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Influence of Headteachers' Supervision on Implementation of Digital Literacy Programmes in Public Primary Schools in Marsabit North Sub- County, Marsabit County, Kenya

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Abstract: Headteachers' supervision plays a key role in the implementation of digital literacy programmes (DLP) in schools. However, in Marsabit North Sub- County, implementation of digital literacy programmes has not been smooth. This study sought to determine the influence of headteachers' supervision on implementation of DLP in public primary schools in Marsabit North Sub- County, Marsabit County, Kenya. The study was guided by the supervision theory and network society theory. The study adopted mixed methodology and concurrent triangulation research design. Target population was 138 respondents which comprised 18 headteachers and 120 teachers from which a sample of 102 respondents was determined using Yamane's Formula. This consisted of 6 headteachers and 96 teachers. Questionnaires were used to collect data from teachers and interviews for headteachers. Qualitative data were analyzed thematically and presented in narrative form. Quantitative data were analyzed using descriptive statistics such as frequencies and percentages and inferentially using Pearson's Product Moment Correlation Analysis using Statistical Package for Social Sciences (SPSS Version 25) and presented using tables. The study found that few public primary schools have implemented DLP. This is partly since headteachers rarely supervise the process. Thus, headteachers should take a more active role in supervising the use of technology, ensuring that it enhances teaching practices. The Ministry of Education should develop an official policy which requires the Teachers' Service Commission to recruit ICT teachers to increase their number in schools.

Keywords: Headteachers, digital literacy programmes, communication practices, implementation, public primary schools, supervision

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1. Introduction

Digital literacy programme (DLP) is a concept of under information and Communication Technology (ICT) and includes any communication device or application, encompassing radio, television, cellular phones, computer and network hardware and software, satellite systems as well as the various services and applications associated with them, such as videoconferencing and distance learning. According to Daniels (2022), the need and urgency for developing technological literacy, although not a new idea, emerged with greater emphasis in the early 1980s and, with this increasing awareness and interest, the technology quickly was recognized as a powerful vehicle for offering educators innovative ways to enhance teaching and learning. Cognizant of these assertions, Pelgrum and Law (2021) posit that the diffusion of digital literacy programmes in all spheres of life has created a social system that is driven by knowledge and powered by technology.

Pelgrum and Law (2021) further assert that the pedagogical and socio-economic forces that learning has driven the schools to integrate technology in teaching

and learning include greater information access; greater communication; synchronous and asynchronous learning; increased cooperation and collaboration, costeffectiveness and pedagogical improvement. In other words, pedagogical improvement through simulations, virtual experiences, and graphic representations have led both staff and learners to choose more appropriate applications which are flexible in time, in place, personalized, reusable, adapted to specific domains and more cost-efficient (Pelgrum & Law, 2021). This implies that the prominence of digital literacy programmes also puts the various education systems under pressure to use digital literacy programmes in teaching and learning in elementary and primary schools.

In line with these assertions, Tearle (2022) posits that in the United Kingdom, due to the explosion of knowledge, educational institutions including primary schools cannot continue as venues that transmit knowledge from the staff to the learner or use the textbook as the only source of information. These assertions are indicative of the fact that primary schools are therefore expected to promote the acquisition of knowledge and skills through the use of new technologies to ensure efficient, continuous and lifelong learning. For such implementation of digital literacy programmes to be effective, headteachers' supervision plays a key role. In Australia, headteachers are pivotal in guiding the integration of digital literacy into the curriculum. According to Thomas and Naylor (2020), school leaders in Australia are expected to manage technological resources, support teacher training, and create an environment conducive to digital learning. This involves providing professional development opportunities for teachers, ensuring access to technological tools, and fostering a culture of innovation (Sweeny & Lee, 2022). Furthermore, headteachers must maintain a balance between traditional teaching methods and the integration of digital tools, ensuring that digital literacy is seamlessly incorporated into the school's educational objectives. Similarly, in Malaysia, headteachers play a central role in the implementation of digital literacy programmes. According to Zainuddin, Muhamad and Shamsudin (2021), Malaysian school leaders are responsible for aligning digital literacy initiatives with national education policies, such as the Malaysia Education Blueprint 2013-2025. This requires headteachers to oversee the planning and execution of digital literacy strategies, ensuring that teachers are adequately supported and that students are equipped with the necessary skills to navigate the digital world. Moreover, headteachers in Malaysia are tasked with addressing challenges such as access to technology and digital infrastructure, which can hinder the successful implementation of such programmes (Jamil & Tan, 2020). These assertions point to the fact that headteachers and their supervision activities are integral to the successful implementation of digital literacy programmes. Their leadership and supervision are

essential in ensuring that these initiatives are effectively integrated into the educational experience of students.

