

Integrating Technology in English Language Teaching: Global Experiences and Lessons for Indonesia

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Abstract

The integration of Information and Communication Technology (ICT) in English language educational settings often improves teaching and learning (Tinio, 2016). English language teaching and technology have been seen as interesting new research era. This article reviewed studies on ICT integration in teaching from ten different countries. The aim of this review is to analyze cross cultural findings in order to determine what factors might be best applied to the Indonesia situation to improve English language learning and teaching as well as types of technology might be best adopted for ELT improvement. The articles for the study were found through internet search engine, Google scholar and ERIC in the area of technology integration and technology tools in English language teaching. Thus, the data taken is carefully investigated using inclusion and exclusion criteria. The result of analysis showed that the integration of technology in teaching can improve the experience for students and teachers and improve learning for students.

Keywords: ICT, integration, English language teaching, global experiences, factors affecting learning, cross cultural findings

1. Introduction

While teachers still have the option not to integrate technology in their teaching, for those teachers who do opt to use technology the experience of teaching can be improved and student learning can increase. Considering the growing needs on ICT use for teaching, this paper will focus on describing some facts taken from research results around the world on factors affecting ICT integration in English language teaching and kind of technology tools used for teaching. The analysis will thus provide a road map for teachers in Indonesia to use ICT in their teaching in order to improve student outcomes.

The global economy affects mostly all sides of our life including our surrounding, nature, and education institution, including the adoption of technology to run it. The tools of technology, such as laptop, computer, web 2.0 (blog, youtube, wiki), software and hardware applications have been promoted as great tools for the changing and reform of education. Yet, it is not an easy way to engage it into reality as assumed by the experience of the educational agents around the world. Promoting the technology use in diverse way for the purpose educational platforms needs longer time as it is not automatic process. It needs more patience to put it into suitability form for educational benefit as it involves many factors and consideration including curriculum and pedagogy, the readiness of institution, the competence of teachers, financial side, and many others things that need to be considered.

Some studies on information and communication technology integration have been done regarding various aspects such as adoption, challenge in integrating it into teaching learning process, and kind of technology tools used for teaching. A study by Machmud (2011) on technology integration in decentralized curriculum setting in Gorontalo, Indonesia, for instance, found that technology integration in a decentralized curriculum setting needs to be supported. This statement was also stated by Cahyani and Cahyono (2013) who studied Indonesian teachers' attitudes toward the use of technology. In addition, Mothibi (2015) undertook a meta-analysis study of relationship between E-learning and student's academic achievement.

The above subject showed technology imperative in education sector cannot be putting aside and it is generally

faced by most countries in the world (Jones, 2014). The potential use of ICT assimilation within teaching and learning has created new challenges in teaching professional development. In an effort to fulfill the above objective, factors affecting the use of technology for English language teaching use should be taken as consideration to take the better step for better educational improvement.

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For that reason, I try to present data taken from several research findings on what factors affect technology integration for English language teaching from ten different countries; Turkey, Saudi Arabia, Malaysia, Bangladesh, Iran, England, Columbia, Indonesia, USA, Australia, and type of technology tools used for teaching. Also, the study will analyze cross cultural findings in order to determine what factors might be best applied to the Indonesia situation to improve learning and teaching, to identify general types of technology tools used for teaching English, and its potential adaptive type to adopt for teaching English at my local context, Parepare, Indonesia.

2. Method

The articles for the study were found through internet search engine, Google scholar and ERIC in the area of technology integration and technology tools in English language teaching. Thus, the searching from various literatures was selected to fulfill the objective of the paper using inclusion and exclusion criteria. The inclusion criteria for articles are stated as follows:

- 1) It is empirical based research.
- 2) Publication year is within 2012 _2017.
- 3) The research can represent the voice from different countries.
- 4) Keyword for first theme is “factors affecting technology integration in language teaching”.
- 5) Keyword for 2nd theme is “types of technology tools used in language teaching”
- 6) The articles resulted will be examined and categorized to subtheme to ease the findings.
- 7) The setting is at education in the area of English language teaching.

