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The Influence of ICT Integration on Teaching Effectiveness in Public Secondary Schools in Temeke Municipality, Tanzania

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Abstract : This study examined the impact of Information and Communication Technology (ICT) on teaching effectiveness in Temeke Municipality's public secondary schools in Tanzania. A mixed-method approach involved 118 teachers from ten schools, using structured questionnaires for quantitative data and interviews for qualitative insights. Findings revealed low ICT integration in classrooms, primarily due to a lack of resources like computers (M = 1.992) and reliable internet (M = 2.034), resulting in an overall low ICT usage score (M = 1.483). However, teachers showed confidence in digital tools, noting benefits such as improved lesson clarity (M = 4.339), increased student participation (M = 4.795), and better understanding of complex concepts (M = 4.305). The study concludes that ICT integration has a significant relationship with teaching effectiveness in public secondary schools in Temeke Municipality. ICT was perceived to contribute to clearer and better-organised lesson delivery, increased student participation and attention, improved understanding of difficult concepts, and greater opportunities for collaborative, interactive and independent learning. Recommendations focus on upgrading ICT infrastructure, ensuring reliable internet, providing digital resources, and offering ongoing professional development for teachers.

Keywords: ICT Integration, Teaching Effectiveness, Public Secondary Schools.

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INTRODUCTION

Globally, the integration of Information and Communication Technology (ICT) serves as a cornerstone of contemporary educational reform, fundamentally reshaping both instructional delivery and student engagement (Sun & Chen, 2016). The foundation of this transformation is deeply rooted in international policy frameworks, most notably the United Nations' Sustainable Development Goal 4 (SDG 4), which mandates member states to leverage digital technologies to ensure equitable, inclusive, and lifelong learning opportunities. Consequently, international guidelines underscore the necessity of transitioning from rigid, rote-learning methodologies toward interactive, learner-centered pedagogies across both developed and developing regions (UNESCO, 2025). Global implementation experiences demonstrate that when these macro-level policies are synchronized with grassroots

practice, digital tools successfully bridge educational inequities by democratizing resource access, supporting differentiated instruction, and facilitating real-time formative feedback (Darling-Hammond et al., 2020).

However, translating these international frameworks into the Sub-Saharan African context reveals a profound divergence between policy ideals and operational realities. In this region, deep-seated institutional barriers hinder progress, as coherent domestic policies linking structural ICT investments with practical teacher training and core curriculum integration are often severely lacking (Boakye & McMahon, 2016). These systemic friction points are compounded by acute urban-rural disparities that further exacerbate regional educational inequalities (Oye et al., 2016). Nonetheless, localized continental experiences offer valuable blueprints; countries like Rwanda and Botswana have made notable strides by introducing targeted national strategies that focus heavily on boosting teacher digital competence alongside targeted ICT integration (UNICEF, 2020; Isaacs, 2007). Conversely, the experience of South Africa demonstrates that despite the formulation of comprehensive policies, persistent challenges in resource distribution and inadequate classroom-level teacher support continue to limit the effective use of ICT in day-to-day lessons (Kanjee & Moloi, 2016). Ultimately, these regional experiences underscore that the mere provision of hardware is insufficient; ongoing professional development and sustained implementation support remain entirely crucial for realizing the full educational impact of ICT within African classrooms (Adjovu & Bunting, 2018).

Tanzania has articulated a strong strategic vision for the role of ICT in education. The ICT Policy for Basic Education (2007) was among the earliest attempts to integrate technology across pre-primary, primary, secondary, and teacher education levels (URT, 2007). This policy aims to equip learners and teachers with digital skills, expand access to educational resources, and use ICT to enhance instructional delivery. More recently, the National ICT Policy (2016) reinforced these goals, positioning ICT as central to socio-economic transformation and knowledge society development (URT, 2016). Both policies advocate for ICT infrastructure development, teacher training, localized content creation, and integration of ICT into pedagogical practice.

Despite policy commitments, ICT implementation in schools has been inconsistent. Studies show that schools often lack sufficient teacher training, technical support, and pedagogical frameworks for effective use (Mtebe, 2020; Machemba & Biswal, 2025). High student-to-computer ratios and limited internet access hinder regular ICT use in instruction (Ngeze, 2017). Consequently, technology is often underutilised, mainly used for basic tasks like administrative record-keeping. Teacher preparedness is a significant issue in Tanzania, with many educators possessing only basic ICT skills and lacking the pedagogical expertise to integrate technology effectively (Kassimu, 2020; Machemba & Biswal, 2025). While some teachers

demonstrate basic technology literacy, they often lack the deeper pedagogical knowledge necessary for effective instructional use (Mtebe, 2020). Without targeted professional development focusing on pedagogical integration, teachers tend to revert to traditional instruction despite available ICT resources (Polly & Brantley-Dias, 2020).

