

Teachers' Experiences on the Integration of Technology-Enhanced Learning Resources in the Teaching of History and Government

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Abstract

The utilization of technology-enhanced learning (TEL) has proven to enhance the learning experience for learners by increasing learner engagement and learning outcomes in many countries including Kenya. Despite the benefits of TEL resources in teaching and the government's effort to avail the necessary TEL resources, there is still low uptake of TEL by history and government teachers. The purpose of this study therefore was to assess teachers' experiences on the integration of technology-enhanced learning in teaching history and government in national schools in Western region Kenya. The study used a mixed concurrent method approach and adopted Pragmatism as the ideal paradigm. Cross-sectional Research Survey design was employed. Purposive sampling was used to select 8 national schools, the target population was 43 form four teachers of history and government and used the Krejcie and Morgan table to arrive at a sample size of 40 teachers who were selected using stratified random sampling. Research instruments included questionnaires, document analysis, and observation schedules. Quantitative data was analyzed through descriptive statistics such as frequencies, percentages and standard deviations and presented through tables and pie charts. Qualitative data was organized into themes, thematically analyzed and presented through narration. The study established that gender 28(70%), age 21(52.5%), highest level of education 29(72.5%), basic training in technology 33(82.5%), level of training in basic technological skills 27(67.5%), and technological training program attended by teachers 23(57.5%) influenced their attitude towards the integration of TEL resources in teaching history and government. This study recommends that there is need for school management in consultation with parents to set aside funds to train teachers on technological skills.

Keywords: *Teachers' Experiences, Technology Integration, Technology-Enhanced Learning.*

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1.0 INTRODUCTION

To prepare students for the technological society of the future, teachers need to foster a learning environment where students have technology experiences that enhance and transform their learning. The integration of technology-enhanced learning (TEL) tools and applications has become ubiquitous throughout all levels of education. The study was aimed at understanding the teachers' experiences on the integration of technology-enhanced learning in teaching history and government in national schools in Kenya.

The role of TEL in education not only leads to the transformation of teachers' functions to that of instructional managers but also changes the whole school environment by giving teachers new instruments for the analysis and continuous monitoring of the

instruction process (Adam, 2020). However, although TEL are critical resources in teaching and a facilitator for major education and development reforms, it is not sufficient on its own, as it calls for focusing on the changing roles of the teachers. Teachers are agents of change in the adoption and use of TEL in education (Gesci, 2013). Therefore, their experiences determine whether or not they will integrate TEL into teaching or not.

2.0 LITERATURE REVIEW

Teachers' experiences, according to Bingimlas (2019), is largely combines developed skills, exposure and training that helps you do your current work more effectively and prepares your teaching career. Teaching experiences in this study is based on seven parameters: gender, age, teaching experience, highest educational

level, level of training in basic technological skills, and technological training programs.

In research conducted by Kay (2016) on teachers' attitudes toward technology, the findings were that male teachers had relatively higher levels of technology attitude and ability before implementation, but there was no difference between males and females regarding technology attitude and ability after the implementation of the technology. He observes that quality preparation on technology can help lessen gender inequalities. Mark (2016) investigated gender differences in ICT literacy amongst first-year graduate trainee teachers. The study revealed significant differences between males and females in technical technology capabilities. Semerci and Aydin (2018) explored the views of high school teachers in Ankara concerning the employment of technology in the classroom. They found that teachers have a good attitude toward using technology in their classrooms. They also found that there was no significant difference in ICT willingness among teachers based on gender. Padmavathi (2013) surveyed secondary school teachers in the Indian state of Puducherry. Teachers' attitudes about technology use were found to be positive. Teachers' attitudes toward technology use were unaffected by their gender and teachers' experiences. However, gender and training in technology appear to have a substantial impact on actual technology use by teachers. The current study tried to establish if that was the case in the integration of TEL in history and government in national schools in the Western region.

Gender could be crucial issues in Kenya, the rate of men to women utilizing technology according to Kenya Bureau of statistics (2021) figures stood at 70% and 30% respectively. It is also argued that the difference was partly attributed to the perception in the country that technology was a technical subject meant for men, with many females keeping away from it. This necessitates the question: could Kenyan public schools be experiencing a slow uptake of technology in teaching because of gender? This research study sought to answer this question.

