

Parental Involvement and the Development of Digital Literacy among Public Junior School Learners in Kyuso Sub-County, Kitui County, Kenya

Wilfred Gitonga Nyagah¹, Wilfred Gitonga Nyagah², Dr. Laichena Mutabari³

¹Graduate Student, Department of Education, Tharaka University, Kenya

^{2,3}Department of Education, Tharaka University, Kenya

ABSTRACT

Digital literacy is increasingly important in contemporary education. Learners' opportunities to develop digital competencies are influenced by the support and resources available within their home environments. This study examined the effect of parental involvement on the development of digital literacy skills among public junior school learners in Kyuso Sub-County, Kitui County, Kenya. The study was anchored on Epstein's Theory of Overlapping Spheres of Influence and adopted an explanatory sequential mixed methods design. The target population comprised 1,047 Grade 8 learners, 183 teachers, and 619 parents. Data were collected from 232 learners, 27 teachers, and 31 parents. Learners' and teachers' data were collected using structured questionnaires, while parents participated in focus group discussions. Quantitative data were analysed using descriptive statistics, Pearson correlation, and multiple regression, while qualitative data were analysed using thematic analysis method. The findings indicated that parental engagement in learning activities had a positive and significant relationship with learners' digital literacy ($r = .277, p < .001$). Also, the parental communication ($r = 0.178, p = 0.011$) and parental decision-making ($r = 0.217, p = .002$) had significant relationship with learners' digital literacy. Regression results showed that the three dimensions of parental involvement explained 13.0% of the variation in digital literacy ($R^2 = .130$). Parental engagement ($B = 0.186, p < .001$), communication style ($B = .188, p = .035$), and decision-making ($B = .237, p = .012$) each had a positive and statistically significant effect on digital literacy. Qualitative findings further showed that parents supported digital learning through supervision, regulation of device use, participation in school activities, and joint engagement with digital content, although limited access to devices and parental digital skills constrained such involvement. The study recommended.

KEYWORDS

Parental involvement, digital literacy, parental engagement, parental communication, parental decision-making, junior school learners

I. INTRODUCTION

Digital literacy has become an increasingly important component of contemporary education. This is because schools seek to prepare learners for effective participation in a technology-driven society. Beyond the ability to operate digital devices, digital literacy involves learners' capacity to access, search for, evaluate, communicate, create, and use

digital information appropriately for learning and other purposes. Contemporary educational systems increasingly emphasize competencies that enable learners to adapt to digital environments and participate effectively in the knowledge economy.

In Kenya, digital literacy skills are relevant under the Competency-Based Education (CBE) framework. The integration of digital technologies into teaching and learning requires learners to develop not only technical skills but also confidence, responsible digital practices, and the ability to use technology to support teach. However, the development of digital literacy does not occur exclusively within the school environment. The home provides an important complementary learning environment where parents can influence learners' access to technology, patterns of technology use, and engagement with digital learning activities. Parental involvement is therefore an important factor in the development of learners' digital literacy because parents can provide guidance, supervision, encouragement, resources, and opportunities for children to engage with digital technologies for educational purposes.

Parental involvement encompasses activities such as monitoring schoolwork, communicating about academic progress, guiding learning routines, and participating in school-related decisions. In relation to digital learning, these forms of involvement may include helping learners access digital resources, guiding appropriate technology use, discussing online activities, setting learning goals, and making decisions concerning digital devices and learning tools available at home. Appropriate parental guidance can promote responsible digital habits and increase learners' confidence in using technology for learning. However, the ability of parents to provide such support may depend on their own educational background, technological knowledge, access to digital resources, and availability of time (Nudin et al, 2024). Therefore, parental involvement may either facilitate or constrain learners' opportunities to develop digital competencies, particularly where families differ considerably in their capacity to support technology-mediated learning.

International evidence demonstrates that parental support can positively contribute to children's engagement with digital learning. In China, Kang et al. (2024) established that parental support, particularly assistance with online learning platforms, was positively associated with learners' academic engagement and their ability to navigate online learning environments. Similarly, Fitria and Pangesti (2023), in their study of low-income families during online learning, found that parental assistance with organizing learning, managing screen time, and providing access to technology contributed positively to digital literacy. These findings suggest that parental involvement extends beyond simply providing digital devices; Kang and whether it is directed towards meaningful educational activities.

While the existing literature indicate the significant role of parental involvement in development of digital literacy, the effectiveness of parental support is not uniform across households. Lou et al. (2024) reported that parental mediation of digital media was weaker among families with lower educational attainment and less technological experience which contributed to differences in digital fluency and self-regulated learning. This evidence highlights the importance of examining parental involvement within specific social and educational contexts rather than assuming that all families have equal capacity to support digital learning.

The role of parental involvement on the development of digital skills is more complex in African contexts, where socioeconomic conditions, parental education, digital infrastructure,

and technological awareness can influence the extent to which parents participate in their children's digital learning. Economic hardship and livelihood demands may limit the ability of parents to provide consistent support at home. In addition, parents who have limited technological knowledge may experience difficulties guiding children in the effective and responsible use of digital technologies. A study by Dabie and MacKenzie (2025) in Ghana indicated that economic hardship, low levels of parental education, and livelihood demands limit parents' capacity to provide consistent learning support at home. This constrained the development of self-regulation, creativity, and participation in digital learning activities.

