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Original Article

Organizational Support on Integration of Communication Technology in Classroom Learning in Kisumu National Polytechnic, Kenya

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Keywords:

*Classroom Learning,
Integration of
Communication
Technology,
Stakeholder
Involvement,
Teacher Training,
Resource Allocation.*

This study investigates the impact of organizational support on integrating communication technology into classroom learning at Kisumu National Polytechnic. In particular, the study aimed at determining the influence of training of trainers, stakeholder involvement, and resource availability on the integration of communication technology in classroom learning. The study employed a quantitative approach and correlational design and sampled 169 of the 301 trainers from KNP for the study. The study utilized a simple random sampling technique to obtain a sample size. A self-administered questionnaire was used to collect data. Descriptive statistics and Pearson correlational analysis were utilized to analyze the collected data. The study found that training of trainers, stakeholders' involvement, and availability of resources influenced the integration of communication technology in classroom learning with training of trainers and stakeholders' involvement registering an average mean of above 3.0 and availability of resources registering an average mean of 2.8. At the 5% significant level, the results revealed a strong positive correlation between teacher training ($r = .423$, $p\text{-value} = 0.05$). stakeholders involvement ($r = 0.461^*$, $p\text{-value} = 0.02$); resource availability and integration of Technology communication in classroom learning ($r = 0.347^*$, $p\text{-value} = 0.03$). The study therefore rejected the null hypothesis as there was an existing strong positive relationship between factors of organizational support and integration of technology communication in classroom learning KNP. The study findings provide vivid insights and recommendations to the management regarding the need to involve stakeholders, train trainers, and avail resources in integrating communication technology in the classroom.

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INTRODUCTION

Classroom learning is an ancient kind of learning in which the learning environment is built within the physical walls of a classroom (Herrington, 2014). Communication technology integration is the process of incorporating technology into the educational system to improve teaching and learning (Christopoulos & Sprangers, 2021). Several factors have influenced communication technology integration in training, including training influence, stakeholder involvement, and resource availability (Babalola et al., 2018). According to Ismail et al. (2020), training influences teachers' adoption of communication technologies. Tynjälä et al. (2022) added to the definition by stating that influence is a force that causes change in the nature and behavior of teachers. Stakeholder involvement occurs when the polytechnic involves those who may be affected by the polytechnic's decisions or who can influence the polytechnic's decision-making process (Law et al., 2019). Sahin et al. (2016) added to the definition by stating that stakeholder involvement occurs when the institution communicates with and identifies its stakeholders through engagement.

Over the last ten years, several governments around the world have increased their efforts to improve the effectiveness of public services and the education system. Information and communication technologies (ICTs) have been at the center of transformation of education system in the high learning institutions. Digital technologies are revolutionizing learning methodologies in national polytechnics, colleges, and universities around the world (Nuere & De Miguel, 2021). Communication technology has evolved into a

tool for accelerating knowledge creation and dissemination, particularly in the field of education (Chankseliani, et al., 2021). Through education, communication technology has been used to address societal issues and basic human requirements for global development. Tertiary institutions have been more interested in the potential application of e-learning tools to suit the expanding demands for flexible teaching requirements in distant learning since the emergence of the internet and web-based technology.

Between college and university, a polytechnic education provides a clear third choice that combines in-depth theoretical study with practical, hands-on experience (Dakhi et al. 2020). This special combination, in the opinion of polytechnic administration, gives the students the best chance possible to thrive in both their professional and personal life. Rapid development of technology has seen learning in polytechnics both in developing and developed countries become feasible anytime and anywhere. In Kenya, most of the teaching institutions have availed resources to integrate information and communication technology in provision of their services. The expectation of a big return on investment is driving major efforts in the construction of e-learning and significant investments in related information technology infrastructure by teaching institutions (Matthew et al., 2021). Kisumu National Polytechnic (KNP) in Kenya has not been left behind as teachers strive to incorporate technology into their classroom instruction. KNP has invested in technological devices to promote classroom learning, but despite investments in equipment

and information technology infrastructure to increase classroom learning, communication technology integration in classroom learning has been minimal.