Gender is an important cross-cutting theme that needs to be addressed in all teacher policy areas including training, teaching, and technology usage. In Africa, the Research ICT Africa (RIA) Household and Individual Access and Technology Usage Survey reveals that very little ICT data is disaggregated on gender lines Gillwald *et al.*, (2015). Indicators related to teacher training can demonstrate persistent inequalities. Based on an analysis of twelve different countries in Africa, male and female teachers are not equally likely to be trained to use technology in classrooms; moreover, male teachers are more likely to be trained to teach basic technology Mwebaze, (2020). For example, a study undertaken under the Pan African Research Agenda on

the Pedagogical Integration of TEL in Africa showed that females had lower rates of technology usage than males. As a reaction to this, Derbyshire argues for policy initiatives that encourage recruiting female computer-related staff and technicians to ensure female staff have equitable access to technology-related training and support Derbyshire. (2013). The current study tried to establish if that was the case in education particularly in teaching history and government using TEL tools in national schools in the western region.

Research on the relationship between age and teachers' integration of technology is inconclusive. When looking at some secondary education inquiries, one can see that some point to age differences while others do not. Kuskaya (2020, p. 104) analyzed teachers from Turkish vocational and technical schools and established that the younger the teachers were, the more they integrated technology. Similar results were obtained by Zyad (2016, p. 74) whose study of Moroccan secondary school teachers also showed a correlation between attitude to technology and age, revealing that younger teachers are likely integrate technology in their teaching. Likewise, in their research of upper secondary schoolteachers Krumsvik *et al.*, (2016, p. 157) found that teachers who are 50 or older have less digital competence and therefore not likely to integrate technology in teaching.

A study by Kumar *et al.*, (2018) proposed that age is a crucial determinant in the adoption of ICT According to Cavas *et al.*, (2019), there is a link between instructor age and computer attitudes. Another study by Korte and Husing (2017) found that younger instructors are less skeptical about the benefits of ICT in the classroom. Despite this, a large body of study evidence firmly suggests that age has no influence on teachers' usage of ICT (Al-Senaidi *et al.*, 2019; Sim & Lau, 2014).

Padmavathi (2013) surveyed secondary school teachers in the Indian state of Puducherry. Teachers' attitudes about computer use were found to be positive, and teachers' attitudes on computer use were unaffected by their age. In support of this study, Naumi's (2018, p. 101) study on teachers' use of technology in secondary schools did not detect any significant differences between teachers in terms of age.

Semerci and Aydin (2018) explored the views of high school teachers in Ankara concerning the employment of ICT in the classroom. They found that teachers have a good attitude toward using ICT in their classrooms. They also found no significant difference in technology willingness among teachers based on age.

Nurhabibah, Setian, Yanti, Miraj and Yannuar (2018) analyzed technology literacy competence among vocational high school teachers in Indonesia. Among major findings, teachers were found to lack self-

confidence in use of technology. It was also found that the young teachers were integrating technology more than the older teachers. The relatively younger teachers at the age group 21-40 showed a higher level of technology literacy compared with the older group. The current study will try to establish if this is the case in the implementation of history and government curriculum in Kakamega County.

Young (2020) claims that younger and less experienced teachers utilize computers more than older instructors because they are more likely to be computer literate, have had more technologically rich teacher training, and are less likely to be constrained by prior habits, views, or attitudes. The current will try to establish if this is the case in history and government.

A study done in Malaysia by Alazam, Bakar, Hamzar and Asmiran (2022) focused on vocational and technical teachers' technology integration in the Classroom and ICT Skills. The study found that most of the teachers' use of technology in classroom teaching was moderate, and that teachers' ICT skills was moderate. A significance difference was noted in teachers' ICT skills as a function of demographic factors such as age. However, age did not influence ICT integration in classroom. While Alazam *et al.*, (2012) study focused on vocational and technical teachers, the current study will focus on teachers' perception on TEL integration in history and government to find out whether age influences it is integration.

Several studies have been conducted that addressed the relationships between teachers' experience and usage of technology. Most research showed that teachers' experience influences the successful use of TEL in classrooms (Wong & Li, 2018; Giordano, 2017; Hernandez-Ramos, 2015). In a study of teachers' usage of technology, Martin and Lundstrom (2022) found that almost 60% of the teachers in their study who had under 10 years of experience believed technology in the classroom was essential and hence they use it extensively, while only 25% of teachers with over 20 years of experience shared this belief.

Gorder (2018) reported that teacher experience is significantly correlated with the actual use of technology. Claimed that experienced teachers are less ready to integrate technology into their teaching. Similarly, in the United States, the (U.S. National Centre for Education Statistics, 2020) reported that teachers with less experience in teaching were more likely to integrate computers than teachers with more experience in teaching. Research has shown that experience with the use of technology has an influence on the intention to use and actual use of information technology (Thompson 2016).

