

Head Teachers' Coordination of Professional Development and Teachers' Implementation of Digital Literacy Tools in Public Primary Schools in Nakuru North Sub-County

 Maina Wambui Rebecca^{1*}, Njihia Wambui Rose¹ and  Kimotho Michael²

¹Tangaza University, P.O. Box 15055-00509, Langata, Nairobi, Kenya

²The Catholic University of Eastern Africa, P.O. Box 62157-00200, Nairobi, Kenya

Abstract

The rapid integration of technology into the education sector has necessitated a paradigm shift in teaching methodologies, with digital literacy emerging as a crucial skill for both educators and students. In public primary schools, the successful adoption of these tools is heavily dependent on effective leadership and professional support. This study therefore examined how head teachers' coordination of professional development affects teachers' implementation of digital literacy tools in public primary schools in Nakuru North Sub-County. Transformational Leadership Theory was adopted for the study. The study adopted a convergent parallel mixed method design. The target population consisted of 44 schools, 44 head teachers, 350 teachers and 3654 students. Probability and Non-probability sampling techniques were used to select a sample size of 20 head teachers, 114 teachers and 322 students. The study used questionnaires, focus group discussion guide and in-depth interview guide to collect data. Validity of the Instrument was ensured through expert review and reliability was tested using Cronbach's Alpha. Descriptive statistics were used to analyse quantitative data while qualitative data was categorized and interpreted in narrative form and direct quotes. The findings revealed that the coordination of professional development played a key role in ensuring the implementation of digital literacy tools in schools. Further, majority of teachers perceive their head teachers as proactive in organizing regular ICT training workshops, online learning opportunities, and peer-to-peer sessions. These initiatives were found to have a significant positive impact on teachers' digital literacy skills, confidence and their ability to integrate technology into classroom instruction. However, the study also revealed significant challenges, such as limited funding for acquiring and maintaining devices, inconsistent internet connectivity, and a lack of adequate training for both teachers

and students on how to use ICT tools effectively. The study recommends that the government through the ministry of education should ensure that schools are equipped with a long-term digital strategy, including creating specialized roles for IT support staff to ensure sustainable and efficient ICT integration in education. The head teachers should also prioritize regular professional development programs focused on digital literacy to equip teachers with the necessary skills and knowledge.

Keywords: Kenya, Nakuru North, head teachers, coordination, professional development, digital literacy tools

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Correspondence: beckynia42@gmail.com

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Introduction

The transformative leadership style of school leaders has been reported to be vital for the effective implementation of digital literacy (Ronoh, 2021). Transformative leadership has traits that help leaders influence their followers to achieve the desired institutional outcomes (Bukusi, 2020). Digital literacy is the ability to access, manage, understand, integrate, communicate, evaluate and create information safely and appropriately through digital technologies (UNESCO, 2018). Digital literacy consists of equipping people with information communication technology (ICT) concepts, methods and skills to enable them to use and exploit ICTs (Ronoh, 2021). Digital literacy skills are defined as open and dynamic processes dependent

on interactive communication, which require knowledge to use ICTs (Kumar & Bhushan, 2020). Digital literacy is related to an individual's ability and expertise to access and use the technology needed to live, learn, and work in a society where communication and accessing information are the basis of functioning efficiently (Al-Omari, 2019).

Transformational leadership in educational settings involves leaders and followers collaborating to achieve organizational goals beyond their self-interests (Magasi, 2021). In the context of digital literacy implementation, transformational leadership can play a crucial role in facilitating the adoption of digital tools for learning. While the effectiveness of transformational leadership may vary across different

organizational contexts, research suggests that it can be particularly impactful in educational institutions due to the collaborative nature of teaching and learning processes (Xie, 2020).

