

## **Information and Communication Technology (ICT) in English Language Teaching**

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### **Abstract**

ICT has been a basic requirement and essential aspect of education in global context nowadays. ICT in the form of digital literacy becomes one of the skills that students must acquire besides words and numerical literacy in the 21<sup>st</sup> era of learning. This paper explores the progress of ICT integration in education, especially in English Language Teaching. It reviews several findings from empiric studies about the impact of ICT toward teaching and learning. It elaborates the chronological development of ICT in ELT starting from; CALL, TELL, LMS, and how it is integrated into Blended learning. Teachers' perspective of ICT is also discussed to see how it affects ICT practices. At last, it expounds the recent research result of the implementation of ICT in the teaching of English in Indonesia.

*Key terms: ICT, ELT, teachers' perspective, Indonesia*

### **INTRODUCTION**

The Use of technology in English language teaching started in Audio-lingual method era of language teaching in 1970's, when teachers start to use the media to teach listening in the form of cassettes and recorder, then developed into visual audio (video) as teaching resources of English, then later the innovation of computer technology as a hard-wear system. Wilkinson (2016: 257). In hands with the implementation of the communicative language teaching approach, Internet- technology is also developed and innovated to support learning. The term ICT was commonly used in early 1990's when education started to facilitate the practices of internet and computer technology into teaching and learning process in formal settings. Information and communication technology, or ICT, is defined as the activities of using technologies, such as; computer, internet, and other telecommunications media (radio, TV, Smart-phones) to communicate, create and disseminate, store and manage Information. It implies that ICT will be used, applied, and integrated into activities of working and learning based on conceptual understanding and methods of informatics (Unesco, 2002). Moreover, International ICT Literacy Panel (2002: 2) describes ICT literacy as the ability to use digital technology, communications tools, and/or networks to access, manage, integrate, evaluate, and create information in order to function in a knowledge society. In other words, when teachers and learners have the ability to authorize ICT

applications and procedures as teaching and learning tools, meaning they are *Digital Literate* or *Tech-Savvy*.

Overall, the 21<sup>st</sup> era of teaching emphasizes the ICT integration into all levels of education setting, especially in ELT. Teachers are demanded to be ICT literate in dealing with tech-savvy students. Teachers and students are encouraged to use ICT to find, create, and communicate information that includes knowledge, skills, and behaviors involving the effective use of digital devices such as smartphones, tablets, laptops and desktop PCs for purposes of communication, expression, collaboration and advocacy in during the teaching-learning process. In brief, Information Communication Technology in many forms has proven to give many advantages in English language teaching. ICT becomes a global policy of the education and give massive impact to the changes of education system in many developed countries, especially in language teaching context. Teachers, as well as students, are welcoming ICT as new ways of modern and efficient learning activity to promote better achievement in English.

#### **THE IMPACT OF ICT IN ELT**

The policy of UNESCO (2002) accounted ICT as the basic core of world's national education nowadays, alongside with reading, writing, and numeracy skills. It becomes the basic need of education in a modern society of twenty-first century era. Information and communication technology (ICT) has become, within a very short time, one of the basic building blocks of modern society. Many countries now regard understanding ICT and mastering the basic skills and concepts of ICT as part of the core of education, alongside reading, writing, and numeracy. This is in line with Parker (2010) who questions about the ideal teaching framework in 21<sup>st</sup>-century era, how learning should be like, what literacy is, and what knowledge is. She proposed that teachers should equip themselves with the ability of teaching savvy-students, update the technology issues, make use of the technology in teaching, and more importantly perceive the benefits of technology and apply it to the classroom to increase students' achievements and make them ready in facing the multimedia technological expansion.