Meta-analysis and review of 81 research studies by Rosen and Maguire (2013) further concluded that teachers' teaching experience does not eliminate technology phobias and many experienced teachers display some wariness, discomfort, and/or mild anxiety with technology. Additionally, according to (Niederhauser & Stoddart, 2021) teachers' experience in teaching did not influence their use of technology in teaching. However, Wideman (2022) further conducted a qualitative survey on factors contributing to teachers' successful implementation of TEL in Canada. The findings found no relationship between teachers' experience and the use of TEL. The above studies were conducted on a global stage, the current study examined if that was the case with history and government teachers in national schools in the Western region.

Tezci (2019) claims that if teachers have a lot of experience, there will be more TEL use in the classroom. A study done in Malaysia by Alazam, Bakar, Hamzar, and Asmiran (2022) focused on vocational and technical teachers' TEL Integration in the Classroom about knowledge and skills. The study found that most of the teachers' use of technology in classroom teaching was moderate and that teachers' ICT skills were moderate. A significant difference was noted in teachers' TEL skills as a function of demographic factors such as teaching experience. It was also established that the correlations between technology integration in the classroom and teachers' experience among teachers were significant. While Alazam *et al.*, (2022) study focused on vocational and technical teachers, the current study was focused on teachers' perception of TEL integration in history and government and from the previous studies, and it is not clear whether teachers' teaching experience influences TEL integration. Therefore, this study sought to establish the relationship between teachers' teaching experience and TEL integration in teaching history and government.

Conversely, Further, Lau & Sim (2018) conducted a study on the extent of ICT adoption among 250 secondary school teachers in Malaysia. Their findings revealed that older teachers frequently use technology in the classrooms more than the younger teachers. However, some research reported that teachers' experience in teaching did not influence their use of computer technology in teaching. The current study examined whether teachers' experiences influence the integration of TEL in history and government in national schools in the Western region.

In many nations, technology has become an important component of education. Sulemana *et al.*, (2018) aver that when used wisely by well-trained teachers, technology can do wonders in the classroom. ICT enhances the teaching and learning process by increasing students' motivation. For instance, explanations of difficult concepts and words can be made

easy by the use of technology in class. Teachers are at the heart of the education enterprise, and as such, they must play a cardinal role in leveraging ICT technology in teaching and learning (Tekya & Asare, 2016). However, Bhattacharjee and Deb (2016) posit that for successful integration of ICT into teaching and learning, teachers must be capable of structuring their learning environments to merge technology in non-traditional ways. A teacher's lack of expertise in the use of technology will, therefore, curtail creativity and confidence in how to incorporate it into teaching.

The study undertaken by Lau and Sim (2018) explored the degree of technology integration by Malaysian secondary school teachers and revealed that the extent of teachers' academic qualifications influences technology integration in teaching.) From the study of Luhombo (2015) on Teacher factors influencing the integration of ICT in the teaching of the English language in public secondary schools in Mumias Sub-County, it can be deduced that academic qualification determines the adoption of ICT for English lessons in Mumias sub-county. Clark (2020) found a considerable relationship between teachers' level of education and their attitude toward the adoption of information technology. This study revealed the influence of teacher demographic factors such as age, gender, and level of education in merging ICT in teaching in ICT champion schools in Machakos Sub-County and gave recommendations.

Nurhabibah, Setian, Yanti, Miraj and Yannuar (2018) analyzed ICT literacy competence among vocational high school teachers in Indonesia. Among major findings, teachers were found to lack self-confidence in the use of ICT. It was also found that the level of ICT literacy was higher in males than females. Further, there were noted differentials in the level of ICT literacy when data was segregated into age groups and educational levels, teachers with lower education levels had lower literacy levels in technology. The current study was to establish if that is the case in the integration of technology in the implementation of history and government curriculum in Kakamega County.

In Kenya, Chao (2015) carried out a study related to the current study to find out how effective the technology training received by teachers was, in assisting them to integrate ICT in their work to make it more interactive, interesting, and innovative in Mombasa County in Kenya. The study established that even though there was a shortage of ICT infrastructure in most schools in Kenya, the biggest problem was that, even in the few schools with adequate infrastructure, teachers lacked the necessary training to enable them to use the facilities to enhance learning. In the study, 88% of the respondents indicated that teacher ICT training was haphazardly done due to a lack of policy and standards.

Another study in Kenya relevant to the present study is that of Ngaga (2015), on integrating ICT, reflections on practice, and policy implications in a case study of the learning Resource center at the Kenya Technical Teachers College. The study sought to assess the impact of technology teacher training on the use of technology in schools which makes it similar to the present study. However, it differs from the present study because it pointed out access to technology resources and policy as the major determiners to teachers' use of technology in the classroom furthermore it was based on a single institution as opposed to a sample of many institutions used in this study.