In South Africa, Adelabu and Mncube (2023) noted that disparities in resources and limited awareness of effective learning strategies hinder these competencies, even in contexts with stronger engagement, such as parts of South Africa. In Uganda, Sakaue et al. (2023) established that although many parents in Uganda made efforts to support learning during school disruptions, their involvement was largely limited to basic guidance due to lack of digital skills and resources. Similarly, in Tanzania Ndijuye and Beatus (2024) identified that parental support has often remained concentrated on traditional activities such as homework supervision, with comparatively limited involvement in digital and inquiry-based learning. Such limitations reduce learners' exposure to meaningful technology-supported learning experiences and are particularly important in rural and low-resource communities where digital opportunities are already constrained.

In Kenya, the increasing integration of Information and Communication Technology (ICT) into education has created a growing need for learners to acquire digital literacy skills. The implementation of Competency-Based Education (CBE) has further emphasized the development of competencies required for learning and participation in a rapidly changing technological environment. However, the ability of parents to support digital learning remains affected by several challenges, including limited time, inadequate knowledge, insufficient technological skills, and unequal access to digital resources. These challenges can influence the extent to which parents monitor learners' technology use, provide guidance on digital learning activities, and facilitate access to appropriate digital tools. The situation is more pronounced in rural communities where ICT infrastructure and communication platforms are less accessible. Therefore, although national educational efforts have increased the emphasis on digital literacy, the development of these skills also depends on the support learners receive beyond the classroom, particularly from parents and other members of the home environment.

In Kyuso Sub-County, in Kitui County, rural socioeconomic and technological conditions shape the nature and extent of parental involvement in learners' digital development. Poverty, limited ICT access, and gaps in parental awareness reduce opportunities for learners to engage in self-directed learning, creativity, and responsible use of digital technologies. Although previous studies have established the importance of parental involvement in learning and have provided evidence linking parental support with digital literacy, there remains limited context-specific evidence concerning junior school learners in rural Kenyan settings. In particular, there was a need to understand how specific dimensions of parental involvement, including parental engagement, communication style, and decision-making influence learners' digital literacy. It is against this background that this study examined parental involvement and the development of digital literacy skills among junior school learners in Kyuso Sub-County, Kitui County, Kenya.

A. *Statement of the Problem*

In Kenya, digital literacy is increasingly recognized as an important factor in learners' academic development and acquisition of relevant competencies. Learners are expected to effectively access, use, evaluate, and communicate information through digital technologies. However, the development of digital literacy varies across learning contexts, particularly between learners with different levels of exposure to technology and support at home. In rural areas such as Kyuso Sub-County in Kitui County, some junior school learners have limited access to digital devices and opportunities to engage with technology for learning. These challenges are influenced by limited parental education, socioeconomic constraints, inadequate digital resources, and varying levels of parental awareness regarding effective digital learning support. As a result, some learners experience difficulties in developing the digital competencies required for effective participation in contemporary learning environments.

Although the CBE framework places emphasis on digital literacy, disparities in home learning environments affect the extent to which learners develop and apply digital skills. Previous studies have established the importance of parental support in children's learning and have linked parental guidance, technology access, and supervision with digital literacy development. However, limited evidence exists on how specific forms of parental involvement, including parental engagement, communication style, and decision-making, relate to digital literacy among junior school learners in rural Kenyan contexts. In particular, there was limited empirical evidence from Kyuso Sub-County, Kitui County, which created the rationale of conducting this study to examine the role of parental involvement in the development of learners' digital literacy skills.

B. Objective

The objective of this study was to determine the effect of parental involvement on the development of digital literacy skills among public junior school Learners in Kyuso Sub-County, Kitui County, Kenya.

II. THEORETICAL REVIEW

The study was anchored on the Epstein's Theory of Overlapping Spheres of Influence by Epstein (1987). The theory explains how family, school, and community interactions jointly shape learners' educational outcomes. The theory proposes that learners benefit when these three spheres interact and share responsibility for their development. Epstein et al (1995) identified six forms of parental involvement: parenting, communication, volunteering, learning at home, decision-making, and collaboration with the community. These forms describe the different ways through which parents can engage in learners' education, both at home and within the school environment. The theory therefore views parental involvement as a multidimensional process in which coordinated family, school, and community efforts can enhance learners' educational experiences and development.

The theory was relevant to this study as it offered a framework for explaining how parental involvement may contribute to learners' digital literacy skills. Parenting and learning at home may enable parents to provide access to digital resources and guide learners in their educational use. Communication with schools can enhance parents' understanding of learners' digital learning needs, while volunteering, decision-making, and community collaboration creates additional opportunities for digital learning. Therefore, the theory

offered a basis for examining how different forms of parental involvement create supportive conditions for developing digital literacy skills among public junior school learners in Kyuso Sub-County, Kitui County.