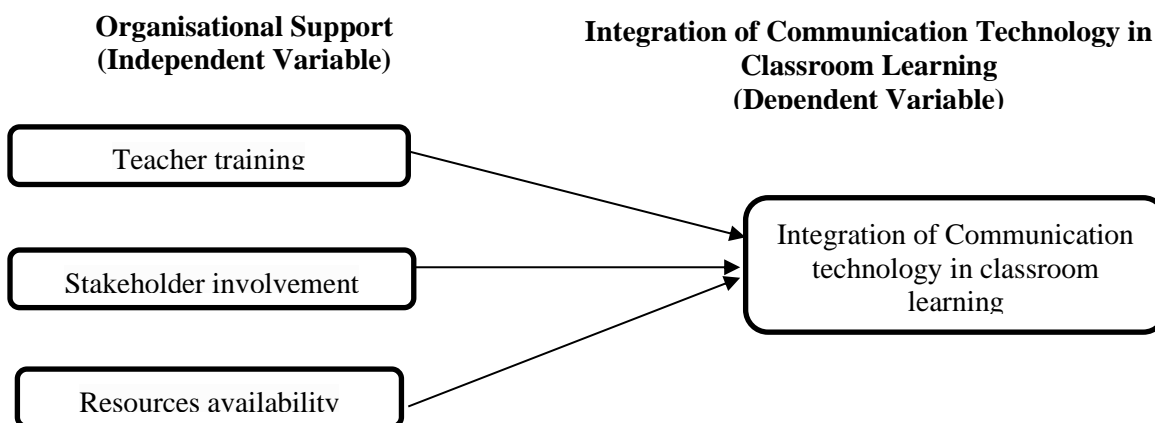
The scholarly literature on the integration of communication technology in learning is limited, particularly in developing nations such as Kenya. The few studies that exist on the integration of communication technology in learning in national polytechnics are inadequate, unstructured, and lack scientific data (Al-Rahmi, et al., 2019; Chirwa & Mubita, 2021; Paudel, 2021). For example, it is suggested that students need to be equipped with technological devices for the integration of communication technology in learning to be successful (Taghizadeh, et al., 2020). However, Rana and Rana's (2020) research show that information communication technology can be incorporated in learning as long as institutions are equipped with information communication technology infrastructure. Furthermore, most studies on integration of communication technology in classroom learning has been carried out in other places such as; Germany (Zawacki-Richter, 2021), the United States (Salaxiddinovna, et al., 2022), Nigeria (Ibrahim, et al., 2020; Yemi-Peters, et al., 2019). A few identified in Kenya, one concentrated on

emerging issues in applying ICT in Kenyan secondary schools. Whereas, the others focused on the motivation in the classrooms and overall teachers' preparedness in using ICT in schools. Although there has been an increase in number of studies examining the use of technology in classrooms, (Gupta & Pathania, 2021; Sivrikova, et al., 2019), research focusing on factors affecting the integration of communication technology in classrooms of national polytechnics of developing countries is limited (Bektaş, et al., 2022). The literature review indicated that scholars and professionals in the field of Technical Education are far from addressing the extent to which resource availability, training of teachers, and stakeholders' involvement influence integration of communication technology in classroom learning. Therefore, the major purpose of this study was to investigate organizational support and its influence on integration of communication technology in classroom learning in Kisumu National polytechnic. Hence the study hypothesis was;-

Ho: there is no statistically significant relationship between organisation support and integration of communication technology in classroom learning in KNP.