The level of technology and its integration, a key framework often cited is the "Technology Integration Matrix" (TIM), which identifies different levels of technology use in education, ranging from basic substitution to transformative integration, including stages like enhancement, adaptation, and infusion; with researchers like Mishra and Koehler prominently contributing to this concept through their "TPACK" (Technological Pedagogical Content Knowledge) model, listing the importance of understanding the intersection between technology, pedagogy, and content area knowledge for effective integration.

A technology training program significantly impacts technology integration in teaching by equipping educators with the necessary skills and knowledge to effectively use digital tools in the classroom, fostering confidence in implementing new technologies and providing a framework to align technology with pedagogical practices, ultimately leading to more engaging and effective learning experiences for students.

Technology training programs can help teachers become more knowledgeable and more open-minded about incorporating technology into the teaching and learning process. Jean and Arcand (2020) have argued that technology training for teachers has improved their self-confidence and ability to instruct young people. Teachers' ICT training appeared inadequate to enable them to fully integrate technology into teaching and learning. This is because it lacked a pedagogical component. Hence, their level of ICT integration in teaching and learning may have been affected by this. Sandaholtz and Reilly (2014) have argued that effective technical assistance and training programs that concentrate on ICT pedagogical development over technical issues help teachers incorporate technology into their lessons. The majority of teachers, according to Sogwe (2022) are more skilled with word processing than other computer programs. This indicates that these teachers' use of technology for classroom teaching and learning was significantly impacted by their training in this specific program. In addition, Gregoire (2014) asserted that there was a dearth of training in pedagogical interactions with ICT and that

only about a quarter of primary and secondary school teachers had any form of computer training. Mehari, *et al.*, (2020) observed that the majority of teachers lacked the essential skills and formal training to integrate technology into their practices of teaching and learning. The above studies examined how technology training programs influence the integration of technology in general; the current study examined how specific training programs, such as workshops, seminars, conferences and conferences, influence technology integration in teaching history and government in national schools in Western region.

3.0 MATERIALS AND METHODS

This was a mixed concurrent method approach study positioned in a Pragmatism paradigm. Purposive

and stratified random sampling were used to select the participants who were teachers of history and government in national schools in western Kenya. Questionnaires, document analysis, and observation schedules were used to generate the data on the teachers' experiences on the integration of technology-enhanced learning resources in the teaching of history and government. 8 national schools and 43 form four teachers of history and government teachers were selected. Quantitative data was analyzed through descriptive statistics such as frequencies, percentages and standard deviations and presented through tables and pie charts. Qualitative data was organized into themes, thematically analyzed and presented through narration.

4.0 RESULTS AND DISCUSSION

Table 4.1: Teachers' demographic factors and integration of TEL resources

Statements	SA (%)	A (%)	U (%)	D (%)	SD (%)	M
1. My gender influences my attitude toward integration of TEL resources	13(32.5)	15(37.5)	1(2.5)	8(20)	3(7.5)	3.68
2. My age influences my attitude toward integration of TEL resources	9(22.5)	12(30)	6(15)	10(25)	3(7.5)	3.35
3. My teaching experience influences my attitude toward integration of TEL	7(17.5)	10(25)	5(12.5)	11(27.5)	7(17.5)	2.98
4. My level of education influences my attitude toward integration of TEL	16(40)	13(32.5)	5(12.5)	4(10)	2(5)	3.93
5. Training in technology influences my attitude toward integration of TEL	23(57.5)	10(25)	3(7.5)	3(7.5)	1(2.5)	4.25
6. My level of training in basic technological skills influences my attitude toward integration of TEL	16(40)	11(27.5)	3(7.5)	7(17.5)	3(7.5)	3.75
7. My technological training program influences my attitude toward integration of TEL	13(32.5)	10(25)	9(22.5)	6(15)	2(5)	3.65
Average Mean						3.66

Source: Research Data, 2023

4.1 History and Government Teachers' Gender and Their Integration of TEL Resources

Gender was the first demographic factor. The respondents were asked to indicate how their gender influences their integration of TEL resources. From the table above, it was observed that, 13 representing 32.5% of teachers of history and government strongly agreed while 15 representing 37.5% of teachers of history and government agreed that their gender influences their attitude toward the integration of TEL resources in teaching history and government. Further, 8 representing 20% of teachers of history and government under study, disagreed that their gender influences their attitude towards the integration of TEL resources in teaching history and government. In addition, 3 representing 7.5% of teachers of history and government strongly disagreed that their gender influences their attitude towards the integration of TEL resources in teaching history and government.

