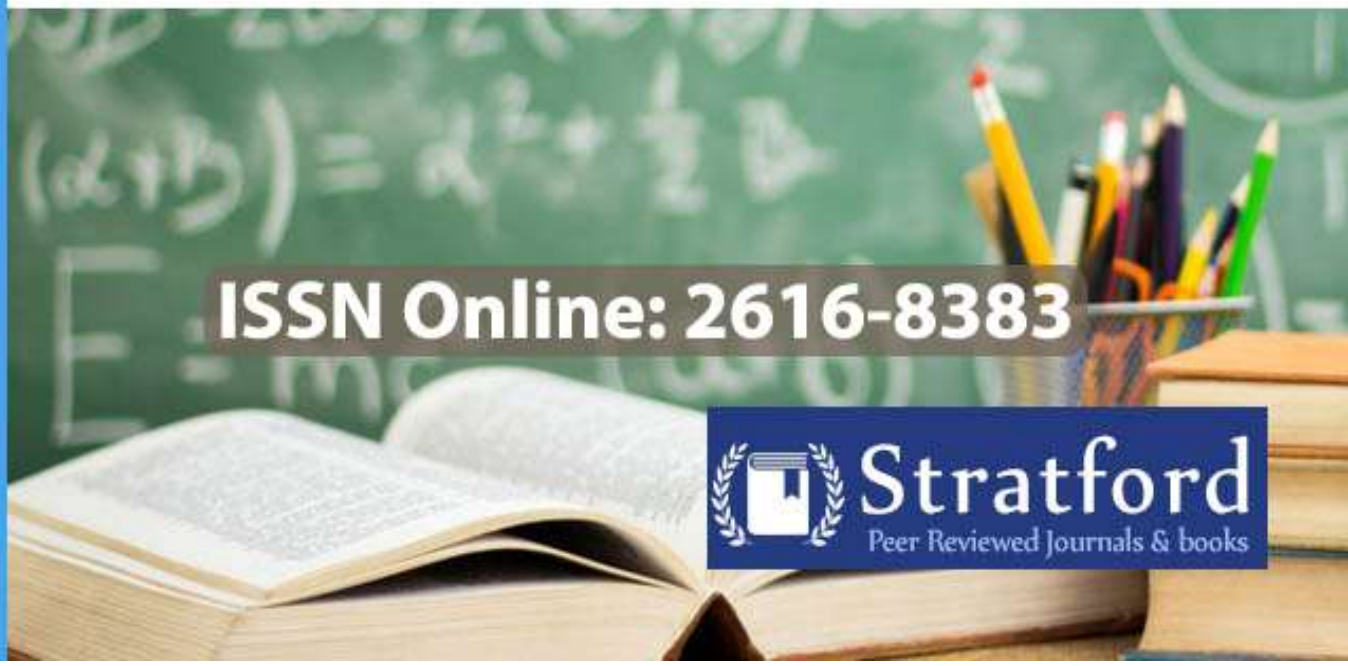
Journal of Education



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ISSN: 2616-8383

Stratford Peer Reviewed Journals and Book Publishing
Journal of Education
Volume 8||Issue 2||Page 15-30||September||2025|
Email: info@stratfordjournals.org ISSN: 2616-8383

Influence of Teacher Perceptions, Attitudes, and Policy on ICT Integration in Basic Schools in Ho Municipality, Ghana

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***How to cite this article*: Obeng, P., Atieku, J. N. & Segbefia, S. K. (2025). Influence of Teacher Perceptions, Attitudes, and Policy on ICT Integration in Basic Schools in Ho Municipality, Ghana, *Journal of Education, 8*(2), 15-30.** https://doi.org/10.53819/81018102t4357

Abstract

This study sought to examine the impact of teacher perspectives, attitudes, and prevailing policies on the incorporation of Information and Communication Technology (ICT) in primary schools in the Ho Municipality of Ghana. The theoretical framework employed was the Technology Acceptance Model (TAM), which asserts that individual attitudes towards technology adoption substantially influence their behavior and perceived utility of ICT products. The study utilized a cross-sectional research design and employed a questionnaire to gather data from teachers at six basic schools. The findings revealed that teacher attitudes were the primary predictor of ICT integration, with 75% of teachers demonstrating positive perspectives of ICT usage; however, only 40% reported participating in regular training sessions to facilitate this integration. Moreover, although current policies and teacher opinions were recognized, they did not substantially forecast ICT integration when evaluated separately. The study advises the Ghana Education Service and the Ministry of Education to reevaluate and enhance existing ICT integration policies to ensure sufficient support and infrastructure, in addition to initiatives aimed at cultivating favorable attitudes among educators and conducting regular evaluations of ICT programs to pinpoint areas needing improvement.