Conceptual Framework

Figure 1: The influence of teacher training, stakeholder involvement and resource availability on the integration of communication technology in classroom learning



LITERATURE REVIEW

Theoretical Framework

Communication theory was first proposed by Shannon and Weaver (1949) and it holds that the source of information and the one who starts the

conversation is the sender who conveys information to the recipient who eventually hears this signal after it has been muddled with other noises and distractions. The early "one-way" theory was enhanced by Drucker (2011) who highlighted the importance of taking input into account. This created a 'two ways' communication, where interaction between individuals, individuals, and groups, with people responding to each other. The 'two ways' communication is a better approach than the 'one way' because as the teachers pass information in the classroom, they must also listen to the learners' individual needs to enhance the learning experience. To ensure effective learning in the classroom, communication should be correct, timely, simple, and conveyed via the proper medium. It is against this, that this study utilized communication theory to explain the influence of training of teachers on the integration of communication technology in classroom learning in Kisumu National Polytechnic.

Kurt Lewin's leadership theory developed by Kurt Lewin (1939) together with other psychologists identified different styles of leadership; autocratic, participative, and delegative styles of leadership. Perceptions of involvement and inclusion have been linked to organizational climate, characterized by fairness. At the interpersonal level, inclusion calls for respect, acceptance, empathy, listening skills, dignity, trust, and access to information. This theory was used to emphasize that teams with inclusive leaders develop a sense of belonging. Various approaches that can enhance inclusivity include; fair treatment, integrating differences, providing psychological safety and involvement of all relevant stakeholders in decision-making, leaders in adopting and implementing communication technology should consider relevant stakeholders' contribution to the institution as vital.

Although the use of technology in learning is becoming a popular topic among professionals and institutions, the integration of communication technology in classroom learning study is a

developing subject in the field of technical education, particularly in the national polytechnics of developing countries (Goh & Sigala, 2020; Lachner, et al., 2021; Lin, et al., 2020; Sivrikova, et al., 2019). The literature review summary indicated that integration of communication technology in classroom learning is limited in the Kenyan context and it has been carried out in other places such as; Germany (Zawacki-Richter, 2021), the United States (Salaxiddinovna, et al., 2022), Nigeria (Ibrahim, et al., 2020; Yemi-Peters, et al., 2019). The few identified in Kenya, one concentrated on emerging issues in applying ICT into Kenyan secondary schools. Whereas, the others focused on the motivation in the classrooms and overall teachers' preparedness in using ICT in schools. Although there has been an increase in the number of studies examining the use of technology in classrooms, (Gupta & Pathania, 2021; Sivrikova, et al., 2019), research focusing on factors affecting the integration of communication technology in classrooms of national polytechnics of developing countries is limited (Bektaş, et al., 2022). There is limited literature in the field of Technical Education are far from addressing the extent to which resource availability, training of teachers and stakeholders' involvement influence integration of communication technology in classroom learning.

The relevance of in polytechnic education cannot be overstated. ICTs have tremendously benefited libraries in their day-to-day operations, such as all library operations (Yemi-Peters et al., 2019). The goal of Yemi-Peters et al. (2019) study was to look into the factors that influence college students' behavioral intention to use ICT which revealed that the current generation of young people accepts digital technologies based on a variety of variables.

Despite the fact that ICT is now a more widely available tool for instructors to use in training activities, the majority of trainers in the hospitality industry are still unable to incorporate it into their teaching and learning processes (Goh & Sigala, 2020). It is demonstrated how significant are

nowadays, particularly the interactive self-regulation tool developed by the researchers, as a necessary pedagogical prerequisite for students to properly achieve their professional potential (Salaxiddinovna et al., 2022).

For several decades, the incorporation of ICT in developing areas (also known as the have-nots, bottom of the pyramid, the south, or, earlier, the third world) has been supported internationally, primarily by highly developed nations (the haves), but the goal of transforming these societies into the ideals envisioned by the donors has remained elusive (Heeks, 2022).

