Information Communication Technology (ICT) in Teaching and Learning Process: An Enhancement or Teacher Replacement, Dilemma

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Abstract: **This research investigated the views of teachers concerning the integration of ICTs in the teaching and learning process. The main objective of this study was to find out if teachers feels that the introduction of ICTs in the process of teaching might be a threat to their jobs. This research was guided by the two theories namely; Diffusion of Innovations theory by Rogers (2003) and Technology Acceptance Model (TAM) by Davis (2003). This study examines the role of a teacher in the ICTs integration process in schools, the importance of ICTs in the modern day education and the current challenges facing implementation of ICT integration in Kenyan schools. Qualitative research Method was used to collect data. This method uses language as its raw material and it aims to study people's thoughts, experiences and feelings. This study adopted three qualitative self-report instruments to collect data namely; Observation method, Focus group discussions and oral interviews. Results revealed that; teachers are confident that their job is secured due to the scarcity of ICTs in schools and their unique intuitional abilities which is core in learning cannot be taken away by technology. Results also revealed that teacher's involvement takes place at all stages of teaching and learning.**

Keywords: **Adoption, Attitudes, Beliefs, In-service, ICT, Implementation, Integration, Innovation, Infusion, Technology.**

1. Introduction

The introduction and utilization of Information technologies in various fields of human workforce has rendered people jobless. As a result of this, fear dominates the remaining sectors such as education. Teachers in some parts of the world where integration of ICTs is rapid, are afraid of losing their jobs as a result of the enormous and miraculous work of information technology. The rapid growth, spread and the utilization of information technology has resulted into mixed results both positive and negative among different people. The greatest fear among human resource sector is if technology can replace them. Important point to note here very strongly is that every human being should bear in mind that technology is here with us and it is here to stay. In this particular section, it is important to understand that information communication technology (ICTs) in the context of education is advancing every day. Teachers should develop themselves professionally to catch up with the rapid evolution of technology. It is worth noting also that the present type of the learners' access technology outside the school setting almost in every day.

Chances are unless the teachers keep upgrading themselves, they can easily become obsolete hence being replaced by those who are technology compliant. Information Communication Technology (ICTs) in this context includes computers, the Internet, and electronic delivery systems such as radios, televisions, and projectors among others. According to Blurton,2002, Information and Communication Technology tools are defined as a "group of various technological tools and resources used to communicate, create, distribute, store, and manage information. While the integration of ICT in education means the process through which a teacher introduces, reinforce, extend, enrich, assess and remediate student's mastery of the curriculum targets.

It is worth noting that Information communication technology has led to many changes in how we work, where we work and even when we work. It has had a dramatic effect on our working lives. In some working sectors, the introduction of ICT led to mass lay off of many workers especially those who were working as clerks. This particular nature of ICT has contributed to fear of unknown and technology stigma in other fields.

It is also important to note that this investigation was motivated by the observation by the World Economic Forum (WEF) that estimated the increase use of technology and automation to displace 85 million jobs by 2025. Technology is currently performing 30% of overall tasks, while humans are doing the remaining 70%, a ratio that is expected to shift to 50:50 in the next few years.

Many scholars have studied more in the effect of ICT in the area of education more so in the art and role of a teacher in the process. According to Dörnyei (2001a:37), he points out that much depends on the teacher´s authority, autonomy, supporting and controlling the ICT. Many scholars in this particular field are in agreement that technology cannot replace a teacher. Technology is merely an augmentation to a teacher. It can help the process of learning, but it certainly cannot replace the role of the teacher.

Another crucial element is the ethical dimension: learning to

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have a say. A Chinese proverb says: "teachers open the door, but you must enter by yourself." Our task is to encourage students. The main element that cannot be replaced in the work of a teacher is the emotional intelligence. A complete human being has to do with a combination of emotional intelligence and intelligent quotient.

The use of ICT in teaching requires competencies on part of the teacher and has indeed made the profession more challenging experience and retain knowledge for a longer time. According to the UNDP (2001) statistics, almost 80% of the teachers in developing countries feel that they are not prepared to use the technology. The integration of information and communication technologies into curriculum is a crucial process in ensuring the quality of education (Hue and Ab Jalil, 2013). However, the presence of technology alone will not stimulate significant changes in a school. Teachers are an important ingredient in the implementation of ICT in education.

Without the involvement of teachers, most students may not take advantage of all the available potential benefits of ICT on their own. Teachers need to actively participate in using ICT. But teachers in Adwa College have not been motivated in integrating ICT. Moreover, the new curriculum applied in 2013 minimized the credit of ICT subject even though it can help student to adapt technology easily. Before 2012, there was no broadband internet connection in Adwa College and many teachers were blaming that. To answer this, starting from the beginning of 2013, broadband connection is applicable in the college.