In South Africa, studies have shown that headteachers' commitment to fostering a technology-friendly environment is crucial in ensuring the successful implementation of digital literacy programmes. According to Mafa (2021), headteachers who actively engage with teachers, provide adequate resources, and monitor the integration of technology in classrooms significantly enhance the outcomes of digital literacy initiatives. However, challenges such as inadequate infrastructure and resistance to change remain prevalent (Mafa, 2021). In Kenva, the role of headteachers in the implementation of digital literacy is highlighted in the Kenyan government's digital literacy programme, known as the Digital Literacy Programme (DLP). A study carried out by Kipkorir (2020) found that headteachers' supervision was a determining factor in the success of this programme.

Effective supervision involved providing guidance and support to teachers, ensuring teachers' digital competence, and maintaining an open line of communication with the Ministry of Education. Kipkorir (2020) further noted that headteachers who fostered collaboration among teachers were more likely to witness successful integration of digital tools in the classroom. In Marsabit North Sub-county, a region with varying levels of technological access, the influence of headteachers' supervision is even more pronounced. According to research undertaken by Wambugu (2019), headteachers' leadership in remote and resource-limited schools has a direct correlation with the adoption of digital literacy programmes. The study emphasized that when headteachers are actively involved in the training of both teachers and students, there is a higher likelihood of overcoming infrastructure challenges, resulting in a more effective implementation of digital literacy initiatives. These findings underscore the importance of headteachers' supervision in ensuring the success of digital literacy programmes. Headteachers who provide consistent guidance, professional development opportunities, and resources contribute significantly to the effective implementation of these initiatives, despite the varying challenges across different regions.

1.1 Statement of the Problem

However, the implementation of DLP has proved more challenging than was initially assumed when it first appeared in the educational agenda in 2013 and even up to date, the use of technology as envisaged through DLP by close 78.1% of teachers and pupils in primary schools is still not commonplace. Despite these assertions, much is yet to be done to interrogate the extent to which headteachers' supervision influences the implementation of DLP in public primary schools, hence the need for this study.

1.2 Research Objectives

The study was guided by the following objectives:

- 1. To assess the status of implementation of digital literacy programmes in public primary schools in Marsabit North Sub-county.
- 2. To determine how headteachers' supervision influences implementation of digital literacy programmes in public primary schools in Marsabit North Sub-county.

1.3 Research Questions

The study was guided by the following research questions:

- 1. What is the status of implementation of digital literacy programmes in public primary schools in Marsabit North Sub-county?
- 2. How does headteachers' supervision influence implementation of digital literacy programmes in public primary schools in Marsabit North Sub-county?

2. Literature Review

Supervision by school heads plays an important role in the implementation of digital literacy programmes.

According to Devadason (2023), the management fosters the use of digital technology at a strategic level, even supporting the introduction of digital literacy education activities. Starting from a review on the role of school managers' attitudes and behaviours as facilitators of the implementation processes. This is done by formulating ICT policies, developing understanding, a conducive school climate, organizing training seminars and workshops for the implementation of digital literacy programmes in primary schools. Whether the first or the second track should receive stronger donor support depends on the situation at hand. In a study conducted in Rome, Goyal, Purohit and Bhaga (2023) revealed that technical assistance offered by school management helps to understand what is involved in improving the digital literacy in primary schools, including the options for developing a legal framework and designing key elements of the integration process. Goyal et al (2023) posited that experience suggests that a promising approach is to start with limited and focused assistance drafting the enabling policies for proper in implementation of digital literacy in primary schools.

