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# **The Implication of Using Information Communication Technology to Present, Comment on and Discuss Student Work on the Outcome of Students Performance: Evidence from Turkey**

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## **Abstract**

Turkish Learning institutions have embraced ICT skills in teaching and learning to ensure career readiness among learners. Information Communication Technology tools provide the opportunity for educators to address problem-solving and project-based learning in both face-to-face and blended learning. However, there have been issues of educators' awareness and skills in utilizing the technology tools in the instructional processes. The purpose of the study was to establish the Outcomes of Technology Integration in Instruction by Higher Learning Institutions in Asia with a focus on Turkey. The paper was a literature based in which comprehensive review of existing literature on technology integration in Education was interrogated to come up with study themes. The empirical literature was reviewed to identify main themes and conclusion drawn based on the reviewed literatures. The study found that factors that influenced integration of ICT in the primary teacher training colleges in Turkey included: adequacy of internet connectivity, adequacy of computer hardware, adequacy of computer software, maintenance of ICT infrastructure, training of personnel in ICT, teacher workload, teacher gender, teacher age, presence of ICT policy and adequacy of fund. Additionally, lecturers were found to be aware of the relevance of Web 2.0 tools for instructional purposes. This paper concludes that integrating technology in instruction will serve as a strategy for leveraging education in Turkey if first-order barriers such as insufficient ICT infrastructure, limited ICT competency among teachers and tutors and lack of comprehensive ICT training are addressed effectively. The study recommends that, the managements of higher learning institutions in the country should provide teachers with regular trainings and seminars on how to adopt ICT in the teaching and learning process.

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**Keywords:** *Technology integration, higher learning institutions, ICT, Turkey*

## **1.1 Background to the Study**

The first computer system in Turkey was implemented in 1996 (Chan, 2017). Since then, the Government has introduced various initiatives to facilitate the greater adoption and diffusion of ICT to improve capacities in every field of business, industry, education, and life in general. These measures include the enhancement of education and training programmes, provision of an environment conducive to the development of ICT, provision of incentives for computerization and automation, and creation of venture capital funds. Currently, Turkey is in full equipment to guide the economic climate in the direction of a knowledge-based one. The Ministry has actually created three main policies for ICT in education. Whereby, the second plan emphasizes on the duty and also function of ICT in education and learning as a teaching as well as discovering tool, as part of a subject, and also as a subject by itself. In addition to making use of radio and also television as a training and also learning device, this plan emphasizes the use of the computer for accessing info, interaction, and also as a performance device. ICT as part of a subject describes using software application (e.g. AutoCAD and SCAD) in topics such as "Innovation" as well as Design Drawing. ICT as a subject describes the intro of subjects such as Information Technology as well as Computerization.

In reality, most instructors have some familiarity with computers and are able to use a variety of computer software as found in one study done by the National Education Association. It was discovered that 94% of all respondents in the survey had the ability to search the Web. However, they do not know just how to fuse computer system skills right into class direction. As a study performed by Cuban (1999) reported, out of every 10 instructors in U.S., less than two seriously are customers of computers and also other information technologies in their classrooms (several times a week); 3 to 4 are periodic individuals (around as soon as a month); and the rest (4-5 instructors out of every 10) never utilize the devices whatsoever. As another searchings for from a study on Survey of ICT use in Philippines Public Secondary school' stated that 92% of the participants who are instructors of the public college claimed that there is a demand for more information offered to them on just how to use ICT to sustain the educational program and also 96% of the participants need to establish abilities to hands on activity to show their pupils (Tinio, 2019).

The use of ICT in education improves the teaching and learning process by providing support to teachers and students and connecting them to each other and to a wide range of information in an efficient way (Kreijns, Van Acker, Vermeulen & Van Buuren, 2013). There is increasing evidence with regards to the benefits of ICT usage in education (Blackwell, Lauricella, Wartella, Robb & Schomburg, 2013 and Tondeur, Van Braak, Ertmer & Ottenbreit-Leftwich, 2017). Perrotta (2013) observes that ICT use in education assists instructors in accomplishing various tasks which include: looking for information as well as preparing sore materials; offering details (e.g utilizing power point discussions, interactive white boards as well as data projectors); collection as well as monitoring of information concerning pupils' tasks; teaming up with associates; interacting with trainees as well as parents; as well as sharing sources to the broader education and learning neighborhood.