A. What is the Impact of ICT in the Teaching and Learning Process?

ICT has transformed teaching and learning processes from being highly teacher-dominated to student- cantered, and that this transformation will result in increased learning gains for students, creating and allowing for opportunities for learners to develop their creativity, problem-solving abilities, informational.

Technology can make it easy to get educated by sitting at home but that education too is provided by a teacher. Even in online courses, we see that teachers are necessary to give lectures, whether in the form of videos, tutorials, Skype sessions, etc. Children still need to learn computers to operate those online sessions, which of course are taught by teachers.

It is significant that we remember, a teacher is more than just a facilitator of knowledge. A teacher also acts as a guide, a mentor and an inspiration for students, a role that cannot be replaced by technology of any kind. Taking critical skills into account like decision making, time management etc., a child needs a teacher as the technology cannot teach these human skills.

It is much obvious that technology is assisting students in their learning and it is playing a crucial role in the field of education. But, as of now, it does not have the power to replace teachers because human interaction cannot be replaced by computers and human emotional skills cannot be taught by technology.

To conclude this introductory part of this study most of the observed scholars are in agreement that no matter how advanced or smart a computer program or a product is, it can never come close to the knowledge and life experience a teacher brings. Several researches have been conducted and it has been proven time and again that teachers bring about a change which no technology can. A teacher simply does not impart knowledge or information. Teaching is definitely not about facts and figures. A teacher leads, guides, facilitates and mentors a student. They are role models who set an example to students and drive them towards a brighter future. A good teacher encourages independent thoughts and independent learning. He/she can be a positive influence, can be an inspiration to set and achieve goals. The trust and bond between a teacher and student create the perfect learning environment; which can never be achieved through virtual learning.

B. Statement of the Problem

The current greatest monster that is feared by many workforces all over the world is the security of the workers' jobs in the current world of ICT. It is a much-known fact that in this modern age, technology is replacing almost everything. We do not need papers and pens, as software can be used to write on, we do not need physical books because of the advent of e-books and PDFs. So, the question arises – Can this modern technology replace teachers too? Is this technology sophisticated enough to teach children the way virtual teachers do? Is the need of human teachers being eliminated?

C. Research Objectives

The main objectives of this study are as follows:
1. To investigate the roles of a teacher in the integration of ICTS in the teaching/learning process
2. To find out if the introduction of ICTs in the teaching is a threat to the job of a teacher.
3. To establish the roles of ICT in teaching/learning process in the 21st Century classroom.

D. Theoretical Framework

Theoretical framework remains to be a pivotal area in research. This is because it connects the researcher with the existing knowledge it provides hypothetical basis to the researcher and provides guiding methods. Theory also provides explanation, understanding and meaningfulness to research.

This particular study was largely guided by the following two theories:
- Diffusion of Innovations theory by Rogers (2003) and
- Technology Acceptance Model (TAM) by Davis (2003).

E. Diffusion of Innovations Theory by Rogers (2003)

Historically, Diffusion of Innovation (DOI) theory, developed by E.M. Rogers in 1962, is one of the oldest social science theories. It originated in communication to explain how, over time, an idea or a product gains momentum and diffuses through a specific population or social system. Rogers' Diffusion of Innovation Theory seeks to explain how new ideas or innovations such as (HHK) are adopted and this theory proposes that there are five attributes of an innovation that

affect smooth adoption: Relative advantage, Compatibility, Complexity, tribality and observability.

The process for Diffusion of Innovation consist of the following major stages:

Knowledge: This is the first step in the diffusion of innovation

Persuasion: This is the point at which the prospective adopter is open to the idea.

Decision: This is the stage at which the would-be adopter is open to make a decision.

Implementation: the stage at which the adopter put in practice the idea

Confirmation stage: This is the last stage where the adopter affirms the knowledge about. Therefore, for marketers, understanding the characteristics of each segment that will either help or hinder the adoption of an innovation is important.

In the diffusion of innovation theory, there are five adopter categories:

1. *Innovators:* Characterized by those who want to be the first to try the innovation.
2. *Early Adopters:* Characterized by those who are comfortable with change and adopting new ideas.
3. *Early Majority:* Characterized by those who adopt new innovations before the average person. However, evidence is needed that the innovation works before this category will adopt the innovation.
4. *Late Majority:* Characterized by those who are skeptical of change and will only adopt an innovation after it's been generally accepted and adopted by the majority of the population.
5. *Laggards:* Characterized by those who are very traditional and conservative – they are the last to make the changeover to new technologies. This category is the hardest to appeal to. Rogers provides the distribution of the five adopter categories as follows: Innovators represent the first 2.5% of the group to adopt an innovation, followed by 13.5% as early adopters, 34% as early majorities, 34% as late majorities, and finally,16% as laggards. Note that the size of the laggard's category is much larger than that of the innovator's category on the opposite end of the spectrum.

