PATH ANALYSIS OF SENIOR TEACHERS' ICT ADOPTION IN TEACHING AS INFLUENCED BY THEIR ICT SKILLS, PERCEPTION AND MOTIVATION

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ABSTRACT

This study was conducted to find out the interrelationships of the factors such as ICT skills, perception, and motivation and their influence on senior teachers' ICT adoption in teaching. This study included 402 senior teachers from the locality of Lebak and Kalamansig, province of Sultan Kudarat for the S.Y. 2022 – 2023. This study employed a path analysis method using quantitative approach. The data gathering tool contained an adapted questionnaire coming from the different authors. Mean, standard deviation, Pearson product moment correlation, multiple regression analysis and structural equation modeling were used in statistical tool. The result of the study showed that the level of senior teachers' ICT adoption in teaching, ICT skills, perception, and motivation are high. Furthermore, the three independent variables (ICT skills, perception, and motivation) had a positive significant relationship with the dependent variable (ICT adoption in teaching). Moreover, the three independent variables were significant predictors of the dependent variable which implies that ICT skills, perception, and motivation is significant for senior teachers to alleviate their integration of ICT in teaching. The best fit model is hypothesized model 5. The model shows that ICT skills is a factor that explains the relationship of perception and motivation on senior teachers' ICT adoption in teaching.

Keywords: *Motivation, Perception, ICT skills, ICT adoption, path analysis, Sultan Kudarat, Philippines*

INTRODUCTION

The introduction of modern methods for imparting education has significantly altered how people around the world view teaching and education. ICT in education has forced many schools to become acquainted to smart technology in this technological age. Computers, the internet, and multimedia are all used as communication tools in this classroom software. By increasing learning effectiveness, ICT use in education brings value to both teaching and learning. It gave learning a new depth that wasn't before present. Students discovered learning in a technology-enhanced environment to be more stimulating and engaging than in a typical classroom environment with the introduction of ICT in schools (Henderson, 2020).

The adoption of ICT in education has a lot of benefits. ICT can play various roles in learning and teaching processes. According to Padmanabhan (2020), through technology, pupils can pick up practical life skills. Teachers can also benefit greatly from it. If they are delivering knowledge with greater technology breakthroughs, they can explain the material more plainly.

Technology and education have the potential to improve teacher-student connections. Students learn subjects more efficiently when teachers successfully integrate technology into those disciplines. It makes studying and teaching more enjoyable and meaningful. The general impression is that integrating technology in learning and teaching is very valuable asset in the process of learning. Hence, it is vital to adopt ICT in education.

Teachers may demonstrate familiarity with technology, but that does not indicate that they are prepared to use technology in the everyday delivery of their lessons (Francom, 2020; Kimmons & Hall, 2016). Bhat and Bashir's (2018) survey of university instructors in India demonstrates that teachers' perceptions of the pedagogical value of ICT are significantly influenced by their ages. Similar to this, Guillén-Gámez & Mayorga-Fernández (2020) found that age was a significant variable and a predictor of the general attitude toward ICT use in their investigation of Spanish higher education teachers.

Aimable (2019) evaluated the use of ICT by teachers in a sample of secondary schools in the Gasabo District of Rwanda and came to the conclusion that performance expectations were necessary for teachers to adopt ICT in order to complete class or school-related tasks more quickly and increase teacher productivity. Since ICT facilities are available to make work much easier and are also relatively simple to understand, the teachers perceived ICT adoption as something that did not take a lot of effort.

Rana & Rana (2020) conducted a study to examine the information and communication technology (ICT) integration in teaching and learning activities in higher education in Nepal. The study indicated that one of the main initial challenges to successfully integrating ICT in planning and teaching activities in universities was the absence of a clear educational strategy in ICT, a strategic document, and an institutional plan. The projected effective use of the existing digital technologies has been hampered by the inadequate ICT infrastructure and teachers' inadequate ICT knowledge and skills. To effectively employ the new technology and transition conventional teacher education to the contemporary system of teacher preparation, the majority of old generation instructors in the Faculty of Education, who have inadequate ICT knowledge and skills, needed advanced professional development training.

There were many studies about the teachers’ adoption of ICT in teaching and it was found that ICT really affects the teaching-learning process. Some of the studies were done in different countries namely the Rwanda (Aimable, 2019) and Nepal (Rana and Rana, 2020). However, none of the above studies have been done in Sultan Kudarat specifically in the municipality of Lebak and Kalamansig; hence there is a contextual gap that this study intended to cover. Moreover, studies that have been made about the ICT adoption in teaching has focussed generally on teachers of all ages. Thus, this study focussed on senior teachers who are seen to be more reluctant on adopting ICT in their teaching.

This study addressed a gap in the local environment especially in the municipality of Lebak and Kalamansig, province of Sultan Kudarat, as there have been no studies exploring the influence of senior teachers’ ICT skill, perception and motivation in adopting ICT in their teaching. The senior teachers of Lebak and Kalamansig will mainly benefit in this study since they are the focus of the research. It will make it easier for senior instructors to be empowered to take a more

active part in integrating ICT in the classroom. Students' academic performance will consequently improve if senior teachers use more ICT in their instruction. As what Jadhav et al. (2022) stated, students learn more effectively with the use of ICT as lesson designs are more engaging and interesting. Educationists and other stakeholders will greatly benefit from the study's addition to the body of literature on ICT adoption once this contextual gap has been filled.

FRAMEWORK

This study is anchored on Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh, Morris, Davis and Davis (2003). The UTAUT identifies four fundamental dimensions as the primary influences on behavioral intention and, ultimately, behavior: performance expectancy, effort expectancy, social influence, and enabling conditions. According to Venkatesh et al. (2003), these constructs are in turn affected by elements including gender, age, experience, and voluntariness of use. It is asserted that researchers and practitioners will be able to determine a person's desire to use a specific system by determining if each of these constructs exists in a "real world" scenario. This will allow the identification of the critical elements influencing acceptance in each particular situation. The Theory of Reasoned Action (TRA), the Technology Acceptance Model (TAM), the Motivational Model (MM), the Theory of Planned Behavior (TPB), a combined Theory of Planned Behavior/Technology Acceptance Model (C-TPBTAM), the Model of PC Utilization (MPCU), Innovation Diffusion Theory (IDT), and Social Cognitive Theory (SCT) were reviewed and integrated to create the theory.

One of the most well-known models for general technology adoption is the Unified Theory of adoption and Use of Technology (UTAUT) (Venkatesh et al., 2003). It seeks to further usage behavior and, like earlier acceptance models, to describe user intentions to utilize an information system (IS). This combined model was developed by Venkatesh et al. (2003) to provide a more thorough depiction of the acceptance process than was feasible with any earlier standalone models. Based on the conceptual and empirical commonalities across the eight models, a single model was developed. The UTAUT paradigm tries to comprehend how societal variances in culture impact how individuals use technology. The relationship between perceived usefulness, ease of use, and intention to use can be explicitly moderated by age, gender, and experience. For instance, the relationship between perceived usefulness and usage intention varies with age and gender, with a stronger relationship being seen in male and younger workers. Age and gender also have an impact on how easy something is to use, with female and older workers giving it more weight, according to Venkatesh et al. (2003). These effects also become less pronounced with increased experience (Venkatesh et al., 2003).

METHOD

Research design

The descriptive-correlational research design was used for this investigation. A descriptive research design was used to acquire data on the current status of the phenomena under inquiry (Shuttleworth, 2008). Additionally, because it was a fact-finding study, the researcher was able to examine the characteristics, behaviors, and experiences of the study participants (Calmorin,

2007). The kind and intensity of connections between two or more variables were also discovered using the correlational design (Creswell, 2003).

The focus of quantitative research is on facts, logic, and objectivity. It stresses the generation of various ideas on a research subject, in-depth, convergent reasoning, and static and numerical data. Due to its high reliability, research studies can usually be replicated or repeated. To collect numerical data, researchers utilize instruments like questionnaires or computer software. The research study can typically be replicated or repeated, the data is typically collected using organized research instruments, the results are typically based on bigger sample sizes that are representative of the population.

The correlational design, on the other hand, is a technique for describing and evaluating the strength of connection (or relationship) between two or more variables or sets of scores (Creswell, 2002). In order to investigate the relationship between the dependent and independent variables, correlational research employs surveys, data reduction and classification techniques, as well as analyses of the associations between variables. Furthermore, a correlational analysis reveals the relationship between two or more variables by figuring out whether a change in one variable would cause a change in another, according to Kalla (2011). Furthermore, according to Siegle (2015), correlational studies don't actually alter any of the variables; rather, they just look at the relationships between them. He added that correlations might vary in the degree or strength of the association and can have either a positive or negative orientation.

