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# Teachers Perspectives of ICT Integration in English Language Teaching: A Review of Literature

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This paper reviews some research articles on the teachers perspective of ICT implementation in education, particularly in English language teaching. It explores the research result based on three scopes; Teachers perspective of ICT in education in general, Teachers perspective of ICT specifically in English language Teaching in Global Context, and The teachers perspectives of ICT in ELT in Indonesian settings. The analysis is based on the research methodology; including the design, subject and instrument used in the research, also the findings and suggestions resulted in the research. Finally, this paper proposes further study on the related topic area on teachers' cognition of ICT in ELT.

**Keywords:** Teacher Perspective, ICT Integration, ELT

## INTRODUCTION

Information Communication Technology has been basic requirement and essential aspect in education in global context nowadays. ICT in the form of digital literacy becomes one of the competencies that teachers must have in the 21<sup>st</sup> century era of teaching. Many countries such as Cyprus, Israel, USA and some others Asian countries like Malaysia, Singapore, and Korea have established ICT into their education system by having Policy for Teachers professional development on ICT. Several studies about teachers' perspective and ICT policy for education were explored in the last two decades Ghavifekr and Rosdy (2015) Jones and Cowie (2011) Karagiorgi and Charalambous (2004) Nachmias et al. (2004) Toh and So (2011) Tomas (2011) Zhao and Frank (2003).

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## METHODS

This paper compares and synthesizes 38 articles related to teachers' cognition and perception to ICT integration. The articles are selected based on the research topic about teachers' perspective on ICT and taken from reputable journals published during 2001-2019. This paper reviews several previous studies focusing on teachers' perspective on the use of information technology in education, particularly the use of ICT in English language teaching context. The analyses take a closer investigation on the subject of the research, findings of the research and the methodology of conducting the research. Firstly, it reviews some studies on teachers' perspective in Education. It comprehends how teachers in general value ICT implementation in Teaching and learning process for many different subjects at many different level of education context. The next it evaluates more specific on English Teachers' perspective toward ICT integration in English teaching classroom. Finally, it appraises some findings of English teachers'

perspectives of ICT in English Language teaching happened in Indonesian settings.

## TEACHERS PERSPECTIVE OF ICT IN EDUCATION

There had been many studies about teachers' perspective on ICT integration toward education in some countries and also some researches on the impact and result of ICT training and courses for pre-service teachers [Abdou \(2010\)](#) [Kalogiannakis \(2010\)](#) ([Gobbo and Girardi, 2001](#); [Goktas et al., 2008](#)). The implementation of ICT in primary levels also led to investigation of the primary teachers beliefs on the use of ICT for their pupils [Levin and Wadmany \(2006\)](#) [Loveless \(2003\)](#) ([Cernochova, 2010](#)). Teachers' perspective of ICT studies were also done in the context of subject teaching beside English, like science and math English [Kafyulilo and Keengwe \(2014\)](#) ([Barak, 2006](#); [Hennessy et al., 2017](#)). This review paper will concentrate on the latest trends of investigation on teachers' perspectives of ICT integration in education in recent years.

ICT nowadays has been a rudimentary aspect of teaching as it has global impact in education policy of many developed countries. As it reviewed by [Zhao et al. \(2016\)](#), in their comparative study on International Policy for Teachers professional development on ICT. They compare six countries; USA, South Korea, Singapore, Australia, Britain, and China, and see the ICT capacity building policy of each country through five different proportions; content, goals, characteristic, implementation, and evaluation. The result indicates that each country has different goals and characteristic of the policy, but they have the same contents that progressively move from technology literacy to knowledge deepening creation. Guarantee for the ICT policy implementation was recommended and third party evaluation was suggested to confirm the effectiveness of the policy of teachers' ICT capability construction.