In Indonesia, Tatminingsih (2022) identified five critical areas for ensuring the effective implementation of digital literacy in schools as follows: The school leaders should embrace ICT; they should use ICT in their teaching-learning activities and their administrative work; they should facilitate the change process for their teachers; and they should provide the necessary professional development opportunities for themselves and their staff. For school programs to be implemented efficiently, the school heads must act as models for the teachers. In Germany, Caena and Redecker (2019) found that teachers should obtain continuing professional development, available technologies and resources, and a positive culture to promote digital literacy effectively. Hence, it suggests that since teachers are supposed to model digital literacy when teaching learners, they should possess requisite digital literacy skills.

According to a study by A'mar and Eleyan (2022), in Palestine, school leadership is one factor determining the effectiveness of ICT in learning. In her study, Tołwińska (2021) who did a study in Poland about technology use in schools suggested that school leadership can be an empowering force that begins the process of using ICT in school teaching and learning. The study also noted that ICT in teaching and learning is one of the innovations that require transformative leaders. Teachers face several challenges that arise from implementing ICTs in school, and strong school leadership is required to assist teachers in overcoming these challenges.

Mendoza and Catiis (2022) conducted a study in the Philippines about

the use of technology in schools. The study found that principals' technological leadership improves teachers' technological literacy and directly motivates them to integrate technology into their teaching for better performance. Learning to use technology increases a teacher's efficacy in the classroom, eventually resulting in digital literacy.

Raza et al. (2023) conducted a study on transformational leadership for technology integration in schools in Switzerland. The study found that principals who were proficient in computers and practiced transformational leadership could effectively promote the adoption of ICT in their schools. They served as examples of how to employ technology in teaching and learning. This suggests that the principals were able to communicate a vision for integrating technology and foster a climate that would allow for the implementation of technology teaching.

Martens et al. (2020) asserted that teachers in Nigeria cannot use ICT effectively because of a lack of assistance. Teachers lacked the knowledge and assurance necessary to utilize technology. The study suggested that school administrators should encourage training for teachers to enable them to implement digital literacy. Guvhu (2018) studied principal leadership and integrating information and communication technologies for teaching and learning in Zimbabwe. The study results revealed that the principals had little knowledge of technology but were aware of their leadership role in supporting teachers to integrate ICT in teaching and learning. The head teachers should support the development of teachers to enable them to acquire the necessary skills to integrate technology into teaching.

Charles et al. (2021) researched the ICT integration strategies used in

elementary school curricula in Uganda. The results of the study demonstrated that planning, coordination, and organization had a significant impact on the integration of ICT. The report proposed that government policies should be established to encourage teachers and school administration to integrate ICT into the teaching and learning process. The report also recommended examining management styles to ensure they can implement plans for successfully integrating ICT into the elementary school curriculum. Therefore, it is paramount for head teachers to be equipped with transformational leadership skills to enable them to coordinate the implementation of digital literacy in their schools through the teachers.

The Digital Literacy Programme was initiated in 2016 in Kenya to provide digital devices to primary school pupils and enhance teachers' capacity to provide digital learning resources. The program made it possible to train about 81000 teachers. For instance, the Ministry of Education, Science and Technology and the Teachers Service Commission TSC focused on training teachers for ICT training to teach fundamental and advanced ICT skills (Government of Kenya, 2016). When first introduced, the Digital Literacy Programme's primary objective was to incorporate ICT in the education curriculum to enhance the efficient transfer of learning content in all the public primary schools in Kenya. The Basic Education Curriculum Framework (2017) outlines that one of the national learning objectives is to enhance social, economic, technological and industrial demands for the nation's development. To this end, the Kenya Institute of Curriculum Development, KICD, conducted a needs assessment study to determine the relevant competencies that should be attained. According to the need assessment conducted by KICD and in

reference to the vision and Mission of BECF, digital competency is one of the competencies that a learner in basic education should achieve. These curriculum designs are also organized in a manner that every learner in primary school will, in a way, be exposed to some digital skills by the end of Grade six. These skills include coding, game-playing and word processing (KICD, 2017).

Muia (2021) noted that only a few teachers had ICT literacy in the ICT in the public primary schools in Kitui Central Sub-County. The study also revealed that several teachers and head teachers could not incorporate ICT in their instructions. Furthermore, there was no cordiality in the relationship between the teachers and head teachers. In the study by Muia, transformational leadership is not required to implement digital literacy.