The articles on the area of technology integration and types of technology tools which emerged during the searching but not including into the criteria above will be excluded, for instance, the study on teacher or students' perception (Bas, et.al (2016); Lim & Chai, (2008); Sang, et.al (2010) will be categorized as excluded studies.

3. The Article Reviews

Searching potential articles to be included in this study was not easy to do even using the keywords. The keyword is not a guarantee that the articles will meet the criteria of the study. Therefore, the articles emerged were selected carefully to meet the chosen criteria. The potential articles emerged in search engine selection then passed the skimming process by reading the titles and the abstract. Next, potentially relevant studies were downloaded and read for closer examination. The articles were thus sorted for contributing data on this study using the chosen criteria. Those articles found in terms of factors affecting technology integration in language teaching contributed 5 (five) themes namely teachers' competence (individual), accessibility, lack of training (professional development), school necessity (institutional), and resources.

Regarding types of technology tools used in language teaching, numbers of subthemes from potential articles were counted as tools of technology commonly applied in language teaching namely social media e.g. Facebook, WhatsApp, mobile learning, websites, blogging, learning software, Edmodo, and YouTube. What this article covered is the numerous factors affecting technology integration in language teaching from different countries and various technology tools for language teaching which will be a counted lesson for my country in educational setting improvement.

3.1 Factors Affecting Technology Integration in English Language Teaching

In this part, the reviewed articles show the description of the articles covered challenges, and barriers faced by different countries in integrating technology for their English language pedagogy instruction. The first review article was taken from Turkey by Aslan & Zhu (2016). They did research on influencing factors and integration of ICT into teaching practices of pre-service and starting teachers in Turkey. Their study aimed to investigate

teachers' perception for ICT-related variables such as their attitude towards ICT, pedagogical knowledge, and anxiety in using ICT. The results found that perceived competence in ICT integration, computer anxiety, perceived ICT competence and pedagogical knowledge variables significantly presumed the integration of ICT into teachers' teaching practice. Thus the study suggested there should be training for teachers and their professional development to enable the use of ICT more confidently in education.

Another factor in technology integration in Turkey is the school necessity of ICT use as investigated by Akbiyik, and Seferoglu (2012). They examined how ICT lesson is taught through survey questionnaire. The results showed that in terms of teaching method, demonstration and practice as well as question and answer were being the most common method the teachers use in teaching. Whilst regarding teaching materials, they mostly used textbooks instead of using materials from the internet.

Interesting view on the important role of ICT as many countries invested massively in the ICT area for education comes from a neighboring country of Turkey, Saudi Arabia. This study had similar facts on factors influencing the use of technology in teaching with Turkey that comes from the agent of education. Albugarni and Ahmed (2015) investigated success factors for ICT implementation in Saudi Arabia from the perspective of ICT directors, head teachers, teachers and students. Their research findings taken from qualitative data showed that ICT was considered important in improving performance, collaboration, learning experience and learning outcomes. Yet some challenges still happened in applying this technology use, such as lack of space, resources, maintenance, ICT skills along with lack of ICT training and a lack of clear policies on ICT.

Almutlaq, Dimitriadi, and McCrindle (2017) reinforced the essentiality of understanding factors affecting the technology integration for higher education as being important to consider in professional development programs in Saudi Arabia. Their findings indicated significant challenges in integrating technology for higher education covered time and workload, relevant program, opportunity to practice the use of technology, accessibility, and awareness. This means that Al Mutlaq's finding in Saudi Arabia's setting has a bit of different view with Turkey.

Investigating challenges in integrating technology for teaching is not only from the view of education agent as stated previously. Interesting research finding was revealed from the area of South Asia, Bangladesh, which is ICT also being a big issue in this developing country. Research on ICT in language and literacy was investigated by Anwaruddin (2015). His study viewed technology integration from different sides as he did a critical review on why integration of ICT into language and literacy curricula is important from the perspective of multi literacy pedagogy and the socio cultural theories of learning. He gave interesting arguments that information communication technology does not automatically guarantee the improvement of students' learning. However, integrating critical pedagogy into the programs of teachers' professional development may assist teachers using ICT into freeways.