The findings indicate that a majority of the teachers of history and government represented by

28(70%) agreed that their gender did influence their attitude towards their integration of TEL tools and applications in teaching history and government. However, 11(27.5%) of teachers of history and government disagreed that their gender influences their attitude towards the integration of TEL resources in teaching history and government. This item had a mean rating of 3.68 out of 5, implying that history and government teachers' gender highly influenced their integration of TEL resources in teaching history and government. Male teachers were integrating TEL resources more than their female counterparts in teaching history and government.

The above findings were supported during the observation. A total of 16 teachers were observed in class, of which 6 were female teachers, and 10 were male. It was observed that 8 out of 10 male teachers were able to prepare and present the lesson using TEL resources. On the other hand, it was observed that out of 6 female teachers of history and government, only two were able to prepare and present their lessons using TEL

resources such as laptops and tablets without seeking technical assistance. The remaining 4 female teachers had to seek technical assistance from their male colleagues in setting up TEL resources like laptops, tablets, desktops, and projectors during the preparation and presentation of the class lessons.

From the observation, it was evident that gender influences TEL resources integration in teaching history and government. The male teachers were integrating TEL resources like laptops, desktops, and tablets more than their female counterparts. The difference could be attributed to the perception that technology is a technical subject meant for men, with many females keeping away from it.

Gender differences and the use of technology in teaching have been reported in several studies. The findings are in agreement with Kay (2016), Markauskaitie (2016) and, (Gillwald *et al.*, 2015). They had earlier noted a significant connection between a teacher's gender and the integration of technology in teaching and learning. They found that male teachers had relatively higher levels of technology integration than their female counterparts. The gender differences between males and females were attributed to technical technology capabilities.

On the other hand, the findings contradict the findings of Semerci *et al.*, (2018) and Bulut (2019) in the report on the use of technology. They found that there was no significant difference in technology willingness among teachers based on gender. According to Adams (2019). Opined that female teachers applied technology more than male teachers. From the observation, it is evident that male teachers were integrating TEL resources more in teaching history and government in national schools in Western regions than their female counterparts. This could be a result of negative perceptions by female teachers towards the integration of technology due to the low level of technical capabilities in handling TEL resources.

4.2 History and Government Teachers' Age and Their Integration of TEL Resources

The respondents were asked to indicate how their age influences their integration of TEL resources. From the table above, it was observed that 9 representing 22.5% of teachers of history and government strongly agreed, while 12 representing 30% of teachers, agreed that their age influences their attitude towards the integration of TEL resources in teaching history and government. 6 representing 15% of the teachers of history and government recorded that they were undecided on whether their age influences their attitude towards their integration of TEL resources in teaching history and government.

Further, 10 representing 25% of teachers of history and government under study, disagreed that their age influences their attitude towards the integration of TEL resources in teaching history and government. In addition, 3 representing 7.5% of teachers of history and government strongly disagreed that their age influences their attitude towards the integration of TEL resources in teaching history and government.

The findings indicate that a majority of the teachers of history and government represented by 21(52.5%) agreed that their age did influence their attitude towards their integration of TEL tools and applications in teaching history and government. However, 13(32.5%) of teachers of history and government disagreed that their age influences their attitude towards the integration of TEL resources in teaching history and government. This item had a mean rating of 3.35, implying that history and government teachers' age, to some extent, influenced their integration of TEL resources in teaching history and government.

The study findings were authenticated by the observation of teachers in class, a majority of young teachers were comfortable in handling TEL tools during the preparation and presentation of lessons as compared to their older counterparts. It was observed that a majority of the teachers who were willing to be observed in class integrating TEL resources were young. This could be attributed to the fact that the young generation is more open to learning and adapting to new technologies as they emerge, and many universities and teachers training colleges now incorporate technology education into their curricula. This may also be related to perceptions held by older teachers that history and government are abstract subject that can be taught without TEL resources to achieve the objectives. This indicates that a teacher's age is a factor that influences the perception towards integration of TEL resources in teaching history and government.

The findings in this table concur with the findings in other studies, for example, Wong *et al.*, (2022), Hernandez (2017), and Lundstrom (2012). The above scholars concluded that young teachers were integrating technology in class more than their old counterparts. The findings indicate that older teachers were less likely to integrate technology in teaching history and government as compared to young teachers. This could be attributed to technophobia, inadequate skills (less competent) in terms of integration of technology in teaching, and the general perception that history and government as a subject are too abstract and, therefore, there is no need to integrate technology during instruction. The results also share the same sentiments with Riley (2019), who established young teachers' integrated technology more than their older counterparts. However, the study findings vary with the findings of

Naumi (2017) and Apolloia (2014), who found no significant difference between the young and the old teachers concerning the integration of technology in teaching.