Multimedia and technology are some of the components of ICT development in English language teaching. Using multimedia or technology has shown a positive impact on language classrooms. It provides more information and teaching materials resources, enhances

students' motivation in learning, and maintain students' communicative competence. It also fully improves students thinking and practical language skills (reading, writing, listening, and speaking) and helps teachers to teach efficiently (Pun, 2013). Shyamlee and Phill (2012) analysed the necessity of multimedia technology in language teaching and brought up the problem faced in using technology in ELT. They concluded that technology in ELT able to cultivate students' interest in the study, promote students communication capacity, widen students' knowledge to gain insightful understanding to western culture, improve teaching effect, improve interaction among students and teacher, create a context for language teaching, and provide flexibility to course content. Yet, some problems still arouse in the use of multimedia technology. The technology use is becoming the target knowledge instead of tool or media in teaching the content. The speaking communication is decreasing if the learning activity does not adopt blended learning. The technology sometimes gives restriction to students' thinking potential and the multimedia technology cannot replace the role of a teacher as the main instructional material. They also proposed that teacher should be ICT literate and supported by good infrastructure from the institutions and society. In addition, ICT also makes collaborative learning happened among countries. Anikina et al. (2015) found that online Tele-collaboration in EFL classes between America and Russia university students foster students' International communication skill, motivate language learning, enrich English language skills, and increase students' intercultural awareness.

A previous study on the use of ICT in English Foreign Language teaching exploring university students' frequency, purpose, perception, and expectation toward ICT. Most of the students, from five different English Classes in one university, show a positive attitude toward ICT and expect frequent use of ICT in the classroom. Conversely, the finding reveals that students spent more time employing ICT for general purpose than for language learning purpose. This study suggests that teacher should provide proper English learning resources from the internet so that students can maximize their language learning. Then, students need to be equipped with digital literacy skills that lead them to use the internet technology wisely and beneficially (Tri & Nguyen, 2013). Furthermore, Technology creates paperless teaching and learning environment. Study showed that technology contributes to the modernization and enhancement of the efficiency of educational process, especially the use of electronic teaching materials gives more advantages than traditional text-books since it allows revealing the educational potential of information technologies, such as hypertext and other multimedia

tools (Moodle and Blogger) (Shishkovskaya, Sokolova, and Chernaya, 2015).

### **THE DEVELOPMENT OF ICT IN ELT**

ICT has been integrated into ELT for the last three decades. Many researches explored the impact of ICT in language teaching, the implementation, and the way it embraces various platforms, materials, and approaches for language teaching and learning in the modern era. It

started with the presence of CALL (Computer Assisted Language Learning) (Levy, 1997; Beatty, 2010; Davies et al., 2013 in Motteram, 2013). As an integral component of learning program, CALL provides teachers the lenient access to select a purpose-made programme, application, or website for teaching skills and content subjects. Teachers can also construct an activity in which learners read, respond, or interact with other learners using materials on the Internet. With CALL, a school may develop a set of learning activities or lists of resources for learners to use outside of class for self-directed learning activities. CALL supports second language learning theories, provide digital learning tools and activities for students and accommodate digital literacy for language classrooms (Wilkinson, 2016) and providing one PC/laptop per student helps them improve learning (Tallvid, 2016).

Further development of CALL is the emerging of MALL. Research on multimedia players application in Korea and research on the implementation of iPods in Duke University (Kim, 2004; Belanger, 2005; in Chinnery 2006) initiated the investigation of the development of MALL in the language teaching as the shifting of technology from CALL to TELL and then flourish of cell-phones and mobile electronica gadget that generate further research on the application of mobile phones for language teaching. They argued that MALL gives more convenience and portability for the students due to the massive ownership of mobile phones. Hong et al. (2016) also confirm that the presence of RALL (Robot-Assisted Language Learning) improves students' motivation, attention, confidence, acceptance of the teaching materials, satisfaction in the learning process, as well as their language ability.