To corroborate these assertions, Allan, Yuen and Wong (2022) carried out a study in Argentina which established that, in evaluating the success of the implementation of digital literacy programmes in primary schools and practices, elements are needed to be taken into consideration such as values and motives, which influence the induction and decisions of those who are responsible for the implementation processes. Allan et al

(2022) further revealed that schools that provide a conducive school climate enhance the implementation of DLP. In most countries in Sub-Saharan Africa, effective school management is important in supervising, coordinating and supporting the implementation of DLP in primary schools (Ayemoba, 2023). In a study conducted in Kumasi Metropolis in Ghana, Buabeng-Andoh (2022) revealed that, as key drivers of the implementation process, school management can facilitate and support the idea of implementing digital literacy in primary schools.

To achieve this, school management needs to appreciate that, the idea to implement digital literacy in primary schools is not only about technology use but also about the transformation of working atmosphere and attitude in their communities (Buabeng-Andoh, 2022). By being role models, visionary planners and custodians of digital literacy infrastructure in primary schools should be committed to championing and having an interest in the implementation of digital literacy programmes. In other words, for successful implementation of digital literacy programmes in primary schools, school management should be involved, concerned and supervise the whole process, through promoting training, facilitation, induction and sharing decision making with other school management, delegating responsibilities and maintaining a clear vision of the implementation process. In Kenya and Marsabit North Sub-county in particular, MoE (2024) indicates that, to be able to lead the implementation of digital technology in primary schools, managers such as headteachers should be dedicated to the implementation process, be creative thinkers, peoplecentred, maintain professionalism and standard during the implementation process. MoE (2024) argues that in many instances, supervision in the implementation of digital literacy programmes in primary schools through acquiring the needed infrastructure is critical. However, very few, if any, use these facilities in a significant way with primary school learners, therefore lacking the necessary vision and knowledge to lead transformation through the implementation of digital literacy programmes in primary schools. Despite these assertions, MoE (2024) as did other reviewed empirical studies had not indicated how supervision would be more effective in the implementation of digital literacy programmes in primary schools.

2.1 Theoretical Framework

The study was guided by the supervision theory whose proponent was Edward Thorndike in the year 1927 as a framework and foundation for understanding the behavior of teachers or educators in the context of supervision. Today, the theory has evolved to encompass a broader understanding of how leadership practices, including supervision, influence educational outcomes. The core principles of supervision theory focus on the improvement of both teaching and learning. This theory holds that supervision is not merely an evaluative function; it is aimed at fostering professional growth through collaborative efforts. This involves headteachers working alongside teachers, offering guidance, support, and feedback to enhance instructional quality and efficiency.

This theory further holds that effective supervision aims at achieving educational goals. In the case of digital literacy programs, the headteacher's role is to ensure that technology integration is aligned with the school's educational objectives, guiding teachers to use digital tools effectively in their classrooms. In the same token, supervision theory emphasizes the importance of feedback in fostering an environment of continuous improvement. For the implementation of digital literacy programs, this feedback loop ensures that teachers are supported in overcoming challenges related to technology usage and digital literacy teaching methods. Finally, this theory is premised on the fact that supervision encourages educators to engage in selfreflection to assess their teaching practices and their impact on students.

For headteachers, this means not only reflecting on their own leadership practices but also guiding teachers in self-reflection regarding their use of technology in the classroom. In the context of this study, the application of supervision theory to digital literacy programs in schools is pivotal for the successful integration of technology into the curriculum. Headteachers, as the central figures in supervision, influence the way digital tools and technologies are implemented in teaching practices. Headteachers supervise teachers by ensuring they have the necessary training to use digital tools effectively. This involves organizing professional development programs where teachers are taught how to integrate digital literacy into various subjects. Supervision ensures that the focus remains on equipping teachers with skills to enhance students' digital competencies.

In supervising the implementation of digital literacy programs, headteachers are tasked with monitoring how effectively teachers incorporate technology into their lessons. This includes observing classroom practices, assessing student progress, and ensuring that the digital tools used are contributing positively to the learning environment. This theory underscores the fact that effective supervision involves encouraging teachers to experiment with new ideas and tools. In digital literacy programs, headteachers play an important role in fostering an innovative environment where teachers feel supported to try new technologies and teaching strategies. The study was also underpinned by the Network Society Theory as proposed by Castells Manuel (2000) which endorses the use of technology in educational institutions with emphasis laid on implementation of DLP by teachers who are faced with the task of teaching the next generation. Furthermore, the necessity of using digital technology for teacher development through a community of practice and the

networks established for knowledge acquisition and sharing is key towards the implementation of DLP.