Similarly, Williams (2008) indicate that making use of ICT that include using electronic media, net system and advanced academic innovations leads to a number of benefits: accessibility to a broader circle of finding out products; much better information and also understandings on the subject taught, by utilizing a plethora of presentation devices, hence promoting participatory rearing. Despite the tried and tested positive academic outcomes associated with making use of ICT in education and learning, teachers have actually been discovered to be show unwillingness to adopt ICT in the training as well as discovering process (Ward, 2020). Undoubtedly, while a couple of instructors seem to have no troubles in incorporating ICT in the educational procedure and have a mostly favorable point of view about the advantages of ICT in education and learning, numerous instructors do express some kind of adverse reactions (Kreijns et al, 2019). Innovation is even seen by some teachers as providing risk to their conventional method of job (Williams, 2008). Consequently, it becomes important to identify the determinants of ICT adoption in education so as to increase its use in the teaching and learning process by teachers.

The intention of an individual to make use of a particular technology has been found to be highly associated with his or her actual usage of the technology and two main determinants of usage intention as suggested by the Technology Acceptance Model (TAM), are the user's ease of use and perceived usefulness of technology (Davis, 2017). Zhao and Cziko (2018) believe that three conditions are required for educators to totally welcome ICT; the last must have the idea that they have control over the technology utilized, its performance as well as finally be assured that the medium utilized will not cause disruptions. The applicability of TAM to the education market as well as the significance of other determinants such as teacher self-efficacy and educator ICT literacy are further talked about listed below. Technology can play various instructional roles and also it is the responsibility of the instructors to determine just how to ideal usage modern technology to support pupil knowing. Having a full framework of the ICT will go worthless if it is not used to the maximum capacity. Meanwhile, Schwach (2019) and Demetriadis et. al. (2018) suggest that the effective use of technology in classroom is not just limited to the educators' perceptions on how to use innovation is class but additionally through expert growth for educators. Their study suggests that training is needed in order for instructors to be able to integrate computer system in their classroom method.

Information and Communication Technology (ICT) is recognized as an essential tool for improving the quality of education (Blackwell, Lauricella, Wartella, Robb and Schomburg, 2013). Governments throughout the world have actually accepted the fact that ICT does play a substantial duty in enhancing education and learning as well as massive investments have been made in this field given that a while Vongkulluksn, Xie & Bowman, 2018; Prasad, Lalitha & Srikar, 2015; Dalby, & Swan, 2019; Sharma, 2015 as well as Kangro as well as Kangro, 2014). Undoubtedly, the adoption as well as effective use of ICT in the teaching and finding out process is just one of the most gone over problems in the modern education policy making process (Baturay, Gökçearslan and Ke, 2017). The understanding and also skills required to welcome the development of ICT is also a concern for all education authorities worldwide (Hordern & Tatto, 2018). The significance of ICT in education has been supported by a number of researchers who found that the correct use of ICT as a facilitator in the teaching process do have favorable effects as well as assist in pupils' achieving much better outcomes (Shemroske, Burnett & Khayum, 2016; Teeroovengadum, Heeraman & Jugurnath, 2017; Ding, Ottenbreit-Leftwich, Lu & Glazewski, 2019 as well as Noor-Ul-Amin, 2013). Certainly, findings from the extant literature show that ICT



has the capability to sustain education and learning and provide chances for reliable interaction amongst educators as well as pupils across the curriculum in ways that have not been possible before (Tondeur, Aesaert, Pynoo, Braak, Fraeyman and Erstad, 2017).