A new term TELL (Technology-Enhanced Language Learners) arises in the use of ICT for the sake of learning the language. (Motteram, 2013). There have been many researches on TELL implementation in English Foreign Language classrooms. Most of the study concludes that applying integrating ICT helps students improve their independent learning as well as their collaborative skills. It surely gives many advantages to the teaching and learning of English as second/foreign language and become the cultural artefact of language learning in 21<sup>st</sup>-century era. TELL suits the constructivist learning theory by accommodating template-based learning and knowledge construction and become new media for enhancing language learning process in the integrated multimodal learning environment (Ruschoof and Ritter, 2001). Yang and Chen (2007) explored the use of TELL in AJET (Advanced Joint English Teaching ) project in Taiwan for senior high school students 10th graders and describe the use of internet-based teaching activities; group emailing, web-based course, email writing program, English homepage design, video conferencing, and chat room discussion. The result shows that experience new technology gives students enjoyment in learning as well as an

opportunity for cultural exchange. Most of the students have a positive attitude toward the project. They also get many benefits; such as experience new technology, develop their computer and English skills, broaden their learning perspectives, and get learning enjoyment.

Additionally, Boonyopakorn (2016) studied showed how TELL become Online social media that give impacts to EFL learners in improving their English communication. The Internet has been an efficient tool to enhance students' language acquisition. Kranthi (2017) concluded that TELL gives some advantages like provide more flexibility and cater more learning style of language learners compared to traditional teaching. It gives in-depth learning experience alongside with textbook. TELL promotes students centred environment and gives an extra time for learning outside the classroom. Technology creates paperless teaching and learning environment. Study showed that technology contributes to the modernization and enhancement of the efficiency of educational process, especially the use of electronic teaching materials gives more advantages than traditional text books since it allows revealing the educational potential of information technologies, such as hypertext and other multimedia tools (Moodle and Blogger) (Shishkovskaya, Sokolova, and Chernaya, 2015).

The initial term of learning management system formed by web-based or virtual learning environment, some educators have also known it as a learning platform. LMS is another innovation and development of technology application that is used in ELT contexts. There are many variations of online learning platform or web-based learning environment, such as; G-Drive, Moodle, Padlet, Blackboard, Edmodo, and the newest one Canvas. The emerges of electronic and online learning platform as learning management system has replaced the role of traditional face-face classroom learning activities. (Averkieva, Chayka, & Glushkov, 2015; Fix, Kolesnikov, & Petrova, 2015; Sokolova, Rostovtseva, & Wasilewski, 2015). Mullama (2010), claimed that Blackboard as online learning platform provides ICT solutions in giving supports to English classroom activities, group-work, pair work assignment, individual works, that enforcing student-centred learning and the principles of students autonomy.

Another experimental study also showed the effectiveness of web 2.0 tools such as; Slide share, You tube, Podcast, Flickr, and Picasa in increasing students' English proficiency in higher education settings, (Shishkovskaya, Bakalo, and Grigoryev 2015). Cavus, et al (2006) reveals that collaborative learning tools can result in successful language learning activity since each web-tool (GrewPtool) supported the defiance of the other web-tool (Moodle) which was lack of interaction feature that needed in a 'real' classroom environment. Good collaboration tools can be used satisfactorily for the teaching of

programming languages in a web-based environment. Rymanova et al (2015) found that LMS Moodle (Modular Object-Oriented Developmental Learning Environment) use in university- level had a positive effect to students' English achievement although they complained about the extra work for teachers and extra burden for students. Additional study of the LMS application named MEC (Macmillian English Campus), applied in English foreign language class in Turkey, statistical analysis shows that MEC has an effect on students achievement, although it might not be the only factor since students learn more due to extra time they have through online exposure. (Bilgin, 2013).

Furthermore, the ICT is implemented in ELT through blended learning strategy; the combination of the traditional classroom setting (face to face) and E-learning (online). Some research findings concluded that Blended learning has some advantages in ELT such as: providing extra opportunities and flexibility for learning outside the class, developing students' autonomous and collaborative learning. (Sokol, Fleet, and Bilgin in Tomlinson and Whittaker, 2013). Beside that, it can facilitate all learners' types, (Akkonyulu & Soylu, 2008), enhance learning efficiency (Mathukin & Zhitkova, 2015) and increase students' motivation and communication skills, (Buran & Evseeva, 2015).

