characterized by limited student interaction and inadequate use of collaborative learning strategies. This situation suggests that classroom practices that promote teamwork, knowledge sharing, active participation, and collective problem-solving have not yet been sufficiently implemented, which may constrain students' development of communication, critical thinking, and collaborative skills. The situation raises concern about the effectiveness of instructional supervision by Heads of Schools in supporting teachers to implement collaborative learning practices. It has also attracted concern among education stakeholders, including employers, parents, education officers, and policymakers. Employers have reported that some secondary school graduates lack essential workplace competencies such as teamwork, communication, creativity, and collaborative problem-solving, which may affect their preparedness for further education and employment. Similarly, parents and education officials have expressed concerns that some students complete secondary education with inadequate confidence and competence in cooperative learning and peer interaction. If the situation persists, students may continue to leave secondary education with insufficient collaboration, communication, critical thinking, and problem-solving skills required for higher education and the labour market. This may also constrain classroom engagement, academic achievement, and the effective implementation of the competency-based curriculum.

Previous studies by Mwandosya and Mlewa (2023), Ngatuni (2024), and Nyanza and Peter (2024) have primarily examined instructional leadership in relation to areas such as school planning, goal setting, resource management, and teacher professional development. Although these studies provide insights into the contribution of instructional leadership to school improvement, limited attention has been given to how Heads of Schools' instructional supervision

supports teachers in implementing collaborative learning practices at the classroom level. Consequently, there is limited empirical evidence on the extent to which Heads of Schools' instructional supervision contributes to enhancing collaborative learning among students, particularly in public secondary schools in Arusha District Council. Therefore, the current study examined the extent to which Heads of Schools' instructional supervision enhances collaborative learning among students in public secondary schools in Arusha District Council, Tanzania.

➤ *Research Question*

The study is guided by one research question:

- To what extent does heads of schools' supervision improve collaborative learning among students in public secondary schools in Arusha District Council?

➤ *Significance of the Study*

The study findings will inform secondary school stakeholders, including heads of schools, teachers, students, education officers, and policymakers, about the role of heads of schools' supervision in improving collaborative learning among students in public secondary schools. For heads of schools, the findings provide a practical understanding of effective supervisory practices that promote collaborative learning. For teachers, the findings enhance understanding of how instructional supervision can support the implementation of collaborative teaching strategies. For students, the findings highlight the importance of collaborative learning in improving teamwork, communication, critical thinking, and problem-solving skills. For education officers, the findings will provide evidence for strengthening supervision and supporting school leaders in promoting learner-centered instructional practices. In addition, the findings will help policymakers strengthen the implementation of the Education and Training Policy (2014, 2023 Edition) and the Education Sector Development Plan (ESDP) 2025/26–2029/30 by improving school supervision, teacher professional development, and the implementation of learner-centred pedagogy in secondary schools. Furthermore, the study contributed to the existing body of knowledge on instructional supervision and collaborative learning by providing empirical evidence on the extent to which heads of schools' supervision improves collaborative learning among students. The study contributes to Instructional Leadership Theory by providing empirical evidence on how heads of schools' instructional supervision practices support the implementation of collaborative learning, thereby extending the theory's application to student-centred and collaborative classroom practices in public secondary schools.

➤ *Theoretical Framework*

The study was guided by Instructional Leadership Theory (ILT), which views the head of school as a key leader responsible for improving teaching and learning through effective instructional leadership. The theory was initially conceptualized by Hallinger and Murphy (1985) and has subsequently been developed and refined by other scholars. The theory is anchored on three key tenets: defining the school mission, managing the instructional programme, and

promoting a positive school learning climate. These three dimensions are further reflected in functions such as framing and communicating school goals, supervising and evaluating instruction, coordinating the curriculum, monitoring student progress, promoting professional development, protecting instructional time, and maintaining a positive learning environment.

The first tenet, defining the school mission, emphasizes establishing and communicating clear school goals that focus on teaching and learning. The second, managing the instructional programme, emphasizes supervising and evaluating instruction, coordinating curriculum implementation, and monitoring students' learning progress. The third, promoting a positive school learning climate, emphasizes professional development, protection of instructional time, visibility of school leaders, and the creation of a supportive environment for teaching and learning.

In the context of this study, these tenets explain how heads of schools can support the implementation of collaborative learning. Defining the school mission provides direction for learner-centred and collaborative practices; managing the instructional programme enables heads of schools to supervise classroom instruction, provide feedback, monitor implementation, and support teachers in using group work, peer learning, classroom discussions, and cooperative problem-solving; while promoting a positive learning climate creates conditions that encourage professional development, student participation, teamwork, and knowledge sharing. Thus, ILT provides a framework for examining how heads of schools' instructional leadership practices contribute to enhancing collaborative learning among students.