Gil-Flores, Rodríguez-Santero and Torres-Gordillo (2017) points out that some factors influence the likelihood that ICT will be integrated in schools include access to ICT facilities, teachers' expertise, ICT resourcing or cost, ICT leadership and general teaching. On educators' ICT proficiency, there is expanding and also widespread awareness that the instructional and technical expertise of the teacher is absolutely critical in the training as well as discovering (Bingimlas, 2009). This has actually made federal governments in Asia, as somewhere else to stress on educator advancement as the key to effectively implementing plan and also curricular, to making use of ICT to boost training and also mentor to increasing instructional criteria. Details as well as interaction modern technology assimilation is largely a personalized method to teaching which permits pupils to function separately creating self-independence which encourages mastery of content thus assisting proficiency of discovering in institution (Ghavifekr, Razak, Ghani, Ran, Meixi, & Tengyue, 2014). Reliable introduction of ICT technology into schools is also mostly dependent upon the schedule and availability of ICT resources that is, hardware, software, and also interaction facilities (Liverpool, 2002). Bransford & Brown, (2000) in their research kept in mind that, the situation has been boosting in the last couple of years. Schools are significantly being geared up with computer systems for mentor, discovering as well as management objectives; connectivity is boosting and also the trainees are enthusiastic about using computers for finding out in spite of inadequate computers in the establishments (Lynch, & Weycker, 2018).

Abdi (2018) posit that Information and Communications Technology (ICT) has undergone innovations and transformed the society that has totally changed the way people think, work and live 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, Razak, Ghani, Ran, Meixi & Tengyue, 2014). Combined with preparing pupils for the current electronic era, teachers are viewed as the principals being used ICT in their day-to-day classrooms. This is due to the ability of ICT in giving dynamic as well as positive teaching-learning environment (Arnseth & Hatlevik, 2012). According to Zinger, Tat and also Warschauer (2018), both pupils and instructors require to find out to rely on the innovation for technical performance in addition to boost the uptake as well as lower resistance to innovation. Educators require to be confident and also experienced in operation numerous ICT devices to develop their skills on the innovation. Without educators' expertise as well as proficiency abilities of ICT assimilation which is appropriate to their demands, ICT cannot be taken into excellent use for educational delivery.

Teachers should have a range of different technical and communication skills which include using chat rooms, word processing skills, web page authoring and using various kinds of ICT tools such as File Transfer Protocol (FTP), compress and decompress of files, e.g., Win zip and so forth (Uerz, Volman & Kral, 2018). Grabe and Stoller (2013) suggest that, before attempting to address integration of technology in learning, it should be first pointed out that in the current information society a country could choose to be an e-tiger (a country determined to take radical policy decisions to be a front runner), e-floater (a country trying to keep pace with the most dynamic countries), e-follower (a country that makes the best use of what reaches it in due course), or e-skeptic (a country which does not believe in the transformation and development potential of ICT and does not take any active step). So only the first two can stay networked. The best will receive

residual e-fallout (willing in the case of e-follower and unwilling in the case of e-skeptic). ICTs are transforming schools and classrooms by bringing in new curricula based on real world problems, providing scaffolds and tools to enhance learning, giving students and teachers more opportunities for feedback and reflection, and building local and global communities that include students, teachers, parents, practicing scientists, and other interested parties (Francis, Ngugi & Kinzi, 2017).

In Saudi Arabia, Alwani and Soomro (2010) found out that some barriers that prevented effective use of IT in science teaching included the fact that poor consistency and compatibility existed between teacher training, available software, and hardware in schools. It was revealed that most efforts undertaken were to supply hardware; however, the hardware that was delivered to Saudi schools was very limited; consisting of older and limited versions. The hardware installed supported very limited software applications produced by the hardware company. Often, this software did not serve the needs of the science teachers. There were also the issues of a lack of availability of Arabic computer software for science and what was available was very expensive.