There is an interesting debate on demands for more research into the complexities of technosocieties, which is an ongoing activity. Both the teacher and the student may require access to the Internet and a computer in the classroom for research and teaching (Gupta & Pathania, 2021). However, because students may use these devices for activities unrelated to their studies, such as texting, web surfing, e-mailing, online gaming, online shopping, and a variety of other communication technology-related activities, they can also be a barrier to learning (Sivrikova et al., 2019). Though technology has undoubtedly had an impact on every element of human life its implementation into university education, has led significantly improved the quality of teaching and learning (Zawacki-Richter, 2021). Despite significant breakthroughs in the integration and optimum use of these resources by stakeholders in tertiary education, such as national polytechnic, there are still certain gray areas that demand higher calibration and knowledge to get the most out of the technology.

METHODOLOGY

Research Design

The study employed a quantitative research approach which is solely based on numerical data and is driven by stringent statistical rules (Mulisa, 2022). This approach entails gathering and analysing quantitative data, examining relationship between variables, and testing of research hypotheses (Saunders, Lewis &

Thornhill, 2019; Creswell & Creswell, 2018). Pearson Correlational design was selected to explore a potential linear relationship between the values of the influence of organizational support on the integration of communication technology in classroom learning, (Puth, Neuhäuser, & Ruxton, 2014), particularly in Kisumu National Polytechnic, Kenya. The study employed a quantitative research approach which is solely based on numerical data and is driven by stringent statistical rules (Mulisa, 2022).

Study Population and Sample Size

The population of this study were trainers of KNP. A total of 301 trainers were reached out for the survey to get a balanced perspective from the trainers. The population was estimated based on the ideal trainer in a Technical and Vocational Education Training institution. Trainers were selected because they are highly involved in classroom training. Therefore, trainers from KNP (as listed by the TKNP Human Resource administration office as at June 2023) were 301. To find the sample size for the 301 trainers, this study employed the Select statistical services' formula. Select statistical services' formula is a key scientific method for the calculation of sample from a larger population (Trench, 2013). The below procedure was followed;

$$n = N * X / (X + N - 1)$$

Where, n= Sample size, $X = Z_{\alpha/2}^2 * p * (1-p) / MOE^2$, $Z_{\alpha/2}^2 = 1.96^2$ (For a confidence level of 95%, α was 0.05 and the critical value was 1.96), MOE = 5% (Margin of error), P= 50% (Sample proportion), N= 301 (Population size)

$$X = 0.0245 \times 0.5 \times (1 - 0.5) / 0.05^2$$

Hence; n = 169

Therefore, the sample size for the study was 169.

Data Collection Instruments

Primary data was collected with the help of self-administered questionnaires. The use of self-administered questionnaires affords privacy of

response and therefore records a high response rate. A questionnaire was adequate for this study since surveys were commonly used to collect valuable information about a population and each parameter in the questionnaire was developed to address a specific objective (Mugenda & Mugenda, 2008).

Pretest of Study

A 10 percent of the projected main sample respondents, which is 30 respondents was used to conduct the pretest of the study. The pretest of the study aimed at providing feedback in relation to reliability, getting to understand the content of the questionnaire as per respondents' views, and correcting any errors that emerged. The questionnaires were administered to respondents to answer and were collected back by the researcher. Analysis was done on the collected data of the pretest and corrections were made on the questionnaires that were used for the major study.

The study will use both content and construct validity. Construct validity on another hand, assesses a measure's compliance with existing knowledge and theory of the variables being measured (Clark & Watson, 2019). Content and construct validity were tested using the content validity index and factor analysis, respectively. The inclusion of all research variables in the questionnaire ensured the maintenance of construct validity.

The study's reliability was improved by removing unclear questions, standardized instructions and use of a large sample size. Cronbach Alpha was used to test reliability. From the results the Cronbach's Coefficient Alpha was found to be 0.754 and showed that the research instrument was consistent. The entire questionnaire indicated similar responses and therefore it was deemed as straight forward and reliable. Data Collection Procedures and ethical procedures were adhered to during the data collection stage.