Instructional Leadership Theory has several strengths that make it appropriate for this study. Its major strength is that it places teaching and learning at the centre of school leadership and provides specific leadership functions through which heads of schools can influence instructional practice. It also recognizes instructional supervision, professional development, curriculum coordination, and a supportive learning environment as important mechanisms for improving classroom practices. These features correspond closely with the study's focus on instructional vision, supervision, professional development, and a positive school environment in supporting collaborative learning.

Despite these strengths, the theory has some limitations. Its strong emphasis on the head of school may place considerable responsibility for instructional improvement on one leader, even though effective implementation of collaborative learning also depends on teachers, students, available resources, and the wider school context. In addition, effective instructional supervision requires adequate time, pedagogical knowledge, and organisational support, which may be constrained in public secondary schools with large enrolments and competing administrative responsibilities.

The theory therefore applies to this study because its three key tenets provide a direct framework for examining

how heads of schools establish instructional goals, supervise and support teaching, and create a positive learning environment that facilitates collaborative learning. It enables the study to examine the contribution of heads of schools' instructional leadership practices to the implementation of collaborative learning among students in public secondary schools in Arusha District Council.

II. REVIEW OF EMPIRICAL STUDIES

➤ *The Extent to which Heads of Schools' Supervision Enhance Collaborative Learning Among Students*

Within this theme, the study examined the extent to which instructional supervision and heads of schools' support strengthen collaborative learning among students in public secondary schools. It focused on how supervision practices, feedback mechanisms, and the provision of teaching and learning resources enhance teacher effectiveness in facilitating group work, peer interaction, and student-centered learning, as examined below.

Williams and Clark (2021) conducted a quasi-experimental study in Florida, USA, involving 2,200 participants (200 teachers and 2,000 students) from 20 secondary schools, divided equally between schools with and without established instructional supervision programmes. Findings showed that structured classroom observations, co-teaching, and post-lesson feedback significantly improved students' participation in group activities and collaborative engagement. However, the study was conducted in a relatively well-resourced educational context with established supervision programmes, trained personnel, and adequate instructional resources, which may differ from Tanzanian public secondary schools. It also focused on established supervision programmes rather than how heads of schools implement instructional supervision as an instructional leadership strategy to promote collaborative learning. Therefore, the current study fills the knowledge gap by examining the contribution of heads of schools' instructional supervision to enhancing collaborative learning among students in public secondary schools in Arusha District Council, Tanzania.

Thompson and Rivera (2021) explored the impact of instructional coaching and supervision on collaborative learning in high schools in Ontario, Canada. The study employed a longitudinal mixed-methods design involving 300 teachers and 3,500 students. Findings indicated that supervision strategies, including structured coaching cycles, peer observation, and shared planning of instructional resources, significantly enhanced student engagement in collaborative problem-solving tasks. These findings provide useful insights into how systematic instructional supervision can foster collaborative learning. However, the study primarily emphasizes the presence of high-level digital platforms and resource-intensive interventions, which may limit understanding of how similar strategies can be improved in resource-constrained contexts. Additionally, the study focuses more on the outcomes of supervision than on the specific ways school leaders communicate and enact an instructional vision to deliberately promote collaborative

learning among students. Therefore, the current study fills the gap by examined how heads of schools in Tanzanian public secondary schools' implement supervision and instructional leadership practices to foster collaborative learning in contextually relevant, resource-limited settings.

Abdelrahman (2022) investigated the role of instructional supervision in improving collaborative learning in secondary schools in Khartoum, Sudan. The study adopted a mixed-methods design and collected data from 50 teachers and 10 school heads using surveys, interviews, and structured observation checklists. The findings revealed that implementing regular supervision schedules, supported by peer-assistance initiatives, led to enhanced group participation and fostered collaborative learning environments. The study provides a general understanding of the role of instructional supervision in promoting collaborative learning, a highly relevant focus for understanding how heads of school can foster collaborative learning environments. However, the study's focus in limited, emphasizing supervision processes rather than exploring broader instructional leadership practices. Therefore, the current study addresses the gap by examined how supervision can be aligned with leadership structures in Tanzanian schools to provide sustainable collaborative learning outcomes.