Keywords: *Perceptions, Attitudes, Existing policies, ICT Integration, Ho Municipality*

1.0 Introduction

The global shift towards a knowledge-based economy necessitates that students are equipped with digital literacy skills from an early age. As such, integrating Information and Communication Technology (ICT) into basic education has garnered significant attention in recent years, becoming a pivotal area of research and application. This requirement for learners to have digital literacy is emphasized in a study by Voogt and Roblin (2020), which highlights the growing demand for ICT skills in the job market, showing the need for early exposure. Additionally, ICT in education is important for fostering critical thinking and problem-solving skills, which are vital in the 21st century job market (Miao, Kärkkäinen & Han 2020). The impact of ICT on teaching methodologies and student engagement in basic education is profound; traditional teaching methods are being transformed by the incorporation of digital tools, as detailed (Heitink et al., 2020). Furthermore, technology provides diverse pathways for learning, catering to different student needs and abilities (Zheng, Warschauer, Lin &Chang, 2020). It is also important to note that ICT fosters collaborative learning, as students can easily connect and work together on projects, breaking down geographical and temporal barriers, as explored by Riel and Becker (2020).

Given the importance of ICT integration in basic education as highlighted above, teacher perceptions and attitudes towards ICT integration in basic schools therefore becomes an integral factors influencing the success of digital initiatives in education. These attitudes play a crucial role in determining how effectively technology is adopted and utilized in the classroom. Teacher perceptions and attitudes towards ICT integration refer to the beliefs, feelings, and opinions that teachers hold regarding the use of ICT in their teaching practices. Teachers' perceptions of ICT is linked to their willingness to integrate these tools into their teaching practices. According to Ertmer and Ottenbreit-Leftwich (2020), teachers who view ICT as a beneficial tool for enhancing student learning are more likely to incorporate it into their lessons. This positive perception is vital because it drives the effort and time teachers invest in learning and applying new technologies. Conversely, if teachers view ICT integration as a burden or irrelevant to their teaching practice, they are less likely to engage with it (Sang, Valcke, van Braak & Tondeur, 2020). Given the rapid technological advancements and the increasing emphasis on digital literacy in the 21st-century curriculum, understanding how teachers in Ho Municipality perceive and engage with ICT is essential, which is the main aim of the current study.

1.1 Statement of the Problem

Over the past decade, the Government of Ghana has been at the forefront of advocating for the integration of information and communication technology (ICT) in education to enhance educational outcomes (Darko Agyei, 2019). The country's Education Strategic Plans for the periods 2003-2015 and 2010-2020, as developed by the Ghana Education Service, highlighted the importance of ICT in achieving key educational objectives related to access, quality, gender inclusiveness, and effective education management. In response to these needs, the Ghanaian government established the ICT for Accelerated Development (ICT4AD) Policy in 2003, delineating comprehensive plans and strategies for leveraging ICT to propel Ghana towards its national goal of becoming an information and knowledge-driven, ICT-literate nation (Government of Ghana, 2018).

To further promote ICT in education, the Ministry of Education launched the ICT in Education Policy in 2008, aiming to address the specific ICT requirements within the education sector. In

line with these initiatives, the Basic School Computerization policy was introduced in 2011, envisioning the introduction of computers and e-learning throughout the education system. In 2012, the Ministry of Education, in partnership with rLG, a Ghanaian ICT company, initiated the "teacher laptop and ICT project." This project provided teachers with ICT training and equipped them with laptops to support research, teaching, and learning across various subject areas.

Ghana, like many other countries worldwide, recognizes the pivotal role of ICT in preparing students for the job market and fostering social, political, and economic development (Abdul-Hamed, 2020). To this end, the Government of Ghana has formulated a comprehensive national ICT policy and has committed substantial resources to ensure widespread accessibility to ICT education for all Ghanaian students (Ministry of Education, 2020). This policy is not just a guideline but is supported by legal and legislative instruments, compelling educational institutions in Ghana to integrate ICT into their curricula and ensure that students have access to ICT resources within their schools (Ministry of Education, 2019). Schools are tasked with planning and facilitating the use of computers and related technologies to enhance various aspects of education, including teaching, learning, and other educational activities, such as employing e-learning through both offline and online applications (Mahini, Forushan, & Haghani, 2012).