The researcher proceeded to collect data from the sampled respondents after seeking clearance from National Council for Science Technology and

Innovation (NACOSTI) for a permit of authorization to collect data, and from the Management of Kisumu National Polytechnic. There was a consent form on each questionnaire with a self-explanatory note on the purpose of the research. The respondent were required to declare by signing that they agree or disagree to participate in the study by having participants not write their names or names of their hotels on the consent form or questionnaire. The questionnaires were also coded to protect the identity of the respondents. Participants were requested not to write their names or name of their hotel to assure them confidentiality as they responded to the items.

Data Analysis

Data cleaning was done and after entering the data into SPSS, it was checked for missing values, outliers, reliability, and normality. Descriptive analysis was also used to describe the study's sample composition. In this regard, frequencies were generated in SPSS to better understand the demographic makeup of the study participants. Pearson's Bivariate Correlation coefficients were used to evaluate autocorrelations, and the coefficients are expected to be low.

RESULTS

Demographic Analysis

The use of descriptive statistics consisting of frequencies and percentages to describe the demographic composition of the study sample was employed. The obtained means were ranked as per the sub-factors of each independent variable in relation to their influence on the integration of communication technology in classroom learning. Tables and percentages were used to present the data collected for ease of understanding. Means above 3.0 implied that the factor under study influences the integration of communication technology in classroom learning. A higher number of respondents (43) fall between 32 and 38 years of age, representing 25.4% of the total respondents in the study. This was followed by individuals between the age brackets of 25 – 31 years of age as they stood at 35 respondents

represented by a 20.7% rate. Individuals above the age of 46 became last as were represented by 29 respondents whose number obtained 17.2% response rate.

Out of 169 respondents, a higher number of males 93 represented by 55% participated in the study, as compared to their female counterparts whose number stood at 76 with a percentage rate of 45. The majority of the respondents (79) have a degree level of education yielding a rate of 46.7%, whereas only 4 respondents (2.4%) have a doctoral, leaving the rest with 36 (diploma), 33 (higher diploma) and 17 (masters) with 21.3%, 19.5% and 10.1% respectively. Majority of the respondents (93) representing 55% were married while single and others represented 29.6% and 15.4% respectively. Majority of respondents (88) had worked in the polytechnic more than 5 years representing 52.1% of the respondents. Individuals who had worked between 1 and 5

years were the least representing 22.5% of the total respondents.

Knowledge in the Integration of Communication Technology

The knowledge in the integration of communication technology representation of the study is summarized in Table 4 below. The majority of the respondents (46) were fairly aware of integrating communication technology in the classroom, representing 27.2% of the total respondents. 37 of the respondents representing 21.9% indicated that they had excellent knowledge on integrating communication technology in the classroom.

Influence of Training of Trainer

Table 1 below shows the mean ranking of the observed variables used to determine how the training of trainers influences the integration of communication technology in classroom learning.

Table 1: Training of trainer on the integration of communication technology in classroom learning

	N	Min	Max	Mean	Std. Error	Std. Dev
Use of data management systems in class	169	1.00	5.00	3.1775	.10048	1.30629
Use of Graphics in Class	169	1.00	5.00	3.1834	.09775	1.27081
Use of classroom videos	169	1.00	5.00	3.2308	.10107	1.31385
Use of PowerPoint Slides in class	169	1.00	5.00	3.2426	.10090	1.31170
Collaborating activities in class through technology	169	2.00	5.00	3.4379	.07953	1.03394

Note: Scale 1 – Strongly disagree to 5 – Strongly agree

The cut-off point for the means was set at 3. (Training of trainer in integrating communication technology in classroom)

The data from Table 1 above indicates that most of the respondents agree with all statements on training of trainers on integrating communication technology in the classroom and registered means of above 3.0. The majority of respondents indicated that they used technological devices in the classroom for collaboration of activities ($M=3.43$, $SD=1.0$). The use of PowerPoint slides in class was scored second by the respondents ($M=3.24$, $SD=1.3$) Whereas, the use of data management systems in class was scored lowest ($M=3.17$, $SD=1.3$).