In Turkey, there have been moves to adopting technologies in many schools, more significantly in higher education 15 institutions (Turkey National ICT Policy of 2013). Several of these organizations of greater understanding have actually presented new modern technology, specifically computer science and information technology, into their curriculum. For instance, in 1995, the College of Dar-es-Salaam approved a Details and also Interaction Technology (ICT) policy strategy, which was geared towards looking after and also implementing ICT programs in improving modern technology usage at the university (Lwoga, Sife, Busagala & Chilimo, 2016). According to the university web site (<http://www.udsm.ac.tz/>), all scholastic buildings were networked and this allowed all educating staff to have accessibility to computers.

To facilitate the implementation of ICT in carrying out its primary activities of teaching, learning, research, and service to the community, the Instructional Technology Resource Unit (ITRU) was established in Turkey from a project proposal submitted to the Carnegie Corporation for funding in 2001. This plus other relocate various professors as well as institutes at the university recommend that there are efforts to put technology combination in place. However, obstacles in the use of technology, particularly in the context of college in establishing countries, have actually been recognized. As an example, Sife, Lwoga, and Sanga (2007) suggest that the ICTs have actually not penetrated to a wonderful degree in lots of higher discovering organizations, not just in Turkey however in many establishing nations, because of many socioeconomic and technological scenarios. In their write-up, they observe that in spite of the achievements that the institutions of higher education in Turkey have actually achieved, they still deal with many difficulties in carrying out the ICT assimilation process. The obstacles include lack of a system approach to knowing, awareness as well as mindsets towards ICTs, management and technological support, team development, lack of ownership, insufficient funds, and transforming college.

## **1.2 Statement of the Problem**

Despite of the efforts carried out by the Turkey government on ICT, according to Schank (2007), modern technology has had very little effect on educators' conceptions of teaching and learning. Besides that, institution authorities have spent millions of ringgit in investment to equip their centres with educational technologies such as computer lab, LCD projector, networking or other computer peripherals like printers and modems to assist teaching and preparations of teaching

materials. Furthermore, some have actually engaged professionals to provide computer system training courses to their scholastic personnel to prepare to step up as world-class university. As shown and found in a few researches pointed out below, this survey would love to consider the Turkey Higher Institution circumstance of ICT application amongst their educators. Making use of modern technology in education and learning is considered among the major trends in instructional reforms in Turkey. Integrating technology into the discovering and also teaching processes is widely viewed as a fantastic assert in those reforms. Nonetheless, the execution procedure of modern technology assimilation by colleges in Turkey has been bordered by apprehension worrying its effectiveness (Mtebe & Raphael, 2017). Obstacles to and also gaps in technology combination have actually been identified as well as gone over by scholars based upon different contexts. In the context of college in developing nations, in spite of significant development, numerous obstacles loom concerning using technology.

There is a requirement to make certain that there are efforts to check the adoption as well as the efficient use innovation to fulfill the wanted objectives. Checking the effectiveness of innovation in education is a need, offered the observations of some scholars that schools have primarily concentrated on the placement of technology in classrooms without authentic energy in the process of learning and mentor. In addition, monitoring may avoid the losing of sources invested in acquisition of that technology. In that context, the scientist has the perception that although that the Colleges in Turkey shows initiatives to take on as well as use innovation, the details supplied concerning modern technology usage does not indicate brilliant information of the nature of application of modern technology assimilation right into the college educational program or the existence of technology prepares to direct implementation. The researcher felt that there was a gap in research indicating that the University is on the right track in implementing the requirement of the Vision 2025; therefore, there was a need to conduct a study to reveal the implication of using Information Communication Technology to present, comment on and discuss student work on the outcome of students' performance: Evidence from Turkey.

### **1.3 Study Objective**

To determine the implication of using Information Communication Technology to present, comment on and discuss student work on the outcome of students' performance: Evidence from Turkey.

### **1.4 Research Questions**

How can Information Communication Technology be used to present, comment on and discuss student work, and what are the implications and impact of students' performance?