F. Relevance of this Model in Teaching

Diffusion theory has been used as a conceptual model to understand how teachers implement the innovations they have learned, in fact through this theory, Rogers attempted to expound on how people acquire new knowledge, how they implement new knowledge and how knowledge become sustained through practice over time.

Rogers' diffusion of innovations theory is the most appropriate for investigating the adoption of technology in higher education and educational environments (Medlin, 2001; Parisot, 1995). In fact, much diffusion research involves technological innovations so Rogers (2003) usually used the word "technology" and "innovation" as synonyms. For Rogers, "a technology is a design for instrumental action that reduces

the uncertainty in the cause-effect relationships involved in achieving a desired outcome" (p. 13). It is composed of two parts: hardware and software. While hardware is "the tool that embodies the technology in the form of a material or physical object," software is "the information base for the tool" (Rogers, 2003, p. 259). Since software (as a technological innovation) has a low level of observability, its rate of adoption is quite slow.

Carter (1998) conducted a computer survey and in-depth interviews to determine computer-based technologies that were being used by the faculty members and the factors that affect their use of these technologies.

Faculty attitudes toward using computer-based technology, support, resources, and training were the selected factors needed to use these technologies effectively. Also, Carter found that word processing software, e-mail, and Internet resources were the most frequently used computer-based technologies. Another study was conducted by Zakaria (2001) on factors related to IT implementation in the curriculum. The selected factors in the study were the Malaysian Ministry of Education Polytechnic faculty members' attitudes toward IT, their IT use in teaching, and the availability of IT. Despite a lack of IT use in general, faculty members usually had a very positive attitude toward IT use in their teaching. Most faculty members reported barriers to IT use in their teaching. Furthermore, Zakaria argued there was a gender difference in terms of IT use.

G. Technology Acceptance Model (Tam) by Davis (2003)

Technology Acceptance Model is the most relevant guide to this study. This is because of the fact that it help to inform us why individuals think that adoption of ICT would help to make their workload easier and more effective and also it explain to us how individuals perceive usefulness in the adoption of ict.in other word it explain to us how an attitude of an individual towards an adoption of ICT influences their behavior. Developed by Fred D. Davis in 1989.

- Extension of the Theory of Reasoned Action (Ajzen & Fishbein 1980)
- Predicts individual adoption and use of new technologies in a work context
- Intention to use new technology is based on 2 factors: perceived usefulness and perceived ease of use.
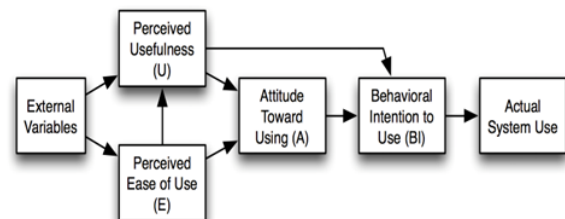

Fig. 1. The technology acceptance model (Davis,1989)

H. Perceived Usefulness (PU)

Describes the degree to which a person believes that their work performance can be increased by using the system, for example whether the system can help them to complete a task

more quickly. Access to information offers the possibility for improved human competence. Lombardi (2007:2) observed that the acquisition of capacity to access authentic information is prevented by users' reluctance to accept and use available strategies and techniques to access the information.

I. Perceived Ease of Use (PEU)

Refers to the extent to which a person has to make a mental or physical effort to use the technology. Access to information offers the possibility for improved human competence. Thus, an application that is perceived to be easier to use is generally accepted and utilized by more people.

Zhu, Linb and Hsu (2012: 968) add that Perceived Ease of Use signifies the degree to which an individual accepts that using certain technology would be effortless and hassle free. The system characteristics can help the ease of use of technology and system usage can equally lead to the acquisition of Information Literacy skill. Nanthida (2011:13) enumerates certain factors that may influence the ease of use of modern resources such as characteristics of information resources, the job experience, technical equipment and support, etc. The following are the factors to consider when evaluating Perceived Ease of Use: computer self-efficacy, perception of external control, internet self-efficacy, computer anxiety, information anxiety, perceived enjoyment and objective, usability and behavioral intention to use.

J. TAM 2 and TAM 3

Because of increasing criticism towards the TAM it was extended with additional factors, such as social influence, age and gender, which influence the intention to behave. TAM2 is an Extension of the original Technology Acceptance Model by Venkatesh and Davis in 2000 which also includes external social factors that influence the behavioral intention to use new technology.