This study determined the levels of teachers' ICT adoption in teaching, ICT skills, perception and motivation. Moreover, the interrelationship of the exogenous and endogenous variables, and as well as the best fit model of teachers' ICT adoption in teaching was investigated.

Instruments

The researcher used an adapted questionnaire from Aimable (2019) for the teachers' ICT adoption in teaching with a Cronbach's alpha value of .75, Turel et.al. (2017) for ICT Skills (α=.83), Yang and Kwok (2017) for perception (α=.92) and Mahdum et al., (2019) for motivation (α =.76) which was modified to fit in to the study and subject to the validation of experts. The teachers' ICT adoption in teaching questionnaire included the following indicators; performance expectancy, effort expectancy, social influence and facilitating conditions. The ICT skills questionnaire included the following indicators; basic hardware operations, personal ICT usage and use of ICT for teaching. The perception questionnaire included the following indicators: perceived usefulness, perceived ease of use and attitude towards use of ICT. The motivation questionnaire included the following indicators: self-efficacy, educational value, impacts on teaching and trainings attended.

Statistical Tools

The following statistical tools were used in the study:

Mean and Standard Deviation was used to determine the levels of ICT skills, perception, motivation and senior teachers' ICT adoption in teaching.

Pearson Product Moment Correlation was utilized to determine the ICT skills, perception, motivation and senior teachers' ICT adoption in teaching. It was to find the significance of the relationship between the dependent and independent variable.

Multiple Regression Analysis was used to measure the influence of ICT skills, perception, motivation and senior teachers' ICT adoption in teaching**.**

To evaluate how the variables interacted, **structural equation modeling** was used. The CMIN/DF, Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), and P of Close Fit (PCLOSE) indices were computed to assess the models' goodness of fit.

RESULTS AND DISCUSSIONS

Level of ICT Adoption in Teaching vis-à-vis Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions.

ICT adoption in teaching has four indicators namely Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions.

Table 1. Level of Senior Teachers' ICT Adoption in Teaching vis-à-vis Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions.

Indicators	Mean	Std. Deviation	Interpretation
1.1 Performance Expectancy			
1. I would find ICT useful in my job.	4.62	0.520	Very High
2. If I use ICT, I will increase my chances of getting a salary raise.	4.18	0.730	High
3. ICT technology enables me to accomplish my tasks more quickly.	4.54	0.528	Very High
4. Using ICT increases my productivity (i.e. communication, processing school activities).	4.41	0.646	High
Category Mean	4.44	0.354	High
1.2 Effort Expectancy			
1. It would be easy for me to become skillful at using ICT.	3.92	0.892	High
2. Learning how to use ICT system does not require a lot of effort.	3.72	0.968	High
3. I would find ICT easy to use in school administration.	4.37	0.708	High
4. My interaction with the ICT system (i.e. Classroom software, projector) would be clear and understandable.	4.07	0.785	High
Category Mean	4.02	0.615	High
1.3 Social Influence			
1. My colleagues think that I should use ICT in my class and school related work.	4.44	0.642	High

2. My colleagues are frequently using ICT for classes and school related activities.	4.24	0.801	High
Category Mean	4.34	0.577	High
1.4 Facilitating Conditions			
1. The school has enough ICT resources including hardware and software for officials and teachers.	3.66	0.998	High
2. I have the knowledge to use ICT resources.	4.45	0.550	High
3. There is a technical team at school that provides assistance to teachers in the use of ICT.	4.01	0.923	High
Category Mean	**4.04**	**0.643**	**High**
Overall Mean	**4.21**	**0.437**	**High**

As shown in Table 1, all indicators of ICT Adoption in Teaching obtained a descriptive interpretation of High. Among the four indicators, Performance Expectancy got the highest category mean of 4.44 (SD=0.354), followed by Social Influence (mean= 4.34, SD=0.577), Facilitating Conditions (mean=4.04, SD=0.643), Effort Expectancy (mean= 4.02, SD=0.615).

ICT Adoption in Teaching garnered an overall mean of 4.21 or a descriptive interpretation of High, implying that the level senior teacher-respondents' ICT adoption in teaching is High. The finding agrees to the study of Hero (2020) that teachers concur that they are ready to incorporate ICT into their teaching techniques. The usage of ICT in the classroom demonstrates that teachers in the 21st century educational system are not intimidated by innovations and instructional trends. ICT integration in daily teaching appears to be a well-practiced skill among teachers.

Shah et al. (2020), who also employed the UTAUT Theory, found that all of the independent variables—performance expectancy, effort expectancy, social influence, and facilitating conditions—play a significant impact in the adoption of ICT. Additionally, through a behavioural intention mediator, all independent variables have a significant and favourable impact on the usage of ICT. As a result, it is acknowledged that behavioural intention is crucial to ICT adoption. If a person perceives that the use of ICT can be useful in carrying out different teaching activities, then he/she will use ICT to enhance his/her performance. Effort expectancy also impacts the behavioural intention of teachers in the adoption of ICT. Social influence and facilitating conditions also impact the intention of teachers to adopt ICTs.

1.1 Performance Expectancy

As shown in Table 1, the responses of the senior teachers in the indicator Performance Expectancy ranged from High (2 responses) to Very High (2 responses). Statement # 1 "*I would find ICT useful in my job"* merited the highest mean of 4.62 (SD=0.520). This is followed by Statement # 3 *"ICT technology enables me to accomplish my tasks more quickly"* mean=4.54, SD= 0.528); Statement # 4 *"Using ICT increases my productivity (i.e. communication, processing school activities)"* (mean=4.41, SD= 0.646), and Statement # 2 "*If I use ICT, I will increase my chances of getting a salary raise"* (mean= 4.18, SD= 0.730).

The category mean is 4.44(SD=0.354) with a description of High. This implies that senior teachers believe that integrating ICT in their teaching will help them enhance their job performance. The outcome is consistent with the findings of Graham et al. (2020) that the

performance expectancy construct significantly predicted teachers' propensity to adopt ICT. This shows that educators think ICT usage enhances classroom instruction.

Mohammed et al. (2018) also discovered that the best predictor of people's adoption of technology is performance expectancy. According to prior studies, a teacher will be more enthusiastic and willing to adopt and use technology if the instructor believes it would improve his or her performance (Proctor & Marks, 2013). According to the study of Cviko et al. (2012), performance expectancy has been widely used to understand instructors' behavioral intentions to adopt ICT.

Kim and Lee (2020) likewise came to the conclusion that Performance Expectancy was the most important indicator, suggesting that participants had grown to recognize the benefits of using ICTs and had begun to associate these benefits with their use. This suggests that decision-makers and practitioners are likely to concentrate on the value of ICTs, particularly on what may be obtained through their use. Therefore, it is crucial that the advantages and benefits are emphasized and illustrated to the teachers in the context of embracing and adopting ICT-based instruction.

1.2 Effort Expectancy

As shown in Table 1, all statements in the indicator Effort Expectancy gained a descriptive interpretation of High. Statement # 3 *"I would find ICT easy to use in school administration"* had the highest mean at 4.37 (SD=0.708), followed by Statement #4 *"My interaction with the ICT system (i.e. Classroom software, projector) would be clear and understandable"* (mean= 4.07, SD= 0.785); Statement # *1 "It would be easy for me to become skilful at using ICT"* (mean= 3.92, SD= 0.892), and Statement #2 *" Learning how to use ICT system does not require a lot of effort"* (mean= 3.72, SD= 0.968).

The category mean is 4.02 (SD= 0.615) which means that there is a High Level of Senior Teachers' Effort Expectancy. This implies that teachers see how simple it is to integrate ICT into their lessons, so they continue to integrate it in their class. The findings are supported by Kim and Lee's study (2020), which found that teachers' intentions to use ICT are positively impacted by effort expectations. It suggests that when ICTs are incredibly simple to use, teachers are eager to employ them, allowing them to devote more time to other projects and activities. Although the importance of Effort Expectancy decreases over the period of usage (Agarwal & Prasad, 1997), the findings emphasize that there is a key need to ensure ease of use across ICTs devices and systems, which is a particularly relevant concern when considering that teachers will vary in terms of their technical competence and experience with the ICTs.

The majority of people, according to Raman and Don (2013), think that using technology is a simple and painless process. The association of "effort expectancy" with the intent to use technology has been found in the literature as significant and positive as well as having a direct impact on intention (Khan et al., 2019; Teo & Milutinovic, 2015) and indicated that instructors recognize the use of technology to lessen their efforts which they put into their task. This way of thinking increases the desire to use ICT as a result.