Muchiri and Were (2016) affirmed a positive relationship between school leadership and ICT utilization in learning and teaching in Kenyan schools. This means that leadership is required for ICT to be embraced in teaching and learning and in the study conducted in Nakuru County, Salim and Onjure (2020) focused on the Effects of ICT Integration on the performance of digital literacy projects in the public primary schools. The study also found that restricted physical and Virtual networks, limited technical support, inadequate training and lack of adequate teacher competence hindered the digital literacy projects' performance in the Nakuru County public primary schools. The concerns identified in the study of Salim and Onjure were attributed to the absence of transformative leadership in digital literacy. Cherotich et al. (2022) looked at the effects of ICT infrastructure on digital literacy among teachers in public primary schools within Nakuru County. The study ascertained that ICT resources are essential for adopting digital literacy. However, many schools lack the

basic ICT facilities to support the introduction of digital literacy. Additionally, these schools were poorly equipped and, in some cases, the resources were scarce or deplorable. The study also proved that such issues hinder the proper coordination of ICT infrastructure for enhanced digital literacy.

Mahinda (2018) assessed the factors influencing the implementation of digital literacy programs in public primary schools in Nakuru North Sub-County. The study established that effective leadership is essential for facilitating the adoption of ICT in classroom teaching and learning. It suggested that headteachers must promote a digital culture to fully realize the goals of digital literacy. However, the study did not explore how headteachers' transformative leadership strategies impact teachers' implementation of digital literacy. Although various studies have examined the use of digital tools in education, there remains a scarcity of literature specifically addressing how headteachers' transformative leadership influences the implementation of digital literacy tools in public primary schools in Nakuru North Sub-County, Kenya. This gap highlights the need for the present study.

Statement of the Problem

Studies across the globe have demonstrated that school leadership plays a crucial role in promoting teachers' implementation of digital literacy in schools (Dashtestani & Hojatpanah, 2022; Nalda et al., 2020). Specifically, transformational leadership strategies among school heads have been found to positively influence teachers' use of information and communication technologies (ICT) for instructional purposes, thereby enhancing learning outcomes (Zainal & Mohd, 2021). In Kenya, the government has recognized the importance of school leadership in

supporting the integration of digital literacy in schools. Initiatives such as training head teachers in digital and leadership skills have been implemented to improve teaching and learning through enhanced digital literacy (Ndegwa & Tanui, 2023).

Despite these efforts, concerns persist regarding the effectiveness of these measures in improving teachers' implementation of digital literacy tools for learning, particularly in Nakuru North Sub-County. According to a report from the Nakuru North Sub-County Director of Education, there is an outcry and worrying situation regarding implementation of technology tools in schools. Stakeholders, including parents, have raised concerns about teachers' effectiveness in utilizing digital literacy tools (Sub-County Director Report, 2025). The report indicates that many teachers lack adequate guidance, training, and motivation, which has led to poor implementation of digital tools, limited integration into classroom instruction, and diminished student engagement and development of digital skills.

As these challenges persist in the area, there is growing uncertainty about whether head teachers' transformative leadership strategies have contributed to the situation and whether a direct relationship exists between head teachers' transformative leadership strategies and teachers' implementation of digital literacy tools. There is concern if teachers' use of digital literacy tools continues to be ineffective, it could hinder students' acquisition of essential technological skills, reduce engagement, widen the digital divide, limit learning opportunities, and leave learners ill-prepared for future academic and professional demands.

Furthermore, there is limited literature exploring the influence of head teachers' transformative leadership

strategies and teachers' implementation of digital literacy tools, particularly in public schools within Nakuru North Sub-County. It is from this perspective that the current study seeks to address this gap by assessing how head teachers' transformative leadership strategies influence teachers' implementation of digital literacy tools for learning in public primary schools in Nakuru North Sub-County, Kenya.