Despite the numerous advantages of ICT in everyday life, both in and out of school, studies have revealed that integration is slow, especially among basic schools in Ghana. The successful integration of ICT and related technologies into education in Ghanaian basic schools holds the potential for significant benefits to the educational system. However, despite these efforts, the integration of ICT into basic education by teachers in Ghana remains at a relatively low level. Moreover, the journey toward achieving this integration in basic schools especially in Ho Municipality faces myriad of challenges and setbacks (Abdul-Hamed, 2020). Despite the government's dedication and policy framework, obstacles such as limited infrastructure, inadequate teacher training in ICT, and disparities in access to ICT resources among schools and regions remain significant hurdles. In addition to the low level of ICT integration in basic education, there is also very little data on the availability of ICT tools and its usage in basic education in Ghana, this is because not many studies have been done in this area. Moreover, ICT is advantageous when is used to improve reading skills; however, it is unclear to what extent this has been achieved in Ho Municipality. The study therefore seeks to assess teacher perceptions and attitudes towards ICT integration in basic schools in Ho Municipality.

1.2 Research Questions

i. What effect do teacher perceptions have on ICT integration in basic schools in Ho Municipality, Ghana?
ii. What effect do teacher attitudes have on ICT integration in basic schools in Ho Municipality, Ghana?
iii. What is the effect of existing policies on ICT integration in basic schools in Ho Municipality, Ghana?

1.3 Significance of the Study

The findings of this study would be of significant importance for various stakeholders, including management, policymakers, and academicians and scholars. This study would empower school management to make informed decisions, guides policymakers in crafting effective policies, and enriches the academic discourse on education technology.

2.1 Literature Reviews

Technology Acceptance Model

Technology Acceptance Model was developed by Davis (1989). The Technology Acceptance Model (TAM) is a widely recognized theoretical framework used to understand and predict users' acceptance and adoption of technology, particularly in the context of information systems and technology usage. TAM states that an individual's intention to use a technology is determined by two primary factors: perceived ease of use (PEOU) and perceived usefulness (PU) (Davis, 1989). PEOU refers to the user's perception of how effortless it is to use the technology, while PU relates to the user's belief that using the technology will enhance their performance or productivity (Davis, 1989).

Research applying TAM has demonstrated its effectiveness in various domains, including education. For example, Venkatesh and Davis (2000) extended the original TAM to create the Unified Theory of Acceptance and Use of Technology (UTAUT), which incorporates additional factors like social influence and facilitating conditions. In educational settings, studies have applied TAM to investigate teachers' and students' acceptance of educational technologies. For instance, Teo, Lee, and Chai (2008) used TAM to explore factors influencing teachers' acceptance of ICT in classrooms. Similarly, Huang, Teo, and Zhou (2019) employed TAM to assess students' acceptance of mobile learning applications. These studies demonstrate the versatility and applicability of TAM in understanding technology adoption in education.

Individual's attitude toward adopting any new technology, according to TAM, determines specific behaviour, beliefs, perceived ease of use, and perceived utility. Perceived usefulness refers to an individual's belief that utilizing technology improves their performance, whereas perceived ease of use influences perceived usefulness. As described in the TAM, using technology enhances self-efficacy in the use of ICT and has a considerable influence on perceived ease of use. If basic school teacher finds it difficult to incorporate ICT while teaching pupils or students, they may consider it a waste of time and refuse to use it. If a teacher believes that using digital media into teaching and learning reading abilities will help children develop their language skills, the teacher will be motivated to do so. In contrast, if a basic school teacher does not believe that the system will increase his or her work performance, the likelihood of using it is minimal. Teachers are more inclined to employ ICT while teaching if they believe it is simple to use and will meet their requirements as well as those of their learners.