A thoughtful research on factors affecting technology integration comes from neighboring continent of Asia, Middle East country, Iran. Dastjerdi, (2016), an Iranian researcher explored other factors affecting technology integration in language teaching than educational agent; ICT usefulness among distance education students based on technology acceptance model in Iran. His research result showed perceived usefulness has a direct effect on the decision to use technologies, while the attitude toward technologies affected the decision to use technologies. This means that technology will be considered to be part of teaching if it is easy to use and useful for teachers.

If in Iran, the researcher talked about the perceived usefulness of technology integration in teaching, it is slightly diverse on perspective in the USA. A study by Hur, Shannon, & Wolf (2016) on internal and external factors affecting technology integration in classroom showed perceived benefits and appropriate budget gave a direct impact on the way teacher use technology. This is implied that the skillful agent of education in technology does not a guarantee of technology assimilation in pedagogy. In other side of America, North America; Mirriahi, Vaid, & Burns (2015) found perceived usefulness and ease of use were the factors influence the teachers in technology use. This study suggested strategies should be done in promoting awareness of the technology-enabled learning.

The perceived usefulness and the ease of use seems dominated the reason of incorporating technology in teaching in USA, however, it is not similar in Australia. An interesting study was investigated by Gregory & Lodge (2015) on barriers in technology integration in higher education. They revealed that academic workload is being silent barrier in implementing technology during the teaching learning process. It is clearly stated here that teachers' level factor or ecosystem level factor is not the dominated reasons but workload may be another trigger for the technology integration in teaching.

The above countries faced challenges in incorporating technology merely from one or two factors, but it is completely different in Asian countries. Malaysia, for instance, faced more complicated challenges in

incorporating technology for pedagogical practice. The challenge in integrating technology is investigated by Ghavifekr, Kunjappan, Ramasamy (2016). They analyzed challenges faced by teachers in using ICT tool in classrooms by distributing questionnaires to 100 secondary teachers. Their findings showed that limited accessibility and network connection, limited technical support, lack of effective training, limited time, and lack of teachers' competency are the main key issues in adopting technology into pedagogical practices. This means that there are 3 main factors; teacher, ecosystem, administrative. These factors should be completed each other to support the successful of technology integration in teaching.

Another Asian country that met complex challenge is Indonesia. Indonesia consists of 34 provinces, and one of them is Gorontalo. A study on ICT and curriculum was done by Machmud (2011). She explored the issue and challenges faced by teachers in Gorontalo regarding teaching English as foreign language and ICT integration in their English foreign language instruction. Her qualitative study indicated that the accessibility of technology in teaching setting is one of the challenges in integrating technology in English Foreign Language (EFL) instruction. Also, teachers' competence in using ICT for teaching learning process was another challenge faced by education stakeholders in Gorontalo, Indonesia. Therefore the study recommended training for technical use of ICT in order to help teachers implementing technology into their teaching instruction. Frankly said, it is a comprehensive study however it is only on one part in Indonesia, and it needs more similar comprehensive study on technology integration for teaching in all part of Indonesia including my local area, Parepare, South Sulawesi. The table below shows diverse factors in integrating technology in different countries.

Table 1. Factors affecting technology integration in teaching

No	Factors affecting technology integration	Countries
1	Teachers' competence	Turkey, Indonesia, Saudi Arabia,
2	Accessibility	Saudi, Malaysia, Indonesia
3	Lack of training on technology use	Saudi Arabia, Bangladesh, Malaysia
4	School Necessity	Iran
5	Space an resources	Saudi Arabia
6	Budget	United State of America
7	Perceived usefulness	North America
8	Academic workload	Australia

The table showed teachers' competence on technology will contribute to the integration of technology in their teaching for some countries (Saudi, Turkey, Indonesia), but it is not being the main factor in other countries (Iran). It indicates that the success and the barrier in integrating technology into teaching may depend on many factors based on the country's circumstance. Nevertheless, they illustrated differences on school necessity on ICT use.