A. *Empirical Review*

Parental involvement plays a key role in promoting development of digital skills among junior secondary learners. Parental involvement extends learners' digital learning beyond the school environment by providing resources, guidance, supervision, and opportunities to practice digital skills at home. The effectiveness of such involvement is partly influenced by parents' own digital competence. According to Qualter (2024) digitally competent parents were better positioned to model responsible technology use and guide children in evaluating digital information. Similarly, Boerkamp et al (2026) emphasized that digitally literate parents who model responsible technology use and provide guidance enhance learners' skills and confidence.

In another study, Reinhold et al. (2024) established that parents with stronger digital competencies were able to support children's digital learning and address technology-related challenges. Access to digital resources also provided opportunities for learners to practise technology use. Further evidence was obtained by O'Hara (2020) who did a study in the United Kingdom found that access to digital tools at home, combined with parental communication, facilitated children's use of technology in school. Similarly, Haisraeli and Fogiel-Bijaoui (2023) did a study among parents, principals, and senior education officials in elementary schools in Israel and established that parental support and provision of laptops were associated with improved learning experiences. The studies indicated that parental involvement through competence, resource provision, and support can strengthen learners' engagement with digital technologies.

Beyond providing resources, the quality of parental guidance and communication may determine how effectively learners use digital technologies for learning. Zahra et al. (2025) found that parental mediation through co-use of digital devices, discussion, and feedback enhanced learners' engagement with digital content. Bachmann et al. (2024) similarly reported that parental discussions on digital safety and appropriate online behaviour supported children's ability to make informed decisions when using the internet.

Parent-school communication and parental decision-making can further reinforce digital learning. This occurs when parents are enabled to understand learners' needs and expectations. Kojo et al. (2025), in a study conducted in Tanzania, found that weak communication between parents and school leadership constrained digital engagement and created limited coherence regarding digital learning objectives. On decision making, Kim et al. (2020) emphasized the importance of parental input in providing systematic guidance for young learners' development of basic digital skills, while Msambwa and Daniel (2024) found that parental investment and collaboration with teachers supported ICT programmes. These findings indicate that effective parental involvement requires more than access to technology; it encompasses active guidance, communication, and participation in decisions affecting digital learning.

In Kenya, parental involvement is particularly relevant within the Competency-Based Education framework, which emphasizes digital literacy as a core competency for contemporary learning (Mwita, 2025). The government's Digital Literacy Programme sought to increase learners' access to digital technologies through the provision of devices such as laptops, projectors, and tablets (Kyalo, 2021). However, the availability of digital resources

does not necessarily ensure effective digital learning. Achieng et al. (2025) found that although Kenyan parents generally held positive attitudes towards digital learning, limited communication and inadequate alignment between policy and classroom practice constrained meaningful parental engagement. This indicated that parental participation is important in translating access to digital technologies into meaningful learning experiences.

B. Conceptual Framework

A conceptual framework defines the research variables, their constructs, and the relationships between the independent and dependent variables (Varpio et al 2020). In this study, the independent variable is parental involvement measured in terms of parental engagement in learning activities, parental communication, and parental decision making. The dependent variable was digital literacy.

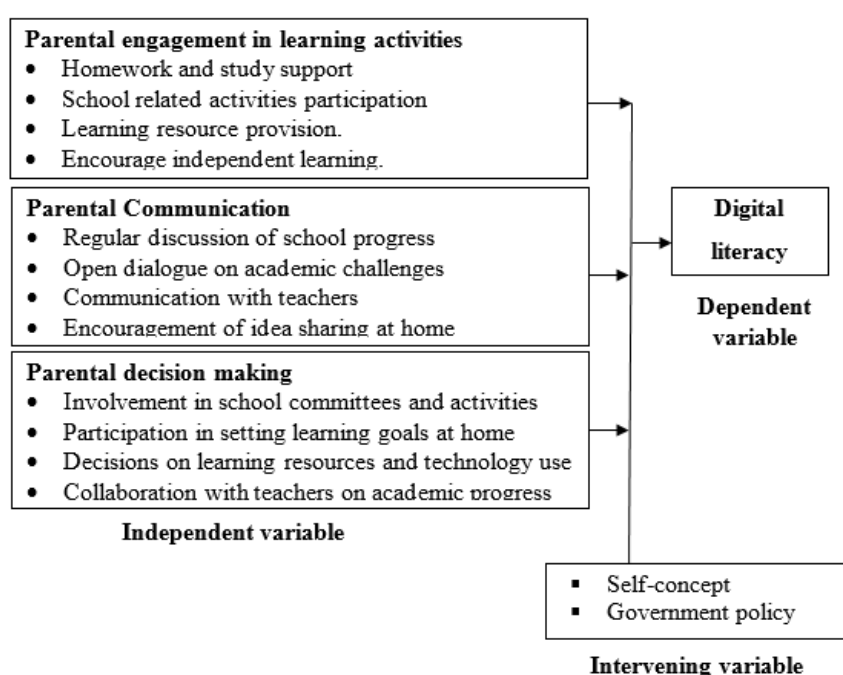


Figure 1: The Conceptual Framework

III. RESEARCH METHODOLOGY

A. Research Design

An explanatory sequential mixed methods design was used in this study. This design involves the collection and analysis of quantitative data in the first phase, followed by the collection and analysis of qualitative data to explain, elaborate, or provide deeper understanding of the quantitative findings. The design enabled researchers to use qualitative evidence to explain and enrich the interpretation of quantitative results, thereby providing a more comprehensive understanding of the effect of parental involvement on the development of digital literacy among public junior school learners.