A survey study was conducted to 60 teachers from three upper secondary schools in Sweden. They used questionnaire that contains of Likert questionnaire and open-ended questions to investigate what teachers want to learn regarding to ICT. The study reveals six desired areas of learning: (1) Technological aspect, (2) How to use ICT for teaching and learning, (3) LMS- Learning Management System, (4) Safety and Plagiarism, (5) Best practice, (6) Collaboration and professional development. The data was analyzed through the lens of TPACK model and categorized the finding into the following group. The teachers desire of learning (1,2,3,4,6) are categorized into Technological taxonomy of TPACK. The Pedagogical feature was represented by teachers desires number (2,3,5,6). The Need of learning safety and Plagiarism and Collaboration and professional development are categorized into Content aspect. The teachers' desire area number two, on how to implement ICT for teaching learning activity is included in TPACK aspect. It concludes that teachers inquired different forms of knowledge and that interpretation of TPACK only emerged in theme number 2: how to use ICT in teaching learn-

ing. The result of this study is as a bottom up survey to have further design of CPD of ICT proficiency for teachers in Sweden [Olofsson et al. \(2017\)](#).

Three antecedents below were examined to have further insights of teachers' use of ICT in classroom settings. These three predictors determine school teachers' frequency of using computers in class are; School characteristic, Teachers attitude, and Teachers collaboration. The result shows there are more country-specific results than similarities between the selected countries ([Drossel et al., 2017](#)). Teachers' attitude shows more relevant correlation than school characteristic and teachers' collaboration on the process of level of ICT integration in class. The study use Correlation design (Multiple Regression) and 15 teachers were randomly selected from the population of teachers who fill in ICILS 2013 questionnaires. The Population was Netherland 1083, Denmark 728, Australia 3495, Poland 2228, and Germany 1386. The questionnaire was taken from The International Association for Evaluation of Educational Achievement (IEA) study of International Computer and Information Literacy Study 2013 (ICILS). This research has some limitations, in which it uses subjective teachers' data, it doesn't focus on specific aspect of ICT use and doesn't have closer look on each country analysis on the education system or policy-makers from each country. Moreover, It over generalizes teachers perspectives from five countries while the subject was randomly selected from those five countries.

An exploratory-descriptive study using Pearson Correlation analysis in inspecting predominant education philosophy existed among participants. The participants were 800 pre-service ICT teachers from 22 public universities in Turkey. The study concludes that participants who belong to existentialism and progressivism education philosophy have strong belief in ICT integration in Education. While participants with Reconstructionism and Perennialism philosophy of education, have respectively belief in ICT. Essentialism was the least educational philosophy applied in ICT integration. The study also found that there was weak or no correlation between educational philosophies and occupational anxiety. Additionally, the level of occupational anxiety is also low ([Deryakulu and Atal-Köysüren, 2018](#)).

The ethnography research and case study was done to see teachers perspective of the implementation of 1:1 (laptop per student-initiatives) done in three years program in Sweden secondary school [Tallvid \(2016\)](#). It followed and observed 6 Math teachers during their participation in ICT in-service training which was done two hours/week service training. The research also performed classroom observation during three years implementation of 1:1 program. The research found teachers reluctance on pedagogical use of personal laptops in secondary schools. Teachers' arguments were exposed technical, pedagogical, and content concerns and resulted some following factors of reluctance; lack of technical competence, not worth the effort, insufficient material, diminishing control, and lack of time. However, reasons behind the reluctance were not explored yet by the researcher.

Another survey design using multiple regression analysis is done by applying Structural Equation Modelling (SEM) analysis, with AMOS 5.0 software. The questionnaire was distributed to 1,891 secondary school teachers of government schools of Negara Brunei Darussalam to seek for their present condition of ICT usage in secondary school. The Findings indicate that teachers use of ICT are influenced by three factors: (1) Personal (attitude) feeling of like comfortable and enjoying using ICT during Teaching, (2) Social (subjective norms) the demands from school principals and Head of the department, and (3) Control (perceived behaviour control) such as; teachers capability, knowledge and skills of using ICT effectively and successfully for teaching. Nevertheless, it does not explore more on the students factors to see the complete perspective of ICT implementation in order to see the benefit and importance of ICT [Salleh and Laxman \(2014\)](#).

From the findings, we can summarize that ICT are used in many education level, subjects in many countries and teachers mostly have positive attitude toward the implementation in classroom setting, despite the teachers' reluctance due to the ICT facility, training, and technical support provided by educational institution. The following discussion would focus more on the teachers' perspective on ICT in more specific context of ELT.