Temeke Municipality illustrates the localised manifestation of these national issues. As an urban district in Dar es Salaam, Temeke houses several public secondary schools with varying levels of ICT provision. While some schools may have computers and occasional internet access, these resources are often insufficient for regular instructional use due to high student numbers and limited support (Ngeze, 2017). Teachers in Temeke report limited opportunities for professional development in pedagogical ICT use, and school leadership often prioritizes administrative uses of technology over instructional transformation (Machemba & Biswal, 2025). Consequently, ICT integration remains superficial, and its influence on teaching effectiveness is neither consistent nor well-documented at the school level.

The limited and inconsistent integration of ICT in Tanzanian secondary schools has several implications. First, teachers may remain reliant on traditional, teacher-centred methods, limiting opportunities for active, student-centred learning (Bendera, 2024). Second, students miss crucial opportunities to develop digital literacy skills necessary for success in further education and the labour market (Mtebe, 2020). Third, persistent gaps between policy aspirations and classroom realities may exacerbate educational inequalities, particularly between urban schools with some resources and under-resourced schools with minimal access (Ngeze, 2017). This disconnect undermines the goals of national education strategies, including the Tanzania Development Vision 2050, which envisions a knowledge-based society supported by ICT (URT, 2016).

Information and Communication Technology (ICT) has been globally acknowledged as a key driver of teaching effectiveness, supporting interactive pedagogies, improving lesson delivery, and enhancing student engagement (Akram et al., 2022; Msafiri et al., 2023). Empirical evidence demonstrates that ICT facilitates personalised learning, access to diverse resources, and collaborative classroom environments, thereby improving academic performance (Toma et al. 2023; Bendera, 2024). In Tanzania, policies such as the ICT Policy for Basic Education (2007) and the Education and Training Policy (2014) emphasise ICT integration as a strategy for enhancing the quality of teaching and learning (Kalinga, 2024). Pilot programmes and teacher development initiatives have shown that well-supported ICT integration improves teacher confidence, lesson interactivity, and student participation (Shekwavi & Mrema, 2025; Rajabu & George, 2025).

Despite advancements, empirical evidence on ICT integration's impact on teaching effectiveness in urban secondary schools, such as in Temeke Municipality,

remains limited (Elias, 2019). This study assesses how ICT integration influences teaching effectiveness in Temeke Municipality's public secondary schools.

Theoretical Review

This study is based on the Technology Acceptance Model (TAM), which explains why individuals adopt or reject new technologies by focusing on Perceived Usefulness (PU) and Perceived Ease of Use (PEU). Developed by Davis (1989) and rooted in the Theory of Reasoned Action, TAM has been widely applied across various domains, demonstrating strong predictive validity (Marbán & Mulenga, 2022; Marian et al., 2025). The Technology Acceptance Model (TAM) suggests that perceived usefulness (PU) and perceived ease of use (PEU) drive behavioral intention and actual technology use, especially in educational contexts. Attitudes toward technology mediate this relationship, with ease of use enhancing perceived usefulness. TAM also posits that external variables influence adoption indirectly through PU and PEU, highlighting the significance of context in technology integration. The limited integration of ICT in Tanzanian secondary schools restricts active learning and digital literacy for students and exacerbates educational inequalities. Despite policies promoting ICT. This study assesses the impact of ICT integration on teaching effectiveness in Temeke municipality's public secondary schools, guided by the Technology Acceptance Model (TAM).

Another assumption of TAM is that attitude toward use mediates the influence of PU and PEU on behavioural intention. Marbán and Mulenga (2022) highlight that perceived ease of use can indirectly affect adoption by increasing perceived usefulness. If a technology is easy to operate, users find it more beneficial because they can integrate it into their workflow without frustration. TAM also assumes that technology use is volitional, meaning users have the freedom to accept or reject the technology. This assumption is particularly relevant in education, where policy or institutional mandates can alter the voluntary nature of technology adoption (Marian et al., 2025).