B. *Target Population*

The target population included 1,047 Grade 8 learners, 183 teachers, and 619 Parents of Grade 8 learners (Kyuso Sub-County Education Office, 2025). The accessible population comprised Grade 8 learners, teachers teaching in public junior schools, and parents of Grade 8 learners drawn from the selected public junior schools in Kyuso Sub-County.

Table 1: Target Population

Group	Size
Learners	1047
Teachers	183
Parents	619
Total	1849

Source: Kyuso Sub County, Ministry of Education Office (2025)

C. *Sampling Procedure and Sample Size*

The sample size for learners was determined using the Krejcie and Morgan (1970) sample size determination table. For teachers, 30 respondents were purposively selected from the accessible population of 183 teachers. In addition, 40 parents were purposively selected to participate in Focus Group Discussions (FGDs), in line with Bekele and Ago (2022) who recommend 30-50 participants for qualitative studies. The sample therefore comprised 281 Grade 8 learners, 30 teachers and 40 parents.

Table 2: Sample Size

Category	Target Population	Sample Size	Method
Learners	1047	281	Krejcie and Morgan 1970
Teachers	183	30	Purposive
Parents (FGD)	619	40	Purposive
Total	1849	351	

D. *Research Instruments*

The study was based on primary data. Data from the learners and teachers was collected using structured questionnaires. Data from the parents was collected using Focus Group Discussions (FGDs). The questionnaires were administered by the researcher with the help of a research assistant. Focused Group Discussions were conducted by the researcher.

Pilot Study, Validity and Reliability Analysis

A pilot study was conducted in three public junior schools in Tseikuru Sub-County involving 25 learners and four teachers. The purpose was to assess the clarity and suitability of the research instruments and data collection procedures. The learners' and teachers' questionnaires and the parent focus group discussion guide were reviewed by university supervisors to establish face and content validity, with their feedback informing the revision of unclear, repetitive, and irrelevant items. Reliability of the questionnaires was assessed using Cronbach's alpha coefficient. The learners' questionnaire attained a reliability coefficient of 0.78, while the teachers' questionnaire recorded 0.84. Both coefficients exceeded the recommended threshold of 0.70, indicating acceptable internal consistency and supporting the suitability of the instruments for the main study (Paget et al., 2023).
Data Analysis Procedures.

After data collection, the data was scrutinized and cleaned to identify any errors or inconsistencies. Quantitative methods were used to analyse data collected from the learners and teachers. This was done using the Statistical Package for the Social Sciences (SPSS version 28). Descriptive statistics were used to summarize the data. This was done using frequencies, percentages, means, and standard deviations. Correlation analysis was used to determine the relationship between parental engagement in learning activities, parental communication, and parental decision making and digital literacy. Regression analysis was used to determine the effect of parental involvement on the development of digital skills. Data collected using FGDs were transcribed and analysed using Thematic Analysis (TA).

1. *Research Results*

Out of the total respondents, 232 learners, 27 teachers and 31 parents participated in the study. The response rates were 82.6%, 90 % and 77.5% respectively. According to Mugenda and Mugenda (2003), a response rate of 70% or higher is considered sufficient for research purposes. Therefore, the response rates achieved in this study were sufficient to give reliable findings.

2. *Demographic Characteristics of Respondents*

The respondents were relatively balanced by gender among learners, with males comprising 52.9% and females 47.1%. The majority of teachers (55.3%) and parents (69.2%) were females. Among teachers, 42.1% were aged 31-40 years, 28.9% were 20-30 years, 21.1% were 41-50 years, and 7.9% were 51 years and above. Majority of the teachers (50.0%) were single while majority of parents were married (72.3%). Most teachers held bachelor's degrees (63.2%), while 48.04% of parents had secondary education. Cumulatively, a majority of the teachers had considerable teaching experience and were in a position to give reliable data. Most parents were engaged in farming or agriculture (52.2%), 21.7% were engaged in business or trading, 17.4% were in formal employment and 8.7% were engaged in casual labour. Regarding digital access, the majority of learners had access to smartphones and internet. Access to tablets, laptops and computers was low.