## **2.1 Theoretical Review**

### **Diffusion of Innovation Theory**

The theory was founded by Everett Rogers (1962). The theory explains the user adoption of new technologies and how, why, and at what rate new ideas and technology spread. Diffusion of Innovations Theory (DOI) is a set of generalizations regarding the typical spread of innovations and trends within a social system and therefore explains why some innovations are adopted while others are ignored at various levels of analysis. According to Rogers (2003), diffusion is the process through which a technology is interacted through specific channels with time among the participants of a social system while a technology is a suggestion, procedure, practice or gadget

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viewed as brand-new by a specific or social system of adoption. Diffusion is a social process that includes as well as occurs via the mass media, social communications and other social networks. According to this theory, the four variables that affect the adoption of an innovation consist of: the advancement itself, the communication channels used to spread out info regarding the development, time, and also finally, the nature of the society to which it is introduced.

Kaminski (2011) classifies adopters of development as: trendsetters, very early adopters, early bulk, late bulk adopters as well as laggards. The innovators are risk-takers as well as pioneers in experimenting with the technology. The early adopters train early as well as assist get the word out regarding the technology to others. The early majority are persuaded by the development. The late bulk wait to see to it that fostering of any development will only occur if it remains in their best interest. The last team is the laggards. These are individuals who are very doubtful and also withstand embracing innovations till it is absolutely necessary for them to do so. In most cases, the laggards never embrace the development.

Bateman and Snell (2004) recognize five attributes of innovations that help to discuss various rates of adoption. First, the innovation must have some relative advantage over an existing innovation or the status quo. Therefore, if a specific views that the innovation has higher advantages, after that its adoption will certainly be quick. Second of all, the technology needs to work with existing values, experiences as well as demands for possible customers. Finally, the advancement should not be also intricate. This is since new ideas that are easy to comprehend are embraced much more swiftly than those that call for brand-new skills. Furthermore, the advancement must have test capability for it to be evaluated for a restricted time without adoption. Trial ability gives people with much less uncertainty as well as provides a possibility to learn as well as practice by doing. Lastly, the technology has to provide evident outcomes. If an advancement reveals favorable results, the opportunity of its adoption is boosted.

Rogers (1975) indicates that the decision to approve a development is neither authoritative neither collective. Each member of a social system deals with 5-stage innovation-decisions procedure. The initial stage is called the understanding phase. In this phase, prospective adopters of a technology need to first find out the innovation and know just how it operates. In the second stage, the possible customers should be persuaded as to the merits of the technology prior to they adopt it. Thirdly, they need to decide to either adopt the advancement or not. The 4th phase is the execution stage where individuals place the advancement right into actual use. Lastly the individuals need to confirm that their choice to embrace the innovation was appropriate. Once these stages are achieved, the diffusion of the innovation that has been introduced takes place. The theory is relevant to the study since it explains the various stages of adoption of technology. The theory also helps the researcher understand the stages of adoption of technology in education in higher learning institutions in Turkey.

### **Technology Acceptance Theory**

Technology Acceptance Model was first put forward by Davis (1989). The Theory states that when users are presented with a new technology, a number of factors influence Organization Formal and informal linking structures communication processes environment technology support infrastructure Government regulations Technology decision making and adoption. Technology Expense Availability their choice regarding just how as well as when they will certainly utilize it and Regarded efficiency. All technology acceptance theories are made to gauge the degree of



approval as well as contentment to the individuals versus any technology or information system but from various viewpoints depending on the constructs or factors which represent their structure. Innovation Acceptance Model is an information systems theory that designs how users concern accept and make use of a technology. Regarded efficiency is defined as the degree to which an individual believes that using a particular system would certainly boost his/her task efficiency. Regarded simplicity of use (PEOU); this is the level to which a person believes that using a certain system would certainly be free from effort (Davis, 1989).