The findings corroborate with Lin et al. (2020) findings that indicated that educational leaders advocate for and put into practice the idea of integrating technology into teaching. Trainers being aware of the benefits accrued from integrating communication technology in classroom learning is an indication that they have received training and understood the significance of such commission. Also, the study findings agreed with Lachner et al. (2021) findings that reported that few principals utilized computers and the majority had negative perceptions regarding computer skills. The fact that there was minimal use of data management systems in the classroom learning by trainers, is an indication

that trainers training on utilizing data management systems had not been effectively done. Apart from training on using data management systems in class, utilizing data management systems in classroom learning requires huge investments in technological infrastructure (Bektaş et al., 2022). Cascading these infrastructural technological installations to classrooms might require huge resources and with constrained budgets in national polytechnics, this might be the reason for minimal data management system use. However, technology adoption and utilization are critical in educational institutions like national polytechnics. The study recommends educational institutions such as national polytechnics to train trainers on integrating communication technology in

classroom learning and equip them with necessary technological infrastructures to improve the learning experience and performance.

Influence of Stakeholder Involvement

The second objective of the study sought to find out the influence of stakeholder involvement on the integration of communication technology in classroom learning at Kisumu National Polytechnic. Table 2 below shows the mean ranking of the various variables used to determine how stakeholder involvement influences the integration of communication technology in classroom learning at Kisumu National Polytechnic.

Table 2: Influence of Stakeholder involvement on the integration of communication technology in classroom learning

	N	Min	Max	Mean	Std. Error	Std. Dev
Openness in discussion of disagreements	169	2.00	5.00	3.3491	.07792	1.01302
Individual trainers' objectives align with the institution	169	2.00	5.00	3.3728	.07862	1.02212
Involvement of trainers in decision making	169	2.00	5.00	3.5030	.08186	1.06416
Working as a team	169	2.00	5.00	3.5444	.07827	1.01746

Note: Scale 1 – Strongly disagree to 5 – Strongly agree

The cut-off point for the means was set at 3. (Stakeholder involvement in integrating communication technology in classroom). Results for stakeholder involvement in Table 2 show that the attribute "working as a team" ($M = 3.54$, $SD = 1.02$) was the most scored followed by "involvement of trainers in decision making" ($M = 3.50$, $SD = 1.1$). Whereas the attribute "openness in a discussion of disagreements" ($M = 3.34$, $SD = 1.01$) was the lowest score.

The findings of the study agree with Khan et al. (2021) who reported that the expansion of e-learning programs requires a working environment that is diverse, and multicultural and the curriculum development should incorporate global views. This implies that all stakeholders in the educational sector should actively be involved in designing learning programs and curricula for

easy implementation of the same. The provision of flexible programs amid globalization and the internationalization of education requires incorporating diverse views (Nuere & De Miguel, 2021). This is possible by involving relevant stakeholders in planning, packaging, developing, and implementing curricula in learning institutions. Therefore, the study suggests that relevant stakeholders should be involved in designing courses to be able to meet the wide range of populations and demands.

Influence of Resource Availability

Table 3 below shows the mean ranking of variables used to determine how resource availability influences the integration of communication technology in classroom learning at Kisumu National Polytechnic.

Table 3: Resource availability on integration of communication technology in classroom learning

	N	Min	Max	Mean	Std. Error	Std. Dev
Technicians for communication technology	169	1.00	5.00	2.5858	.08743	1.13653
Information availability in class	169	1.00	5.00	2.6568	.07173	.93253
Time taken to use technology in class	169	1.00	5.00	2.7101	.07891	1.02584
Available software Applications	169	1.00	5.00	2.7278	.09068	1.17888
Infrastructure set for technology use	169	1.00	5.00	2.7811	.07481	.97254
Use of Interactive devices in class	169	2.00	5.00	3.3846	.07873	1.02353

Note: Scale 1 – Strongly disagree to 5 – Strongly agree

The cut-off point for the means was set at 3. (Resource availability in integrating communication technology in classroom). Results for resource availability in *Table 3* show that the most scored attribute was the use of Interactive devices in class ($M = 3.38$, $SD = 1.02$), followed by infrastructure set for technology use ($M = 2.78$, $SD = 0.97$). Whereas, available software applications were the least scored attribute ($M = 2.72$, $SD = 1.18$).