Table 3: Demographic analysis

Characteristic	Category	Percentage (%)
Learners' gender	Male	52.9
	Female	47.1
Teachers' gender	Male	44.7
	Female	55.3
Parents' gender	Male	30.8
	Female	69.2
Teachers' age	20-30 years	28.9
	31-40 years	42.1
	41-50 years	21.1
	51 years and above	7.9
Teachers' marital status	Single	50.0
	Married	42.1
	Divorced	5.3
	Widowed	2.6
Parents' marital status	Single	12.3
	Married	72.3
	Divorced	10.0
	Widowed	5.4
Teachers' education	Diploma	26.3
	Bachelor's degree	63.2
	Master's degree	10.5
Parents' education	Primary	30.88
	Secondary	48.04
	Tertiary	16.18
	No formal education	4.90
Teachers' teaching experience	Below 5 years	36.8
	6-10 years	31.6
	11-15 years	21.1
	Above 15 years	10.5
Parents' occupation	Farming/agriculture	52.2
	Business/trading	21.7
	Formal employment	17.4
	Casual labour	8.7

Access to smartphone	Yes	76.5
	No	23.5
Access to tablet	Yes	7.4
	No	92.6
Access to laptop/computer	Yes	13.7
	No	86.3
Internet access	Yes	51.0
	No	49.0

3. Descriptive Analysis

Descriptive analysis was conducted to assess learners' digital literacy skills in using digital devices, accessing online learning information, communicating digitally, creating digital content, and applying technology creatively. As presented in Table 4, learners reported moderate ability to use digital devices such as phones, computers, and tablets for schoolwork ($M = 2.8248$, $SD = 0.55862$) and to find learning information online, including videos and websites ($M = 2.8296$, $SD = 0.55617$). Lower levels were reported for communicating with teachers or classmates using digital tools ($M = 2.4084$, $SD = 0.51038$), creating digital content such as posters, videos, or presentations ($M = 2.0261$, $SD = 0.19864$), and using digital tools creatively to solve problems ($M = 2.0213$, $SD = 0.18492$).

Table 4: Digital Literacy as per the Learners

Statement	N	Mean	SD
I can use digital devices (phone, computer, and tablet) for schoolwork.	232	2.8248	.55862
I can find learning information online, such as videos and websites.	232	2.8296	.55617
I can communicate with teachers or classmates using digital tools.	232	2.4084	.51038
I have created something using technology (poster, video, presentation).	232	2.0261	.19864
I can use digital tools in new and creative ways to solve problems.	232	2.0213	.18492

Teachers' responses largely corroborated the learners' assessments. As shown on table 5, teachers reported that learners used digital platforms to share ideas with peers and teachers ($M = 3.2680$, $SD = 1.27098$) and combined digital tools to produce innovative outputs ($M = 2.7037$, $SD = 1.06752$). Lower ratings were reported for operating digital devices effectively in class ($M = 2.4074$, $SD = 0.63605$), searching for and using digital information for learning ($M = 2.3593$, $SD = 0.59437$), and creating or presenting original digital work ($M = 2.2593$, $SD = 0.71213$). Teachers' assessments indicated modest digital literacy, particularly in digital information use and content creation.

Table 5: Digital Literacy as Per the Teachers

Statement	N	Mean	SD
Learners can operate digital devices effectively in class.	27	2.4074	.63605
Learners use digital tools to create or present original work.	27	2.2593	.71213
Learners search for and use digital information to support learning	27	2.3593	.59437
Learners use digital platforms to share ideas with peers and teachers.	27	3.2680	1.27098
Learners combine different digital tools to produce innovative outputs.	27	2.7037	1.06752

Parents' views further contextualized the findings, indicating that support for digital learning at home was constrained by limited resources and parental digital skills. Although parents participated in school meetings and decision-making, some reported limited confidence in guiding children's use of computers and the internet. One parent explained:

"We attend school meetings and we want our children to do well, but when it comes to computers or internet, many of us don't know how to guide them properly" (FGD 2, participant 3, 2026).

Parents also reported that smartphones were the main digital devices available at home and were often shared among family members, limiting opportunities for online learning. As one parent noted:

"At home we only have one phone, and the child uses it when I am around. There is no computer, so learning online is not easy" (FGD 1, respondent 7, 2026). Supervision was largely oriented towards online safety, with parents monitoring children's use to limit exposure to inappropriate content while encouraging school-related activities.

The analysis of teachers' perceptions of parental decision-making in supporting learners' development were also analysed and the findings presented on table 6.

Table 6: Teachers' Perceptions of Parental Decision-Making in Supporting Learners' digital literacy

Statement	N	Mean	SD
Parents' involvement in school committees improves support for digital learning.	27	4.4815	.50918
Learners perform better when parents are involved in setting home learning goals.	27	4.6667	.48038
Parents' decisions on learning tools and tech use at home affect digital skill growth.	27	4.5185	.50918
School-home collaboration in decision-making enhances teaching effectiveness.	27	4.6667	.48038

The findings indicated that teachers agreed that parental involvement in school committees improves support for digital learning (Mean = 4.4815, SD = 0.50918). They also agreed that parental involvement in setting home learning goals improves learners' performance (Mean = 4.6667, SD = 0.48038), while parents' decisions on learning tools and technology use influence digital skill development (Mean = 4.5185, SD = 0.50918). Further, teachers agreed that school-home collaboration in decision-making enhances teaching effectiveness (Mean = 4.6667, SD = 0.48038).