Nuwagaba and Kato (2021) assessed the influence of instructional supervision on collaborative learning in Kampala, Uganda, using a descriptive survey design. Data were gathered from 60 teachers and 15 principals through structured questionnaires and interviews. The study found that supervision practices such as routine lesson reviews, joint teacher planning sessions, and student group monitoring significantly contributed to improved collaborative learning among students. The researchers concluded that effective supervision reinforced teamwork and strengthened collaborative pedagogical strategies. The study contributes to the literature on instructional supervision and collaborative learning. However, a population gap emerged, as the study focused on teachers' and school leaders' views, excluding student perspectives. Therefore, the current study addresses the methodological gap by incorporated both teacher and student perspectives to provide a more holistic understanding of the role of supervision in promoting collaborative learning in Tanzanian secondary schools.

Mwenda and Ally (2023) conducted a qualitative study in Arusha, Tanzania, to examine instructional supervision practices that support collaborative learning in public secondary schools. Data were collected through in-depth interviews with 8 school heads and 24 teachers. The findings indicated that supervision practices, including classroom observations, collaborative lesson planning, and structured feedback, enhanced instructional delivery and fostered student collaboration. Participants also highlighted the importance of consistent supervisory engagement in reinforcing collaborative learning norms. These findings provide valuable context-specific insights into effective supervision practices in Tanzanian public secondary schools. However, while the study provides valuable qualitative

insights into how supervision supports collaborative learning, it gives limited attention to quantifying the magnitude of its impact or assessing the extent to which these practices improve student collaboration outcomes. Therefore, the current study fills the by employed a mixed-methods design to capture both qualitative insights and quantitative evidence on how heads of schools implement instructional supervision to deliberately foster collaborative learning among students in Tanzanian public secondary schools.

➤ *Demonstration of Research Gap*

The reviewed studies reveal methodological, knowledge, and contextual gaps that justify the present study. Methodologically, most of the reviewed studies relied on a single research approach, which limited their ability to capture both the measurable patterns and the contextual explanations underlying the relationship between instructional leadership and collaborative learning. For example, Williams and Clark (2021) employed a quasi-experimental design, which was useful for examining changes associated with an intervention but provided limited qualitative insight into how instructional leadership practices were implemented and experienced within school settings. Similarly, Mwenda and Ally (2023) adopted a qualitative approach based primarily on interviews, which provided contextual and experiential information but offered limited quantitative evidence for assessing the extent to which instructional leadership practices were reflected across participants. The reliance on either quantitative or qualitative approaches therefore creates a methodological limitation because evidence from one approach alone may not sufficiently explain both the extent and the contextual dimensions of instructional leadership practices. To address this limitation, the present study employed a convergent mixed-methods design, in which quantitative and qualitative data were collected concurrently, analyzed separately, and integrated during interpretation. This design enabled the study to establish the extent to which Heads of Schools' instructional supervision contributes to collaborative learning while also obtaining qualitative explanations of how and under what school conditions such supervision is implemented.

Knowledge gap, the reviewed studies mainly established that instructional supervision in contributing the teaching and learning in general, example (Thompson & Rivera, 2021; Abdelrahman, 2022; Nuwagaba & Kato, 2021). However, limited knowledge exists regarding the specific contribution of heads of schools' instructional supervision, particularly how follow-up, feedback, teacher support, and provision of instructional resources strengthen teachers' implementation of collaborative learning. The present study therefore sought to generate quantitative and qualitative evidence on the contribution of heads of schools' instructional supervision to enhancing collaborative learning among students.

Contextual Gap, most of the reviewed studies were conducted outside Tanzania, including the Canada (Thompson & Rivera, 2021), Sudan (Abdelrahman, 2022), and Uganda (Nuwagaba & Kato, 2021), where educational

systems, instructional resources, teacher capacity, and school leadership conditions may differ from those in Tanzanian public secondary schools. The present study addressed this contextual gap by examining the contribution of heads of schools' instructional supervision to enhancing collaborative learning among students in public secondary schools in Arusha District Council, Tanzania.