According to this theory, all those who participate in the new knowledge economy need skills that benefit them in terms of power, wealth and meaning in the information and knowledge society which can be facilitated and achieved through the use of various digital technology tools. These digital tools also allow people all over the world to communicate with anyone, anywhere and at any time without any face-to-face interaction. These social networks are platforms in which collective knowledge becomes a source of individual knowledge and also become scenes for informal exchange of expertise which can benefit all who participate in the network. The infusion of digital technology in educational institutions as part of the new social structure has great implications for teaching and learning.

In the context of this study, this theory is relevant since it underscores the fact that, for any society to develop optimally, its primary school education system must be founded on the knowledge and skills that are presently driving the network society.

3. Methodology

3.1 Design

In this section, the research outlines the research methodology and design that guided the study.

Research design. In this research the study adopted mixed methodology and concurrent triangulation research design which involved implementation of quantitative and qualitative methods at the same time and with equal weight.

3.2 Target Population

Target population was 138 respondents which comprised 18 headteachers and 120 teachers from all the public primary schools in Marsabit North Sub-county.

3.3 Sampling Procedures and Sample Size

From th target population, a sample of 102 respondents was determined using Yamane's Formula. Stratified sampling was applied to create three strata based on the number of zones in Marsabit North Sub-county. From each zone, two headteachers were sampled using purposive sampling. However, from each zone, simple random sampling was applied to select 32 teachers. This sampling procedure realized a sample size of six and 96 teachers.

3.4 Research Instruments

Questionnaires were used to collect quantitative data from teachers whereas interviews were used to gather qualitative data from headteachers.

3.5 Data Analysis procedures

Data analysis began by identifying common themes from the respondents' descriptions of their experiences. Qualitative data were analyzed thematically based on the objectives and presented in narrative forms. Quantitative data were analyzed using descriptive statistics such as frequencies and percentages and inferentially using Pearson's Product Moment Correlation Analysis with the help of Statistical Package for Social Sciences (SPSS Version 25) and presented using tables.

3.6 Ethical Considerations

In this study, an ethical clearance certificate was obtained from Mount Kenya Ethical Review Committee (MKU ERC) before embarking on data collection processes. The researcher undertook to keep private any information given by the respondents that touched on their personal life. The researcher assured the respondents that no private information would be divulged to a third party. The nature and the purpose of the research were explained to the respondents by the researcher. The researcher explained to the respondents the procedure that would be followed during the data collection so that they could participate willingly. The raw data collected were filed for easy reference. Once the data were analyzed, computer printouts were filed while soft copies were stored in storage devices such as CDs and flash discs.

4. Results and Discussion

In this section, findings of the study as per the objectives of the study are outlined besides highlighting presentation of findings as well as discussions.

4.1 Response Rates

In this study, 96 questionnaires were administered to teachers and, in return, 90 questionnaires were filled and returned. The researcher also interviewed 6 headteachers. This yielded response rates shown in Table 1;

Table 1: Response Rates				
Respondents	Sampled Respondents	Those Who Participated	Achieved Return Rate (%)	
Headteachers	6	6	100.0	
Teachers	96	90	93.8	
Total	102	96	94.1	

Source: Field Data (2025)

Table 1 shows that headteachers registered a response rate of 100.0% whereas teachers registered 93.8%. This yielded an average response rate of 94.1%, which is consistent with the assertions of Creswell (2018) that a response rate above 75.0% is adequate. This information was important since it allowed the researcher to generalize the study outcomes to the target population.

4.2 Status of Implementation of Digital Literacy Programmes in Public Primary Schools

The study sought to assess the status of implementation of digital literacy programmes in public primary schools in Marsabit North Sub-county. Data were collected on the number of schools which have adopted DLP, number of teachers using ICT during teaching and number of learners undertaking DLP. Results are shown in Table 2;

Table 2: Status of Implementation of Digital Literacy Programmes in Public Primary Schools in Marsabit North Sub country

Indicators of Implementation of DLP	Number		
-	f	%	
Schools which have adopted DLP	6	15.0	
Teachers using ICT during teaching	73	12.4	
Students undertaking DLP	1837	14.4	

Source: Field Data (2025)