Technology Acceptance Model In the opinion of Marangunic and Granic (2015: 81), the constant improvement and progress in technology, especially ICT related applications, makes the choice to decide on matters of acceptance and rejection a dilemma. Based on this, many models and theories have been developed to shed more light on the effective use of technology and, out of all the models, the Technology Acceptance Model (TAM) stands out in examining issues affecting users' acceptance of modern technology. Without considerable understanding of the foundation, growth, and adjustment, along with the limitations of the model, there can be no broad and systematic research in the field. The Technology Acceptance Model (TAM) is an expansion of Ajzen and Fishbein's Theory of Reasoned Action (TRA) (Priyanka and Kumar, 2013: 144) which was a theory initiated by Fred Davis in1986 and since then has gone through several modifications and validation. The aim of the theory is to describe factors that determine technology acceptance, information technology usage behaviour and to provide a parsimonious theoretical explanatory model (Bertrand and Bouchard, 2008:200). Ducey (2013:20) explains that the TAM includes Perceived Ease of Use and Perceived Usefulness which are the important

determinants of technology acceptance and user behavior. Teo (2013: 81) identified various factors that promote the use and acceptance of technology. He enumerates individual differences, social influences, beliefs, attitudes and situational influences as factors that promote the intention to use technology and promote the ability to accept or reject it. In addition, Teo (2013: 81) posited that an individual's behaviour is influenced by an intention to perform the behaviour, in other words, the real performance of the behaviour is heralded by a person's behavioural intention to engage in the activity. The Technology Acceptance Model (TAM) is a prominent theory that seeks to investigate the attributes that influence technology adoption.

Ducey (2013:3) also described it as a parsimonious theory of technology adoption in an establishment which intends that individual responses toward a technology can trigger intentions or curiosity to use the technology, which in due course can influence actual usage (Aggorowati, Suhartono and Gautama, 2012: 499). Also important to TAM is intention which can also be used to envisage and predict the eagerness and motivation to perform behaviour and a number of skills. Such intention is determined by three factors: the first is personal in nature which reflects human attitude, the second is a subjective norm which shows social influence and the third is called perceived behavioural control (Huda, et al., 2012: 272). Therefore, peoples' intention to adopt a particular skill can be anchored on the three important factors stated above. Many studies have been conducted to test the authenticity of TAM. For example, Aypay, et al. (2012: 264) tested the theory in predicting the intensity of technology acceptance among pre-service teachers and results indicated that there is a relationship between the model and information acquisition.

Jiang, Chen and Lai (2010:243) also found that individual behaviours of technology acceptance are valuable but incomplete without looking at social factors and personal environment which are two of the factors alluded to in the previous paragraph. Thakur (2013:17) discussed the issues affecting consumer intention to adopt the use of mobile payment systems and found out that "performance expectancy, effort expectancy, social influence is facilitating conditions in the e-finance and mobile finance context". Garg and Garg (2013:48) suggest that in formulating perceptions regarding new technologies, subjective and social norms influence consumers as well as perceptions of the quality of service. Many theories have been developed that are applicable to Information Literacy research. They include: Diffusion of Innovation by Rogers (1983), Theory of Reasoned Action (TRA) by Ajzen cited by Priyanka and Kumar (2013: 144) and Theory of Planned Behaviour by Ajzen (1991).Despite that, the Technology Acceptance Model, in my view, is most appropriate because it helps to predict users' behaviour by considering the three components suggested by Huda et al. (2012:12) and supported by Shroff, Deneen and Eugenia's (2011: 604) study. The validity of the theory has also been tested and was found to be impressive. The TAM, which is based on the two central variables of Perceived Ease of Use and Perceived Usefulness, has been adjudged as an essential

determinant for classroom 11 instructional media acceptance and performance and is one of the most widely, applied theoretical models in the Information System (IS) field. The TAM is also one of the most influential and commonly adopted theories for describing an individual's acceptance of information systems (Bagozzi, 2007: 244).

With careful observation, the variables that make up TAM are also similar to the personal ability expected of modern professionals in order to attain Information Literacy skill.

Suki and Suki (2011: 1) observed that the two definite beliefs of Perceived Usefulness and Perceived Ease of Use to a large extent have direct links to the attitudes that determine the use of technology. Perceived Usefulness is seen by Pantano and Di Pietro (2012: 2) and Teo (2013:81) as a subjective prospect that specific application systems will increase job performance within a particular organization, which is also known as "performance expectancy". Wen and Kwon (2010: 255) observed that Perceived Ease of Use is anchored on the belief that it would be effortless and hassle free to acquire a particular skill also known as "effort expectancy". In the opinion of Bagozzi (2007:2), the TAM anticipated that attitudes would have a positive influence on the mind-set that would gear human efforts towards the use of technology. The TAM has proven to be useful in revealing certain shortcomings in society.