The perception and attitude of teachers regarding the usage of ICT will determine their behavioural purpose for ICT integration into the process of teaching and learning. Basic education school teachers will be convinced to include ICT into their practices to help learners develop their academic skills if they believe that using ICT tools will increase their performance in disseminating knowledge to the pupils. Learners' educational skills and focus are improved by a programmed reading material read aloud by a human or computergenerated voice. The perceived ease of use of teachers is dependent on their ICT competencies, and their skills with ICT resources and attitudes regarding ICT integration into teaching and learning activities, according to this research. When a teacher is instructed on how to utilize ICT to assist students in reading written text, they are more possibly to employ it in reading activities. In this study, the researcher will use Davis's (1989) TAM model to find out the teachers' perceptions and attitude towards integration of ICT in education in basic schools in Ho Municipality.

Effect of Teacher Perception on ICT Integration in Basic Schools

Kennedy, et al. (2023) examined teachers' perceptions of the impact of ICT on basic school students' academic performance in the Afienya Circuit. The researchers used a descriptive survey research design to gather data from teachers in the Afienya Circuit. Findings revealed that using computers in primary schools in Mobole-Afienya Circuit encouraged open learning, supported the practice of previously taught concepts, and helped learners acquire skills like word recognition and vocabulary building.

Adu and Zondo (2023) explored educators' perceptions of ICT integration in teaching Economics. The methodology involved a qualitative case study design with eight Economics teachers from public Secondary Schools in KwaZulu Natal. Findings indicated that teachers perceived ICT integration positively impacting Economics teaching, but faced challenges due to lack of ICT skills and attachment to traditional methods. Challenges included inadequate computers, lack of Internet connectivity, and teachers' lack of ICT knowledge hindering effective integration.

Akram, et al. (2022) reviewed teachers' perceptions of technology integration in teaching-learning practices in Pakistan. The methodology involved structuring questions, finding prior studies, selecting and evaluating them, analyzing and synthesizing findings, and using and reporting the results. Findings indicated that teachers had positive perceptions of technology integration, believing it enhanced instructional practices, made learning interactive, and kept learners motivated. Barriers included internet speed, infrastructure, and training obstacles. Recommendations included clear policies, budget allocation, and career development opportunities for teachers to enhance technological competencies.

Ngao, Sang and Kihwele (2022) explored teacher educators' perceptions and practices in integrating ICT in teacher education programs. Some educators lack understanding of the rationale behind using technology in teaching, facing barriers like equipment challenges and time constraints. Teacher educators utilize various software, learning platforms, social media, and online resources to enhance preservice teachers' learning experiences. Integrating ICT in teacher training is crucial, and educators should be supported in developing positive attitudes towards ICT use in teaching practices. Equipping preservice teachers with ICT-based pedagogical skills, including observing how educators use technology, can significantly impact their future teaching practices.

Abulencia, et al. (2022) focused on teachers' perception of instructional technology application and integration competence in a high school in the Philippines. Teachers were found to have average ICT competence, with high competency in MS Word and MS PowerPoint, and average competency in MS Excel and the Internet. All selected teachers integrated technology into teaching, perceiving that technology significantly impacts students' learning by enhancing teaching activities and effectiveness. Recommendations included providing ICT training for teachers and designing long-term plans for ICT integration in teaching.

Maja (2023) explored teachers' perceptions of integrating technology in EFAL classes in rural primary schools in Limpopo, South Africa. An interpretivist paradigm guided the study, using the technology acceptance model (TAM). Through an exploratory qualitative case study with ten Intermediate Phase EFAL teachers, it was found that teachers are willing to use technology in teaching EFAL, appreciating its productivity and suggesting the need for additional in-service training.

Effect of Teacher Attitudes on ICT Integration in Basic School

Aburayash (2022) investigated the impact of teachers' characteristics on their attitudes towards integrating ICT in teaching lower primary grades in Jordan. Methodology involved a sample of 210 male and female primary school teachers in the middle Badia region, data collected through a questionnaire, and analysis done using descriptive and inferential statistics. Findings revealed that teachers' experience in teaching, computer competencies, and ICT training were strong predictors of their attitudes towards ICT integration, emphasizing the importance of teacher training in acquiring and utilizing ICT skills in education.

Arhin, et al. (2022) investigated the influence of teachers' self-efficacy and attitude towards the integration of ICT into teaching and learning at the basic school level. Methodology involved descriptive surveys, online questionnaires, and statistical analyses like Pearson correlation coefficient. Findings indicated high levels of self-efficacy among teachers, positive attitudes towards ICT integration, significant gender differences in attitudes, and no significant relationship between self-efficacy and attitudes towards ICT integration.