III. METHODOLOGY

This study employed a convergent design under mixed research method, whereby quantitative and qualitative data were collected parallel to provide a comprehensive understanding of the extent to which heads of schools' supervision improves collaborative among students in public secondary schools in Arusha District Council. The convergent research design was considered appropriate because it enables researchers to collect and analyze quantitative and qualitative data simultaneously and integrate the findings to obtain a more comprehensive understanding of the research problem (Creswell & Creswell, 2023). The target population comprised 37 public secondary schools, 37 Heads of Schools, 1,505 teachers, and 3,682 Form III and Form IV students in Arusha District Council, making a total population of 5,261 individuals, alongside 37 public secondary schools as institutional units. The sample comprised 11 public secondary schools selected through simple random sampling, 11 Heads of Schools selected through criterion purposive sampling, 152 teachers, and 362 students selected through proportionate stratified random sampling. Thus, the study involved 536 sampled units, comprising 11 schools and 525 individual participants. Quantitative data were collected through questionnaires administered to teachers and students, while qualitative data were collected through interview guide for heads of schools. The data collection instruments were validated by three MWECAU research experts in Educational Planning and Administration. A pilot study was conducted at one public secondary school that was not included in the actual data collection. The reliability of the Likert-scale items was assessed using Cronbach's Alpha, which produced coefficients of 0.933 for the teachers' questionnaire and 0.783 for the students' questionnaire. These coefficients indicate high internal consistency, suggesting that the questionnaire items consistently measured the intended constructs. The

trustworthiness of the qualitative data was enhanced through methodological triangulation; whereby quantitative questionnaire findings were compared with qualitative interview evidence to obtain a more comprehensive understanding of the study phenomenon. Peer debriefing and comparison of findings across data sources further enhanced the credibility and dependability of the qualitative findings.

Quantitative data were analyzed descriptively using frequencies, percentages, and means with the Statistical Package for the Social Sciences (SPSS) version 27 whereas qualitative data were analyzed thematically through seven step outlined by Creswell, these steps includes (1) organizing and preparing the data for analysis, (2) reading through all the data to gain a general sense of the information, (3) coding the data by identifying meaningful segments of text, (4) generating themes by grouping related codes, (5) representing and reporting the themes in a narrative form, and (6) interpreting the meaning of the themes in relation to the research questions and existing literature (Creswell & Creswell, 2023). Ethical considerations were observed throughout the research process by obtaining research clearance and informed consent, maintaining confidentiality and anonymity, avoiding plagiarism, and adhering to established research ethics.

IV. RESULTS AND DISCUSSION

The study examined the extent to which heads of schools' supervision improves collaborative learning among students in public secondary schools in Arusha District Council. A five-point Likert scale was used for data analysis, ranging from Very Small Extent (VSE) to Very Large Extent (VHE). The rate of Percentage described as < 20 = extremely minority, 20 -29 = Very Low Majority, 30 -39 = Low Minority, 40 - 49 = minority, 50 - 59 = Moderate, 60 - 69 = Majority, 70 -79 = High Majority, 80 - 89 = Very High Majority, 90 - 99 = Extremely Majority, 100 = Overwhelming Majority (Taherdoost, 2019). To measure the extent, the results were analyzed using the mean score criteria developed by Chyung and Hutchinson (2023), where the mean score range is: 1.00–1.99 Very Small Extent, 2.00 –2.99 Small Extent, 3.00 –3.99 Moderate Extent, 4.00– 4.49 Large Extent, and 4.50 –5.00 Very Large Extent. Table 1 presents the summary of the findings from the teachers' questionnaire.

Table 1 Response from Teachers and Student's Questionnaire on the Extent to which Heads of Schools' Supervision Enhances Collaborative Learning Among Students

Statements	R	VLE		LE		ME		HE		VHE		MEAN
		f	%	f	%	f	%	f	%	f	%	
The head of school's classroom supervision supports the effective use of group work during lessons.	T	11	8	13	9.5	35	25.5	41	29.5	37	27	3.58
	S	53	15	45	12.4	85	23.5	65	18	114	31.5	3.39
The head of school's classroom supervision improves the organization of group discussions during learning activities.	T	9	6.6	10	7.3	31	22.6	53	38.7	34	24.8	3.68
	S	23	6.4	31	8.6	74	20.4	123	34	111	30.7	3.74
The head of school's classroom supervision encourages active	T	5	3.6	13	9.5	26	19.5	53	38.7	40	29.2	3.8
	S	27	7.5	48	13.3	75	20.7	86	23.8	126	32.8	3.65