The findings of the study agree with Abuya's (2019) findings that updated communication technological infrastructure is one of the key factors to the successful integration of information communication technology in teaching and learning. The presence of technological infrastructure arouses curiosity in learning and makes it possible for trainers to elaborate concepts using technology. Trainers who fear technology find it possible to avoid it as students engage them and require to be assisted in utilizing already available technology. Also, the study's findings

agree with Betz (2011) that appropriate infrastructure and professional development of teachers ensure the successful application of communication technology in classroom learning. Averting current problems in applying communication technology needs on-site technical support (Nzwili, 2017) and the findings confirmed the need to avail technicians in integrating communication technology in the classroom. Therefore, there is a need for national polytechnics to avail communication technological resources to successfully integrate communication technology in classroom learning to enhance the learning experience and student performance.

Integrating Communication Technology in Classroom Learning

The following *table 4* indicates the ranking of the mean of variables utilized to establish the integration of communication technology in classroom learning.

Table 4: Integrating communication technology into classroom learning

	N	Min	Max	Mean	Std. Error	Std. Dev
Technology enhances peer support	169	1.00	5.00	3.1479	.09811	1.27546
Technology makes learning accessible	169	1.00	5.00	3.1538	.10001	1.30018
Technology creates teaching differentiation	169	1.00	5.00	3.1775	.09692	1.25990
Technology introduces new learning techniques	169	1.00	5.00	3.1953	.09941	1.29228
Technology reduces paperwork	169	1.00	5.00	3.2367	.09940	1.29222
Technology enhances interaction	169	2.00	5.00	3.5266	.07557	.98237

Note: Scale 1 – Strongly disagree to 5 – Strongly agree

The cut-off point for the means was set at 3. (Integrating communication technology in classroom)

The results of *Table 4* indicate that the attribute "Technology enhances interaction" ($M = 3.52$, SD

$= 0.98$) was the strongest indicator of integration of communication technology in the classroom, followed by "Technology reduces paperwork" ($M = 3.23$, $SD = 1.29$). Whereas the attribute "

Technology enhances peer support " was scored the lowest ($M = 3.14$, $SD = 1.27$).

Table 5: Correlational analysis

		1	2	3	4
1. Teacher training	R	1			
	Sig. (2-tailed)				
	N	221			
2. Stakeholders involvement	R	.373	1		
	Sig. (2-tailed)	.0564			
	N	221	221		
3. Resource Availability	R	.242	.258*	1	
	Sig. (2-tailed)	.648	.060		
	N	221	221	221	
4. Integration of Technology communication in classroom learning	R	.423*	.461*	.347*	1
	Sig. (2-tailed)	.005	.002	.003	
	N	221	221	221	221

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

At the 5% significant level, as indicated in Table 5 above, significant results were obtained ($r = .423$, $p\text{-value} = 0.05$) indicating that there is a relationship between Teacher training and integration of Technology communication thus the null hypothesis was rejected in this case, thus a strong positive correlation was found between these variables. Further, the results revealed a strong positive correlation between stakeholders' involvement and the integration of Technology communication in classroom learning ($r = 0.461^*$, $p\text{-value} = 0.02$). The null hypothesis was therefore rejected. The results further revealed at 5% significance level a strong positive correlation between Resource Availability and integration of Technology communication in classroom learning ($r = 0.347^*$, $p\text{-value} = 0.03$). The researcher therefore rejected the null hypothesis as there was an existing strong positive relationship between factors of organizational support and integration of technology communication in classroom learning at Kisumu National Polytechnic.