1.3 Social Influence

All statements under the Social Influence garnered a descriptive interpretation of High as shown in Table 1. Statement #1 *"My colleagues think that I should use ICT in my class and school related work"* got the highest mean of 4.44 (SD=0.642). This is followed by Statement #2 "My colleagues are frequently using ICT for classes and school related activities" (mean= 4.24, SD=0.801).

The category mean is 4.34 (SD=0.577) with a descriptive interpretation of High. This implies that teachers believe that they should integrate ICT in their class because some people is thinking that they are using it. The social influence construct, according to Graham et al. (2020), positively predicted the instructors' intention to adopt ICT. According to other studies, the usage of ICT was judged necessary by the persons who were significant to the participating teachers, which is evidence of the substantial positive impact of social influence (Moran et al., 2010; Teo, 2011).

The adoption of ICT by teachers is also significantly influenced by social influence, which refers to how people are influenced by those around them (Shah et al., 2020). This outcome is consistent with earlier research that discovered comparable outcomes (Khan, Hameed, & Hamayun, 2019). The lecturers may persuade other lecturers to update their reaching methodology by utilizing ICTs in their classes. The findings support (Abbasi et al., 2015), who also discovered a strong mediating impact of behavioral goals.

Because a teacher's experience with ICTs could have an impact on their colleagues, students, and other people, it is crucial to make sure that teachers have a positive experience. The Asia-Pacific Ministerial Forum on ICT in Education 2017 firmly endorses this viewpoint, calling on Member States to create learning spaces and communities of practice to help teachers and exchange innovations (UNESCO, 2018).

1.4 Facilitating Conditions

As shown in Table 1, all of the statements under the Facilitating Conditions earned a descriptive interpretation of High. Statement #2 *"I have the knowledge to use ICT resources"* got the highest mean of 4. 45 (SD= 0.550), followed by Statement #3 "*There is a technical team at school that provides assistance to teachers in the use of ICT"* (mean= 4.01, SD= 0.923), and Statement #1 *"The school has enough ICT resources including hardware and software for officials and teachers"* (mean=3.66, SD=0.998).

The category mean is 4.04 (SD=0.643) with a descriptive interpretation of High. This implies that senior teachers believe that an organisational and technical infrastructure exists to support their adoption of ICT in teaching. They agree that they have access to enough resources and assistance and because of this, they tend to use ICT in their class. That is to say that availability of ICTs plays an important role in activating some set of behavioral intentions that makes teachers' ICT utilization pattern interesting (Davis, 1989), and that ICT availability develops confidence and belief towards behaviors capable of producing specific performances that could increase technology use (Ross and Willson, 2017).

ICT infrastructure has a positive link with teachers' ICT self-efficacy, which simply means that if a teacher has good ICT self-efficacy, his opinion of ICT infrastructure will be positive and high, even in the face of negativity and unpreparedness (Kundu et al., 2020).

A study conducted in Zambia by Chirwa and Mubita (2021) found that Geography instructors' decision to integrate ICT into their classes was purely based on the availability of ICT facilities. Again, the school administration played an important role in encouraging teachers and students to use ICT since the administration was held accountable in the school for maintaining and providing these ICT resources.

Table 2. Level of Senior Teachers' ICT Skills vis-à-vis Basic Hardware Operations, Personal ICT Usage, and Use of ICT for Teaching

Indicators	Mean	Std. Deviation	Interpretation
2.1 Basic Hardware Operations			
1. I can solve simple technical issues on my computer.	3.78	0.903	High
2. When I buy a new computer hardware or device, I can install it into my computer by myself.	3.58	0.848	High
3. My typing skills are good.	4.16	0.667	High
Category Mean	3.84	0.513	High
2.2 Personal ICT Usage			
1. I can resolve issues with Office software (Microsoft Office, Open Office etc.) without assistance.	3.47	0.937	Moderate
2. I use online instructional materials to figure out how to use software that I wish to learn.	3.58	0.770	High
3. I can design a simple web page.	3.42	0.907	Moderate
4. I can assist somebody planning to buy a new computer as a technical expert.	3.45	0.923	Moderate
5. I can perform basic picture/graphic editing.	3.61	0.906	High
Category Mean	3.51	0.621	High
2.3 Use of ICT for Teaching			
1. I can find animations related to my course and deploy them.	4.38	0.701	High
2. I can use presentations (PowerPoint) when delivering instruction in class.	4.36	0.618	High
3. I can find videos from Internet to support course content and have my students watch them.	4.32	0.687	High
4. I can create online personal BLOGs (i.e., blogger and wordpress).	3.99	0.847	
5. I can inform my students about computer ethics.	4.45	0.646	High
6. I can effectively use search engines.	4.42	0.706	High
7. I can use social networking services (i.e., Facebook, Twitter) for educational purposes.	4.64	0.566	Very High

8. I can share instructional materials that I find online (via e-mail, Dropbox, Google Drive, etc.) with my students	4.25	0.845	High
Category Mean	4.35	0.304	High
Overall Mean	3.98	0.387	High

ICT Skills has three indicators namely Basic Hardware Operations, Personal ICT Usage, and Use of ICT for Teaching. All indicators gained a descriptive interpretation of High as shown in Table 2. Use of ICT for Teaching merited a descriptive interpretation of High with a category mean of 4.35 (SD=0.304), followed by Basic Hardware Operations that earned a category mean of 3.84 (SD=0.513), and the indicator Personal ICT Usage with a category mean of 3.51 (SD=0.621).

ICT Skills obtained an overall mean of 3.98 (SD= 0.387) interpreted as High. This implies that the level of senior teachers' ICT Skills is High. The results support Perienen's (2020) study that found teachers regularly used technology. Many of them used their computer abilities for purposes other than their own personal usage, such as word processing lesson plans and exam papers, keeping track of students' grades, and searching the web for cutting-edge teaching techniques. These computer-based activities are frequently considered examples of ICT usage, but technology integration also refers to the use of appropriate computing tools, such as PCs, laptops, tablets, OHP, and the like, to describe, debate, and illustrate mathematical topics.

Gigler (2011), a researcher, asserts that having IT abilities is a prerequisite for using ICT. Additionally, according to the researchers Solar et al., (2013), those who are familiar with IT will use ICT. In his study, researcher Haydn (2014) asserted that the adoption of ICTs is significantly influenced by IT capabilities. Furthermore, IT competencies have a large and advantageous impact on ICT, according to Twining et al., (2013). For instance, a person who is capable of using IT will want to use ICT.

2.1 Basic Hardware Operations

All statements from the indicator Basic Hardware Operations obtained a descriptive interpretation of High. Statement # 3 *"My typing skills are good"* gained the highest mean of 4.16 (SD=0.667), followed by Statement #1 *"I can solve simple technical issues on my computer"* with a mean of 3.78 (SD=0.903), and Statement #2 *"When I buy a new computer hardware or device, I can install it into my computer by myself"* with a mean of 3.58 (SD=0.848).

The category mean is 3.84 (SD=0.513) with a descriptive interpretation of High. This implies that senior teachers have a high level of Basic Hardware Skills. Malhotra (2014) came to the conclusion that practically all of the teacher respondents were utilizing technology in some capacity during the teaching and learning process. Knowledge of how to use technology was discovered to be the most significant element influencing their decision to use technology. Teachers having a solid background in technology have better technological integration abilities (Hsu, 2010).

2.2 Personal ICT Usage

Responses of senior teachers in the statements under Personal ICT Usage ranged from Moderate (3 responses) to High (2 responses) as shown in Table 2. Statement #5 *"I can perform basic picture/graphic editing"* merited the highest mean of 3.61 (SD=0.906), followed by Statement #2 *"I use online instructional materials to figure out how to use software that I wish to learn"* (mean=3.58, SD=0.770); Statement #1 *" I can resolve issues with Office software (Microsoft Office, Open Office etc.) without assistance"* (mean=3.47, SD= 0.937); Statement #*4 ''I can assist somebody planning to buy a new computer as a technical expert"* (mean= 3.45, SD= 0.923), and Statement #3 *"I can design a simple web page"* (mean=3.42, SD=0.907).

The category mean is 3.51 (SD=0.621) with a descriptive interpretation of High. This implies that senior teachers' level of Personal ICT Usage is High. They were personally inclined with the ICT and use it as resources in teaching their students. In order to successfully integrate ICT into their instructional practices, teachers must possess both professional and technological abilities, which heavily depend on their sense of self-efficacy. The study's evaluated articles support the idea that using ICT in teaching and learning practices increases instructors' proficiency in a number of areas (Akram et.al, 2022). Watson and Rockinson-Szapkiw (2021) have noted that technology-integrated educational methods strengthen teachers' pedagogical and technological skills in addition to improving the quality of instruction.