Finally, TAM posits that external variables influence technology adoption only through PU and PEU. While external factors like training, infrastructure, and social influence are acknowledged, they are considered antecedents rather than direct predictors. This simplification allows the model to remain parsimonious but has limitations when applied in complex environments such as schools where contextual and organisational factors are significant (Link.springer.com, 2023).

Empirical Review

Rajabu and George (2025) study investigates the challenges of adopting digital technology in Tanzania's Handeni District public secondary schools. The study used teacher reports, observations, and document review, analysing Tanzania's ICT policy

for basic education, the draft National Digital Education Strategy 2024-2030, and ICT guidelines. Triangulating data from these sources enabled the study to fully understand digital technology use in Handeni District public secondary schools. The findings show that limited access to digital devices, poor digital competence among teachers and students, inadequate internet connectivity, and inconsistent classroom use of digital tools hinder digital technology adoption.

Dongo and Mkulu (2021) investigated the effectiveness of ICT integration on effective teaching and learning in public secondary schools found in Misungwi district. The study employed a mixed research approach and the convergent parallel design for data collection. The study targeted 100 respondents. The study employed simple random, stratified and purposive sampling to select respondents and the data collection tools were questionnaires, interviews, and observation. The study revealed that the implementation of ICT has many extent on effective teaching and learning process and such as it enhances the accessibility of teaching and learning materials, improves teachers and students knowledge and skills and makes lesson more effective, makes learning student-centred and self-directed, makes and creative good teaching and learning environment, and improve high thinking capacity for students and teachers.

A study by Masoud (2023) explored teachers' readiness to integrate ICT for enhancing school management efficiency in public secondary schools. The study applied a convergent research design in mixed approach, which comprises of quantitative and qualitative approaches. Simple random sampling and purposive sampling were used to obtain a sample of 106 respondents. The findings revealed that, although most teachers have average ICT competence, the gap is still noticeable in ICT managerial training rather than ICT training for basic ICT knowledge and skills. Moreover, teachers were identified as having positive attitudes towards ICT integration due to their perceived benefits in incorporating ICT.

Mangundu et al. (2025) examined the use of ICT in secondary schools in Southern Africa and found that school leadership and organisational support often do not prioritize ICT integration in teaching practices. Limited leadership commitment was reflected in weak school ICT policies, absence of clear ICT plans, and insufficient budget allocation for maintenance and training. This lack of institutional backing discouraged teachers from exploring innovative ICT applications, reinforcing traditional teacher-centered methods instead (Mangundu et al., 2025).

Polly et al. (2021) reported that even when ICT tools are available, teachers struggle to align them with curriculum objectives and assessment standards. Many educators found it difficult to incorporate technology into lesson plans that meet subject-specific learning outcomes, making ICT be used as an add-on rather than a central instructional strategy. This misalignment often resulted in superficial use of

technology that did not significantly enhance teaching effectiveness or student learning.

Although existing literature establishes that Information and Communication Technology (ICT) integration enhances classroom engagement, empirical gaps persist regarding its measurable impact on teaching efficiency and instructional productivity. To address this deficit, this study establishes a robust framework to optimize the monitoring and evaluation of educational technology, delivering actionable, context-specific recommendations to maximize its instructional value.

METHODOLOGY

This study employed a cross-sectional design to investigate characteristics (Kothari, 2004) through a mixed methods approach, combining quantitative analysis of student achievement data with qualitative insights from interviews and surveys. Conducted in Temeke District, it assessed ICT resources in integrating technology into teaching among national digital learning policies. A sample of 118 teachers from 278 was selected using systematic sampling techniques. Data collection included questionnaires, interviews, and observations, ensuring reliability with standardized protocols and a Cronbach's alpha ($\alpha \geq 0.7$). Quantitative data were analyzed with Microsoft Excel and SPSS Version 28, using descriptive statistics and regression analysis at $p < 0.05$. Ethical considerations, such as confidentiality, were maintained, enhancing the credibility of the findings.

RESULT AND DISCUSSION

The effect of ICT Integration on Teaching Effectiveness in Public Secondary Schools in Temeke Municipality

This study examined the effect of ICT integration on teaching effectiveness in Temeke Municipality's public secondary schools across three dimensions which including quality of lesson delivery, student engagement in learning, and use of learner-centred teaching strategies. Data were collected using five-point Likert scale, where 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree. Mean scores and standard deviations were calculated to determine the level and consistency of respondents' perceptions. Higher mean scores indicate stronger agreement that ICT integration contributes to teaching effectiveness.