The attitude toward adoption will choose about the adopter's positive or adverse actions in the future concerning new modern technology. The design is one of the most frequently utilized versions for research study right into new information technology acceptance. Lots of other scientists have also used and suggested additions for TAM theoretical framework (Venkatesh & Davis, 2000, Chuttur, 2009). The TAM model has been used by a variety of scientists in ICT assimilation in monitoring of institutions, for example principals' attributes affecting ICT in monitoring of high schools (Edward, 2015) as well as principals' role in promoting usage as well as integration of details and also interaction technology in public secondary schools (Tanui, 2013). Dishaw and also Strong (1999) argued that TAM framework lack the task emphasis which has led to mixed findings considering that information and also communication modern technology is task oriented. These scientists therefore recommended the task-technology fit design to resolve this trouble.

## **2.2 Empirical Review**

According to Baylor and Ritchie (2020), training has an important influence on how well integration of ICT is embraced in the classroom. Kalra (2018) stress the need for ongoing support by an ICT coordinator, who is in a good position to guide and successfully integrate ICT at institutional level. The study wrapped up that a multitude of instructor instructors were discovered not to have access to computer systems to help the teaching/learning procedure and also this consequently indicate that instructor trainers did not have access to the web which implies that integration is influenced to a huge extent by inaccessibility of requisite ICT facilities. The research ended also that, there were a myriad of elements which were found to influence combination of these innovations in learning such as; poor computers in the college, lack of experience necessary for the integration of ICT in the training as well as learning process, high work load for the teacher instructors as well as lack of interest amongst teacher fitness instructors which stopped them from integrating ICT in mentor as well as discovering process. Thus, presenting an obstacle in the integration process.

Melo, Llopis, Gascó and also González (2020) observed that without guiding policy suggests that combination of ICT In educator training colleges is much better said than done. Finally, it was ended that the competence of funds was a factor that influenced combination of ICT in the process of mentor and knowing. This influenced on the stipulation of software and hardware, upkeep of the ICT facilities which makes certain that computers function effectively and also stipulation of training for the employees on just how to use ICT, therefore dealing with technophobia which creates educator instructors to fail to take up tasks that need integration of ICT. Based upon the study findings, it was recommended that Primary instructor training colleges ought to develop techniques to recognize strengths as well as weak point of various technological resources with a view to adopting ICT in the process of training and also understanding. It was also suggested that

Main instructor training colleges must offer educators with routine trainings and seminars on just how to adopt ICT in the mentor and also finding out process. The main educator training colleges ought to make certain that they provide refresher course training on normal basis.

According to Lazar (2015) with the help of brand-new modern technology comes a surge of understanding and also receiving brand-new information, especially on mobile devices. The study learnt that, today more than ever the role of instructional technology in training is of fantastic value because of the use of info and also interaction technologies. With the help of numerous applications for correspondence course, the Net, teachers, as well as trainees themselves, they see the benefit of instructional innovation. The research suggested that for a much better understanding of educational modern technology needs a set of computer technology, pedagogy, psychology, cybernetics and informatics. It was exposed that the expertise educators have suffices for a standard use education modern technology. However, academic technology is one huge system. The research study suggested that, first off, educators have a basic understanding of the use of instructional technology; it takes far more expert training through a selection of meetings, programs, specialist literature as well as seminars to get a much better expertise in making use of instructional modern technology. Based on the findings it was concluded that, with the application of academic modern technology, students can individually proceed in understanding training products, to select the pace of job, to duplicate the material that is not adequately clear, that after tests performed immediately obtain outcomes as well as track their development.

Wright, Stanford, and Beedle (2007) describe ICTs as giving opportunities for students to explore, discover, create, communicate effectively and freely with instructors, complete and receive assignments and feedback online, initiate and participate in online discussions. Both lecturers as well as pupils in the research study of discourse in this short article settle on the significant influence ICT carries pupils and also their understanding and also on teaching as well as training styles. Amongst the influences of ICT in mentor and learning reported were; learning help and resourcefulness, convenience with ICT, psychoanalytical and psychosocial help, task enabler, connection with ICT and discovering partnership. They ended that accessibility to technology alone does not assure integration as well as modern technology alone will not guarantee trainees' discovering. Thus, bearing this in mind Robinson (2007) recommends that modern technology integration be comprehended as an essential component of a much more comprehensive plan of education reform which will certainly consist of curriculum, assessment, direction as well as various other practices within the context of the entire school. It was advised that studies assessing innovation influence ought to use a mix of quantitative and also qualitative methods such that each can make up for the weak point of the other, thus provided a thorough and also reliable outcome