Objective of the Study

To examine how head teachers' coordination of professional development affects teachers' implementation of digital literacy tools in public primary schools in Nakuru North Sub-County.

Research Question

How does the head teachers' coordination of professional development influence teachers' implementation of digital literacy tools in public primary schools in Nakuru North Sub-County?

Theoretical Framework

This study was based on the transformational leadership theory. Burns (1978) originally put forth the transformational leadership theory, concerned with leadership that closely collaborates with followers to attain goals beyond their self-interests. The leader recognizes the necessary change and develops a vision to direct it. Transformational leadership strives to encourage team members to be more creative and self-actualized. Burns (2008) identified four elements of transformational leadership: inspiration motivation, individual consideration, intellectual stimulation, and idealized influence. Transformational leadership entails the leader's ability to identify and communicate a clear vision to inspire and motivate followers. Inspiring motivation involves pushing people to do better at

their jobs and establishing a distinct vision for improving productivity. The head teachers may communicate the desired goals from the instructors, who may also reassure them that they are manageable. The degree to which the leader is conscious of the requirements of the followers and responds by directing the followers is known as individualized consideration. Genuinely caring leaders take note of their followers' needs and emotions and practically respond to them. The needs of each teacher were identified by the head teachers, who then guides as necessary. For instance, it is essential to help individual teachers develop the skills needed to apply digital literacy through professional development.

Empirical Review

In Spain, Fernández-Batanero et al. (2020) studied Digital competencies for teacher professional development. The method follows the Statement Guidelines for Systematic Reviews and Meta-analysis (PRISMA). After applying the inclusion, exclusion, and thematic belonging criteria in Scopus and Wos databases, the sample comprised 21 studies. The selected studies emphasize the importance of digital competence as one of the challenges facing teachers today, being mainly qualitative methodology studies. Among the conclusions, we highlight that most of the selected studies reveal a lack of teacher training and insufficient ICT training. The study under discussion used secondary data to establish the link between professional development and ICT integration. The current study intends to collect primary data from head teachers, teachers, and students using interviews and questionnaires.

A study by Yelubay et al. (2022) from Asia sought to establish the effectiveness of developing future teachers' digital competence through massive open online courses. The study

used a mixed method. The primary data was collected through questionnaires. The findings of this study revealed that massive open online courses as a distance learning technology effectively improved teachers' digital competence. The study by Yelubay et al. (2022) was conducted in a different geographical setting and did not show the role of the head teacher in teachers' professional development and the implementation of digital literacy. The current study intends to determine whether training workshops organized by the head teachers' impact teachers' implementation of digital literacy in public primary in Nakuru North Sub-County, Kenya.

Chama and Subavaera pandiyan (2023) study sought to investigate the difficulties experienced in teaching digital capabilities to secondary school students in Zambia. The data was collected from a sample of 281 teachers and 20 schools in Lusaka. The findings show that while teachers in Zambia have access to digital devices and have moderate to high levels of digital literacy, there is a challenge to incorporate technology into the curriculum and instruction effectively. The study recommended professional development programs for teachers to improve their digital competencies to address the challenge. Though the study established that there is a challenge to incorporate technology into the curriculum and instruction effectively and recommended professional development programs for teachers, it failed to give the specific coordination role of the school leadership. The reviewed study also collected data from teachers only. This leaves a gap the proposed study sought to address by exploring head teachers' coordination of teachers' professional development. It involved students, teachers, and head teachers from public primary schools in Nakuru North Sub-County, Kenya.

Ngoungouo (2017) carried out a study in Cameroon to identify the types of ICTs utilized by teachers, as well as to assess the status of equipment in those schools and the level of teacher training in the use of ICTs in teaching. A questionnaire was used to collect data from 21 teachers. According to the findings, 14.28% of the teachers were trained on the use of ICT instructions, while 85.75% were not. Furthermore, the said teachers acquired the knowledge by their initiative through online learning platforms on the internet. The study, therefore, revealed that teachers desired to be trained, hence the need for professional development. The study by Ngoungouo (2017) established that only three out of 21 teachers undertook online ICT training. However, the study did not state clearly whether the trained teachers effectively used ICTs for instructional purposes. Further, the study used a sample of 21 teachers, a small sample representing a large population. Thus, the current study intends to collect data from 105 teachers.