Hoesni, et al. (2020) examined determine the effects of ICT towards students' attitude. The methodology utilized a systematic document analysis technique to analyze issues related to the effect of ICT on student attitude. Findings indicated that the use of ICT in the classroom led to advantages in student performance, motivation, and efficiency, creating a dynamic and interactive learning environment.

Kao, et al. (2020) assessed primary school teachers' self-efficacy and attitudes towards web-based professional development significantly predict their technology integration in teaching activities. Improving teachers' learning attitudes and cultivating their self-efficacy can enhance their intention to integrate technology into teaching, ultimately strengthening teaching effectiveness through web-based technologies. Internet experience can boost teachers' confidence in participating in web-based professional development programs, leading to more positive perceptions of technology integration in teaching.

Bilbokaitė-Skiauterienė, and Bilbokaitė, (2022) reveaedl pre-school teachers' attitudes towards the impact of ICT and computer games on students, highlighting the significant influence on children's self-learning process, knowledge, skills, behavior, and attitudes. A qualitative approach was applied to the study, utilizing focus groups with 48 pre-school teachers. The research findings indicate that ICT and computer games have a significant impact on preschool children, leading to changes in their knowledge, skills, behavior, and attitudes.

Effect of Existing Policies on ICT Integration in Basic School

Kays and Gamundani (2020) discussed the potential usage of ICTs in basic education, focusing on the Namibian basic education system. It highlights the challenges and proposes solutions for maximizing benefits from an ICT policy perspective. The research employed a mixed method approach in a case study context, emphasizing the importance of ICTs in educational content delivery and administration. The study provides insights into the skills of teachers in using ICT for educational content delivery, aiming to guide policy implementation for ICTs in education.

Silva, and Neide Sobral (2017) compared national educational policies for integrating ICT in basic education in Brazil and Spain between 1997 and 2010. It analyzes the objectives of these policies, highlighting a focus on educational quality aligned with market logic and international recommendations. The policies aim at technological development, economic growth, and endorse

the discourse of globalization. Spain aligns its policies with the European framework, receiving support and benefits from the EU, while Brazil and Spain both aim to integrate into the information society through educational policies.

Zeng (2022) reviewed China's policy for integrating ICT in basic education from 1988 to 2021, focusing on teaching innovation, infrastructure construction, and ICT competence development. China aims to promote education equity and quality through ICT integration, emphasizing joint efforts and open communication in recent years. The study combines bibliometrics-based analysis and content analysis to analyze policy changes in basic education, highlighting the deep integration of ICT and educational reform through innovative teaching modes. China's policy for ICT integration in education prioritizes promoting equity and quality over students' competency and performance, distinguishing it from Western approaches.

Da Costa, et al. (2022) discussed the integration of Information and Communication Technologies (ICT) in Basic Education in Brazil, highlighting the lack of investment in technology and teacher training in public schools. It analyzes the National Common Curricular Base (BNCC) of Brazilian education and data from the Brazilian Internet Steering Committee census, revealing the discrepancy between curriculum recommendations and the actual access to ICT resources in schools. Despite the theoretical encouragement for ICT use in education, the reality shows insufficient investments in human and technological resources, even for basic instrumental teaching, reflecting a precarious situation in Brazilian public schools.

Owusu-Ansah (2015) assessed the impact of the One Laptop Per Child Policy (OLPCP) on teaching and learning in basic schools in the Suhum Municipality, Ghana. Criteria for laptop distribution, improvement in academic performance, and challenges hindering policy goals were explored. Conventional teaching practices in Ghanaian education remain a challenge despite ICT introduction. Majority of the respondents in the study were male, indicating potential gender imbalances in school enrolment.

Natia and Al-hassan (2015) discussed the importance of ICT in promoting teaching and learning in Ghanaian basic schools. The Government of Ghana has implemented policies like the ICT in Education Policy and Basic School Computerization policy to introduce ICT tools and e-learning into the education system. Despite efforts to provide ICT tools, teachers' capacity to effectively use them for teaching is hindered by lack of training and poor internet access. The study highlights the need for more focus on training teachers and providing ICT tools at the primary school level to enhance learning outcomes.

3.0 Methodology

Research Design

A cross-sectional research design is an observational study that assesses exposure, outcome, and other variables simultaneously (Zuleika, 2022). It provides a snapshot of a population at a specific point in time, analyzing prevalence and health characteristics. These studies are cost-effective, quick to conduct, and useful for generating new hypotheses (Hunziker & Blankenagel, 2024).