Portera and Donthub's (2009: 999) study, it was discovered that despite the growth of information usage, evidence has shown that there is a significant decline among the elderly, illiterate, lower income earners than the younger, well-educated and high-income earners. The application of the TAM has helped to confirm that age, education, earnings and race are associated with beliefs of the importance of information and beliefs can influence attitudes towards and use of skills that will enhance access to information. In the opinion of Davis (1989: 320), who is the creator of the Technology Acceptance Model (TAM), the two important variables, Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), influence the perceptions determining the adoption of technology and are suggestive of user intentions to develop new skills. The extent of the acquisition of new skills can be affected significantly by both extrinsic and intrinsic motivations (Davis 1989: 320). Extrinsic motivation refers to the performance of an activity because it is perceived to be helpful in achieving special outcomes that are different from the activity itself (Davis, 1989:320). In contrast, intrinsic motivation, Davis further explains, refers to the performance of a task for no apparent reinforcement other than the procedure of performing the activity per se. The 12 rationale why Perceived Usefulness is relevant to the acceptance of Information Literacy skill is that it is s adopted first and foremost because it is instrumental in achieving specific objectives that are not inherent in the use of the skill itself. The underlying principle for each variable in the model is examined below.

2. Literature Review

Teaching is a complex relational profession that deals with human beings directly throughout their life growth stages. For effective intelligence quotient to be developed a great amount of emotional intelligence must be engaged by a teacher.

Aldwyn Cooper (2017), "Despite advances in artificial intelligence, humans will always have the edge over machines when it comes to teaching.

Cooper must have realized this due to the unique work of the teacher when it comes to the place of emotional intelligence (EI) in the teaching process.

It is important to note that machines like computers are programmed and by nature reactive and not proactive. It is this proactive nature that the teacher will provide in class.

This why Steve Jobs who has interacted mostly in the field if computers had this to say: "I've helped with more computers in more schools than anybody else in the world and I am absolutely convinced that is by no means the most important thing. The most important thing [to education] is a person. A person who incites your curiosity and feeds your curiosity; and machines cannot do that in the same way that people can." – Steve Jobs ,1995.

In this 21st century, the term "technology" is an important issue in many fields including education. This is because technology has become the knowledge transfer highway in most countries. Technology integration nowadays has gone through innovations and transformed our societies that has totally changed the way people think, work and live (Grabe, 2007). As part of this, schools and other educational institutions which are supposed to prepare students to live in "a knowledge society" need to consider ICT integration in their curriculum (Ghavifekr, Afshari & Amla Salleh, 2012). Integration of Information, Communication, and Technology (ICT) in education refers to the use of computerbased communication that incorporates into daily classroom instructional process. In conjunction with preparing students for the current digital era, teachers are seen as the key players in using ICT in their daily classrooms. This is due to the capability of ICT in providing dynamic and proactive teaching-learning environment (Arnseth & Hatlevik, 2012). This particular observation is good however, it is important o note that the integration of ICT in the teaching process is dynamic but less proactive. It is the presence of the human teacher that can elevate the dynamic and active function of technology in teaching to the level of dynamic, relational and proactive.

While, the aim of ICT integration is to improve and increase the quality, accessibility and cost-efficiency of the delivery of instruction to students, it also refers to benefits from networking the learning communities to face the challenges of current globalization (Albirini, 2006, p.6). To add on the argument from Albirini, the networking benefit of ICT to the students need to be monitored by the teacher so that the learners may not surfer from cyber bullying which is currently a great moral setback to the young generation in our society. In this case therefore the teacher provides the role of moral custodian and guardian of the young learners. The teacher will also provide guidance and counselling to the students for both active and proactive purposes.

Process of adoption of ICT is not a single step, but it is ongoing and continuous steps that fully support teaching and learning and information resources (Young, 2003).

For this one I support the observation of Young that ICT utilization in teaching provide support service but can never take the role of a teacher.

Multiple resources are abundant on the Internet, and knowledge can be acquired through video clips, audio sounds, visual presentation and so on. Current research has indicated that ICT assists in transforming a teaching environment into a learner-centered one (Castro Sánchez and Alemán 2011). Since learners are actively involved in the learning processes in ICT classrooms, they are authorized by the teacher to make decisions, plans, and so forth (Lu, Hou and Huang 2010). ICT therefore provides both learners and instructors with more educational affordances and possibilities. All the above scholars are in agreement as far as the role of ICT in the teaching is concerned. The only gap of information here is for this research to confirm that role of a teacher in the learning environment is irreplaceable but it can only be enhanced through the use of ICTs.