Kirchhoff and Makubuya (2022) explored sustainable teaching practices to meet the Kenyan government's call for innovative learning and to teach digital literacy to all students. They were selected from Trans Nzoia County preschool, primary, and secondary school teachers attending a three-day professional development course. The study findings confirmed that while the participants were satisfied with the training, they also complained of inadequate technology resources. It was a challenge for them to teach digital literacy in a constructivist fashion, as was expected of them.

Matthew et al. (2016) research in Kenya focused on the effects of enhancing literacy instruction by expanding the teacher knowledge base. The study occurred in the coastal area, and the teachers were educated on developing

lessons for the semi-scripted plans and the weekly text-messages to help students read results and classroom practices. The sample comprised 51 public primary schools and the schools were selected randomly. It was also pointed out that there were more written text instructions and an immense focus on letters and sounds. After two years, there are positive effects on three out of four fundamental indexes of children's literacy, and school drop-out reduces from 5. This makes the approach to literacy training both sustainable and cheap; in the subsequent years, a similar approach has been embraced across Kenya.

In Nakuru County, Mbugua (2015) conducted a study to investigate the impact of ICT integration in teaching on students' academic performance in public secondary schools in Nakuru County, Kenya. The descriptive survey research design was used in this study. The study sampled 81 principals and 405 teachers to participate in the study. Data were collected using teacher questionnaires, an interview schedule for Principals, and a school Observation Schedule to appropriately capture the impact of ICT integration on teaching and student performance. The findings revealed that teachers had only basic or no ICT skills, which posed challenges for teachers to integrate ICT into teaching. The reviewed study provides important insights into the teachers' ICT skills and how they can be developed. However, this study was carried out in public secondary schools. The current study proposes to assess whether head teachers' coordination of professional development influences teachers' implementation of digital literacy in Nakuru North Sub-County primary schools.

Methodology

The study adopted a convergent parallel mixed method design. The target

population consisted of 44 schools, 44 head teachers, 350 teachers and 3654 students. Probability and Non-probability sampling techniques were used to select a sample size of 20 head teachers, 114 teachers and 322 students. The study used questionnaires, focus group discussion guide and in-depth interview guide to collect data. Experts in educational research reviewed the tools to establish content validity. Reliability testing using Cronbach's Alpha produced a coefficient of 0.876, indicating high internal consistency. Descriptive statistics were used to analyse quantitative data while qualitative data was categorized and interpreted in narrative form and direct quotes.

Results and Discussion

Head teachers' Coordination of Professional Development and Teachers' Implementation of Digital Literacy

The study aimed to examine how head teachers' coordination of professional development influence teachers' implementation of digital literacy tools in public primary schools in Nakuru North Sub-County. Teachers were asked to indicate their opinions on a five-point scale, as shown in Table 4, which included the following options: Strongly Disagree (SD), Disagree (D), Neutral (N), Agree (A), and Strongly Agree (SA).

Table 4 indicates that a majority of teachers (45.4%) and (15.8%) agreed and strongly agreed that the head teacher regularly organizes ICT training workshops for staff. In contrast, only a small percentage (7.9%) disagreed with this view. In support of this data, one of the head teachers affirmed the findings, noting that teachers are routinely provided with training opportunities aimed at enhancing their skills in the use of ICT for teaching and learning purposes.