Leena (2018) found that several of the obstacles facing assimilation of innovation in understanding are; trainers do not know how to make use of the modern technology, some instructors turn down to integrate innovation in the process of teaching and knowing. They have not happy to customize their typical teaching methods (Lepi, 2013); the request for specific understanding is not adequately sustained by brand-new technologies or techniques. Technology is not frequently proper for all learning styles. Nonetheless, it can aid each learner to get his requirements; a range of the technologies are just initiating to enhance. (Poala, 2015), teachers fall short to analyze both the positive and also negative sides of using educational modern technology and also its effect on the procedure of training and also finding out the English language. (Lepi, 2013), many instructors do not choose to not utilize contemporary technologies for mentor and also learning. They have a

negative attitude to existing technologies. For that reason, they need an alteration in their attitude as well as desire to acquaint with the current developments to integrate contemporary technologies into their class and much better methods to teaching are required (Paohhuyla, 2015).

Espay et al (2019) located that a few of the typical challenges impeding proper assimilation of innovation in education consists of; anxiety of modern technology, concern of the unknowns with new modern technologies, terrified to try out new technologies, teachers or teachers believe they need to learn everything at the same time, the students think that an innovation train have to have all responses, some colleges have modern technology, yet it stays unused, lack of training opportunities, absence of innovation support, lack of time to participate in training to discover new modern technologies, lack of time to practice with new modern technologies, absence of time to produce lesson plans that incorporate technology, some teachers exercise a "found out vulnerability" - it's much easier to ask inquiries than to attempt to figure points out for themselves, failure to permit pupils to understand greater than the educator, some educators assume they must have the cutting edges in order to efficiently do their tasks as well as both students as well as instructors do not recognize that older modern technologies are just as effective for many tasks. The research study wrapped up that teachers deal with lots of obstacles as they attempt to integrate modern technology into their class. The study as a result suggested that it is essential that modern technology trains recognize those difficulties, understand the effects of those obstacles, and also are able to generate response to the challenges.

Zinger et al (2018) recognized 2 wide types of obstacles that prevent as well as challenge teachers' efforts in successfully integrating technical pedagogy in the class. The obstacles were categorized as first-order, or external, and also second-order, or inherent, obstacles. The research discovered that first-order obstacles are connected with schedule of sources, as an example, lack of high-speed internet access and absence of instructor PD are first-order obstacles. These barriers are more likely to exist in schools serving poorer youngsters (Warschauer et al., 2014). Worldwide, first-order obstacles associating with equipment are more than likely to be experienced in creating countries. The study also suggested that second-order barriers are complex as well as require considerable attention at the instructor training level. Second-order obstacles related to educators include teachers' beliefs regarding the function of innovation in their classroom, beliefs regarding their very own teaching, and also the willingness or ability to transform their technique. The study concluded that the difficulties that teachers as well as students experience in their class and context need to lead program layout and assistance of technology-based programs. It was suggested that, far better understanding educator technological instructional developmental trajectories might notify development efforts throughout institutions and nations.

### **3.0 Methods**

The paper was based on literature review methodology where relevant empirical literature was reviewed to identify main themes. A critical review of empirical literature was conducted to determine the implication of using Information Communication Technology to present, comment on and discuss student work on the outcome of students' performance: Evidence from Turkey.

### **4.0 Results and Discussion of Findings**

Based on the results from the reviewed literature it was revealed that the factors that influenced integration of ICT in the primary teacher training colleges included: adequacy of internet

connectivity, adequacy of computer hardware, adequacy of computer software, maintenance of ICT infrastructure, training of personnel in ICT, teacher workload, teacher gender, teacher age, presence of ICT policy and adequacy of fund. The reviewed literature also indicated that, other institution-related factors that can be connected to educational computer use are the degree of computer training and ICT-related support.