It can be concluded, that ICT has great role and impact of current language teaching. ICT has been a basic requirement and essential aspect of education in global context nowadays. For that reason, teachers as the front-liners in education need to master digital literacy; having the ability to use ICT to find, create, and communicate information, requiring both cognitive and technical skills (connect.ala.org). As technology, promptly changing English teachers should also be creative in producing and innovating new techniques and methods of teaching that could maximize the use of technology that fulfill students need in current time. Technology had been the medium that supports the education paradigm changes from traditional classes to modern technology-based learning. ICT interwoven training has proven to be effective in increasing teachers' positive attitude toward integrating ICT in EFL classes.

#### **TEACHERS' PERSPECTIVES ON ICT IN ELT**

Teachers have the important role in integrating ICT in a language classroom since they are the main actors in ICT implementation. The success of ICT policy in ELT, need to consider teachers perspectives on the use of practices of ICT in the formal education settings. Starting in 2000's there had been many studies about teachers perspective on ICT integration toward education in some countries Gobbo and Girardi (2001). Most of the studies investigated secondary school teachers' perspectives in cooperating ICT in their language



classrooms. The studies revealed that mostly teachers have a positive attitude of ICT adoption in English language teaching, although it is not balanced with the real ICT practices, which tend to be infrequent due to teachers low capacity of ICT implementation. Most the teachers believe that ICT give many advantages in language teaching, but they do not really integrate ICT in class. (Son et al, 2009; Edwards,2010; Hashemi, 2013; Al Munawarah,2014; Abukhatala, 2016; Febriani & Hafifah, 2016; Mafuraga, 2017). Some of the research also tried to figure out the perspective of pre-service teachers, since most of the pre-service teachers have ICT in ELT subject that prepare them to be digital literate teachers in real education setting in secondary schools. (Goktas et al, 2008; Kalogiannakis, 2010; Hismanoglu 2012; Deryakulu, 2017). Additionally, some studies reveal that besides teachers' belief and attitude, teachers' knowledge about a technology play crucial role in determining teachers attitude in incorporating technology in their teaching ( Liu, 2010; Abbit, 2011; Kazu & Erten, 2013; Keser et al, 2015).

ICT integration was also done at primary level, most of the teachers in primary level believe, ICT gives better strategy by proving more interactive technology multimedia in that suitable with the characteristic of young leaners. (Loveless, 2003; Levin and Wadmany, 2006; Cernochova, 2010; Safitry, et al, 2015). However, there is still limited study on teachers perspective on ICT and other online learning application such as social media and other technology-assisted language learning (TELL) at higher education levels. (Dashtestani, 2014; Silviaynti, 2014; Inayati, 2014). It is assumed that teachers in higher education setting have better ICT literacy than secondary school teachers and elementary school teachers.

Other researchers also investigated the impact and result of teachers' professional development in ICT and TPACK. They found that the program helped the teacher to improve their technological skills as well as their understanding of ICT for enhancing education quality. (Goktas et al, 2008; Kalogiannakis, 2010; Zhao et al, 2016; Olofsson, 2017). Specific training is also done in comparing teachers attitude before and after ICT training for English Language Teaching. (Hismanoglu, 2012). Teachers' perspective of ICT studies were also done in the context of subject teaching beside English, like science and math English (Hennesy, Ruthven and Brindley 2002; Barak 2006; Kafyulilo and Keengwe 2014).

Based on the previous studies done by a number of researches (Hu & Webb, 2009' Hashemi, 2013; Salleh & Laxman, 2014; Drossel, 2017), there are internal and external factors that influence the ICT integration in language teaching. The internal factors are; personal factor from teacher attitude and collaboration in teaching. The external factors are a



social factor, institutional factor, and technological factor. Both factors become crucial aspects that affect teachers' attitude, belief, and practices of ICT in their classroom.