3.2 Kinds of Technology Used for Teaching

There are many kinds of technologies which can be used for teaching instruction. Some research on the use of various technologies in educational purpose will be described below to show how diverse technologies may affect educational practice around the world. One example is taken from the work of Won (2015) who investigated social media as connected to learning technology for undergraduate students at Virginia Polytechnic Institute, USA. In this case Won focused her investigation on Facebook. Facebook is a form of social media that allow individuals to share personal information or join groups with one another, maintain or make relationship with others. The results of the study showed that these undergraduate students were open and willing to using social media in academic contexts. Utilizing Facebook as media to learn was also done by Rodliyah (2016) who use Facebook closed group to improve the writing of EFL students in Bandung, Indonesia. Her findings showed that the students responded positively in this facebook closed group and perceived improvement in their writing within four months treatment especially on their vocabulary and grammar. In this study, E-dialogue journal writing was being the method through facebook closed group.

Facebook is not the only form of social media utilized for interactive language learning. Edmodo can also be categorized as social media though this form is more dedicated to the education platform. Edmodo is categorized as education oriented social networking site aiming for facilitating interaction between teacher and students. It is a free website and secured for teachers and students who register. A study on Edmodo in the education setting has been done by Okumura (2016), and Khongchan (2013). They studied Edmodo as one type of web 2.0 technology for teaching. Khongjian, for instance, investigated how teachers applied Edmodo and Google docs in

class as an online classroom community in Thailand. His findings showed that Edmodo and Google docs are good to be used but prior workshop will be better to give in introducing how to use them in class. Furthermore, Okumura did research on Edmodo for English language teaching in Japanese university setting. His research result demonstrated positive aspects of Edmodo, including students developing their communication network with other students, enhancing students' communicative competence, and enabling the teacher to acknowledge authentic chance to use English with technology.

Another motivating view on using technology tool for educational purposes is studied by Susilo (2014), Plana, et.al (2013), Jafari & Chalak (2016). Their researches were about Whatsapp for teaching. Whatsapp is a mobile instant messaging application for smartphones. This application allows its user to send and receive message, images, or video to others as long as they have internet connection. Jafari & Chalak (2016), for instance, emphasized their research on Whatsapp application as additional material for teaching vocabulary in English as foreign language teaching. They said that Whatsapp can be a miniature classroom by making mini class discussion in a chat group.

Having discussed social media as part of technology used for educational context, I move to other kind of technology tool as assisted teaching device in teaching namely mobile learning. Noriega (2016) conducted a study on the use of mobile learning, in this case Podcast to improve writing in English as Second Language in Columbia. Podcasting is a device to listen or watch an audio or video broadcast. The broadcast is published on the internet and downloaded to a desktop or laptop, and then it is copied o the device. The user can choose when, where, and how to watch or listen it. Noriega's study implies that mobile technology could be an alternative source for teaching writing by incorporating it into traditional using genre approach. Her findings indicated that mobile learning brought positive effects for students in producing the quality of a text and also making the students more independent and being motivated in learning.

Websites can be good sources as well to vary the use of media in teaching as stated by Ciaffaroni (2006). Web-based learning is one way to learn using web-based technologies or tools for learning or simply said it is a way to interact with teachers, other students, or learning material using computer and internet. Ciaffaroni (2006) did an evaluation on several websites for learning English including ESL Café, English-Zone, and LearnEnglish using particular measurement. She said that the websites available seems not having high potential learning, but they can be attractive sources for English learners as they provide interesting ways to keep the learner learning via games or interesting activities. Other research on websites for learning was conducted by Suarcaya (2011) who conducted a research on EFL listening class using web-based audio materials. His study revealed that the students enjoyed and interested in online activity during listening class.

Moving further on types of technology tool use for interactive learning is blogging. Blog is a website where the author can put links, photos, video, and texts regularly and the reader can add comment or like to the blog site. It can be made for educational purposes; classes, schools, individual. An interesting study on using blogging as part of ICT use in university was done by Muwanga-Zake, Parkes, & Gregory (2010). They indicated that university is suggested to make a pedagogical blog that can support professional development in pedagogical use of ICT.