## TEACHERS PERSPECTIVE OF ICT IN ELT

The conflict among ICT policy, curriculum and facility allocation in university influence the teachers' attitude toward the application ICT to education. As where in China, learning system in higher education system is mostly teacher-centred and one class can consist of 60 students become serious problems to the ICT pedagogy implementation, which demand student-centred learning. Despite the fact that professional development on technology training had started in 2004 -2005 to adopt ICT in China higher education system, most English for Business program teachers aware the advantages of ICT, but they do not really apply ICT into their teaching due to the lack of ICT competence, facility and policy supports. The data were taken by interviewing 7 teachers of English for business purposes in pioneer university that applying ICT in higher education in South China [\(Hu and Webb, 2009\)](#).

The questionnaire distributed to 309 first-year students, aged 18-22 at Queensland University, Australia. It reveals English Teachers competency, including ICT from the students' point of view. The result indicates that English Teacher competency on ICT is the lowest among other competency that teachers have beside; literacy competency, verbal non-verbal, reading, visual, genre, structure, grammar, spelling, and ICT [Penn-Edwards \(2010\)](#).

Three main factors; personal, institutional and technological factors that influence ESL teachers in adopting ICT in their language teaching were analyzed. The data was collected from 217 English teachers of senior high schools academic year 2011-2012 in Chandigarh city India, through questionnaire

and analyzed using SPSS, one sample T-test, multiple regression and ANOVA to analyze and test the hypotheses. Teachers' personal feelings, knowledge and attitude would affect their acceptance of the usefulness of ICT and its integration in teaching. The more positive attitude toward ICT teachers have, the more ICT integration in Language teaching teachers do. Likewise, supports on funding, facilities and training on ICT influence teachers' attitude in applying ICT for teaching students. On the technological level, teachers must remark technology progressively, value the technology, and update to the changes and technology innovation for better teaching and learning [\(Hashemi, 2013\)](#).

A survey study had done to teachers, pre service teacher and educators in Turkey about the effectiveness of ICT related course in Pre-service Teacher education program. Majority of the respondents believe that the course is effective, although they endorse that the course need to be restructure to be more favourable in practice [\(Goktas et al., 2008\)](#). Similarly, [Hismanoglu \(2012\)](#) compare EFL prospective teachers' attitude before and after they got training on curriculum innovation applying ICT. The result shows significant progress and support previous research finding that suggest ICT be embedded in whole teacher education program and ICT should be integrated in the curriculum of ELT.

Further research done by distributing questionnaire to 242 EFL Teachers from 2 universities, 6 schools, and language teaching institution in the province of Tehran and Alborz, Iran and had semi-structured interviews to 46 teachers. A mixed method used to analyze the data, which resulted that teachers Iranian teachers adopted positive attitude toward the implementation of Online Instruction. The findings provide crucial insights of strategy of implementing online instructions, such as: improving online facilities, training on teaching methodologies of Online EFL Courses, implementing Blended Learning (face to face and online teaching), and training on online computer literacy. However, the differences between three perspectives variables were not analyzed. More over the research formulated some problems faced by the teachers in implementing online instruction. The challenges are the lack of online facilities and resources, the lack of interaction in online instruction, cultural resistance to online instructions, teachers limited knowledge of online instructions [\(Dashtestani, 2014\)](#).

Another qualitative study done by [Abukhattala \(2016\)](#), examining the Use of Technology in Language classrooms in Libya. The research investigated Teachers understanding of the technology itself, types of technology the teachers use in language classrooms, and kinds of traditional or cultural learning and teaching styles they use in applying technology in language classrooms. By doing structured and semi-structured interviews to twelve English teachers, He also found several problems faced by the teachers in integrating ICT. The problems were related to the lack of funding from the institution correlated to sponsoring ICT that causing the lack of technology facility to support learning and lack of ICT training for teachers. All the problems existed led to the unsuccessful use

of ICT integration to promote better learning and teaching in Libya. However, he indicated providing teachers with facility and training of ICT is not enough; rather than convincing teachers' belief of the benefits of using ICT in the classroom. Therefore, the most important aspect of ICT integration here is the teachers' attitude.

A case study of investigating English teachers' awareness of ICT to improve their teaching method was done in Botswana. Open-ended questionnaire were distributed to 55 English Teachers of 11 senior high schools in Kweneng region. The result shows that Teachers are lack of information of ICT tools and lack of ICT training that they can apply for their classroom teaching. However, they are aware the importance of ICT for language teaching and willing to have more training of ICT implementation in order to improve their teaching quality and to overcome problems of ICT integration into ELT [Mafuraga and Moremi \(2017\)](#).