In summary, ICT has been used in many education levels and subjects in many countries. Most teachers have shown a positive attitude and strong belief toward the advantages of ICT integration in ELT classroom settings. However, some problems are still existed in the execution due to the ICT facility, training, technical support provided by the educational institution, and teachers low self-efficacy to the ICT itself. Some conflicts might happen in the implementation of ICT integration related to the policy of education and curriculum on ICT adoption. Most of the finding shows a positive perspective of teachers in the integration of ICT for teaching and learning. Some variables of teachers perspectives such as; institutional, social, facility, belief, understanding, attitude, and practices of ICT were explored. Most of the study recommends the use of ICT in language teaching and learning context and promotes ICT training for teachers to increase their professional development, especially in preparing teachers in teaching in the twenty-first century of digital literacy

#### **ICT IN ELT (INDONESIAN CONTEXT)**

Indonesian education policy has put digital literacy as one of the important skills, students and teachers should have in globalization era of technology. As stated in the latest document of the P21 framework that accounted 4C: communication, collaborative, critical thinking, and creativity, students must fulfil all those skills in current education settings. ([www.P21.org/framework](http://www.P21.org/framework)). ICT competency is one of the main aspects of Communication skills and has become the goals and learning outcomes of the Indonesian national curriculum.

Computers and internet technology have become daily normal use in students and teachers activity because the internet and social media could easily be access by the citizens in a very reasonable prize. Survey result of Technology Development; Internet users in Indonesia is 20.4 %, which is 53,236,719 people from the population of 260,581,100 people. ([http://www.internetlivestats.com\(2016\)](http://www.internetlivestats.com(2016))). There are no constrains of ICT implementation in the form of facility and policy support in Indonesia, except the teachers and students attitude toward ICT integration into language teaching.

A study on teachers' perspectives of technology integration in English Foreign language teaching found that most of English teachers in Indonesia believe the importance and the usefulness of technology for teaching all skills of English, but it contradicts with their teaching practices in class. It reveals that most teachers do not have the ICT pedagogy that they can implement in their classroom although they have a positive attitude toward the

development of technology (ICT) for language learning. (Innayati, 2014; Silviyanti et al, 2014; Febriani & Hafifah, 2017). However, some research found that there are several problems encounter the ICT integration in EFL teaching in Indonesia context because of lack of technical supports from the schools and teachers are mostly digital immigrants, who are not proficient in technological knowledge. (Harendita, 2013; Al Munawarah & Sophia, 2014; Safitry et al, 2015)

Previously Son, et al. (2009) introduced CALL in Indonesia and did a survey to 73 In-service EFL teachers who attend the workshop of GloCALL (Globalization and localization in Computer Assisted Language Learning) Conference 2008, in Jakarta and Yogyakarta. The results showed that teachers' computer literacy was adequate and they still had some problems related to the accessibility and ownership of the computer. In line with Harendita (2013) that found most Indonesian teachers are digital immigrants so that ICT expectation often conflicted with the pedagogical issue in the classroom. Another study confirms the ICT implementation in some universities; Universitas Gajah Mada, UNISSULA Semarang, MIKOM Yogyakarta, ITB, Parahyangan, Brawijaya, Soegijapranata Catholic university in the form of E-learning. However, students still have problems in independence level (65.52%), connection problem (58.62%), and difficulties in understanding the material (48.28%). (Kusumo 2012). Further training and a new policy of ICT integration in English language teaching recommended by Inayati (2014) based on her findings of teachers' profile, teachers' familiarity and frequency of use of social media, and teachers' attitude toward the use of social media. Most of the teachers show a positive attitude and prove that social media promotes blended learning and better integration of ICT in ELT context.