4.3 Teaching Experiences and Integration of TEL Resource in Teaching History and Government

The respondents were asked to indicate how their teaching experience influences their integration of TEL resources. From the table, it was reported that 7 representing 17.5% of teachers of history and government strongly agreed, while 10 representing 25% of teachers, agreed that their teaching experience influences their attitude towards the integration of TEL resources in teaching history and government. 5 representing 12.5% of the teachers of history and government recorded that they were undecided on whether their teaching experience influences their integration of TEL resources in teaching history and government.

Further, 11 representing 27.5% of teachers of history and government under study, disagreed that their teaching experience influences their attitude toward the integration of TEL resources in teaching history and government. In addition, 7 representing 17.5% of teachers of history and government strongly disagreed that their teaching experience influences their attitude towards the integration of TEL resources in teaching history and government.

The findings indicate that 17 (42.5%) of the teachers of history and government agreed that their teaching experience did influence their attitude towards their integration of TEL tools and applications in teaching history and government. On the other hand, 18(45%) of teachers of history and government disagreed that their teaching experience influences their attitude towards the integration of TEL resources in teaching history and government. This item had a mean rating of 2.98, implying that history and government teachers' teaching experience had no significant influence on their integration of TEL resources in teaching history and government. This implies that there is no justification that the more years one has taught, the more he or she is likely to integrate TEL resources into teaching.

Further, in agreement with the foregoing argument, Barasa (2021), Nguli (2017), and Indembukhani (2021). Observed that the teaching experience of teachers does not influence their use of technology in teaching. Similarly, the study finding is in line with Nguli (2017), who postulated that effective use of technology is related to the level of technological comfort and the perceived ease of use of technology and not the teaching experience. This result findings vary with Gorder (2018), who argued that experienced

teachers are likely to integrate technology into their teaching.

4.4 Highest Level of Education and Integration of TEL Tools as Reported by Teachers

The teachers were asked to indicate whether their highest level of education influences their attitude toward the integration of TEL resources in teaching history and government. From the table above, it was observed that 16 representing 40% of teachers of history and government strongly agreed while 13 representing 32.5% of teachers agreed that their highest level of education influences their attitude towards the integration of TEL resources in teaching history and government. 5 representing 12.5% of the teachers of history and government recorded that were undecided on whether their highest level of education influences their attitude towards the integration of TEL resources in teaching history and government.

Further, 4 representing 10% of teachers of history and government under study, disagreed that their highest level of education influences their attitude towards the integration of TEL resources in teaching history and government. In addition, 2 representing 5% of teachers of history and government strongly disagreed that their highest level of education influences their attitude toward the integration of TEL resources in teaching history and government.

The findings indicate that a majority of the teachers of history and government represented by 29(72.5%) agreed that their highest level of education did influence their attitude towards their integration of TEL tools and applications in teaching history and government. However, 6(15%) of teachers of history and government disagreed that their highest level of education influences their attitude towards the integration of TEL resources in teaching history and government. This item had a mean rating of 3.93 implying that history and government teachers' highest level of education greatly influenced their attitude towards the integration of TEL resources in teaching history and government.

It was deduced that the extent of integration increases with the degree of the level of education. A majority of the teachers with high levels of education are competent in terms of TEL resource integration in teaching history and government. Teachers with higher education qualifications are more likely to build greater confidence in them towards the integration of technology than those with lower levels of education. Higher levels of education, therefore, have a positive effect on teachers' perception of technology integration in the classroom because it improves their skills which in turn improves their self-efficacy.

The study findings confirm, as seen in the literature review, the existence of the relationship between teacher's academic qualifications and the integration of TEL resources in teaching. The results validate the findings of the studies by Lau (2018), Luhombo (2015), and Clark (2010). In their studies, they found a considerable relationship between teachers' highest level of education and their attitude toward the adoption of technology in teaching. Lau (2018). Opined that teachers with higher academic qualifications are more likely to be proficient with technology and integrate it into their lessons than those with low levels of education. However, these findings contradict Sampasa (2022), Barsi (2018), and Berrocoso (2022) whose study found no significant relationship between academic qualifications and the integration of technology in teaching. Barsi (2018) opined that there is no correlation between teachers' academic qualifications and the integration of technology in teaching. He maintained that fundamental technological training is the major factor influencing the integration of technology resources in teaching.