participation in collaborative learning activities.												
The head of school's classroom supervision enhances collaborative problem-solving during group activities.	T	6	4.4	11	8	24	17.5	55	40.1	41	29.9	3.83
	S	29	8	40	11	60	16	108	29.8	125	34.5	3.72
Follow-up by the head of school after classroom supervision promotes the implementation of collaborative learning practices.	T	4	2.9	16	11.7	24	17.5	54	39.4	39	28.5	3.79
	S	29	8	33	9.1	75	20.7	97	26.8	128	35.4	3.72
The head of school's classroom supervision promotes fair and respectful management of group work.	T	7	5.1	12	8.8	39	28.5	49	35.8	30	21.9	3.88
	S	34	9.4	39	10.8	93	22.9	93	25.7	113	31.2	3.59
The head of school's classroom supervision promotes the use of project-based learning that involves teamwork.	T	5	3.6	10	7.3	23	16.3	58	42.3	41	29.9	3.61
	S	44	12	43	11.9	76	21	88	24.3	111	30.7	3.49
The head of school's classroom supervision motivates greater participation in collaborative learning activities.	T	11	8	17	12.4	20	14	42	30.7	47	34.3	3.71
	S	29	8	42	11.6	70	19.3	125	34.5	96	26.5	3.6
The head of school's classroom supervision helps create a cooperative classroom learning environment.	T	6	4.4	13	9.5	30	21.9	52	38	36	26.3	3.72
	S	24	6.6	44	12.2	90	24.9	80	22.1	124	24.3	3.65
The head of school's classroom supervision enhances the overall collaborative learning experience in the classroom.	T	6	4.4	15	10.9	18	13.1	51	37.2	47	34.3	3.86
	S	21	5.8	34	9.4	65	18	91	25.1	151	41.7	3.88
Grand Mean	T											3.746
	S											3.643

Source: Field Data (2026)

Data on Table 1 indicate that moderate of teachers (63.5%) rated as very high extent and high extent that the head of school's classroom supervision improves the organization of group discussions during learning activities, while very low majority of teachers (22.6%) rated as moderate and extremely minority of teachers (13.9%) rated as very low extent and low extent that the head of school's classroom supervision improves the organization of group discussions during learning activities. The mean score was 3.68, indicating that, to a moderate extent, teachers perceived that the head of school's classroom supervision improves the organization of group discussions during learning activities. While the response of students indicates that majority of students (64.2%) rated as very high and high extent that the head of school's classroom supervision improves the organization of group discussions during learning activities, while the very low majority of students (20.4%) rated as moderate and extremely minority of students (15%) rated as very low and low extent that the head of school's classroom supervision improves the organization of group discussions during learning activities. The mean score was 3.61, indicating that, to a moderate extent, the majority of students understand that the head of school's classroom supervision improves the organization of group discussions during learning activities. During the interview, the head of school '1' stated:

During classroom supervision, I pay close attention to how teachers organize group discussions and whether every student is actively involved. After observing the lesson, I discuss with teachers the strengths and areas that need improvement, particularly on managing groups, encouraging participation, and ensuring meaningful interaction among students. As a result, teachers have improved the way they organize and facilitate group discussions during classroom learning (HOS 01, personal communication, 14th May 2026).

At the same time, during the face to face of interview of head of school 2 said:

During classroom supervision, I observe how teachers form and manage student groups and whether all students are given opportunities to participate. After the lesson, I provide feedback on areas that require improvement, especially in assigning group tasks, encouraging active participation, and promoting cooperation among students. Through regular supervision and follow-up, I have observed that teachers have improved their ability to organize and facilitate collaborative learning activities in the classroom (HOS 02, personal communication, 15th May 2026).

The views of the heads of schools imply that classroom supervision plays an important role in improving the implementation of collaborative learning among students. The heads explained that regular classroom observation

enabled them to assess how teachers organized and managed student groups, assigned group tasks, encouraged equal participation, and promoted meaningful interaction among learners. They further indicated that providing constructive feedback after classroom observation helped teachers identify strengths and areas requiring improvement, particularly in managing groups, supporting less-active students, and facilitating effective group discussions. The findings indicate that classroom supervision by the head of school plays a significant role in improving the organization of group discussions during learning activities by strengthening teachers' instructional practices and promoting learner-centered teaching approaches. The finding aligns with Williams and Clark (2021), who found that structured classroom observations, professional coaching, and post-lesson feedback significantly enhanced teachers' ability to organize collaborative learning activities, resulting in greater student participation and more effective group discussions. The study suggests that classroom supervision by the head of school contributes to improving the organization of group discussions, thereby enhancing collaborative learning among students.