2.3 Use of ICT for Teaching

In terms of the ICT Skills indicator of Use of ICT for Teaching, responses ranged from High (7 responses) to Very High (1 response). Among all the statements, Statement #7 *"I can use social networking services (i.e., Facebook, Twitter) for educational purposes"* got the highest mean of 4.64 (SD= 0.566), followed by Statement #5 *"I can inform my students about computer ethics"* (mean=4.45, SD=0.646); Statement #6 *"I can effectively use search engines"* (mean=4.42, SD= 0.706); Statement #1 *"I can find animations related to my course and deploy them"* (mean=4.38, SD=0.701); Statement #2 *"I can use presentations (PowerPoint) when delivering instruction in class"* (mean= 4.36, SD=0.618); Statement #3 *"I can find videos from Internet to support course content and have my students watch them"* (mean= 4.32, SD=0.687); Statement #8 *"I can share instructional materials that I find online (via e-mail, Dropbox, Google Drive, etc.) with my students"* (mean=4.25, SD=0.845), and Statement #4 *"I can create online personal BLOGs (i.e., blogger and wordpress)"* (mean=3.99, SD=0.847).

The category mean is 4.35 (SD=0.304) with a descriptive interpretation of High. This implies that senior teachers have a high level of Use of ICT for Teaching because they believe that it will be useful in teaching their students. Buabeng-Andoh (2012) looked into how teachers felt about using ICT for both teaching and learning, as well as how well-equipped they thought they were to do so. The research's findings show that a larger proportion of participants firmly thought that ICT may encourage students' participation in the educational process, ease evaluation, and facilitate student engagement. Additionally, it may be inferred that using ICT in the classroom helps students understand what they have been taught, makes teaching more real-world, and improves student engagement (Mensah and Osman, 2022).

Table 3. Level of Senior Teachers' Perception vis-à-vis Ease of, Perceived Usefulness, and Attitude Towards Use of ICT

Indicators	Mean	Std. Deviation	Interpretation
3.1 Perceived Usefulness			
1. Using ICT improve my learning.	4.59	0.555	Very High
2. Using ICT will enhance my effectiveness.	4.52	0.515	Very High
3. Using ICT will enhance my productivity.	4.46	0.595	High
4. I find ICT a useful tool in my learning.	4.54	0.523	Very High
Category Mean	4.53	0.263	Very High
3.2 Ease of Access			
1. I find ICT easy to use.	4.39	0.709	High
2. My interaction with ICT is clear and understandable.	4.19	0.859	High
3. I find it easy to get ICT to do what I want them to do.	4.27	0.695	High
4. Interacting with ICT does not require a lot of mental effort.	3.92	1.071	High
Category Mean	4.19	0.540	High
3.3 Attitude Towards Use of ICT			
1. ICT make learning more interesting.	4.49	0.534	High
2. I look forward to lessons that require me to use ICT.	4.16	0.802	High
3. Working with ICT is fun.	4.35	0.688	High
4. I like the idea of using ICT.	4.45	0.736	High
Category Mean	**4.36**	**0.338**	**High**
Overall Mean	**4.36**	**0.218**	**High**

The responses from the three indicators of Perception ranged from High (2 responses) to Very High (1 response) as shown in Table 3. Perceived Usefulness is the indicator that gained the highest category mean of 4.53 (SD=0.263), followed by Attitude Towards Use of ICT (mean=4.36, SD=0.338), and Ease of Access (mean= 4.19, SD=0.540),

Perception obtained an overall mean of 4.36 (SD=0.218). This implies that the level of senior teachers' perception about adopting ICT in their teaching is High. The results support the study of Mwapwele, et al. (2019), which found that the majority of instructors had a positive attitude toward using ICT resources for teaching and learning. Teachers believed they could help students because they felt in charge of the ICTs. Additionally, the teachers believed that using ICTs effectively for teaching and learning, and they were confident in getting the necessary technical help from their coworkers and the larger community. These results support the claims made by Haßler et al. (2016) as well as Mouza and Barrett-Greenly (2015), who contend that teachers' optimism is a result of both the advantages of utilizing ICTs for instruction and the digital skills they acquire as a result.

Ngao et al., (2022) agreed with the findings because in their conclusion, individuals who have positive attitudes of integrating technology aim to learn about or utilize it in their teaching. The intention to learn through technology was less evident among individuals who had negative

impressions. These results are consistent with those of Darling-Hammond (2006), who discovered that instructors with positive perceptions utilized technology to a high degree and improved their critical thinking, problem-solving, and peer cooperation skills.

3.1 Perceived Usefulness

As shown in Table 3, responses of senior teachers to the statements under the Perceived usefulness ranged from High (1 statement) to Very High (3 statements). Statement #1 *"Using ICT improve my learning"* gained the highest mean of 4.59 (SD=0.555), followed by Statement #4 "*I find ICT a useful tool in my learning"* (mean=4.54, SD= 0.523); Statement #2 *"Using ICT will enhance my effectiveness"* (mean=4.52, SD=0.515), and Statement #3 *"Using ICT will enhance my productivity"* (mean=4.46, SD=0.595).

The category mean is 4.53 (SD=0.263) with a descriptive interpretation of Very High. This implies that senior teachers adopt ICT in the classroom because they believe that it will benefit them, their teaching, and the learning of their students. They believed that the depths of collaboration, creation, and communication that these tools enabled for students allowed for more meaningful learning experiences for their students. Similar findings were made with teachers in tech-rich classrooms by Badia et al. (2013). The majority of educators said that their pupils used contemporary digital tools to collaborate and interact with one another both in and outside of class. Teachers said that in general, pupils preferred using these technologies and were quick to grasp how to use them in the classroom (Fugere, 2020).

Teachers generally believed that using ICTs improved their ability to teach (Fahm et al. 2022). This is similar to the finding by Tella et al. (2007) that most teachers perceived ICT as very useful and made teaching and learning easier which led to their recommendation that "professional development policies should support ICT-related teaching models" and that "emphasis should be placed on the pedagogy underlying the use of ICTs for teaching and learning".

Perception can also be impacted by a teacher's level of technological proficiency. According to Badia et al. (2013), a teacher's usage of a contemporary educational tool in a technologically advanced environment is most influenced by how useful the tool is viewed to be. In contrast, instructors may view integrating technology as a stressful and challenging process when there is a dearth of technological expertise in their culture.

Researchers O'Neal et al. (2017) used interviews with primary school teachers to gather data and found that, despite having access to technology, teachers were still frustrated by the lack of training opportunities. These theories about knowledge and experience are consistent with the findings that teachers' attitudes and opinions about technology generally correspond to their usage (Ertmer, et al. 2012). In other words, a teacher is more likely to use a tool in the classroom if they believe it to be valuable.

3.2 Ease of Access

As shown in Table 3, all statements under the Ease of Access has a descriptive interpretation of High. Statement #1 *"I find ICT easy to use"* obtained a highest mean of 4.39

(SD=0.709), followed by Statement #3 *"I find it easy to get ICT to do what I want them to do"* (mean=4.27, SD=0.695); Statement #2 *"My interaction with ICT is clear and understandable"* (mean=4.19, SD=0.859), and Statement #4 *"Interacting with ICT does not require a lot of mental effort"* (mean=3.92, SD=1.071).

The category mean is 4.19 (SD= 0.540) with a descriptive interpretation of High. This implies that senior teachers accept and make use of ICT in teaching because they believe that it is simpler to use and it makes their work easier. This outcome backs up Mahdum et al.(2019) that teachers said that using an ICT facility would be less work, easy to learn how to use, and would be simple to become skilled at using. This suggests that teachers have a good attitude toward using ICT resources, which makes it simple for them to incorporate it into their classroom lessons. This might be crucial when presenting the pupils with crucial ideas via graphical depictions or video examples.

According to the aforementioned findings, ICT has proven to be simple to use, and as a result teachers are quite inclined to use the technology. Al Mulhim (2014) and Alhawiti (2013) have previously noted that a lack of time, training, and access to technology made using ICT in teaching considerably more challenging. In other words, using a computer to prepare lessons doesn't take much work, but using advanced ICT in a classroom does require some work and requires training.