4.5 Teacher's Technological Training and Their Integration of TEL Resources in Teaching History and Government

In the same vein, the researcher was interested in establishing whether teacher's basic technological training skills influence the attitude towards the integration of TEL resources in teaching history and government. The teachers were asked to indicate whether basic technological training skills such as cloud computing, computer literacy, word processor, data communication, networking skills, online assessment, and *data analytics* influence their attitude towards the integration of TEL resources in teaching history and government. It was reported that 23 representing 57.5% of teachers of history and government strongly agreed while 10 representing 25% of teachers agreed that their basic technological training skills such as cloud computing, computer literacy, word processor, data communication, networking skills, online assessment, and *data Analytics* influence their attitude towards the integration of TEL resources in teaching history and government. In addition, 3 representing 7.5% of the teachers of history and government recorded that were undecided on whether basic technological training skill influences their attitude towards the integration of TEL resources in teaching history and government.

Further, the remaining 4, 3 representing 7.5% of teachers and 1 representing 2.5% of history and government under study, disagreed and strongly agreed respectively that the basic technological training skills influence their attitude towards the integration of TEL resources in teaching history and government.

The findings indicate that a majority of the teachers of history and government represented by

33(82.5%) agreed that basic technological training skills did influence their attitude towards their integration of TEL tools and applications in teaching history and government. However, 4(10%) of teachers of history and government disagreed that their basic technological training skills influence their attitude towards the integration of TEL resources in teaching history and government. This item had a mean rating of 4.25 implying that the basic technological training skills of teachers of history and government teachers had a significant influence on their attitudes regarding the integration of TEL resources in teaching history and government. Teachers with basic technological training skills such as cloud computing, computer literacy, word processor, data communication, networking skills, online assessment, and data analytics are more likely to build greater confidence in them towards the integration of technology than those without any technology training. Basic technological training, therefore, has a positive effect on teachers' perception of technology integration in the classroom because it improves their skills which in turn improves their self-efficacy.

This finding verifies those of numerous earlier studies by Mbugua S. N. (2014), Otiang'a *et al.*, (2018), and Soi *et al.*, (2018). Their findings established a positive correlation between the teacher's basic technological training skills and the integration of technology in teaching. For instance, researchers like Indembukhani. (2021), found a significant relationship between teachers' basic technological training skills and integration of technology in teaching English in secondary schools in Kisumu. Basic technological training skills are vital since teachers can only be able to integrate technology into teaching when they have skills in general to use technology resources. Mbugua (2014). Postulated that the ease of use of technology resources is enhanced by adequate training for teachers. This is because technology training for teachers gives the self-efficacy required to integrate TEL tools and applications in teaching.

4.6 Level of Teacher's Technological Training and Their Integration of TEL Resources in Teaching History and Government

On whether the teachers' level of training in basic technological skills such as certificate, diploma influenced the attitude of teachers towards integration of TEL in teaching history and government, 16(40%) of the teachers of history and government strongly agreed that the level of training in basic technological skills influenced their attitude towards the integration of TEL resources in teaching history and government. In addition, 11 representing 27.5% of teachers of history and government agreed that the level of training in basic technological skills influenced their attitude towards the integration of TEL resources in teaching history and government. However, a minority of the teachers; 10(25%) agreed with 3(7.5%) being undecided. The

study revealed that teachers with diploma level of qualifications were integrating TEL resources more than their counterparts with certificates in teaching history and government.

The findings indicate that the majority of the teachers of history and government represented by 27(67.5%) agreed that the level of training in basic technological skills did influence their attitude towards their integration of TEL tools and applications in teaching history and government. However, 10(25%) of teachers of history and government disagreed that their level of training in basic technological skills influences their attitude towards the integration of TEL resources in teaching history and government. This item had a mean rating of 3.75 implying that the level of training in basic technological skills of teachers of history and government teachers had a significant influence on their attitudes regarding the integration of TEL resources in teaching history and government.

The above findings established that the level of technological training had a significant influence on how well technology is integrated into the classroom. Higher technologically trained teachers of history and government (those with diploma qualifications in technology) were more likely to integrate TEL tools than those with less technology training like certificate in basic computer.

The above study findings were consistent with the study of Barasa (2021), Nguli (2017), and Naumi (2017) as indicated in the reviewed literature. The three studies demonstrated that those with higher levels of technology training were more likely to integrate technology in class than those with lower levels of technology training. This is because those with higher levels of technology training are more competent in the integration of technology into the teaching process. Higher levels of basic technological training leads to high self-efficacy in technology integration.