Table 2 shows that the number of public primary schools in Marsabit North Sub-county which have adopted digital literacy programmes is still low with only 6 out of 40 (15.0%) offering computer studies, only 73 out of 183 (39.9%) of the teachers use ICT during teaching whereas 1837(14.4%) of the students undertake computer lessons

under digital literacy programmes. During the interviews, the headteachers also responded in favour of the view that implementation of digital literacy programmes has been a challenge. Headteacher, H1, stated;

In my school, we have not fully implemented literacy digital programme. In as much as we have conceptualized the idea that DLP is to improving classroom kev pedagogy and administrative operations, much is vet to be done to realize its full implementation. Many teachers are yet to integrate in their technology teaching activities with only a few students undertaking computer or DLP programmes.

ICT in schools is still a challenge with only 41% of schools having implemented digital literacy programmes in teaching and learning. These findings affirm the fact that, despite its key role in enhancing classroom pedagogy and improved learner performance, implementation of DLP in public primary schools has been low.

4.3 Headteachers' Supervision and Implementation of Digital Literacy Programmes in Public Primary Schools

The study sought to assess how headteachers' supervision influences implementation of digital literacy programmes in public primary schools. Results are shown in Table 3;

These findings corroborate the assertions of Hennessy, Harrison and Wamakote (2023) that implementation of

Table 3: Teachers'	Views on the Influence of Headteachers' Supervision and Implementation of Digital Literacy
	Programmes in Public Primary Schools

Test Items	Ratings				
	SA %	A %	U %	D %	SD %
In public primary schools, the headteachers do not always supervise how teachers use technology in teaching	67.5	7.8	3.9	11.7	9.1
Headteachers rarely supervise how to use technology in lesson preparation as a way of implementing DLP	50.6	9.1	6.1	19.9	14.3
In public primary schools, supervision by headteachers has not helped realize effective implementation of DLP	67.5	7.4	4.8	14.7	5.6
Teachers have been effective in using technology due to frequent supervision by the headteachers	40.7	4.3	2.6	46.8	5.6
Headteachers have the skills to supervise the implementation of DLP in public primary schools	39.4	6.1	5.2	41.6	7.7

Source: Field Data (2025)

Table 3 shows that 61(67.5%) of the teachers strongly agreed with the view that headteachers do not always supervise how teachers use technology in teaching while 8(7.8%) agreed, 4(3.9%) were undecided, 11(11.7%) disagreed whereas 9(9.1%) strongly disagreed. More than half, 46(50.6%) of the teachers strongly agreed with the view that headteachers rarely supervise how to use technology in lesson preparation as a way of implementing DLP while 9(9.1%) agreed, 6(6.1%) were undecided, 18(19.9%) disagreed whereas 13(14.3%) strongly disagreed. Most, 61(67.5%), of the teachers strongly agreed with the view that, in public primary schools, supervision by headteachers has not helped realize effective implementation of DLP while 7(7.4%) agreed, 5(4.8%) were undecided, 14(14.7%) disagreed whereas 6(5.6%) strongly disagreed.

The study found that 37(40.7%) of the teachers strongly agreed with the view that they have been effective in using technology due to frequent supervision by the headteachers, 4(4.3%) agreed, 3(2.6%) were undecided, 43(46.8%) disagreed whereas 6(5.6%) strongly disagreed. The study revealed that 36(39.4%) of the teachers strongly agreed with the view that headteachers have the skills to supervise the implementation of DLP in public primary schools, 6(6.1%) agreed, 5(5.2%) were undecided, 38(41.6%) disagreed whereas 7(7.7%) strongly disagreed. This implies that, while the initiative is well-intentioned, the implementation and supervision of technology use in lesson preparation and teaching faced challenges, particularly have concerning headteachers' roles in supervision. These findings are consistent with the findings of research conducted by

Mwangi (2024), which established that headteachers in public primary schools are not always actively involved in supervising how teachers use technology in the classroom. According to Mwangi (2024), many headteachers do not consistently monitor or evaluate the effectiveness of technology integration in lessons. In the words of Chege and Njiru (2021), the failure to adequately supervise teachers on how to incorporate technology into lesson preparation has been found to undermine the success of DLP initiatives. The role of headteachers is vital not only in ensuring that teachers utilize available technological resources but also in guiding and providing feedback to improve instructional practices.