Table 1: Head teachers' coordination of professional development and teachers' implementation of digital literacy

Statement	SD		D		N		A		SA	
	F	%	F	%	F	%	F	%	F	%
The head teacher regularly organizes ICT training workshops for teachers.	9	7.9	22	19.3	13	11.4	52	45.6	18	15.8
I have opportunities to engage in online learning about digital literacy	12	10.5	19	16.7	8	7.0	53	46.5	22	19.3
The head teacher facilitates peer learning sessions on ICT integration.	13	11.4	13	11.4	33	28.9	44	38.6	11	9.6
Professional development opportunities have improved my digital literacy skills.	4	3.5	2	1.8	13	11.4	60	52.6	35	30.7
The frequency of ICT-related professional development enhances my use of ICT in teaching.	4	3.5	23	20.2	19	16.7	53	46.5	15	13.2

Source: Field Data (2025)

One head teacher shared the following perspective:

As a head teacher, I am deeply concerned with the professional development of the teachers in my school. As a result, I make it a point to invite a qualified professional to train them, especially at the start of every school term. This initiative has significantly helped many teachers improve their digital literacy skills (Head Teacher 7, 12/03/2025).

These findings suggest that head teachers in Nakuru North Sub-County are taking proactive steps to ensure that teachers are equipped with the necessary ICT skills for effective teaching and learning. The initiative to provide regular training indicates a growing awareness among school leadership about the importance of digital competence in modern education.

This aligns with findings by Akram et al. (2022), who emphasized that ongoing teacher training in ICT is essential for preparing educators to meet the demands of 21st-century learners. Their study underscores the critical role of professional development in enhancing teachers’ ability to integrate technology into classroom instruction effectively.

A considerable number of teachers (46.5%) agreed that they have opportunities to engage in online learning related to digital literacy. Only a small proportion (7.0%) was undecided about this view. The 7.0% of teachers who were undecided about whether they have opportunities to engage in online learning related to digital literacy may reflect a number of underlying factors. One possible explanation is inconsistent access to reliable internet or digital devices, which could make it difficult for some teachers to fully engage in or even be aware of available online training

opportunities. Additionally, a lack of clear communication from school leadership regarding such opportunities might lead to uncertainty among teachers. Another contributing factor could be varying levels of digital confidence. Teachers who are less comfortable with technology may feel unsure about their ability to participate in online learning, leading them to respond as undecided. Further, time constraints and heavy workloads could cause teachers to be uncertain about whether they can realistically engage in online professional development, even if opportunities exist. This small but significant percentage highlights the importance of not only providing ICT training opportunities but also ensuring that they are clearly communicated, accessible, and tailored to teachers' varying needs and confidence levels. The high number of teachers agreeing on teacher professional development was also supported by head teachers, one of whom stated:

To ensure teachers have unrestricted access to continuous professional learning, I prioritized providing stable and reliable internet connectivity in our school. This has enabled them to participate in various online training programs, significantly improving their ICT competencies and equipping them to integrate digital tools more effectively into their instructional practices (Head Teacher 9, 12/03/2025).

Similarly, responses to open-ended questions revealed that many teachers reported participating in online workshops designed to enhance their digital skills. These findings highlight the growing role of online platforms in supporting continuous professional development for teachers. However, challenges remain. One of the head teachers pointed out a key barrier:

As a leader in this school, I encourage teachers to seek opportunities to learn

how to use ICT, including attending online workshops on digital tools for teaching and learning. But the challenge has been teachers' attitudes. Some are not willing to invest their time in going online to search for information or improve their ICT knowledge. This reluctance has hindered the acquisition of digital skills among some teachers (Head Teacher 10, 15/03/2025).

These findings suggest that while infrastructure and opportunities for online learning exist, the full potential of such initiatives is limited by factors such as teacher motivation and attitude.

The study further revealed that a significant proportion of teachers (38.6%) and (9.6%) agreed and strongly agreed respectively that head teachers facilitate peer learning sessions focused on ICT integration. In contrast, only 11.4% of the teachers strongly disagreed with this statement. These quantitative findings were reinforced by qualitative data from the open-ended responses, where many teachers expressed that they acquire most of their ICT skills through peer learning sessions organized by their head teachers. These sessions appear to serve as valuable platforms for sharing practical knowledge and teaching strategies related to the use of digital tools in the classroom.

One head teacher highlighted the importance of this approach, stating,

"Peer-to-peer teaching has been one of my strategies for enhancing ICT skills among teachers. I encourage school-based workshops where teachers are given a chance to teach and learn from one another."