The qualitative findings from the parents' focus group discussions further contextualized these perceptions by showing how parental decisions regarding digital learning were made at home. Parents described school meetings as an important source of information that influenced household decisions about access to digital resources. One parent explained:

"Personally, I attend school meetings because I want to know what is needed for digital learning. When teachers talk about phones or internet, I try to plan how the child can access it, even if it is shared" (FGD 4, participant 2, 2026).

The participant further explained that decisions regarding device use were discussed within the family to balance learning needs and discipline. Similarly, parents described supervision and online safety as important considerations in regulating technology use. One parent noted:

"I allow the child to use the smartphone mostly for schoolwork, and I sit nearby to see what they are watching. I don't want them to misuse the internet" (FGD 3, participant 4, 2026).

However, parental decision-making was also shaped by limited access to digital resources. Parents reported that devices were often shared among family members and that access had to be balanced with other household needs. Some households had no digital devices at all, further limiting opportunities for technology-supported learning. As one parent stated:

"In my home we do not have a smartphone, so the child depends mostly on what is taught at school. Sometimes they borrow from neighbours, but it is not always possible" (FGD 3, participant 1, 2026).

Among households with limited access, parents described deliberate scheduling of device use to accommodate both learning and family responsibilities. One participant explained:

"Availability of digital gadgets is a big problem. In my home for instance, we only have one phone in the house, so the child uses it at specific times after chores. I choose the time so learning does not interfere with family duties" (FGD 4, participant 4, 2026).

Despite these constraints, some parents reported actively engaging with children during digital learning activities rather than merely providing access to devices. One parent described jointly searching for learning materials and discussing the content with the child:

"Sometimes we search for science videos together, and I ask the child to explain what they understood. Even if I don't know everything, I want them to think about it" (FGD 4, participant 3, 2026).

Parents also indicated that collaboration with teachers increased their confidence in supporting digital learning at home. As one participant explained:

"When parents and teachers agree on what children need, it becomes easier to support them at home. I feel more confident guiding my child when I understand the school direction" (FGD 2, participant 6, 2026).

The respondent added that joint viewing becomes a learning conversation. This indicated that parental involvement extends beyond permission to active engagement with digital content. Another parent reflected on the broader impact of participation in school decisions and stated that

IV. INFERENCE ANALYSIS

A. Correlation Analysis

Correlation analysis was used to determine the relationship between parental involvement and development of digital literacy skills among public junior school learners. As shown on table 7, parental engagement had positive and statistically significant relationship with learners' digital literacy ($r = 0.277$, $p = 0.0001$). Communication style also had positive and significant relationship with digital literacy ($r = 0.178$, $p = 0.011$). Decision-making also showed positive and significant relationship ($r = 0.217$, $p = 0.002$). Since all p-values were less than 0.05, the relationships were statistically significant. The findings imply that greater parental involvement was associated with better digital literacy among learners.

Table 7: Relationship between parental involvement and digital skills

		Parental engagement	Communication style	Decision making
Digital literacy	Pearson Correlation	.277	.178	.217
	Sig. (2-tailed)	.000	.011	.002
	N	204	204	204

Regression analysis was used to examine the influence of parental engagement in learning activities, parental communication style, and parental decision-making on digital literacy among public junior school learners. Engagement in learning activities, communication style, and decision-making had a positive relationship with digital literacy ($R = 0.361$). The three dimensions of parental involvement explained 13.0% of variation in digital literacy ($R^2 = 0.130$).

Table 8: Model summary of the Regression Analysis on Digital Literacy Skills

Model		R	R Square	Adjusted R Square	Std. Error of the Estimate
1		.361	.130	.117	2.06277

ANOVA results on table 25 indicated that the regression model was statistically significant since the p value was less than 0.05 ($F = 9.971$, $p = 0.0001$). The model was suitable for determining the influence of parental involvement on the development of digital skills among junior school learners in Kyuso Sub-County, Kitui County, Kenya.

Table 9: ANOVA Results for the Regression Model on Digital Literacy Skills

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	127.286	3	42.429	9.971	.000 ^b
	Residual	851.004	200	4.255		
	Total	978.289	203			

The regression coefficient results on table 10 indicated that parental engagement in learning activities had a positive and statistically significant effect on digital literacy ($B = 0.186$, $t=3.692$, $p = 0.0001$). Parental communication style also showed a statistically significant relationship ($B = 0.188$, $p = 0.035$), indicating that discussions and guidance about schoolwork enhance digital literacy. Parental decision-making also had a positive and statistically significant effect on digital literacy ($B = 0.237$, $t=2.543$, $p = 0.012$). This implied that rules and resource decisions at home contribute to digital literacy.