Population of Study

The target population refers to the specific group that a study aims to generalize its findings to, while the sample size is the number of participants selected from the target population for the study. The sample size calculation in research, particularly in randomized controlled trials, is essential for determining the number of participants needed to achieve study objectives effectively

without unnecessary burden or resource wastage. Understanding the effects of target population size on sample size determination is vital in survey research, where expertise in planning, execution, and analysis stages is required (Willie, 2022). In this study, the target population for the study was 150 primary and JHS teachers in selected basic schools in Ho municipality.

Table1: Population of Selected Schools in Ho

S/N	School	Male Teachers	Female Teachers	Total
1	7 Garrison Primary	8	24	32
2	Volta Barrack JHS	13	21	34
3	Ho Dome E.P JHS	5	25	30
4	Ho Housing M/A JHS	4	14	18
5	Ho AME Zion JHS	4	14	18
6	Ho Fiave Global JHS	6	12	18
	Total	**40**	**110**	**150**

Source: Ho Municipal Education Directorate

Sample and Sampling Technique

The study employed simple random techniques to sample a population of 110 teachers from six selected basic schools in housing circuit. Krejice and Morgan (1970) sample size calculator was used to get 150 teachers from the population. Simple random sampling (SRS) involves selecting a sample from a population where each unit has an equal chance of being chosen, making it useful for homogeneous populations (Latpate, 2021).

Data Collection Questionnaire

The study's main data was gathered via a structured questionnaire. A self-administered survey containing questions using a Likert scale from 1 (Strongly Disagree) to 5 (Strongly Agree). The questions that were most relevant to the study informed the development of the questionnaire. The research questions posed by the study were intended to be answered by the questionnaire.

4.0 Findings and Discussion

Table 2: Socio-demographic Characteristics of Respondents

Variable	Category	Frequency N= 108	Percentage (%)
	Female	48	44.3
Gender	Male	60	55.7
Age	20- 29yrs	27	24.6
	30-39yrs	68	63.9
	40- 49yrs	2	1.6
	50yrs and above	11	9.8
Highest Qualification	B.Ed.	67	62.3
	Diploma	28	26.2
	HND	4	3.3
	Master's degree	9	8.2

Source: Field Data (2024).

Table 2 presented the demographic information of respondents for the study. The gender breakdown revealed that out of 108 respondents, 60 of the respondents representing 55.7 % were male and 48 respondents representing 44.3% were female. This implied the views of the male teachers dominated this study. Respondents between 30 to 39 years were the majority with 68 teachers representing 63.9% who participated in the study, additional respondents between the ages of 20-29 were the second majority that participated in the study 27 representing 24.6%while those respondents above 49 years were the least participants in the study with 2 representing 1.6%. In terms of educational qualification. The First Degree (B.Ed.) degree holders were the majority with 67 representing 62.3%. With Diploma holders 28(26.2%) while those who hold HND certificates where the least participant with 4(3.3%).

Multiple Linear Regression

Multiple linear regression was conducted to ascertain relationships between multiple independent variables (Attitudes, Perception and Policies) and a dependent variable (ICT Integration) thus: What effect do teacher perceptions have on ICT integration in basic schools in Ho Municipality, What effect do teacher attitudes have on ICT integration in basic schools in Ho Municipality and What is the effect of existing policies on ICT integration in basic schools in Ho Municipality. This method extends the concepts of simple linear regression to cases where there are more than one IV influencing the DV, allowing for a more comprehensive analysis of the relationships between variables (Shah,et al,2016). By using multiple linear regression, the researcher can assess the simultaneous effects of multiple predictors (perceptions, attitudes ,policies) on a response variable, determining not only the importance and size of each predictor's effect but also how these predictors interact with each other in influencing the outcome (Slinker,& Glantz,2008). This approach is crucial in situations where a single predictor-variable relationship is insufficient to capture the complexity of the system under study, enabling a more accurate and nuanced understanding of the underlying processes and dynamics.

What effect do teacher perceptions, teacher attitudes, and existing policies have on ICT integration in basic schools in Ho Municipality?