3.3 Attitude Towards Use of ICT

As shown in Table 3, all statements in the indicator Attitude Toward Use of ICT obtained a descriptive interpretation of High. Statement #*1 " ICT make learning more interesting"* gained the highest mean of 4.49 (SD=0.534), followed by Statement #*4 " I like the idea of using ICT"* (mean= 4.45, SD=0.736); Statement #*3 " Working with ICT is fun"* (mean= 4.35, SD= 0.688), and Statement #2 *" I look forward to lessons that require me to use ICT"* (mean= 4.16, SD=0.802).

The category mean is 4.36(SD=0.338) with a descriptive interpretation of High. This implies that senior teachers has a positive attitude in adopting ICT in teaching. The outcome is consistent with Mensah and Osman's study from 2022, which found that instructors had a favorable opinion of the use of ICT in social studies instruction. These opinions include the ideas that integrating ICT into social studies teaching and learning makes classes more interesting, diversified, and well-presented as well as enabling the instructor to efficiently manage class time.

Furthermore, Hong (2016) conducted interviews with 23 social studies instructors in Colorado to get their perspectives on ICT integration in the classroom. The majority of instructors, the study's findings show, had positive attitudes toward ICT as a teaching tool and a willingness to learn more about it in order to use it effectively in the classroom.

According to a study by Albirini (2004), instructors had favorable opinions toward the use of ICT in the classroom. Computer traits, cultural beliefs, and computer proficiency all predicted teachers' opinions. The findings show how teachers' perceptions of technology, their interactions with it, and the cultural context of its introduction into schools all play a role in influencing their attitudes about technology and its subsequent adoption in educational practice.

Indicators	Mean	Std. Deviation	Interpretation
4.1 Self-Efficacy			
1. I believe in my ability and knowledge to use ICT in learning activities.	4.15	0.691	High
2. I like to use ICT in my learning activities because I am certain that I can get good results and benefits.	4.25	0.617	High
3. I am able to search, evaluate and choose ICT devices that are appropriate to support my learning activities.	4.18	0.658	High
4. I have certain strategies to solve problems and obstacles with the use of ICT.	4.23	0.845	High
5. I am sure that I can continue to integrate ICT in my learning activities in the future.	4.21	0.802	High
Category Mean	4.20	0.384	High
4.2 Educational Value			
1. The use of ICT can facilitate student-centered learning.	4.64	0.543	Very High
2. The use of ICT can prepare students for their future careers.	4.55	0.527	Very High
3. The use of ICT provides an opportunity to improve the quality of my teaching.	4.61	0.555	Very High
4. The use of ICT can improve students' understanding.	4.63	0.502	Very High
5. The use of ICT provides an opportunity to follow the latest information.	4.50	0.613	Very High
6. The use of ICTs can provide opportunities to study new things.	4.64	0.529	Very High
Category Mean	4.60	0.249	Very High
4.3 Impacts on Teaching			
1. The use of ICT can contribute to making students work more actively and problem-based.	4.53	0.644	Very High
2. The use of ICT can inspire and make students able to express themselves.	4.36	0.565	High
3. The use of ICT can improve the quality of student learning.	4.36	0.525	High
4. The use of ICT can make learning more meaningful.	4.40	0.510	High
5. The use of ICT can develop teacher's pedagogical abilities.	4.39	0.494	High
6. The use of ICT can increase self- confidence.	4.29	0.596	High
Category Mean	4.39	0.231	High
4.4 Trainings Attended			
1. The training held by the school made me motivated to use ICT in learning activities.	4.35	0.590	High
2. I need more trainings on how to use ICT in learning activities.	4.69	0.493	Very High

3. All teachers and prospective teachers must attend trainings on the use of ICT.	4.66	0.501	Very High
Category Mean	4.57	0.332	Very High
Overall Mean	4.44	0.200	High

Table 4. Level of Senior Teachers' Motivation vis-à-vis Self-Efficacy, Educational Value, Impacts on Teaching, and Trainings Attended

The responses from the four indicators of Motivation ranged from High (2 responses) to Very High (2 responses) as shown in Table 4. Educational Value is the indicator that gained the highest category mean of 4.60 (SD= 0.249), followed by Trainings Attended (mean=4.57, SD=0.332); Impacts on Teaching (mean=4. 39, SD=0.231) and Self-Efficacy (mean= 4.20, SD=0.384),

Motivation obtained an overall mean of 4.44 (SD=0.200). This implies that the level of senior teachers' motivation in using ICT in teaching is High. Teachers tend to integrate ICT in teaching when they are motivated to do it. Based on Mahdum et.al (2019), teachers prefer to employ ICT in their classrooms because they can see positive outcomes and advantages. Additionally, the teachers claim that they are able to search for, assess, and select ICT tools that are appropriate to complement their instruction thanks to ICT. Although there are some challenges that teachers must overcome when using ICT, they are confident that they can keep integrating ICT into their lessons. According to Catarina (2012), teachers' self-efficacy in using ICT in the classroom would directly affect how they use the technology. These encouraging comments could indicate that teachers are highly motivated to use ICT in their classes.

Motivation and, in particular, the current perceived utility-value of educational technologies, which heavily depends on the specific context, play a crucial role in the integration of technology in a qualitatively high way. From the standpoint of teacher education, educators must be conscious of the impact of contextual factors like motivation as well as the extent and quality of their technological integration (Backfisch et.al, 2021).

4.1 Self-Efficacy

All statements under the indicator of Self- Efficacy merited a descriptive interpretation of High as shown in Table 4. Statement #2 *"I like to use ICT in my learning activities because I am certain that I can get good results and benefits"* got the highest mean of 4.25(SD= 0.617), followed by Statement #4 "*I have certain strategies to solve problems and obstacles with the use of ICT"* (mean=4.23, SD=0.845); Statement #5 *"I am sure that I can continue to integrate ICT in my learning activities in the future"* (mean= 4.21, SD= 0.802); Statement # 3 *" I am able to search, evaluate and choose ICT devices that are appropriate to support my learning activities"* (mean=4.18 , SD=0.658); and Statement #1 *"I believe in my ability and knowledge to use ICT in learning activities"* (mean=4.15, SD=0.691).

The category mean is 4.20 (SD=0.384) with a descriptive interpretation of High. This implies that senior teachers have confidence in their skills and knowledge in integrating ICT into classroom activities. That outcome reflects the conclusions of earlier studies that highlight the

significance of teachers' self-efficacy with computers or their degree of ICT confidence (e.g., Balanskat et al., 2007; Becta, 2004), (e.g., Buabeng-Andoh, 2012). According to Wastiau et al. (2013), teachers who are confident in their digital literacy and optimistic about the benefits of ICT for teaching plan ICT-based activities with their students more frequently. The results also support Player-Koro's (2012) assertion that teachers' attitudes toward technology have less of an impact on their use of ICT in the classroom than do their own levels of ICT self-efficacy.

Teachers should be introduced to technology gradually, giving them opportunities to experiment and test out new ideas. Self-efficacy can be created through positive personal and vicarious experiences with technology (Ertmer, & OttenbreitLeftwich, 2010).

According to the self-efficacy perspective, a teacher's ability to successfully acquire students' learning outcomes is heavily dependent on their ability to integrate ICT into their classrooms (Guoyan et al., 2021). Given the significance of teachers' self-efficacy in an effective ICT integration, various studies have recommended creating training programs to help teachers hone their pedagogical and technological abilities.

4.2 Educational Value

As shown in Table 4, all statements in the indicator Educational Value is interpreted as Very High. Statement #*1 "The use of ICT can facilitate student-centered learning"* obtained the highest mean of 4.64 (SD= 0.543) and Statement # 6 *"The use of ICTs can provide opportunities to study new things"* (mean=4.64, SD=0.529); Statement #4 *"The use of ICT can improve students' understanding"* (mean= 4.63, SD= 0.502); Statement #3 *"The use of ICT provides an opportunity to improve the quality of my teaching"* (mean= 4.61, SD=0.555); Statement #2 *"The use of ICT can prepare students for their future careers"* (mean=4.55, SD=0.527), and Statement #5 *"The use of ICT provides an opportunity to follow the latest information"* (mean=4.50, SD=0.613).

The category mean is 4.60 (SD= 0.249) with a descriptive interpretation of Very High. This implies that senior teachers are utilizing ICT in their class because they believe in its educational value. They knew that it will help students to learn faster and more enjoyable. According to Fahm et al. (2022), using ICT gadgets among students will help them learn fundamental skills. According to Zaranis et al. (2013), ICT gadgets are also seen as transformative instruments that, when utilized properly, can encourage the move to a learner-centered environment, hence enhancing engagement and knowledge retention, and that also support socio-economic development (Ayo and Mbarika, 2017). These two studies claim that when ICT devices are used in courses, students are more likely to be engaged since technology offers a variety of ways to make learning more interesting and fun while also delivering the same material in various ways.