Table 10: Coefficients of the Regression Model on Digital Literacy Skills

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.351	2.270		1.036	.302
	Parental Engagement in Learning Activities	.186	.050	.246	3.692	.000
	Parental Communication Style	.188	.089	.141	2.126	.035
	Parental Decision-Making	.237	.093	.170	2.543	.012

V. DISCUSSION

The study found that parental involvement had a statistically significant effect on the development of digital literacy skills among public junior school learners in Kyuso Sub-County. Parental engagement, communication, and decision-making contributed significantly to learners' ability to use digital technologies effectively, responsibly, and safely. In particular, parental participation in digital activities and modelling of responsible technology use appeared influential, indicating that hands-on guidance, co-use of digital devices, and discussions on online safety can support the acquisition of digital skills. Parental decision-making also contributed to access to digital devices and the organization of digital learning activities at home, suggesting that both practical support and parental guidance are important in developing learners' digital competencies.

The findings are consistent with the results of Van Deursen et al. (2021) and Wirth and Reinhold (2024) who found that digitally literate parents who model responsible technology use and provide appropriate guidance can enhance learners' digital skills and confidence. Similarly, Helsper and Livingstone (2023) and O'Hara (2020) demonstrated that active parental mediation and discussions about digital use can strengthen children's digital awareness and responsible online behaviour. In the Kenyan context, Murithi and Yoo (2021) observed that parental involvement in digital learning may be constrained by limited resources and digital skills, a challenge also reflected in the Kyuso findings.

VI. CONCLUSION

The study concluded that parental involvement has significant influence on the development of digital literacy skills among public junior school learners in Kyuso Sub-County. Parental participation in school decision-making, setting home learning goals, guiding technology use, and school-home collaboration therefore play an important role in supporting learners' digital literacy development. However, limited access to digital devices and parental digital skills constrained the extent of support provided at home.

RECOMMENDATIONS

The Ministry of Education and school administrators should strengthen structured parental involvement in supporting digital literacy among public junior school learners. Parents should be sensitized on responsible technology use and equipped with practical strategies for supervising and supporting learners' educational use of digital devices. Schools should enhance school-home collaboration and maintain regular communication with parents on appropriate digital learning activities. Given the reported limitations in access to digital devices and parental digital skills, schools and relevant stakeholders should also promote initiatives that improve access to digital resources and strengthen parents' capacity to support technology-based learning at home.

REFERENCES

- [1] Achieng, S. A. (2025). Integrating multiple approaches to teacher pedagogical competence, student motivation, and pedagogy in EFL/ESP. *Recherche et pratiques pédagogiques en langues. Cahiers de l'Apliut*, 44(2), 1-10
- [2] Adelabu, O. J., & Mncube, V. (2023). Narratives of parents' participation in their children's education. *South African Journal of Education*, 43 (1), 1-8.
- [3] Andrada, M. A., & Barrot, J. S. (2025). Parental involvement during online learning of learners with special educational needs. *Educational Review*, 77(4), 1275-1297.
- [4] Bachmann, J. L., Witmer, S. E., Solanki, P., Ma, W., Truckenmiller, A. J., Parker, D. C., & Windram, H. (2026). Exploring School and Home Contributions to Reading

- Growth within a High-Impact Tutoring Program in High-Needs Schools. *Reading & Writing Quarterly*, 42(1), 1-17.
- [5] Bayucca, S. A. (2021). Challenges encountered and technical assistance needed by parents and learners utilizing modular distance learning: Basis for a proposed support program. *Journal of Humanities and Social Sciences (JHASS)*, 3(3), 128-135.
- [6] Boerkamp, L. G., Deursen, A. V., van Laar, E., van der Zeeuw, A., van der Graaf, S., & Lutkenhaus, R. O. (2026). Cocreating support: toward a digital inclusion intervention for parents in poverty. *CoDesign*, 1 (1), 1-16.
- [7] Dabie, P. K., & MacKenzie, A. H. (2025). Insights from Ghana: Strengths and challenges of parental involvement in the school environment. Available at SSRN 5209118.
- [8] Epstein J.L., Salinas, K.C., & Jackson, V.E. (1995). *TIPS: Teachers Involve Parents in Schoolwork ó Manual for teachers*. Baltimore: Johns Hopkins University, Center on Families, Communities, Schools and Children's Learning.
- [9] Epstein, J. L. (1987). Toward a theory of family-school connections. *Social intervention: Potential and constraints*, 1 (1), 121-136.
- [10] Evgin, D., Karabulut, R., & Deniz, S. (2026). Digital parenting, self-efficacy, and family support among parents of children with disabilities. *Journal of Pediatric Nursing*, 88 (1), 635-644.
- [11] Fitria, R., & Pangesti, A. P. (2023). Parental Involvement during Online Learning: A Study among Low-Income Families in Indonesia. *Jurnal ilmiah sekolah dasar*, 7(1), 67-75
- [12] Haisraeli, A., & Fogiel-Bijaoui, S. (2023). Parental involvement in school pedagogy: a threat or a promise? *Educational Review*, 75(4), 597-616.
- [13] Kang, L., Li, C., Chen, D., & Bao, X. (2024). Parental involvement, academic self-efficacy, and depression on academic performance among Chinese students during COVID-19 pandemic. *Psychology research and behavior management*, 201-216.
- [14] Khan, N., Sarwar, A., Chen, T. B., & Khan, S. (2022). Connecting digital literacy in higher education to the 21st century workforce. *Knowledge Management & E-Learning*, 14(1), 46-61.
- [15] Kim, S. W. (2020). Meta-analysis of parental involvement and achievement in East Asian countries. *Education and Urban Society*, 52(2), 312-337.
- [16] Kojo, J. W., Seni, A. J., & Ndibalema, P. (2025). Stakeholders' perspectives on parental engagement in Tanzanian pre-primary schools: Exploring opportunities and challenges. *Educational Dimension*, 12 (1), 133-149.
- [17] Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30, 607-610
- [18] Kyalo, E. M. (2021). *Implementation of Digital Literacy Program in Public Primary Schools: a Case Study of Makueni County, Kenya* (Doctoral dissertation, University of Nairobi).
- [19] Lou, J., Wang, M., Xie, X., Wang, F., Zhou, X., Lu, J., & Zhu, H. (2024). The association between family socio-demographic factors, parental mediation and adolescents' digital literacy: a cross-sectional study. *BMC Public Health*, 24(1), 1-10.
- [20] Macharia, J. K., Githaiga, G., Kivuva, M., & Ratemo, H. A. M. (2026). A Framework for National Foundational Digital Literacy Skills Training of Citizens in Kenya.