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.622	0.387	0.354	0.50739

Table 3 shows the regression model summary. R square is 0.387 which means the model formed can explain 38.7%variance of the dependent variable which is ICT Integration. The relevance of a 38.7 %R square in regression analysis indicates the proportion of the variance in the dependent variable that can be explained by the independent variables. Moreso the difference between the R square (0.387) and Adjusted R square (0.354) is small, this means there is no insignificant variable in the regression model. It can be infer that difference R square and adjusted R square indicate all variables in the model are significant. This means the regression model is a good model.

Table 4: ANOVA

Model	Sum of Square	df	Mean Square	F	Sig
Regression	9.253	3	3.084	11.981	.000
Residual	14.674	57	.257		
Total	23.928	60			

a. Dependent Variable: ICT Integration

b. Predictors: (Constant): Attitudes, Perception and Policies

The essence of ANOVA in linear regression lies in its ability to assess the significance of sample regression lines, providing a clearer insight into the overall nature of regression analysis Sungheetha, et al (2019). ANOVA is crucial in summarizing classical linear models by decomposing the sum of squares into components for each source of variation, with the F-test testing the hypothesis that a specific source of variation is zero (Hill, 2006). Table 4 presented result of ANOVA of dependent variable and independent variable (the analysis over variance explains how the independents variable jointly affect the dependent variable). As the p-value (sig) of the ANOVA is 0.000 which is less than 5% level of significance the null hypothesis is rejected which means that all the predictor variables (Attitudes, Perception and Policies) jointly predict the dependents variables, what this means is that Teachers Attitudes (TA), Teachers Perception (TP) and Existing Policies (EP) all predict teacher ICT integration into their teaching and learning.

Table 5: Regression Coefficient

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	.662	.576		1.148	.000		
Attitudes	.600	.152	.487	3.936	.000	.703	1.422

a. Dependent Variable: ICT Integration

b. Predictors: (Constant): Attitudes, Perception and Policies

Table 5 presented regression equation, coefficients and collinearity statistics using stepwise regression analysis technique. Stepwise regression analysis is a statistical technique used to iteratively design a regression model by selecting the most influential variables from a pool of independent variables, ultimately reducing the dimensionality of the data (Manishankar, et al, 2021). This method involves trying different regression models, such as simple regression, multiple regression, and stepwise multiple regression, to identify the variables that have a significant impact on the dependent variable (Ahlgren, & Walberg, 2017). The process includes accessing a set of data specific to a business environment, generating a correlation table to rank variables based on their correlation with the dependent variable, and displaying the results (Torgerson et al, 2018).

As the p-value (sig) of the independent variable of teacher attitudes (TA) on ICT integration in Ho municipality is 0.001 which is less than 5% level of significance the null hypothesis is rejected that which means that teacher attitudes (TP) will predict their ICT integration into teaching and learning. The other independent variables Teachers Perception (p-value=.136) and Existing Policies (p-value=.489) were deemed insignificant to the regression model after the stepwise statistical techniques was used to for the regression model. The conclusion drawn was that it is only teacher attitudes that has significant effect on their ICT integration.

From table 5 regression equation was formed considering unstandardized coefficients is: ICT Integration = 0.662 +0.600 (Teacher Attitudes) + 0.152 (Teacher Perception) + 040 (Existing Policies). Unstandardized coefficients are utilized in regression equations to represent the actual impact of predictor variables on the outcome without adjusting for the scale of measurement, making them particularly useful when the original units of the variables are essential for interpretation (Gu, & Cheung, 2023). While standardized coefficients facilitate comparisons across studies with different units of measure, unstandardized coefficients provide a direct understanding of how a one-unit change in a predictor variable affects the outcome variable in its original scale. Additionally, when dealing with risk factors in epidemiologic research, unstandardized coefficients can help compare variables measured in different units and assess the effects of risk factors across diverse populations, enhancing the interpretability and comparability of results (Landis, 2014). The constant of regression model was 2.119. This indicates that even if teachers ICT integration is held at constant their 6.0 % (Teacher Attitudes), 15.2% (Teacher Perception) and 4.0% (Existing Policies). This means that as teachers ICT integration improves their attitudes also improves by 6.0%, their Perception also increases by 15.2% and Existing Policies for ICT integration improves by 4.0%

Collinearity statistics for the independents variables using Variance Inflation factor (VIF) and tolerance. The VIF for all the independent variable was below 5.0 and tolerance values for the independent's variables are more than 0.2 which implies that there is no multicollinearity among the independent variables. According to field (2009) VIF more than 5 means there is a multicollinearity however the result in table 4 indicates VIF is less than 5. When there is no multicollinearity among variables in regression analysis, it means that the independent variables are not highly correlated with each other. In other words, the effect of each independent variable can be measured independently without being influenced by the other variables (Singh, 2023). This is important because multicollinearity can introduce errors into the regression model and affect the estimates of the regression coefficients (Ellsworth, 2023).