The findings presented in Table 1 indicate that high majority of teachers (70%) rated as very high extent and high extent that the head of school's classroom supervision enhances collaborative problem-solving during group activities, and the extremely minority of teachers (17.5%) rated as moderate while extremely minority of teachers (12.4%) rated as very low extent and low extent that the head of school's classroom supervision enhances collaborative problem-solving during group activities. The mean score of 3.83 indicates that, to a moderate extent, teachers perceive instructional supervision as an important factor in improving their ability to engage students in solving problems together through collaborative learning. While the response of students indicates that moderate of students (56.9%) rated as very high and high extent that the head of school's classroom supervision enhances collaborative problem-solving during group activities, while the very low majority of students (22.9%) rated as moderate and extremely minority of students (20.2%) rated as very low and low extent that the head of school's classroom supervision enhances collaborative problem-solving during group activities. The mean score was 3.59, indicating that, to a moderate extent, students understand that the head of school's classroom supervision enhances collaborative problem-solving during group activities. During the face-to-face interview, the head of school '5' remarked:

When I conduct classroom supervision, I observe whether teachers provide opportunities for students to solve problems together through group activities rather than relying only on individual work. During the post-observation discussion, I encourage teachers to use collaborative tasks that require learners to share ideas, analyze issues, and find solutions collectively. Since introducing this approach, I have observed that teachers are more confident in facilitating collaborative problem-solving, and students participate more actively in finding solutions as a team (HOS 05, personal communication, 22nd May 2026)

Similarly, the head of school 8 shared this during face to face said that:

During classroom supervision, I assess whether teachers give students opportunities to work together when solving learning problems. After observing the lesson, I discuss with teachers the importance of using group tasks that encourage students to exchange ideas, discuss different approaches, and reach solutions collectively. Through regular supervision and feedback, I have noticed that teachers have improved their ability to facilitate cooperative problem-solving, while students have become more willing to contribute ideas and work together to solve classroom tasks (HOS 08, personal communication, 29th May 2026).

The views of the heads of schools imply that classroom supervision plays an important role in improving collaborative problem-solving among students. The heads explained that regular classroom observation enabled them to assess whether teachers provided opportunities for students to work together in solving learning problems, sharing ideas, discussing different approaches, and reaching solutions collectively. They further indicated that post-observation feedback and professional support helped teachers improve their ability to design and facilitate collaborative tasks that encouraged active participation and cooperation among learners. The findings indicate that classroom supervision improves teachers' capacity to engage students in collaborative problem-solving by strengthening learner-centered instructional practices and promoting meaningful group interaction. The finding aligns with Mwenda and Ally (2023), who found that instructional supervision practices, including classroom observations, collaborative lesson planning, and structured feedback, enhanced teachers' instructional delivery and promoted collaborative learning among students. The finding suggests that classroom supervision by the head of school strengthens teachers' capacity to facilitate collaborative learning activities in which students work together to analyze issues, exchange ideas, and solve problems collectively.

The results presented in Table 1 reveal that the majority of teachers (67.9%) rated as very high extent and high extent that follow-up by the head of school after classroom supervision promotes the implementation of collaborative learning practices, while extremely minority of teachers (17.5%) rated as moderate and extremely minority of teachers (14.6%) rated as very low extent and low extent that follow-up by the head of school after classroom supervision promotes the implementation of collaborative learning practices. The mean score was 3.79, indicating that, to a moderate extent, the majority of teachers acknowledge that follow-up by the head of school after classroom supervision promotes the implementation of collaborative learning practices. While the response of students indicates that majority of students (64.3%) rated as very high and high extent that follow-up done by the head of school after supervision improves collaborative learning in class, while extremely minority of students (16%) rated as moderate and extremely minority of students rated as very low and low extent that follow-up done by the head of school after

supervision improves collaborative learning in class. The mean score was 3.72, indicating that, to a moderate extent, students acknowledge that the follow-up by the head of school after supervision improves collaborative learning in class. The data was supported by the head of school '10' during a face-to-face interview who said. During the face-to-face interview, the head of school '4' shared this:

Classroom supervision does not end when I leave the classroom. After every observation, I meet with the teacher to discuss the strengths of the lesson and the areas that need improvement. During follow-up meetings, I review whether the agreed strategies, particularly those related to collaborative learning, have been implemented. This continuous follow-up encourages teachers to apply collaborative learning practices more consistently, and I have observed positive changes in the way lessons are conducted and how students work together during classroom activities (HOS 04, personal communication, 18th May 2026)

At the same time, during face to face of interview with head of school 6 said that:

After observing classroom lessons, I do not leave the teacher without further guidance. I meet with the teacher to discuss the areas that were well implemented and those requiring improvement. I also conduct follow-up visits to check whether the recommendations provided, especially those concerning group work, student participation, and cooperative activities, have been put into practice. Through this continuous support and follow-up, teachers have become more consistent in using collaborative learning strategies, and students have shown greater involvement in working and learning together during classroom activities (HOS 06, personal communication, 19th May 2026).