- International Journal of Digital Literacy and Digital Competence (IJDLC), 17(1), 1-28.
- [21] Marín, V. I., & Castaneda, L. (2023). Developing digital literacy for teaching and learning. In *Handbook of open, distance and digital education* (pp. 1089-1108). Singapore: Springer Nature Singapore.
- [22] Msambwa, M. M., & Daniel, K. (2024). A systematic literature review on the ICT integration in teaching and learning: Lessons for an effective integration in Tanzania. *European Journal of Education*, 59, e12696. <https://doi.org/10.1111/ejed.12696>
- [23] Munyoki, J. K. (2024). Factors influencing the integration of ICT in teaching and learning in public primary schools in Kitui West Subcounty, Kenya (Doctoral dissertation, African Nazarene University).
- [24] Mwita, C. W., Nganyi, J., & Ndiku, J. (2025). School-Level Factors and Girls' Participation: Relationship between Schools' Learning Resources and Girls Participation. *Jumuga Journal of Education, Oral Studies, and Human Sciences*, 8(1), 1-8.
- [25] Nechakovska, A. I., & Stojanovska, V. (2025). The role of parents in supporting student engagement in digital learning ENVIRONMENTS. *International Journal for Education, Research and Training*, 7(1), 5-14.
- [26] Nudin, B., Sihab, W., Aldinata, N., & Imaduddin, M. D. (2024). The role of parents and families in children's education in the digital era. *Linguanusa: Social Humanities, Education and Linguistic*, 2(1), 8-16.
- [27] Nuhu, K. M., Adewara, O. S., Adeteju, K. A., Ibrahim, M., Raheem, A. O., Hamza, G. L., & Olumorin, C. O. (2026). Influence of Parental Scaffolding on Digital Literacy Development among Primary School-Aged Children in Some Selected States in Nigeria. *Federal University Gusau Faculty of Education Journal*, 6(3), 107-118.
- [28] O'Hara, S. (2020). What Can We Learn from Independent Family-Owned Local Media Groups? Case studies from the United Kingdom. In *The Routledge companion to local media and journalism* (pp. 226-235). Routledge.
- [29] Opicho, E. N., Imonje, R., & Chepkonga, S. (2025). Teachers' digital literacy skills and implementation of competency based curriculum in junior schools in westlands sub county, Kenya. *International Journal of Current Science Research and Review*, 8(4), 1665-1675.
- [30] Paget, L. D., Sierevelt, I. N., Tol, J. L., Kerkhoffs, G. M., & Reurink, G. (2023). The completely patient-reported version of the American Orthopaedic Foot and Ankle Society (AOFAS) score: A valid and reliable measurement for ankle osteoarthritis. *Journal of ISAKOS*, 8(5), 345-351.
- [31] Qualter, D. (2024). From digital exclusion to digital inclusion: shaping the role of parental involvement in home-based digital learning—a narrative literature review. *Computers in the Schools*, 41(2), 120-144.
- [32] Reinhold, F., Leuders, T., Loibl, K., Nückles, M., Beege, M., & Boelmann, J. M. (2024). Learning mechanisms explaining learning with digital tools in educational settings: A cognitive process framework. *Educational Psychology Review*, 36(1), 1-21.
- [33] Sakaue, K., Wokadala, J., & Ogawa, K. (2023). Effect of parental engagement on children's home-based continued learning during COVID-19-induced school

- closures: Evidence from Uganda. *International Journal of Educational Development*, 1 (1),1-17
- [34] Varpio, L., Paradis, E., Uijtdehaage, S., & Young, M. (2020). The distinctions between theory, theoretical framework, and conceptual framework. *Academic medicine*, 95(7), 989-994.
- [35] Zahra, S., Azam, K., & Latif, A. (2025). The Impact of Parental Mediation on Children's Digital Content Exposure. *Policy Journal of Social Science Review*, 3(12), 522-536.