On teachers perception On ICT Integration Adu and Zondo (2023) findings indicated that teachers perceived ICT integration positively impacting Economics teaching, but faced challenges due to lack of ICT skills and attachment to traditional methods. Similarly, Akram, et al. (2022) findings indicated that teachers had positive perceptions of technology integration, believing it enhanced instructional practices, made learning interactive, and kept learners motivated. Also Tayaban, (2022) study found that ICT integration was perceived as beneficial by teachers and students, enhancing teaching quality, improving learning materials, and fostering creativity and imagination among students and also Maja (2023) it was found that teachers are willing to use technology in teaching EFAL, appreciating its productivity and suggesting the need for additional in-service training. However Ngao, Sang, and Kihwele (2022) maintained that some educators lack understanding of the rationale behind using technology in teaching, facing barriers like equipment challenges and time constraints.

On teachers attitudes Aburayash (2022) findings revealed that teachers' experience in teaching, computer competencies, and ICT training were strong predictors of their attitudes towards ICT integration, emphasizing the importance of teacher training in acquiring and utilizing ICT skills in education. Kao, et al. (2020) posited that improving teachers' learning attitudes and cultivating their self-efficacy can enhance their intention to integrate technology into teaching, ultimately strengthening teaching effectiveness through web-based technologies and Dukić, et al. (2020) Teachers showed awareness of ICT importance but expressed dissatisfaction with professional development opportunities. Teachers were willing to participate in curriculum development, acquire new competencies, and focus on student learning.

On existing policies on ICT integration, Silva and Sobral (2017) maintained that policies aim at technological development, economic growth, and endorse the discourse of globalization. As Spain aligns its policies with the European framework, receiving support and benefits from the EU, while Brazil and Spain both aim to integrate into the information society through educational policies. Zeng (2022) China's policy for ICT integration in education prioritizes promoting equity and quality over students' competency and performance, distinguishing it from Western approaches. Ahuja (2016) asserted that Ethical, legal, and social aspects of technology use must be considered in ICT-oriented curricula. Shift from teacher-centered to student-centered learning is observed with ICT inclusion in schools. According to Natia and Al-hassan (2015) the Government of Ghana has implemented policies like the ICT in Education Policy and Basic School Computerization policy to introduce ICT tools and e-learning into the education system.

Teachers' attitudes towards ICT improve by 6.0% as their incorporation of ICT improves. This is consistent with research that shows that providing training and support in the use of information and communication technology (ICT) can have a positive impact on teachers' attitudes.

With enhanced ICT integration, teachers' perceptions improve by 15.2%. According to the aforesaid research, the notable rise in numbers is a result of positive perceptions regarding the advantages of ICT in education. As ICT integration improves, the impact of existing policies improves by 4.0%. These findings indicate that effectively implementing ICT policies and integration methods can result in improved support and infrastructure, which can help address the practical difficulties experienced by instructors.

5.0 Conclusion

i. Teacher attitudes are the most significant predictor of ICT integration in basic schools within the Ho Municipality.
ii. While teachers generally have positive perceptions of ICT integration, there is a clear need for more regular training sessions to support this integration.
iii. Existing policies and teacher perceptions, although important, do not significantly predict ICT integration when considered individually.
iv. This study the need to focus on improving teacher attitudes and providing sufficient training to enhance ICT integration in education.

6.0 Recommendations

i. GES and Ministry of Education should review and strengthen existing ICT integration policies to ensure they provide adequate support and infrastructure to facilitate effective ICT use in education.
ii. Initiatives aimed at fostering positive attitudes towards ICT among teachers should be continued and expanded, as attitudes have been shown to be a significant predictor of successful ICT integration.
iii. Regular assessment of ICT integration programs and policies should be conducted to identify gaps and areas for improvement, ensuring that the programs meet the needs of teachers and students.
iv. Tailored support and resources should be provided to address the specific needs of teachers, considering factors such as their experience, existing ICT competencies, and access to resources.

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