4.3 Impacts on Teaching

As shown in Table 4, responses under the indicator Impacts on Teaching ranged from High (5 responses) to Very High (1 response). Statement #1 *"The use of ICT can contribute to making students work more actively and problem-based"* (mean=4.53 SD=0.644) was interpreted as Very High. Statement # 4 *"The use of ICT can make learning more meaningful"* got the highest

mean under the High (mean= 4.40 SD= 0.510), followed by Statement #*5 "The use of ICT can develop teacher's pedagogical abilities"* (mean=4.39, SD=0.494); Statement #2 *"The use of ICT can inspire and make students able to express themselves"* (mean=4.36, SD=0.565); Statement #3 *"The use of ICT can improve the quality of student learning"* (mean=4.36, SD=0.525), and Statement #*6 " The use of ICT can increase self-confidence"* (mean=4.29, SD=0.596).

The category mean is 4.39 (SD= 0.231) with a descriptive interpretation of High. This implies that senior teachers believe that ICT has a great impact on teaching that's why they are adopting it in their class. The outcome matches the findings of Mahdum et.al (2019) that teachers concur that integrating ICT into instruction has a favorable effect. ICT use can encourage students to engage in more active, problem-based learning and increase the significance of classroom activities. Teachers are motivated in part because using ICT can help them improve their pedagogical skills and boost their self-esteem.

It is well established that ICTs increase student engagement in the learning process by exposing them to a wide choice of subjects, resources, and tools. Additionally, it helps teachers improve their performances. According to the study by Cox et al. (1999), ICTs improved material presentation, are fun to use in the classroom, made the lesson more engaging for students, and reduced the teachers' difficulty in maintaining control of the class.

4.4 Trainings Attended

As shown in Table 4, responses in the indicator Trainings Attended ranged from High (1 response) to Very High (2 responses). Statement #2 *"I need more trainings on how to use ICT in learning activities"* got the highest mean of 4.69 (SD=0.493), followed by Statement #3 *"All teachers and prospective teachers must attend trainings on the use of ICT"* (mean= 4.66, SD=0.501), and Statement #1 *"The training held by the school made me motivated to use ICT in learning activities"* (mean= 4.35, SD=0.590).

The category mean is 4.57 (SD=0.332) with a descriptive interpretation of Very HIgh. This implies that teachers are more likely to use ICT when they were provided with administrative support like trainings to enhance their skills in integrating ICT. This outcome is consistent with the research by Mwapwele et al (2019) who came to the conclusion that the majority of instructors believed they could use ICTs in creative ways. They had colleagues who were creative and with whom they could work in the effort to alter classroom interactions for students. They also believed in the technical support provided, believed they could help students use software for projects, and had these beliefs. Similar findings are provided by Kopcha (2012), who explains how teachers' creative methods to using ICTs for teaching and learning are influenced by technical and administrative support as well as the aid of colleagues.

The relationship between teachers' ICT literacy and ICT education and implementation is clear; teachers' ICT literacy is a by-product of training. The government should maintain its ICT policies and regulations by holding more frequent ICT seminars and workshops to raise teachers' ICT literacy levels. To address ICT issues and promote greater ICT integration in education, it would be beneficial for institutions and the government to provide ICT facilities with more operational training and stronger policy support (Hafifah and Sulistyo, 2020).

Relationship between the Senior Teachers' ICT Skills, Perception and Motivation towards their ICT Adoption in Teaching

Table 5 presents the correlation between the dependent variable ICT Adoption in Teaching and the independent variables ICT Skills, Perception, and Motivation.

Table 5. **Relationship between the Senior Teachers' ICT Skills, Perception and Motivation towards their ICT Adoption in Teaching**

VARIABLES	Pearson r	Level of Significance (p value)	Remarks
ICT skills and ICT Adoption in Teaching	.794**	.000	Significant
Perception and ICT Adoption in Teaching	.630**	.000	Significant
Motivation and ICT Adoption in Teaching	.660**	.000	Significant

The results show that the all three independent variables ICT Skills, Perception, and Motivation have a positive significant relationship with the dependent variable ICT Adoption in Teaching.

As shown in Table 5, ICT Skills (r= .794; p=.000, sig. <.05) had a highly significant relationship with Senior Teachers' ICT Adoption in Teaching. Specifically, the strength of the relationship between Senior Teachers' ICT Adoption in Teaching and their ICT Skills is strong and has a direct proportional relationship as exhibited by the coefficient of .794. This suggests that as the level of senior teachers' ICT skills go higher, the higher their ICT adoption in teaching is. Hence, *the null hypothesis which states that "ICT Skills has no significant relationship with ICT Adoption in Teaching"* is therefore rejected.

This result complements the study Paudel (2020), which found that a teacher's aptitude and preparation are crucial for successful instruction and improved program effectiveness. The ICT policy strives to give teachers the technological know-how they need to successfully integrate and use ICTs in their classrooms. According to earlier research, instructors' technological knowledge and proficiency affect how they use technology in the teaching and learning process (Aydin, 2013; Japhet & Usman, 2018).

The second relationship that Table 5 shows reflects the correlation between Senior Teachers' Perception and ICT Adoption in Teaching. It revealed that there is a significant relationship between ICT adoption and Perception since p= .000 with r= .630 which indicates Moderate Positive Relationship. It means that the as level of senior teachers' perception goes higher, the higher their ICT adoption in teaching is. Hence, *the null hypothesis which states that "Perception has no significant relationship with ICT Adoption in Teaching"* is therefore rejected.

This result validates the findings of Gebremedhin and Fenta's (2015) study, which found a substantial association between instructors' attitudes toward ICT integration and the characteristics that promote ICT use. This shows that encouraging ICT use increases instructors' perceptions of its integration into the teaching-learning process, and vice versa. Additionally, the results of the correlation showed a strong association between teachers' perceptions of the use of ICT to improve the caliber of the courses they teach and their increased productivity as a result of ICT use. This suggests that if ICT is incorporated into the course that teachers teach, their productivity is realized.

Correlation between Motivation and ICT Adoption in Teaching was also shown in Table 5. It revealed that there is a significant relationship between ICT adoption and Perception since p= .000 with r= .660 which indicates Moderate Positive Relationship. It means that the as level of senior teachers' motivation goes higher, the higher their ICT adoption in teaching is. Hence, *the null hypothesis which states that "Motivation has no significant relationship with ICT Adoption in Teaching"* is therefore rejected.

The results are consistent with Catarina's (2012) study, which found that teachers' motivation to use ICT in the classroom will directly impact both teaching and learning. It also results in a change in teaching methods from only chalk and talk to more creative uses of ICTs (Susikaran, 2013).

Chigona et al. (2014) assert that the usage of technology in the classroom may have an impact on teachers' job satisfaction. One would be happy and driven to work if, for instance, technology made teaching simpler and more enjoyable. In order for ICT interventions in schools to be successful, educators are vital (Jung, 2005), hence it is crucial that the institutions make sure that they live up to their expectations when using technology in the classroom. This implies that technical support should be easily accessible to the institutions. Teachers lacked the drive to use technology in the classroom without the necessary assistance.

Influence of the Senior Teachers' ICT Skills, Perception and Motivation on their ICT Adoption in Teaching

Table 6 presents the results of the regression analysis to show the significant predictors of Senior Teachers' ICT Adoption in Teaching. The result shows that all the three independent variables, ICT Skills, Perception, and Motivation were significant predictors of Senior Teachers' ICT Adoption in Teaching.

Table 6 Influence of the Senior Teachers' ICT Skills, Perception and Motivation on their ICT Adoption in Teaching

	Unstandardized Coefficients		Standardized Coefficient			
Variables	B	Std. Error	Beta	**T**	**p-value**	**Remarks**
(Constant)	-2.159	.322		-6.716	.000	
ICT Skills	.594	.044	.527	13.517	.000	Significant

Perception	.463	.068	.231	6.839	.000	Significant
Motivation	.459	.080	.210	5.764	.000	Significant

In particular, ICT Skills have a significant direct effect on the ICT Adoption in Teaching (β=.594, p<.05). This means that the regression weight for ICT Skills in the prediction of ICT Adoption in Teaching is significantly different form zero at the 0.05 level (two-tailed). Thus, for every increase in Senior Teachers' ICT Skills, there is a corresponding increase in their ICT Adoption in Teaching by .594. It implies that senior teachers should equip themselves with ICT skills so that they can use ICT better in their teaching.