Quality of Lesson Delivery

Table 1 presents teachers' perceptions of the contribution of ICT to the quality of lesson delivery. The findings indicate that ICT positively supports lesson delivery, particularly by improving the clarity, organisation, and interactivity of lessons. The results show that teachers perceive ICT as an important tool for enhancing the quality and effectiveness of classroom instruction.

Table 1. ICT Integration and Quality of Lesson Delivery

Statement	Mean	SD
ICT helps me present lessons more clearly.	4.339	0.475
ICT improves the organisation and structure of my lessons.	4.068	0.252
ICT makes lessons more interesting and interactive.	4.017	0.130

Source: *Field Data, 2026*

Table 1 shows that teachers generally perceived ICT as contributing positively to the quality of lesson delivery. The highest mean was recorded for the ability of ICT to help teachers present lessons more clearly (M = 4.339, SD = 0.475), followed by its contribution to lesson organisation and structure (M = 4.068, SD = 0.252) and its ability to make lessons more interesting and interactive (M = 4.017, SD = 0.130). The consistently high means, together with the relatively small standard deviations, indicate strong and relatively uniform agreement among respondents. The results suggest that teachers viewed ICT as useful in presenting instructional content, organising teaching activities and creating more engaging lessons. In practical terms, digital presentations, diagrams, videos and other multimedia resources can give teachers additional ways of explaining content and structuring classroom activities, particularly where such resources are relevant to the subject matter and learning objectives.

The finding on lesson clarity is consistent with Dongo and Mkulu (2021), who reported that ICT integration improved lesson delivery and access to teaching and learning materials in public secondary schools in Misungwi District. Similarly, Rajabu and George (2025) found that ICT adoption supported lesson preparation and teacher-student interaction in public secondary schools in Handeni District. These studies reinforce the view that appropriately selected ICT resources can extend teachers' instructional options. However, the evidence should not be interpreted as meaning that the mere presence or frequent use of technology automatically produces better lessons. Shekwavi and Mrema (2025) found that inadequate ICT skills, poor infrastructure and unstable electricity constrained effective ICT implementation. This qualification is important in the present study because the earlier findings showed limited availability of computers, internet connectivity, projectors and digital teaching materials. Thus, teachers may recognise the instructional value of ICT while still having limited opportunities to apply it consistently.

The relatively high score for lesson organisation further indicates that teachers perceived ICT as useful beyond the actual presentation of content. Digital materials can assist in sequencing lesson activities, preparing instructional resources and organising information before and during classroom instruction. This interpretation is consistent with Rajabu and George (2025), whose findings linked ICT adoption with improved lesson preparation. Nevertheless, the contribution of ICT to lesson organisation depends on teachers' ability to integrate technology into an appropriate

instructional design. Technology that simply replaces printed notes or conventional presentation may offer limited pedagogical improvement. Its value is greater when it helps teachers structure activities that promote explanation, interaction, collaboration, feedback and student participation.

The finding that ICT makes lessons more interesting and interactive is supported by Toma et al. (2023), who reported improvements in student participation and engagement following ICT-integrated teaching, and by Rajabu and George (2025), who identified improvements in teacher-student interaction. These findings suggest that ICT can create opportunities for more active forms of classroom participation. However, the present result represents teachers' perceptions of the contribution of ICT, rather than a direct experimental measurement of student engagement or academic achievement. The high level of agreement should therefore be understood as evidence of teachers' perceived pedagogical value of ICT, not as proof that ICT use alone produces improved learning outcomes.

The findings indicate that teachers regard ICT as a useful resource for improving lesson clarity, organisation and classroom interaction. At the same time, the results highlight a distinction between the potential of ICT and its actual pedagogical application. The benefits identified by respondents are more likely to be realised when teachers have access to functional equipment, reliable connectivity, appropriate digital materials and adequate technical and pedagogical support. The implication for Temeke Municipality is therefore not simply to increase the quantity of ICT facilities, but to create conditions that enable teachers to use technology purposefully in ways that strengthen the quality of instruction.