This is further supported by the findings of research carried out by Ochieng and Nyaboke (2020), who report that headteachers rarely engage with teachers on how to effectively use technology for lesson preparation. This oversight in supervision means that teachers are left to navigate the complexities of technology use without sufficient guidance, often leading to ineffective or underutilized technological resources. Such an approach hinders the realization of the intended outcomes of DLP, as teachers may not be aware of the best practices for integrating digital tools into their teaching methods. According to the study by Kabiru (2020), although some headteachers attempt to monitor technology use, their efforts do not translate into tangible improvements in the teaching process. However, there are instances where frequent supervision by headteachers has led to positive outcomes.

A study carried out by Odhiambo and Njiru (2022) found that where headteachers provided regular and constructive feedback, teachers became more proficient in using technology for lesson preparation and delivery. This suggests that, when headteachers take an active role in supervising the technological aspect of teaching, it can significantly enhance the effectiveness of DLP implementation. Unfortunately, such cases remain the exception rather than the rule. These findings also corroborate the findings of a study conducted by (2023), headteachers reported feeling Wambui underprepared to oversee the technological aspects of teaching due to insufficient professional development opportunities. As a result, the lack of competence in using and supervising digital tools has led to an overall weak implementation of DLP in many public primary schools. These findings point to the fact that, while the role of headteachers in supervising technology integration is recognized as essential, there are significant gaps in their involvement and effectiveness.

The lack of supervision regarding technology use in lesson preparation and the inadequate skills of headteachers have hindered the successful implementation of DLP. This further implies that, for DLP to succeed in public primary schools, headteachers must be more actively involved in supervising the use of technology in teaching and lesson preparation. This further affirms the fact that the role of technology in teaching and lesson preparation has become indispensable. With the increasing reliance on digital tools, headteachers must take an active role in supervising the use of technology within their schools. Their involvement ensures that technology is not only integrated effectively into the curriculum but also aligned with the educational objectives of the institution.

Headteachers play a vital role in providing guidance on how technology can enhance teaching practices. They can offer professional development opportunities to teachers, helping them utilize digital tools to create more engaging and interactive lessons. Through their supervision, headteachers can monitor whether the technology is being used appropriately and if it is truly benefiting the students' learning experiences. This oversight can prevent misuse, ensure equity of access, and support the consistent application of technology across subjects and grade levels. Moreover, active supervision allows headteachers to identify gaps in resources and skills, addressing these issues before they hinder the teaching process. This indicates that headteachers' involvement can also foster a culture of innovation, where teachers are encouraged to experiment with new technologies, thus contributing to the overall progress of the educational environment. Ultimately, headteachers' supervision of technology use in education is essential for maintaining a high standard of teaching and ensuring the proper integration of digital tools into the learning process.

4.4 Inferential Analysis

To verify the influence of headteachers' supervision on implementation of digital literacy programmes in public primary schools, data were collected on how often (Very Often = 5, Often = 4, Sometimes = 3, Rarely = 2 and Never = 1) they supervise teachers' use of technology in their classroom pedagogy, the number of schools which have functional computer systems, number of teachers using ICT during teaching and the number of learners with ICT skills. Results are shown in Table 4:

How often Headteachers Supervise Teachers' Use of Technology	No. of Schools whichNo. ofhave FunctionalTeachersComputer SystemsUsing ICT		Number of Learners with ICT Skills	
1	0	3	83	
2	0	4	109	
1	0	5	103	
2	0	4	149	
3	1	10	141	
1	1	1	101	

 Table 4: How Often Headteachers Supervise Teachers' Use of Technology and Implementation of Digital Literacy

 Programmes Public Primary Schools

Source: Field Data (2025)

Table 4 shows that, in public primary schools where headteachers supervise teachers' use of technology, implementation of digital literacy programmes has been smooth. This implies that headteachers who take an active role in monitoring technology use help ensure that teachers are supported and encouraged to adopt new methods effectively. This supervision fosters a positive environment in which educators feel confident exploring digital resources and applying them in their classrooms. When headteachers oversee the use of technology, they can identify potential challenges early and provide timely solutions. They also help align digital literacy programmes with the school's broader educational goals, making sure that technology is used to enhance learning rather than distract from it. This form of leadership also encourages collaboration among teachers, allowing them to share experiences and best practices, which further smooths the implementation process. Moreover, headteachers who prioritize digital literacy create an atmosphere of accountability and motivation. Teachers are more likely to engage fully with digital tools when they know their efforts are observed and appreciated. In this way, supervision by headteachers acts as a catalyst for successful adoption of digital literacy programmes in public primary schools. Results in Table 4 were subjected to Pearson's Product Moment Correlation Analysis and the results are shown in Table 5:

Table 5: Relationship between Headteachers'	Supervision and Implementation of Digital Literacy Programmes in
	Public Primary Schools

		1 usite 1 minury Senteens					
		Х	Α	В	С		
Х	Pearson Correlation	1	.531*	.525*	.657**		
	Sig. (2-tailed)		.042	.045	.008		
	N	6	6	6	6		
Α	Pearson Correlation	.531*	1	.121	.092		
	Sig. (2-tailed)	.042		.666	.745		
	N	6	6	6	6		
В	Pearson Correlation	.525*	.121	1	$.700^{**}$		
	Sig. (2-tailed)	.045	.666		.004		
	N	6	6	6	6		
С	Pearson Correlation	.657**	.092	$.700^{**}$	1		
	Sig. (2-tailed)	.008	.745	.004			
	N	6	6	6	6		

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Key: X- Headteachers' Supervision; A-Number of Public Primary Schools which have adopted DLP; A-Number of Public Primary Schools which have Functional Computer Systems; B-Number of Teachers Using ICT in Instruction and C-Number of Learners with ICT Skills

Table 5 shows a Pearson Product Moment Correlation Test Analysis which generated correlation coefficients of r1 = 0.531, r2 = 0.525 and r3 = 0.657, with corresponding significant levels (p-values) of 0.042, 0.045 and 0.008 which were less than the predetermined level of significance, 0.05, that is, p-value = 0.042, 0.045 and 0.008<0.05. Thus, the data shows that there is significant influence of headteachers' supervision on implementation of DLP in public primary schools. This further indicates that headteachers are entrusted with the responsibility of overseeing educational processes, ensuring that teachers are adhering to established curricula, and maintaining the quality of instruction within the school. Their supervision is critical in fostering an environment where DLP is effectively executed. Headteachers not only provide guidance on how lessons should be structured but also monitor whether teachers are following the prescribed lesson plans. This direct involvement in the instructional process helps maintain consistency and quality across the school's teaching practices.

4.5 Thematic Analysis

During the interviews, headteachers, however, responded contrary to the view that they do not always supervise implementation of digital literacy programmes. Headteacher, H2, stated:

In my primary school, I always supervise how teachers use technology in lesson preparation as well as teaching. This has made it easy to implement DLP.

Despite these contradicting views, these findings underscore the vitality of headteachers' supervision of the process of implementation of DLP. Just like quantitative findings, these views support those expressed by Mwangi (2019), who indicated that headteachers in public primary schools are not always actively involved in supervising how teachers use technology in the classroom. According to Mwangi (2019), many headteachers do not consistently monitor or evaluate the effectiveness of technology integration in lessons. This further implies that supervision activities undertaken by headteachers prevent misuse, ensure equity of access, and support the consistent application of technology across subjects and grade levels. Moreover, active supervision allows headteachers to identify gaps in resources and skills, addressing these issues before they hinder the teaching process. In other words, headteachers' supervision of technology use in education is essential for maintaining a high standard of teaching and ensuring the proper integration of digital tools into the learning process.

5. Conclusion and Recommendations

5.1 Conclusion

Implementation of DLP still faces numerous challenges with the number of public primary schools which have adopted the same being few. The study found that, in many public primary schools, DLP has not been fully implemented. The study revealed that headteachers rarely undertake serious supervision of teachers' use of technology in their pedagogical activities which has slowed the process of implementation of digital literacy programmes. In other words, implementation of DLP is not effectively supervised in public primary schools.

5.2 Recommendations

As a practice, headteachers should take a more active role in supervising and supporting the use of technology, ensuring that it enhances teaching practices and aligns with educational goals. As a policy, the Ministry of Education should develop an official policy which requires Teachers' Service commission (TSC) to recruit an ICT teacher during every recruitment exercise as a way of increasing their number in public primary schools.

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