The merits of ICT in education have been extolled in the literature. The use of ICT has been found to: Assist students in accessing digital information efficiently and effectively As Brush, Glazewski and Hew (2008) have stated, ICT is used as a tool for students to discover learning topics, solve problems, and provide solutions to the problems in the learning process. ICT makes knowledge acquisition more accessible, and concepts in learning areas are understood while engaging students in the application of ICT. Support student-centered and self-directed learning Students are now more frequently engaged in the meaningful use of computers (Castro Sánchez and Alemán 2011).

They build new knowledge through accessing, selecting, organizing, and interpreting information and data. Based on learning through ICT, students are more capable of using information and data from various sources, and critically assessing the quality of the learning materials. Produce a creative learning environment ICT develops students' new understanding in their areas of learning (Chai, Koh and Tsai 2010). ICT provides more creative solutions to different types of learning inquiries. For example, in a reading class, e-books are commonly used in reading aloud activities. Learners can access all types of texts from beginning to advanced levels with ease through computers, laptops, personal digital assistants (PDAs), or iPads. More specifically, these e-books may come with some reading applications, which offer a reading-aloud interface, relevant vocabulary-building activities, games related to reading skills and vocabulary acquisition, and more. Therefore, ICT involves purpose designed applications that provide innovative ways to meet a variety of learning needs.

Promote collaborative learning in a distance-learning environment Koch (2005) mentioned that using ICT enables students to communicate, share, and work collaboratively anywhere, any time. For instance, a teleconferencing classroom could invite students around the world to gather together simultaneously for a topic discussion.

They may have the opportunity to analyze problems and explore ideas as well as to develop concepts.

3. What is the Role of Teachers in the Integration of ICT?

To understand effectively the difference between the benefits of utilization of ICTs in the teaching environment and importance of a teacher, it is crucial to do a critical literature review on the role of a teacher in the integration of ICT into actual teaching and learning process.

The teacher is responsible for creating the environment in the class. He prepares the learning opportunities that help students use the lessons of communication technology. Consequently, it is crucial that all teachers be prepared to provide their students with these opportunities.

Dugan Hope (2018) in his article entitled five reasons why even the most sophisticated computer cannot effectively replace a good teacher, he highlighted the following:

A. Teaching is Relational; Not Transactional

The most important gift a teacher has is the ability to see children for who they are, who they can be, and the relationship (not the transaction) between the two. Positive student interactions are an essential component of the learner experience and creating meaningful student relationships is also considered one of the most complex and challenging responsibilities of a teacher.

There are many nuances to relationships that robots will never replicate in their human interactions. Truly knowing someone is more than utilizing an algorithm to recall information. Students learn from teachers they like, which is an intimacy outside the grasp of current AI. Robotics and other forms of information communication can be used to enhance or speed up human correspondence; not establish and maintain meaningful associations.

Because the ability to build relationships is both key and difficult, being great at interpersonal experiences is requisite for being an effective teacher. If one can accept the idea that machines cannot create meaningful relationships, only enhance them, then it follows that machines cannot be great teachers.

B. Empathy & Trust

According to researchers at McGill University in Montreal, empathy matters. Their study noted that people who receive empathy from others, especially from an early age, develop a higher capacity to learn. Sometimes students, like adults, need care and attention. When a teacher stops, listens, and provides attention it is an investment in the relationship. Empathy has also been correlated with reducing the damaging effects of repeated stress, which also suggests that empathy has tremendous implications for achievement, both socially and intellectually.

C. Inspiration

One of the uniting aspects of the human experience is having an inspirational teacher. If you speak to a successful person, they will often tell the story of the teacher that either *incited* them or *inspired* them to attain their current goals. Teaching is about inspiration, not information. Effective teaching focuses on the *why* and *how*, not the *what*, with the goal to spark imagination and to find a bridge to learners' hearts

and minds. Teachers are trained to inspire learners; inspiration cannot be programmed.

A computer may be able to *motivate* a student, but to really inspire takes a human being (If you need a concrete example, take a look at the rather unusual 'inspirational' posters and memes created by When compared the teachers with the computers, the technology will not teach the ethics, way of life, or moral values but the teacher along with the subject can teach how to live with the moral values, ethics & integrity, and the responsibilities.

The technology can't replace the teachers because the teacher itself says how to use the technology in a right way. The best example of this is, the calculator cannot replace the mathematics teacher.

A teacher can grasp the interest of the students but the computer cannot find out the interesting subjects of the students. Some of the students can't afford the fees for their studies; in this case, the technology will help in preparing their studies.