The head of school's views implies that follow-up after classroom supervision promotes the implementation of collaborative learning practices through continuous professional support, monitoring, and constructive feedback provided to teachers. According to the head of school, follow-up supervision enables teachers to reflect on the recommendations provided during classroom observation, implement agreed instructional strategies, and continuously improve the use of collaborative learning practices in their classrooms. This ongoing guidance and monitoring encourage teachers to apply learner-centered approaches consistently, strengthen classroom instruction, and enhance students' participation in collaborative learning activities. The study found that follow-up after supervision plays a significant role in supporting teachers in implementing collaborative learning strategies. However, it is limited by contextual factors such as teacher competence, resources, and the learning environment. The finding also contrasts with Williams and Clark (2021), who reported that established supervision programs involving observation cycles, co-teaching, and post-lesson feedback significantly improved teachers' collaborative learning practices. The finding highlights that supervision follow-up alone may not be sufficient to ensure consistent implementation of collaborative learning strategies without supportive

conditions such as adequate resources and teacher capacity development.

Data on Table 1 indicate that moderate of teachers (57.7%) rated as very high and high extent that the head of school's classroom supervision promotes the use of project-based learning that involves teamwork, while very low majority of teachers (28.5%) rated as moderate and the extremely minority of teachers (13.9%) rated as very low extent and low extent that the head of school's classroom supervision promotes the use of project-based learning that involves teamwork. The mean score was 3.88, indicating that, to a moderate extent, instructional supervision by heads of schools plays an important role in encouraging teachers to adopt project-based learning strategies. Also response from students indicate that majority of students (62.2%) rated as very high and high extent that the head of school's classroom supervision promotes the use of project-based learning that involves teamwork, while the extremely minority of students (20.7%) rated as moderate and extremely minority of students (16.1%) rated as very low and low extent that the head of school's classroom supervision promotes the use of project-based learning that involves teamwork. The mean score was 3.72, indicating that, to a moderate extent, the student perceives that the head of school's classroom supervision promotes the use of project-based learning that involves teamwork. During a face-to-face interview with the head of school, '9' commented that:

Classroom supervision has enabled us to encourage teachers to use project-based learning as one of the effective teaching approaches. Whenever I conduct classroom observations, I pay close attention to whether teachers engage students in projects that require them to work together in groups to solve real-life problems. After the observation, I provide constructive feedback and encourage teachers to design learning activities where students collaborate, share responsibilities, and present their project outcomes together, classroom supervision has significantly increased the use of collaborative project-based learning in our school (HOS 9, personal communication, 1st June 2026).

Similarly, during face to face interview of head of school 10, had this to share:

Classroom supervision has helped me encourage teachers to integrate project-based learning into their lessons. During classroom observations, I assess whether students are engaged in group projects that require them to cooperate, share responsibilities, and apply their knowledge to solve practical problems. After each observation, I provide feedback on how teachers can improve students' collaboration and participation in project activities. Through regular supervision and follow-up, teachers have increasingly adopted project-based learning, while students have become more active in working together and presenting their project outcomes (HOS 10, personal communication, 19th May 2026).

The views of the heads of schools imply that classroom supervision plays an important role in strengthening the use

of project-based learning as a collaborative learning strategy among students. The heads explained that regular classroom observation enabled them to assess whether teachers engaged students in group projects that required them to work together, share responsibilities, solve real-life problems, and present their project outcomes collectively. They further indicated that post-observation feedback and professional support helped teachers improve their ability to design and facilitate project-based activities that encouraged active participation, cooperation, and shared responsibility among learners. The findings indicate that classroom supervision improves teachers' capacity to implement collaborative project-based learning by strengthening learner-centred instructional practices and creating meaningful opportunities for students to interact, cooperate, and apply their knowledge collectively. The finding also aligns with Thompson and Rivera (2021), who reported that instructional coaching, peer observation, and shared planning of instructional resources significantly improved students' engagement in collaborative problem-solving. The study suggests that although instructional supervision encourages teachers to adopt project-based learning strategies, its effectiveness depends on contextual factors such as resource availability, teacher competence, and supportive school conditions.