According to several research, teachers' initial ICT use and future behavior with technology are influenced by their attitudes and ICT ability (Chun-Mei et al. 2018; Japhet & Usman, 2018). Sipila (2014) looked into how teachers felt about ICT integration, their degree of ICT proficiency, and the things that would make it difficult for them to use ICT in the classroom. The study came to the conclusion that ICT-savvy teachers frequently incorporate the technology into their teaching.

Similarly, the Senior Teachers' Perception significantly predicts their ICT Adoption in Teaching (β=.463, p<0.05). This means that the regression weight for Perception in the prediction of ICT Adoption in Teaching is significantly different form zero at the 0.05 level (two-tailed). In other words, when senior teachers' perception increased by 1, their ICT adoption in teaching would increase by .463. It implies that if senior have a positive perception about using ICT, they would decide to integrate it in their class.

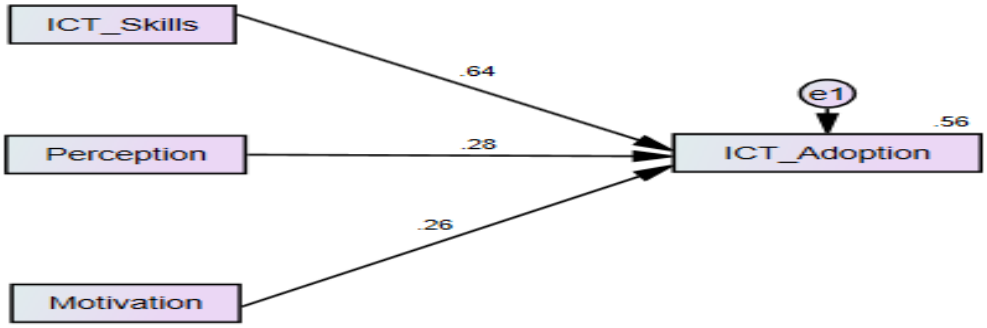
ICT was viewed as useful in teaching by the 26 English instructors in Banda Aceh who were the subject of Asnawi et al. (2018) study. Finally, Liu etl al. (2017) hypothesized using a route analysis that perceived utility, subjective norms, and conducive situations may all be utilized to predict teachers' perceptions of technology. The results of the study showed that teachers' opinions about the ICT resources have a big impact on their attitudes toward using the technology and how useful they think it is. The intention of instructors to use ICT is significantly impacted by these two variables (ATU and PU) (Teo, 2019).

Moreover, the Senior Teachers' Motivation also predicts their ICT Adoption in Teaching (β=.459, p<0.05). This means that the regression weight for Motivation in the prediction of ICT Adoption in Teaching is significantly different form zero at the 0.05 level (two-tailed). This indicates that for every increase of one point on motivation, the ICT Adoption in Teaching is predicted to be higher by .459 points. It implies that if senior teachers are motivated to integrate ICT in their teaching then they will use it.

In a study on teachers' acceptance and integration of ICT in the classroom, Hassan et al. (2016) collected data. Four teachers in total were questioned. The findings demonstrated a connection between teachers' ICT usage and their confidence. The researchers came to the conclusion that a teacher who is self-assured will have positive attitudes toward ICT and be motivated to include it into teaching.

Test of Hypothesized Models

Figure 6 presents Hypothesized Model 1 depicting the direct effect of ICT Skills, Perception, and Motivation on Senior Teachers' ICT Adoption in Teaching.

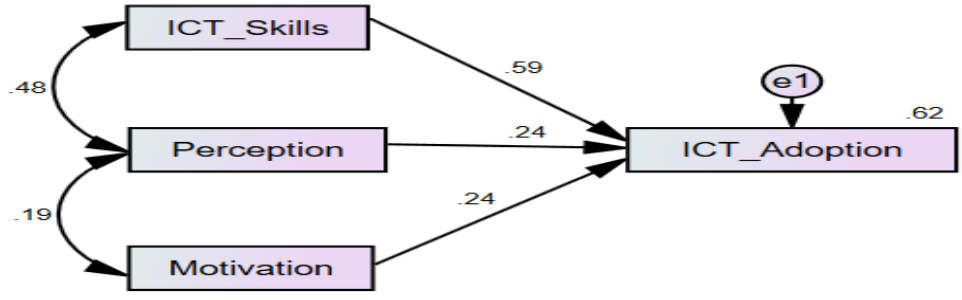


MODEL FIT VALUES		
INDEX	**CRITERION**	**MODEL FIT VALUES**
CMIN/DF	<3.0	128.575
P-value	>.05	.000
NFI	>.95	.557
TLI	>.95	.115
CFI	>.95	.558
GFI	>.95	.279
RMSEA	<.05	.564
PCLOSE	>.05	.000

Figure 6. Test of Hypothesized Model 1

Based on the results, the amount of variance explained by the combined direct influence of ICT Skills, Perception, and Motivation on ICT Adoption in Teaching is .56 (56%). Meanwhile, the three exogenous variables, ICT Skills (β=.64), Perception (β=.28), and Motivation (β=.26) significantly predict the ICT Adoption in Teaching. Furthermore, the goodness of fit results had values that were not within the range of the criteria indices as shown by CMIN/DF<3.0, (NFI, TLI, CFI, GFI >.95), and RMSEA <.05 and PCLOSE >.05. This implies that Hypothesized Model 1 does not fit the data, and is a poorly fit model for senior teachers' ICT adoption in teaching.

Figure 7 shows Hypothesized Model 2 depicting the interrelationships of ICT Skills, Perception, and Motivation and its direct effect on Senior Teachers' ICT Adoption in Teaching.



MODEL FIT VALUES		
INDEX	**CRITERION**	**MODEL FIT VALUES**
CMIN/DF	<3.0	217.218
P-value	>.05	.000
NFI	>.95	.751
TLI	>.95	-.499
CFI	>.95	.750
GFI	>.95	.125
RMSEA	<.05	.734
PCLOSE	>.05	.000

Figure 7. Test of Hypothesized Model 2

Based on the results, the variance of .62 (62%) in ICT Adoption is attributed to the combined influence of ICT Skills, Perception, and Motivation. Meanwhile, the three exogenous variables, ICT Skills (β=.59), Perception (β=.24), and Motivation (β=.24) significantly predict the ICT Adoption in Teaching. Furthermore, the goodness of fit results had values that were not within the range of the criteria indices as shown by CMIN/DF<3.0, (NFI, TLI, CFI, GFI >.95), and RMSEA <.05 and PCLOSE >.05. This implies that Hypothesized Model 2 does not fit the data, and is a poorly fit model for senior teachers' ICT adoption in teaching.

Figure 8 shows Hypothesized Model 3 depicting the direct effect of Perception and Motivation on ICT Skills and Senior Teachers' ICT Adoption in Teaching.

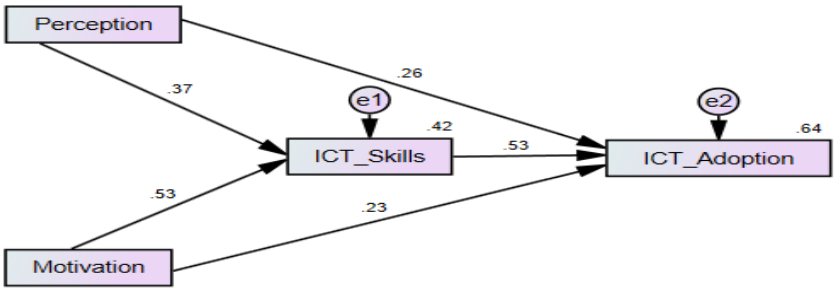


Figure 8. Test of Hypothesized Model 3

MODEL FIT VALUES		
INDEX	**CRITERION**	**MODEL FIT VALUES**
CMIN/DF	<3.0	102.344
P-value	>.05	.000
NFI	>.95	.883
TLI	>.95	.297
CFI	>.95	.883
GFI	>.95	.147
RMSEA	<.05	.503
PCLOSE	>.05	.000

Based on the results, the variance of .64 (64%) in ICT Adoption is attributed to the combined influence of ICT Skills, Perception, and Motivation. Meanwhile, the three exogenous variables, ICT Skills (β=.53), Perception (β=.26), and Motivation (β=.23) significantly predict the ICT Adoption in Teaching. Furthermore, the goodness of fit results had values that were not within the range of the criteria indices as shown by CMIN/DF<3.0, (NFI, TLI, CFI, GFI >.95), and RMSEA <.05 and PCLOSE >.05. This implies that Hypothesized Model 3 does not fit the data, and is a poorly fit model for senior teachers' ICT adoption in teaching.