The results from the reviewed literature indicated that, training has an important influence on how well integration of ICT is embraced in the classroom. The results also indicate that there is need for ongoing support by an ICT coordinator, who is in a good position to guide and successfully integrate ICT at institutional level. , today more than ever the role of educational technology in teaching is of great importance because of the use of information and communication technologies. With the help of various applications for distance education, the Internet, teachers, and students themselves, they see the advantage of educational technology. Based on the findings of the reviewed literatures, for a better understanding of educational technology requires a set of computer science, pedagogy, psychology, cybernetics and informatics. The knowledge teachers possess is sufficient for a basic use of education technology. However, educational technology is one big system.

As per the reviewed literatures' findings, education technology has been confirmed to have great potentials that impact on teaching and learning, it motivates and engages students to learn and helps broaden their skills, helps to simulate the workplace experiences thereby preparing students for the challenges of the labor market. This revolutionaries the school environment, facilitates teaching by providing resourceful teaching aids for teachers and connects the school to the outside world. The results from the reviewed literatures also show that that technology empowers teachers and learners and promotes the growth of skills necessary for the 21st century workplace.

## **5.0 Conclusion**

There are a number of factors which are found to influence integration of these technologies in learning such as; inadequate computers in the college, lack of expertise necessary for the integration of ICT in the teaching and learning process, high work load for the teacher trainers and lack of interest among teacher trainers which prevented them from integrating ICT in teaching and learning process. The research study based upon the assessed literatures likewise ends that, in most cases there are absence of correct ICT plan for assisting the procedure of integrating ICT in the mentor and also learning process. Without leading policy suggests that combination of ICT In instructor training colleges is far better stated than done. Ultimately, it was concluded that the adequacy of funds was a variable that affected assimilation of ICT in the process of teaching and knowing. These influence on the stipulation of hardware and software, upkeep of the ICT framework which makes certain that computer systems function properly and also arrangement of training for the workers on how to use ICT, hence resolving technophobia which triggers teacher instructors to fail to use up tasks that call for assimilation of ICT.

With the application of educational innovation, trainees can independently advance in grasping mentor products, to choose the speed of job, to duplicate the material that is not adequately clear, that after tests executed promptly obtain results and also track their progression. Interactive, multimedia material offers an excellent benefit of modern knowing over standard discovering. With the application of academic innovation we get comments between the teacher and also the student. It is additionally concluded that access to technology alone does not guarantee



combination and also modern technology alone will not ensure trainees' discovering. Hence, bearing this in mind Robinson (2007) suggests that technology combination be recognized as an important element of a more extensive bundle of education reform which will certainly consist of curriculum, assessment, instruction and other methods within the context of the entire school. Educators for the most part fail to evaluate both the positive and negative sides of using instructional technology and its effect on the process of teaching as well as finding out the English language. Most teachers do not favor to not use contemporary technologies for teaching as well as knowing, they have a negative attitude to existing modern technologies. It is also ended on the basis of the examined literature that educators face several challenges as they attempt to incorporate technology into their classrooms. Finally, based on the results of the reviewed literature, the study concludes that the challenges that teachers and students experience in their classroom and context should guide program design and support of technology-based programs.

## **6.0 Recommendation**

Based on the findings of the reviewed literatures, the study recommends that, the managements of higher learning institutions in Turkey should provide teachers with regular trainings and seminars on how to adopt ICT in the teaching and learning process. In addition to this, the management of such higher learning institutions should ensure that they provide refresher training on regular basis. The study also recommends that, more studies should be done to find the right strategies to apply educational technology in teaching in the learning institutions in Turkey.

The study based on the findings of the reviewed literature recommends that, studies evaluating technology impact in learning in higher learning institutions in Turkey should employ a combination of quantitative and qualitative approaches such that each can compensate for the weakness of the other, thereby given a detailed and credible result. The study further recommends that better understanding teacher technological pedagogical developmental trajectories could inform development efforts across higher learning institutions in Turkey.

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