CONCLUSION

The study's first objective was to determine the influence of training trainers on the integration of communication technology in classroom learning at Kisumu National Polytechnic. The observed variables of training of trainers were used to determine the extent to which training influences communication technology integration in the

classroom. The study concluded that the training of trainers influences the integration of communication technology in classroom learning. The use of technological devices, PowerPoint slides, data management systems, and graphics in the classroom were determined as the most important attributes that trainers had acquired. Trainers were largely using technological devices and PowerPoint slides in the classroom, implying that they had been trained majorly in the use of technological slides and PowerPoint slides. Although graphics and data management systems are embraced at Kisumu National Polytechnic, their usage is minimal. With the global necessity of managing and analyzing big data, national polytechnics are likely to encounter difficulties in teaching and learning in the future. Therefore, national polytechnics should train trainers in using data management systems and graphics.

The study's second objective was to find out the influence of stakeholder involvement on the integration of communication technology in classroom learning at Kisumu National Polytechnic. The stakeholder involvement variables' mean was determined and mean ranked to determine their influence on the integration of communication technology in classroom learning. Openness in a discussion of disagreements, individual trainers' objectives aligning to that of the institution, and involvement of trainers in

decision-making and working as a team were determined as stakeholder involvement variables that influence communication technology integration in classroom learning. Working as a team attribute was the highest score, implying that integrating communication technology in classroom learning requires all individuals in the institution. However, openness in a discussion of disagreements was scored least, indicating that Kisumu National Polytechnics is likely to face challenges in the future amidst adopting ever-changing technology in classroom learning. Therefore, national polytechnics should encourage disagreements in adopting communication technology in the classrooms.

Finally, the study sought to determine the influence of resource availability on the integration of communication technology in classroom learning at Kisumu National Polytechnic. The resource availability variables were mean-ranked to determine their influence on communication technology in classroom learning. Technicians for communication technology, information availability in a class, time taken to use technology in class, available software applications for class, infrastructure set for technology use, and use of interactive devices in class were determined to influence the integration of communication technology in classroom learning. The use of interactive devices and infrastructure set for technology use were determined to greatly influence communication technology integration in classroom learning. However, software application availability was rated lowly, indicating inadequate software applications are likely to hinder enhanced learning experience and performance at Kisumu National Polytechnic. Therefore, the polytechnics should invest in software applications to enhance communication technology integration in classroom learning and thus improve the learning experience and performance of students.

Recommendations below were made as per the study findings and conclusions.

To enhance communication technology in classroom learning at Kisumu National

Polytechnic and entire polytechnics in the country, polytechnics' management should continuously train trainers. In so doing, a good number of trainers will avoid being technophobic and integrate communication technology in classroom teaching and learning. Also, the National Polytechnic governing council should arrange frequent communication technology training programs to equip trainers with the necessary skills and knowledge in communication Technology.

Stakeholders in the polytechnic should be involved in reviewing the curriculum and planning for technology adoption to prepare them in advance and make its implementation easy. To incorporate communication technology elements in learning, the National Polytechnic governing council should collaborate with all stakeholders and equip the polytechnic with communication technology infrastructure and capacity to build the trainers on their usage.

To motivate trainers to venture more into integrating communication technology in classroom learning, individual efforts in using technology in the classroom could be reported in regular evaluations of trainer's performance. This, in turn, could be used to recognize trainers and promote them.

The following areas have been recommended for further research. A study should be carried out to investigate strategies to promote the integration of communication technology in classroom learning and to identify existing and additional strategies implemented in national polytechnics. A study should be conducted to identify additional factors associated with the integration of communication technology and the magnitude of their influence. Additional research is to determine the attributes utilized to evaluate the integration of communication technology in classroom learning. Further research should be carried out to determine the effect of regulations and politics on the integration of communication technology in classroom learning.

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