Similarly on website platform as ESL Café, English-Zone, and LearnEnglish, *Youtube* currenty has its own position as popular video-sharing website. It is a most well-known site to share or create video to be published publicly. *Youtube* can also be a good supplementary resource for language teaching. For example a study by Jones & Cuthrell (2011), Alhamami (2013) discussed the *Youtube* video can be a source to introduce new subject or even the more difficult subject, to stress the lesson point, or to specify particular skill or concept in language learning. Brook (2011) supported previous research by setting up lesson plans in incorporating *Youtube* for language learning in classroom.

Using software can be another alternative in using technology in teaching eventhough the software is not particularly for teaching, for instance mindvisualizer. Mindvisualizer is a kind of e-mindmapping software that can be downloaded online. A study on it has been done by Salasiah (2017) who investigated the use of mindvisualiser in teaching writing in Parepare, Indonesia. The result of the study showed significance contribution of mindvisualizer application in class of writing. They enjoyed the learning a lot using the software and ease them to develop their ideas. However, there is one weakness of this software as it has a limited application time. Despite its limitation, this software application is highly recommended as one of teaching media in improving writing. Below table described various technology used in teaching.

Table 2. Types of technology tools for learning

No	Kinds of technology used	Learning specification	Countries
1	Social media; facebook	Academic learning; writing	Virginia, USA
2	WhatsApp	Speaking	Iran
3	Mobile Learning	Writing	Thailand
4	Websites	Listening	Italy
5	Blogging	General	Columbia
6	Learning Software	Writing	Malaysia Indonesia
7	Edmodo	English language learning	Thailand
8	Youtube	Language learning	United states, Saudi Arabia

4. Result and Discussion

Lessons from this review suggest that diverse factors may affect technology integration for teaching; for instance, it could come from the teacher's competence on technology. If the teacher has good competence on technology, the more practical the teacher with technology will be in his teaching. The accessibility of technology or resources is another factor in integrating technology for teaching in some countries; Iran, Saudi Arabia. Lack of training in how to use the technology appropriately for teaching is being another problem in technology adoption for learning (Saudi, Bangladesh, and Malaysia).

These findings can be a good lesson for my country, Indonesia as a developing country who tries to speed up in catching the rapid technology movement in education platform. They can contribute much to my country's progress particularly by giving more attention toward the technology role in education in order to enhance education quality. Principally, the findings will be a good consideration for my local government to support the teacher in enhancing ICT skill for teaching purpose as well as providing resources in order to ease the accessibility of technology. Correspondingly, concerning on professional development factors by providing technological training for teacher will push their teaching professionalism.

In terms of types of technology used for teaching, the review studies showed various kinds of technology can be used for teaching. Social media, Whatsapp, mobile learning, websites, blogging, and learning software are some of technology tools used for teaching in general. They are good to be applied in supporting teaching. Moreover, they can support the active learning of the students. Nonetheless, it needs more studies to be used for teaching different skill in language learning, such as Whatsapp for reading, or mobile learning for speaking.

The articles above showed the technology used to teach the language skills is still counted, and it needs more research from other countries to support the benefit use of technology in teaching instruction. Lesson from this review suggests more studies on various technologies in teaching in order to vary the types of technology integration in teaching learning environment. This review studies also support me as a teacher to apply more variety of technology to be adopted in teaching as well as conduct more studies on types of technology for various teaching language skills. Precisely, in teaching writing as my main teaching subject, this review can be my consideration in choosing appropriate technology to be applied for pedagogy purposes.

5. Conclusion

The article shows that many challenges are still faced by education stakeholders in integrating technology for English language teaching, particularly for teachers as the agent of educational mobility. This study can be a lesson for my country, Indonesia by considering the cross cultural findings from different countries in order to determine what factors might be best applied to the Indonesia situation to improve learning and teaching. In addition, the article's focus on types of technology tool used for teaching can be a countless message for agents of education particularly for teachers in choosing the most adaptive technology tools within their pedagogy setting. However, more research on technology integration and technology tools for ELT are still needed to be explored to enrich research on education, such as more areas of technology to investigate, for instance, on finding more varied technology types to be applied in teaching language skills.

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