Student Engagement in Learning

Table 2 presents teachers' perceptions of the effect of ICT integration on student engagement in learning. The findings focus on students' participation, attention, and understanding of difficult concepts during lessons. The mean scores and standard deviations for the three statements are presented in Table 2

Table 2. ICT Integration and Student Engagement in Learning

Statement	Mean	SD
Students participate more actively when ICT is used in lessons.	4.795	0.406
ICT motivates students to pay attention during class.	4.085	0.280
ICT helps students understand difficult concepts more easily.	4.305	0.462

Source: *Field Data, 2026*

Table 2 shows that teachers generally perceived ICT as having a positive contribution to student engagement and understanding during learning. The strongest agreement was recorded for the statement that students participate more actively when ICT is used in lessons (M = 4.795, SD = 0.406), followed by the view that

ICT helps students understand difficult concepts more easily (M = 4.305, SD = 0.462). The statement that ICT motivates students to pay attention during class also recorded a high mean (M = 4.085, SD = 0.280). The relatively low standard deviations indicate considerable consistency in teachers' responses. The results therefore suggest that teachers associate ICT use with greater student participation, attention and conceptual understanding.

The particularly high score for student participation suggests that teachers perceive technology as capable of creating opportunities for more active involvement in lessons. Digital presentations, videos, simulations, online resources and interactive activities can allow students to discuss, collaborate, respond to questions, present ideas and explore learning materials. This interpretation is consistent with Toma et al. (2023), whose study found improvements in student performance and participatory skills following ICT-integrated teaching. Similarly, Dongo and Mkulu (2021) reported that ICT supported learner-centred instruction and contributed to more effective teaching and learning. These studies provide support for the view that ICT can facilitate more participatory forms of instruction when it is deliberately incorporated into learning activities.

The findings on attention and understanding also indicate that teachers perceive ICT as useful for presenting content in ways that are easier for students to follow. Multimedia resources can combine visual, audio and interactive representations, which may be particularly useful when explaining abstract or difficult concepts. The finding is consistent with Rajabu and George (2025), who reported improvements in student engagement following ICT adoption. However, the evidence should be interpreted carefully because the present findings are based on teachers' perceptions rather than direct observation or measurement of students' attention, participation or academic achievement. The high mean scores therefore demonstrate a strong perceived contribution of ICT, but they do not independently establish that ICT use caused improvements in student learning.

The results also need to be considered against the study's earlier evidence of limited ICT availability and low frequency of classroom use. This creates an important distinction between the perceived pedagogical potential of ICT and its actual use in schools. Shekwavi and Mrema (2025), for example, found that inadequate infrastructure, limited ICT skills and unstable electricity constrained effective ICT implementation. Their findings help explain why the benefits identified by teachers may not be realised consistently in the present context. Even when teachers recognise that technology can improve participation and understanding, unreliable equipment, internet connectivity, electricity or technical support can prevent them from incorporating ICT into lessons as intended.

The implication of the findings is that ICT investment should focus on enabling meaningful pedagogical use, rather than simply increasing the number of

technological devices in schools. Teachers need access to appropriate digital materials and reliable infrastructure, but they also need to know how to design activities in which technology contributes directly to participation, discussion, problem-solving and conceptual understanding. ICT should therefore complement sound teaching strategies rather than replace them. Overall, the data indicate that teachers see considerable potential for ICT to strengthen student engagement and understanding, but the extent to which these benefits are realised depends on the quality, purpose and conditions of ICT use in the classroom.

Use of Learner-Centred Teaching Strategies

Table 3 presents teachers' perceptions of the contribution of ICT to learner-centred teaching strategies. The findings indicate that ICT supports collaborative and interactive learning and enables students to explore learning materials independently. Overall, the results suggest that ICT can promote active student participation and strengthen learner-centred approaches in the classroom.

Table 3. ICT Integration and Learner-Centred Teaching Strategies

Statement	Mean	SD
ICT enables collaborative learning among students.	4.000	0.000
ICT supports interactive teaching approaches in the classroom.	4.017	0.130
ICT allows students to explore learning materials independently.	4.017	0.130

Source: *Field Data, 2026*

Table 3 shows teachers' perceptions of the contribution of ICT to learner-centred teaching strategies. The results show consistently high levels of agreement across all three indicators. ICT enabling collaborative learning recorded a mean of 4.000 (SD = 0.000), while support for interactive teaching approaches and independent exploration of learning materials each recorded a mean of 4.017 (SD = 0.130). The results indicate that teachers generally perceived ICT as a useful resource for creating opportunities for students to participate, interact and take greater responsibility for their learning. The very low standard deviations, particularly the zero variation for collaborative learning, show that respondents held highly consistent views on the role of ICT in supporting learner-centred approaches.