The data presented in Table 1 show that majority of teachers (72.2%) rated as very high extent and high extent that the head of school's classroom supervision helps create a cooperative classroom learning environment. while the extremely minority of teachers (16.3%) rated as moderate and extremely minority of teachers (10.9%) rated as very low extent and low extent that the head of school's classroom supervision helps create a cooperative classroom learning environment. The mean score was 3.61, indicating that, to a moderate extent, the majority of teachers understand that the head of school's classroom supervision helps create a cooperative classroom learning environment. where students interact, support one another, and participate actively in the learning process. Also students respond that majority of students (62.2%) rated as very high and high extent that the head of school's classroom supervision helps create a cooperative classroom learning environment, while the extremely minority of students (20.7%) rated as moderate and extremely minority of students (16.1%) rated as very low and low extent that the head of school's classroom supervision helps create a cooperative classroom learning environment. The mean score was 3.72, indicating that, to a moderate extent, the student perceives that head of school's classroom supervision helps create a cooperative classroom learning environment. The data are supported by the argument of the head of school 7, who shared during the interview that:

During supervision, I observe how teachers organize their classrooms and how they involve students in the learning process. After observations, I provide feedback on ways to improve classroom interaction, encourage teamwork, and ensure that every student participates. This helps teachers create a cooperative environment where students support each other and learn together (HOS 07, personal communication, 25th May 2026).

Similarly, During the interview, the head of school 11 supported this view by stating:

During classroom supervision, I focus on how teachers create an environment that encourages students to interact and work together. I observe whether teachers give students opportunities to share ideas, assist one another, and participate in group activities. After the lesson, I provide feedback on how teachers can improve classroom interaction and encourage all students to take part in the learning activities. Through regular supervision and follow-up, teachers have improved their ability to create supportive classroom environments where students cooperate and learn from one another (HOS 10, personal communication, 05th June 2026).

The views of the heads of schools imply that classroom supervision plays an important role in creating a supportive classroom environment that enhances collaborative learning among students. The heads explained that regular classroom observation enabled them to assess how teachers organized classroom activities, encouraged student interaction, promoted teamwork, and ensured that all students participated in the learning process. They further indicated that post-observation feedback and continuous professional support helped teachers improve their ability to create cooperative learning environments where students could share ideas, assist one another, and participate actively in group activities. The findings indicate that classroom supervision improves teachers' capacity to promote collaborative learning by strengthening supportive classroom practices, encouraging teamwork, and fostering meaningful interaction and mutual learning among students. The finding aligns with Instructional Leadership by Hallinger and Heck (2020), which emphasizes that heads of school's supervision plays a critical role in improving teaching and learning through effective supervision of classroom instruction. This suggests that through classroom observation, feedback, and professional guidance, instructional leaders help teachers implement learner-centered approaches that enhance collaboration, participation, and student engagement.

Generally, the quantitative findings revealed that heads of schools' instructional supervision improve collaborative learning among students to a moderate extent with both teachers (Grand mean = 3.746) and students (Grand mean = 3.643) reporting positive extent on regarding the role of instructional supervision in improving teachers' organization of group work and group discussions, supporting collaborative problem-solving, ensuring students' participation in group activities, promoting project-based learning, creating cooperative classroom environments, and strengthening students' overall collaborative learning experiences. These quantitative findings were converging by qualitative evidence from interviews with heads of schools, which revealed that classroom supervision, observation, constructive feedback, and follow-up supervision help teachers improve learner-centered instructional practices and facilitate collaborative learning. However, the interviews further indicated that the instructional supervision is constrained by contextual challenges, including inadequate

instructional resources, overcrowded classrooms, limited teacher competence and professional training, and insufficient follow-up support, which hinder the consistent implementation of collaborative learning strategies. Thus, the overall study found that, to a moderate extent, heads of schools' instructional supervision contributes to enhancing collaborative learning among students in public secondary schools in Arusha District Council.

V. CONCLUSION

Based on the findings, the researcher concludes that, to a moderate extent heads of school' supervision improve collaborative learning among students through classroom observation, feedback, follow-up, and professional support, thereby improving teachers' ability to facilitate group discussions, cooperative problem-solving, project-based learning, and student participation. However, collaborative learning is limited by contextual factors, such as teacher competence, resource availability, and classroom conditions.

RECOMMENDATIONS

Based on the conclusion, the researcher recommends that heads of schools should move beyond supervision as a monitoring activity and strengthen it as a continuous instructional support process through regular classroom visits, feedback, coaching, and follow-up. Furthermore, schools should invest in teacher capacity-building and improve the availability of instructional resources, as effective collaborative learning requires both strong instructional leadership and supportive school conditions.

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