Figure 9 shows Hypothesized Model 4 depicting the direct effect of ICT skills on Perception, Motivation and Senior Teachers' ICT Adoption in Teaching.

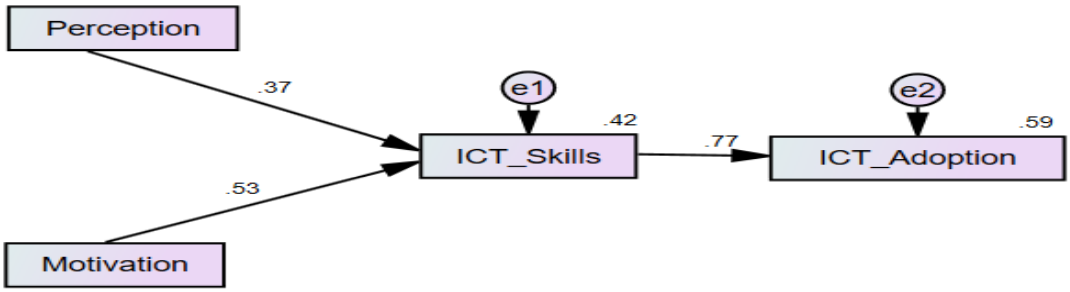


Figure 9. Test of Hypothesized Model 4

MODEL FIT VALUES INDEX	CRITERION	MODEL FIT VALUES
CMIN/DF	<3.0	63.052
P-value	>.05	.000
NFI	>.95	.783
TLI	>.95	.570
CFI	>.95	.785
GFI	>.95	.392
RMSEA	<.05	.393
PCLOSE	>.05	.000

B

Based on the results, the variance of .59 (59%) in ICT Adoption is attributed to the combined influence of ICT Skills, Perception, and Motivation. Meanwhile, the three exogenous

variables, ICT Skills (β=.77), Perception (β=.37), and Motivation (β=.53) significantly predict the ICT Adoption in Teaching. Furthermore, the goodness of fit results had values that were not within the range of the criteria indices as shown by CMIN/DF<3.0, (NFI, TLI, CFI, GFI >.95), and RMSEA <.05 and PCLOSE >.05. This implies that Hypothesized Model 4 does not fit the data, and is a poorly fit model for senior teachers' ICT adoption in teaching.

Best Fit Model of Senior Teachers' ICT Adoption in Teaching

The hypothesized model 5 in standardized estimates is presented in Figure 10. It can be observed in the results that 67 percent of the variance of ICT Adoption in Teaching is explained by the combined influence of ICT Skills and Motivation. On the other hand, a total of 51 percent of the ICT Skills can be attributed to Perception and Motivation. Furthermore, the model illustrates the relationship of Perception and Motivation (r=.47, p>.05), and the direct effect of Perception and Motivation on ICT Skills with beta values of .34 and .49, respectively. On the other hand, it shows the direct effect of ICT Skills and Motivation on ICT Adoption in Teaching with beta values of .63 and .25.

Figure 10 shows Hypothesized Model 5 depicting the correlation of Perception and Motivation and their direct effect on ICT Skills and Senior Teachers' ICT Adoption in Teaching.

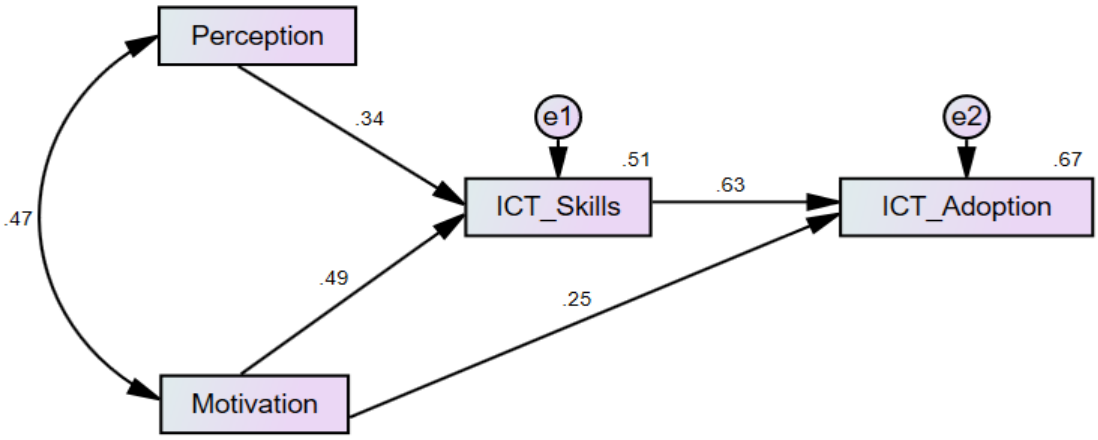


Figure 10. Test of Hypothesized Model 5

Table 7. Goodness of Fit Measures of the Hypothesized Model 5.

MODEL FIT VALUES		
INDEX	**CRITERION**	**MODEL FIT VALUES**
CMIN/DF	<3.0	44.557
P-value	>.05	.000
NFI	>.95	.951
TLI	>.95	.698
CFI	>.95	.951
GFI	>.95	.158
RMSEA	<.05	.330
PCLOSE	>.05	.000

As shown in Table 7, except for the other values, NFI and CFI have successfully met the criteria set by its index (CMIN/DF=6.960 with its p-value >.05, (NFI, TLI, CFI, and GFI >.95), and RMSEA <.05 with a PCLOSE >.05. This implies that Hypothesized Model 5 is the best fit model for senior teachers' ICT adoption in teaching. This is supported by Arbuckle and Wothke (1999) denoting that CMIN/DF should be less than 3.0, and Tucker-Lewis Index (TLI) and comparative Fit Index (CFI) should be close to 0.90. Moreover, the RMSEA and PCLOSE values are supported by MacCallum et al. (1996) indicating 0.01, 0.05, and 0.08 as excellent, good and mediocre fit respectively, with P of close fir (PCLOSE) that is greater than 0.05.

CONCLUSIONS

Based on the findings, the following conclusions have been drawn.

1. Level of Senior Teachers' ICT Adoption in Teaching. The level of senior teachers' ICT adoption in teaching is high. This implies that senior teachers are currently using different strategies where they can integrate ICT to help improve the teaching-learning process.

2. Level of ICT Senior Teachers' ICT Skill. The level of senior teachers' ICT skill is high. This implies that senior teachers have the basic knowledge of the know-how of ICTs. They have known the use of ICT for teaching so they equip themselves with the ICT skills that will help them utilize different instructional materials for students' learning.

3. Level of Senior Teachers' Perception. The level of senior teachers' perception of adopting ICT is high. It means that they perceive ICT as a useful tool in teaching. They have positive attitudes in integrating ICT because they believe that it will help them enhance their strategies in dealing with the technologically driven students.

4. Level of Senior Teachers' Motivation. The level of senior teachers' motivation of adopting ICT is high. Their self-efficacy is high which means that they believe in their capability that they can integrate ICT correctly in teaching. They believe of its educational value and impact in

education. They are motivated to learn more about it and they are eager to have more training to have more knowledge on how to utilize it.

5. Test of Relationships. All three independent variables ICT Skills, Perception, and Motivation have a positive significant relationship with the dependent variable ICT Adoption in Teaching. It means that it is very important for senior teachers to have the basic knowledge of ICT because if they can acquire it, they will feel confident in using it. Having a positive perception about using ICT will also enhance their ICT adoption. Additionally, senior teachers are motivated to adopt ICT in teaching because they know that it can help them enhance themselves and help the teaching-learning process.

6. Predictors of Senior Teachers' ICT Adoption in Teaching. All the three independent variables, ICT Skills, Perception, and Motivation were significant predictors of Senior Teachers' ICT Adoption in Teaching. This implies that teachers should enhance their ICT skills, have higher positive perception and motivation so that their ICT adoption in teaching will also improve.

7. Best Fit Model for Senior Teachers' ICT Adoption in Teaching. The best fit model is hypothesized model 5. The model 5 shows that ICT skills and motivation have significant direct effect on senior teachers' ICT adoption in teaching while perception does not have direct effect on the ICT adoption of senior teachers and it has a significant indirect effect on ICT adoption in teaching which is mediated by ICT skills. On the other hand, motivation also shows a significant indirect effect on ICT adoption in teaching as mediated by ICT skills. This implies that ICT skills is a factor that explains the relationship of perception and motivation on the ICT adoption of senior teachers.

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