This reflects a growing recognition among school leaders that peer learning can be an effective, low-cost method for building digital competencies. By creating spaces for collaborative learning, head teachers are fostering a supportive professional environment that

encourages continuous growth and innovation in the use of ICT for teaching and learning.

The study also revealed that slightly more than half of the teachers (52.6%) agreed that professional development opportunities had contributed to the improvement of their digital literacy skills. This quantitative finding was echoed in the open-ended responses, where many teachers emphasized the importance of training in enhancing their ability to use ICT effectively in teaching. Teachers noted that these professional development sessions have equipped them with both the knowledge and confidence needed to integrate technology into their classroom practices.

This perception was further validated by feedback from students. One student remarked, “Our teachers are effective in the use of ICT in teaching us, and this has improved our learning in class.” Such student testimonials provide additional evidence that professional development has had a positive impact not only on teachers' ICT competence but also on the overall quality of instruction and learning outcomes.

One head teacher emphasized the school's commitment to continuous professional growth, stating:

We have made professional development a top priority, recognizing its importance in enhancing our teachers' skills. By providing a combination of formal training, peer learning, and online resources, we've seen a noticeable improvement in their digital literacy. While it's an ongoing process, the progress is clear, and teachers are becoming more confident in integrating technology into their teaching methods (Head Teacher 4, 18/02/2025).

These findings suggest that targeted professional development initiatives, especially those combining multiple learning approaches, play a critical role in building teachers' digital competencies. As a result, they not only improve teaching practices but also enhance students' learning experiences in technology-enhanced environments.

The findings further revealed that 46.5% and 13.2% of the teachers agreed and strongly agreed respectively that the frequency of ICT-related professional development significantly enhances their ability to use ICT in teaching. However, 16.7% of the teachers were undecided, possibly indicating inconsistencies in access, quality, or individual engagement with these training opportunities.

The importance of ongoing ICT training was reinforced by one of the head teachers, who affirmed that regular professional development has led to noticeable improvements in teachers' digital proficiency. The head teachers attributed this progress to the structured and consistent training provided under his leadership. In interviews with head teachers, similar sentiments were expressed. One head teacher elaborated:

Coordinating professional development for digital literacy has been a central focus of our efforts. We have introduced a peer learning program, conducted regular workshops, and provided access to online courses for our teachers. These initiatives have led to a significant improvement in their digital skills, empowering them to better incorporate technology into their teaching practices (Head Teacher 5, 18/02/2025).

These findings indicate the crucial role that frequent and well-coordinated professional development plays in enhancing teachers' ICT integration skills. Regular exposure to training opportunities

not only builds digital competence but also fosters confidence and innovation in teaching practices.

The results suggested that teachers generally held positive perceptions of the professional development opportunities coordinated by head teachers. These initiatives were viewed as valuable in enhancing teachers' ability to integrate technology into their instructional practices. One head teacher emphasized the transformative impact of these programs, stating:

The professional development opportunities have been truly transformative for teachers. They have progressed from feeling intimidated by technology to confidently integrating it into their daily teaching. The workshops and peer learning sessions have played a crucial role in building their skills and confidence, empowering them to effectively utilize technology in the classroom (Head Teacher 19, 16/02/2025).

These findings are consistent with those of Kisirkoi (2015), who found that professional development is essential in enhancing teachers' digital literacy skills in Kenyan schools. The current study underscores the role of head teachers in effectively coordinating such initiatives, contributing to meaningful changes in teachers' classroom practices.

Conclusions and Recommendations

The study recommends that the head teachers should prioritize hands-on, continuous training for both staff and themselves. They should establish a culture of learning by actively participating in ICT-related professional development and demonstrating its practical use in daily school activities. Head teachers can encourage peer-to-peer learning and create opportunities for teachers to share

successful ICT integration strategies. Additionally, they should allocate time for teachers to explore new technologies and provide consistent support, fostering an environment where digital literacy is embraced and consistently practiced across the school.

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