I too believe that personalized tech-infused learning is the future of education. However, there is a problem. It's not about the technology. Rather, the sleek and ever more powerful devices that are coming down the pipeline are simply one part of a teacher's toolkit. The technology is not the lesson, it is there to enhance the lesson. Our classrooms are changing, and without a doubt they will look quite different in five or ten years than they do today. New technologies are being developed quickly, and with so many different trends taking hold, it is yet to be seen what will be shaken out and what will stick. BUT One thing we feel strongly about: teachers aren't going anywhere. Whatever word you choose - teacher, tutor, preceptor, or something else - the role a teacher plays in the classroom is huge. Everyone knows this on a personal level, and can identify a teacher or mentor who has had influence on us or changed our trajectories in a positive way. They encourage students when they struggle, and inspire them to set and reach for their goals. They are role models, leading by example and giving direction when necessary. A computer can give information, but a teacher can lend a hand, or an ear, and discern what's necessary for a student to succeed, and to want to succeed. A computer is also unable to meet the emotional needs of the students. While teacher can relate to their students by their past experience as they too are humans. Teacher can solve a child's problem but of course computer can't solve a child's problem. A computer cannot keep order in a classroom so what would keep the students behaving? They would only misbehave more when someone isn't there to tell them that what they are doing is wrong. Technology is therefore going to play a critical role in the future of education. But not as big a role as that of a teacher.

Serkan (2009) and Chai, Koh and Tsai (2010) also investigated pre-service teachers' beliefs about the use of computer technology and the effectiveness of ICT courses.

The results of both studies indicate that after participating in courses, pre-service teachers recognized the importance of technology integration into their curricula and believed that ICT use would enhance student learning. They felt that such courses prepared them to apply ICT in the future, and their abilities to select, evaluate, and use a variety of technological resources improved.

More specifically, Chai, Koh and Tsai (2010) found that ICT courses with direct instruction on the use of technological tools through the technology enhanced lesson (TEL) approach helped teachers learn how to use technologies as supporting tools in order to enhance their teaching and student learning. Consequently, the pre-service teachers viewed the preparation course favorably.

D. Fear of Replacing Teachers by ICT

With the introduction of ICT in the classroom, the teacher's role in the learning process becomes more and more critical. What needs to be changed is the role that the teacher plays during these classes. On the other hand, the role of the students it is expanded, the community can also play a new role in the classroom. There are identified some of the reasons for this reluctance: "poor program design, skepticism about the effect of computers on improving learning ISSN 2411-9563 (Print) ISSN 2312-8429 (Online) European Journal of Social Sciences Education and Research May-August 2017 Volume 4, Issue 4 241 outcomes, lack of administrative support, increasing the time and effort required to learn the technology and how to use it, fear of losing authority in the classroom (Kiunga, 2008). These are all issues that should be addressed from teachers to fully exploit the potential of computers and the Internet as educational tools. Professional development of teachers should be long-term, executives, and flexible as far as possible. For many teachers under-qualified, overworked and unpaid, effective adoption of ICT depends on the possibility of giving and continuity to learn what they need to learn, based on their specific circumstances and experiences when they time to learn it.

Institutional Incentives and support for teachers to develop professionally is also critical. This can take the form of promotion for teachers who renew ICT in class (compared to only use), or simply making sure that teachers have adequate access to technology after training.

4. Methodology

A. Research Design

Research design simply refers to the logical structure of the study. It is a specific framework that guides data collection and analysis. According to Creswel (2009), Research designs are plans and the procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis. This study adopted qualitative research design to investigate what teachers think, believe and experience in real and practical life situation concerning their profession and the integration of ICTs in the teaching and learning process.

B. Qualitative Methods

Qualitative research uses language as its raw material and it aims to study people's thoughts, experiences, feelings, or use language in depth and detail. It is also an attempt to understand the person's perception and experiences (Barker C. Pistrang. N

& Elliot.R 2002).

C. Research Instruments

This study adopted three qualitative self-report instruments to collect data namely; Observation method, Focus group discussions and oral interviews.

1) Observation

At its most simple, observation involves 'seeing' things – such as objects, processes, relationships, events – and formally recording the information. There are different types of observation. Structured or direct observation is a process in which observations are recorded against an agreed checklist. Expert observation is usually carried out by someone with specific expertise in an area of work, and involves the expert observing and recording information on a subject. Observation may also be carried out as a participatory exercise. Where this is the case the intended beneficiaries of a project or programme are involved in planning an observation exercise, observing, and discussing findings.

2) Focus Group Discussions

Focus group discussions (FGDs) are facilitated discussions, held with a small group of people who have specialist knowledge or interest in a particular topic. They are used to find out the perceptions and attitudes of a defined group of people. FGD.s are typically carried out with around 6-12 people, and are based around a short list of guiding questions, designed to probe for in-depth information. FGDs are often used to solicit the views of those who would not be willing or able to speak up at larger group meetings. They may also be used to access the views of minority or disadvantaged groups, such as women, children or people with disabilities.

Interviews: Interviews are probably the most common tool used in planning, monitoring and evaluation. They can be carried out with one person at a time (individual interviews) or groups of people. They can be administered formally or informally. They can be carried out face-to-face or through remote media such as telephone and Skype.