A small, but in-depth research done by Al Munawarah (2014) reveals vocational teachers have positive perception and three benefits of using ICT for teaching; helping teachers to conduct interesting and enjoyable learning activities, promoting learners' autonomy, and motivating students learning. Since the subject of the study only limited to four teachers, the result cannot give thorough mapping of teachers' condition of ICT integration in ELT. Using closed-ended questionnaire based on TAM (Technology Acceptance Model) and interview. Silviyanti (2014) found that teachers have high motivation in using ICT since they believe that ICT is important in ELT to create enjoyable, interesting, and effective learning among other constructive outcomes. Nevertheless, some teachers have low motivation since they do not use ICT, although they aware the importance of ICT for learning. However, the sample was too small and not representative, taken from 42 EFL teachers from 2 states universities in Indonesia and only focus on teachers' belief

and motivation. A similar survey was done by Safitry et al (2015), in elementary schools teachers with more than ten years teaching experiences. TIQ (Technology Implementation Questionnaire) was adopted as the research instrument. Teachers have a positive perspective towards applying ICT in their classroom, although they lack technical support from the schools and lack of ICT proficiency.

Finally, more researches on ICT need to be conducted in Indonesian education setting since it is one of the must attain skills in preparing education in 21<sup>st</sup> -century era. The globalization technology that influences education aspect is rapidly changing, therefore educators and practitioners need to cope with the demand of current innovation of technology in the education. For that reason, Indonesia needs to integrate technology into the education curriculum to produce competitive graduates that would have the global capacity digital literacy. We need to know the readiness and willingness of teachers as well as students in our country toward digital literacy and capability of empowering ICT in their daily activities. Nowadays, many schools and educational institutions cater Internet and technology facilities to support the improvement of teaching and learning quality. Started in the 1990's, teachers and students of English classrooms are mostly familiar with the use of ICT. They are mostly digital natives and have great access to technology nowadays. Moreover, Online web-based learning with LMS in ICT integration needs to be developed as an alternative solutions to solve distance learning problems and gaps of education quality throughout different islands of Indonesia. Technology will help teachers to communicate and spread information and knowledge equally and extensively. The online course breaks the obstacles of time, distance, and equity of education quality standard that varies in Indonesia. Thus, further research on the spread of ICT competency in Indonesian education framework needs to be carried on.

## **CONCLUSION**

The above research results show how ICT has great role and impact toward current language teaching. ICT has been the basic requirement and essential aspect of education in global context nowadays. ICT in the form of digital literacy becomes one of the skills that students must acquire beside words and numerical literacy in the 21<sup>st</sup> era of learning. From the previous review and analysis based on the development of ICT in ELT and the practices of ICT integration through CALL, TELL, Blended Learning, and LMS, we can summarize some advantages and disadvantages of ICT implementation in modern English Language Teaching setting. ICT develops students and teachers digital literacy skills and preparing them to face the education framework of 21<sup>st</sup> century teaching and learning. It caters more

teaching-learning material resources for teachers and students as well as enhances students' motivation, attention, confidence, and enjoyment in learning. ICT improves students' critical thinking and performances of language skills. ICT accommodates collaborative and autonomous learning; broaden students learning perspectives and gives flexibility and portability in teaching and learning activity. The most important thing, it increases teachers and students positive attitude to technology application and prepares them in facing the digital era of education.

On the other hand, ICT integration depends on the Teachers capacity and attitude toward ICT in ELT. More training on ICT application need to be conducted in teachers' professional development program to increase teachers ICT literacy and technological-pedagogical knowledge. Time allocation is usually problematic since teachers and students are demanded to work in extra hours in preparation and evaluation using ICT during the teaching-learning process. Educational policy, facility, infrastructures, technological support of ICT have to be fulfilled and prepared very well to enable teachers and students to access ICT to enhance learning. At last, the Information communication technology will keep innovating and evolving, therefore the language teaching and learning principles should also be developed and innovated to produce better education quality in general in supporting the success of P21 education framework as well as improving the quality of teaching methodologies and practices of ICT integration in English language teaching in particular.

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