The finding on collaborative learning suggests that teachers associate ICT with opportunities for students to work together, exchange information and complete learning activities collectively. Digital resources can support group assignments, presentations, shared learning materials and problem-solving activities. This is consistent with Dongo and Mkulu (2021), who found that ICT facilitated learner-centred instruction, and Rajabu and George (2025), who reported that ICT contributed to student engagement and interaction. However, the present finding should not be interpreted as evidence that the mere presence of ICT automatically creates

collaborative learning. Collaboration depends on how teachers structure learning activities and whether students are given meaningful tasks that require interaction and joint problem-solving. Technology can therefore support collaboration, but the pedagogical design of the lesson remains central.

The high rating for interactive teaching approaches further indicates that teachers saw ICT as providing opportunities for greater interaction between teachers, students and learning materials. This finding agrees with Toma et al. (2023), who reported increased participation and interactivity in ICT-supported learning, as well as Rajabu and George (2025), who identified improvements in teacher-student interaction. At the same time, Shekwavi and Mrema (2025) showed that poor infrastructure, limited ICT skills and unstable electricity can restrict effective ICT implementation. This contrast is important because it demonstrates that the interactive potential of ICT depends on whether teachers have consistent access to functional technology and the capacity to incorporate it appropriately into classroom activities.

The finding that ICT enables students to explore learning materials independently also received strong agreement ($M = 4.017$, $SD = 0.130$). This suggests that teachers recognise the potential of digital resources to extend learning beyond direct teacher explanation by allowing students to review content, search for additional information and explore learning materials at their own pace. The result is consistent with Dongo and Mkulu (2021), who found that ICT improved access to teaching and learning materials, and with Rajabu and George (2025), who linked ICT use with student engagement and critical thinking. Nevertheless, independent learning requires more than access to digital information. Students need appropriate resources, functioning devices and guidance from teachers on how to identify, evaluate and use information effectively.

The findings suggest that teachers perceive ICT as capable of supporting the three important dimensions of learner-centred teaching examined in this study: collaboration, classroom interaction and independent learning. However, the results should be considered alongside the earlier evidence showing low actual ICT utilisation and limited availability of ICT facilities. This indicates that the perceived pedagogical value of ICT is greater than its current practical application. The implication is that schools should focus not only on providing ICT equipment but also on ensuring that teachers can use it to design purposeful, learner-centred activities. In this respect, the effectiveness of ICT depends more on the quality and purpose of its pedagogical use than on the mere availability or frequency of technology use.

CONCLUSIONS

The study concludes that ICT integration has a significant relationship with teaching effectiveness in public secondary schools in Temeke Municipality. ICT was

perceived to contribute to clearer and better-organised lesson delivery, increased student participation and attention, improved understanding of difficult concepts, and greater opportunities for collaborative, interactive and independent learning. The regression results further demonstrate that ICT integration was strongly associated with teaching effectiveness, with the combined dimensions of ICT integration accounting for a substantial proportion of the variation in teaching effectiveness. Frequency of ICT use emerged as the strongest positive predictor, demonstrating that the actual and purposeful application of ICT in classroom teaching is particularly important in realising its potential benefits. The study further concludes that teacher ICT competence alone is insufficient to improve teaching effectiveness unless teachers have adequate opportunities, resources and institutional support to apply their skills. The unexpected negative coefficient for ICT infrastructure and resources should, however, be treated cautiously and verified against the original variable coding before a definitive substantive conclusion is made. Overall, the findings demonstrate that meaningful ICT use, rather than merely possessing ICT skills or equipment, is central to strengthening teaching effectiveness.

Recommendations

The study recommends that the Ministry of Education and local authorities should prioritize functional ICT infrastructure in public secondary schools, providing computers, projectors, reliable internet, and digital teaching materials. Despite teachers' good ICT skills, their classroom use is low, so investment must focus on enabling these skills. Education authorities should enhance digital resources, improve internet connectivity, and minimize power interruptions. Professional development for teachers should emphasize practical ICT integration in lesson planning and student-centered approaches. Schools must maintain an updated inventory of ICT equipment and offer technical support. Access to computers should be increased for both teachers and students, with schedules for ICT-supported lesson preparation. Management should promote collaboration through peer learning, workshops, and sharing effective practices, focusing on learning objectives and student needs. Encouraging the regular sharing of ICT-based teaching practices will help optimize resources among teachers. Municipal and school authorities should create systems to improve teachers' access to ICT facilities, encouraging use in lesson preparation and instruction. Schools need to maintain an updated inventory of ICT equipment, schedule regular maintenance, and provide technical support. They should also increase access to functional computers for teachers and students, with timetables that allow ICT-supported lesson preparation.

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