Interviews can also be conducted through written questions via letters or email. Interviews may be structured, semi-structured or open-ended. Structured interviews are based around a core set of questions that are always asked in the same order. Semi-structured interviews also contain a core set of questions, but allow the interviewer to ask supplementary questions, or change the order in which questions are asked.

5. Findings

This research was conducted in ten primary schools in Kenya, five primary schools in Nairobi County were selected randomly to represent urban schools setting and five primary schools were selected from Bomet county to represent the rural setting. In all the schools, two classes were identified standard seven and grade two. In every school observation of ICTs were observed and two teachers were interviewed one of the interviewed teachers in every institution represented was the head teacher. The researcher also engaged teachers as focused group in four school two schools in Nairobi County and two schools in Bomet county. The observation that took place in

most of the schools shows that teachers are still using traditional methods of teaching i.e. the use of books, real objects and manila paper teaching aids. The available computers are found in stores and actively being used in the offices of institutional administrative functions. ICT in some schools in the urban arears is taught as a subject for only computers literacy.

During focused group discussions it was largely discovered that most of the teachers lack skills of integrating ICT into mainstream teaching. The researcher also learned that most of the newly employed teachers are computer literate and they are teaching computer lessons basically to the upper primary classes. Most of the older teachers are not even interested in learning ICT skills and they feel that they are too old for such. In other words, they have a negative attitude and they do not find it necessary at their ages. Most of them are 50 years and above. It was also observed that most of those old teachers were in serviced on the teaching of ICTs but their attitudes remained negative because they thought it was too late. On inquiring about the criteria that was used to select most of the old teachers to be in-serviced on ICT, the researcher found out that the selection by the employer TSC and the ministry of education was based on those who were teaching lower classes or crate and by default most of the lower classes in Kenyan primary schools are taught by old teachers. The reason why the lower primary schools class teachers were selected was based on the introduction of laptops in standard one as per the new education policy that was championed by President Uhuru Kenyatta Government by then.

1) Teacher's Position on Possibility of Being Replaced by Computers

According to the general observation from this study, teachers are not worried of being replaced because of the following reasons:

    a. They stated that the current shortage of teachers in Kenya and most of the African countries is alarming leave a lone the worry of replacing the very few who are existing.

    b. The said ICT such as computers are in most cases very few or non-existence.

    c. Few of them think that teachers can't be replaced by computers based on the unique nature of their profession citing the fact that teachers handle the emotional issues of the learners that machines can't do.

    d. They also stated the geographical and socio-economic diversity as some of the greatest hindrances to technological advancement in Kenya.

Based on various literature reviewed concerning the position of the ICT and the teacher, most of them have a common agreement that the teacher can't be replaced by technology. Instead, ICT will enhance the work of the teacher making it more efficient and more effective. Here in Kenya teachers have no fear because the implementation of the ICT is nonexistence and the whole ideology on ICT in education is more political than reality. In fact, they are wondering of how they can be replaced by what is not in existence or rather what is there in

some places lack systematic way of implementation.

Another monster in the ICT integration in our education lack of effective teacher preparation. They cited the previous in-service of teachers whereby some of them received retirement letters while they were in the training. This lack of strategic preparation of teachers is a great wastage of the scarce resources.

The teachers also mentioned that in most cases they are never involved the process of decision-making process the get themselves in the very end of the process what I normally refer to as the devil in the top-down approach to implementation process. Teachers are human beings with the greatest experience and anything that will involve them at whatever level must start with them from the beginning. In this case bottom-up approach is the most effective model to utilize.

2) Recommendation for Further Research

What will be the position and relevance of a teacher with the introduction of personalized and humanized Artificial Intelligence Reports?

6. Future Directions

From the findings of this study, the following recommendations for future progress are crucial:

a. Teachers must be involved ICT Policy making process right from the beginning of the process so that their hands on experienced may be enhanced and the right attitude be inculcated in the which they will also impart informally and positively to the learners.

b. Leaders should be critically aware that the integration of ICT into education in Kenya is critical and time bound. In fact, if any development should be realized in the near future, ICT should be taken seriously in our schools.

c. ICT integration should start from the early years of the learners so that their emotional intelligence and their IQ grows together.

d. ICT laboratories should be implemented and made functional in all levels of education right from primary schools to universities.

e. A critical empirical inquiry exploring Kenya's policy for ICT integration in basic education is needed, which can not only illuminate the educational situations and prospects in Kenya, but also illustrate global implications.

Kenya government should know that it has responsibility of making high-leveled ICT investment in basic education and expect that such investment will improve the quality of teaching, provide equal learning opportunities and prepare young people for the knowledge-based global economy in the twenty-first century.

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