4.7 Teacher's Technology Training Programs and Their Integration of TEL Resources in Teaching History and Government

Finally, on whether the teachers' technology training programs influenced the attitude of teachers towards the integration of TEL resources in teaching history and government, 13(32.5%) of the teachers of history and government strongly agreed that technology training programs such as independent studies and peer tutoring influenced their attitude towards the integration of TEL resources in teaching history and government. In addition, 10 representing 25% of teachers of history and government agreed that technology training programs influenced their attitude towards the integration of TEL resources in teaching history and government.

Further, 6 representing 15% of teachers, and 2 representing 5% of history and government under study, disagreed and strongly disagreed respectively that technology training programs influence their attitude towards the integration of TEL resources in teaching history and government, 9(22.5%) were undecided. This item had a mean rating of 3.65 implying that the technology training programs for teachers of history and government teachers had a considerable influence on their attitudes regarding the integration of TEL resources in teaching history and government.

The above findings established that the nature of the technological training program had a significant influence on how well technology is integrated into the classroom. History and government teachers who had attended independent studies and peer tutoring programs were integrating TEL resources more than those who attended workshops, seminars, and conferences. This could be attributed to the fact that those who attended independent studies and peer tutoring were motivated by personal reasons. This applies that teachers of history and government are self-driven to attend independent studies and peer tutoring because of positive perceptions towards the integration of TEL tools and applications, unlike workshops, seminars, and conferences which are school-initiated programs.

The findings support Roblyer *et al.*, (2014) who reported that teachers need new pedagogical skills to take full advantage of technology to enhance the integration of technology. Teachers require special technology training that could equip them with the required knowledge on how to develop an appropriate and effective lesson that requires the use of TEL to achieve meaningful teaching. Those who had attended extensive technology training programs were more competent in the integration of technology resources into teaching.

The study established that the majority of the teachers of history and government were in agreement that their gender, age, highest level of education, basic training in technology, level of training in basic technological skills, and technological training program attended by teachers influenced their attitude towards the integration of TEL resources in teaching history and government. More male teachers reported to be integrating TEL resources more than their female counterparts in teaching history and government. This was affirmed during observation. From the observation it was evident that gender influences TEL resources integration in teaching history and government. The male teachers were integrating TEL resources more than their female counterparts. The difference can be attributed to the perception that technology is a technical subject meant for men, with many females keeping away from it.

The findings also revealed that history and government teachers' age, to some extent, influenced their integration of TEL resources in teaching history and government. The study findings were authenticated by the observation of teachers in class, a majority of young teachers were comfortable in handling TEL tools during the preparation and presentation of lessons as compared to their older counterparts. This could be attributed to the fact that the young generation is more open to learning and adapting to new technologies as they emerge, and many universities and teachers training colleges now incorporate technology education into their curricula.

On whether highest level of education influenced the integration of TEL resources in teaching history and government teachers. It was deduced that the extent of integration increases with the degree of the level of education. A majority of the teachers with high levels of education are competent in terms of TEL resource integration in teaching history and government. Teachers with higher education qualifications are more likely to build greater confidence in them towards the integration of technology than those with lower levels of education.

It was revealed that Teachers with basic technological training skills such as cloud computing, computer literacy, word processor, data communication, networking skills, online assessment, and data analytics were integrating TEL resources more than those without. This is because, the above basic technological training skills build greater confidence in them towards the integration of technology than those without any technology training. Basic technological training, therefore, has a positive effect (enhanced TEL integration) on teachers' perception of technology integration in the classroom because it improves their skills which in turn improves their self-efficacy.

The study also established that the level of training in basic technological skills of teachers of history and government teachers had a significant influence on their attitudes regarding the integration of TEL resources in teaching history and government. The above findings established that the level of technological training had a significant influence on how well technology is integrated into the classroom. Higher technologically trained teachers of history and government (those with diploma qualifications in technology) were more likely to integrate TEL tools than those with less technology training like certificate in basic computer.

The nature of the technological training program had a significant influence on how well technology is integrated into the classroom. History and government teachers who had attended independent studies and peer tutoring programs were integrating TEL resources more than those who attended workshops,

seminars, and conferences. This could be attributed to the fact that those who attended independent studies and peer tutoring were motivated by personal reasons.

5.0 CONCLUSION AND RECOMMENDATIONS

From the findings discussed above, the following conclusions were made; the study revealed that, the following attributes: gender, age, highest level of education, basic training in technology, level of training in basic technological skills, and technological training program attended by teachers influenced their attitude towards their integration of TEL tools and applications in teaching history and government. This study, therefore, recommends that there is need for school management in consultation with parents to set aside funds to train teachers on technological skills to up-skilled on technological pedagogical skills.

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