Teachers have important role of integrating ICT in language classroom, since they are the actors of ICT implementation. Regardless to facility and training support they get, the strong willingness and awareness of the importance and necessity of ICT in language teaching need to be possessed by teachers. We can conclude that most Teachers would have positive attitude, beliefs, and practices of ICT integration in language teaching as long as they are fully supported and empowered with the knowledge and capacity of ICT skills. When Teachers are digital literate and able to make use ICT in their daily teaching activities, they will find many advantages and efficiency of teaching. Teachers' constructive perspective of ICT will surely influence their classroom instruction and affect the students' perspective of ICT as well as students achievement in language learning. Furthermore, ICT policy in the institutional level should provide enough provisions on technological instruments and facility.

## TEACHERS PERSPECTIVE OF ICT IN ELT (INDONESIAN CONTEXT)

Indonesian education policy has put digital literacy as one of the skills, beside numerical and literacy skills, that students and teachers must acquire in 21<sup>st</sup> century teaching and learning. ICT competency is one of the main goals and learning outcomes of the national curriculum. Computers and internet technology have become daily normal use in students and teachers activity because Internet and social media could easily be access by the citizens in 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)

There are no significance constrains of ICT implementation in the form of facility and policy support in Indonesia, except from the teachers and students attitude toward ICT integration into language teaching. A study on teachers' belief in technology for language teaching found that most of English teachers in Senior high school 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 positive attitude toward the development of technology (ICT) for language learning [Febriani and Hafifah \(2019\)](#).

Previously, [Son et al. \(2011\)](#) 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 participants were asked to fill in questionnaire to find out about the current level of teachers' ability in computer literacy and performing computer based tasks. The study also reveals the factors affecting teachers' use of computer in classroom and teachers' ownership and accessibility of computers. The result shows that teachers' attitude toward ICT were highly positive. 51 teachers had regular access to computers and 40 teachers had internet connection. The research suggests that teachers have more online opportunities, skills and competencies in the use of CALL for teaching and teachers own professional development. However, the data sources are considered bias, since the samples or participants who come to GloCALL conference are people with interest of CALL already and the size of the participants only limited to conference attendee.

Another study of ICT implementation in higher education was done by [Kusumo et al. \(2012\)](#) who search on the obstacles faced by university students in doing online learning. It is found that some university such as; Universitas Gajah Mada, UNISSULA Semarang, MIKOM Yogyakarta, ITB, Parahyan-gan, Brawijaya, Soegijapranata catholic University have applied E-Learning although it does not focus on ICT in ELT. It also found that students face some problems such as independence level (65.52%), connection problem (58.62%), and difficulties in understanding the material (48.28%). Further study from teachers' perspective of E-learning or ICT implementation need to be done to find out problems that might be faced by the teachers during the teaching learning process.

[Harendita \(2013\)](#), also found that teachers are mosly digital immigrants so that ICT expectation often conflicted with pedagogical issue in the classroom. She suggests further study on teachers' belief in ICT as one of the crucial consideration in adopting ICT in the classroom and further training of ICT to improve teachers' technological and pedagogical knowledge. It is in line with Inayati's suggestion that propose further training and new policy of ICT integration in English language teaching in her study. It did a survey to 67 faculty members teaching in Language Centers in one of the private university in Java to find out the 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 positive attitude and proof that social media promotes blended learning and better integration of ICT in ELT context. However, the study needs further depth observation on why and how social media is used during teaching and learning process ([Inayati, 2014](#)).

A small, but in depth research done by interviewing 4



teachers from one of vocational public school in Bandung. She also had open-ended questionnaire to explore qualitatively teachers' perception toward ICT implementation in EFL Classroom. It reveals teachers 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 (Al-Munawwarah, 2014).

Using closed-ended questionnaire based on TAM (Technology Acceptance Model) and interview Silviyanti and Yusuf (2015) found that 31 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. 11 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 University in Indonesia and only focus on teachers' belief and motivation. Similar survey was piloted to 20 elementary schools teachers with more than ten years teaching experiences. TIQ (Technology Implementation Questionnaire) was adopted as the research instrument. The result shows that teachers have a positive perspective towards applying ICT in their classroom, although they lack of technical support from the schools and lack of ICT proficiency Safitry et al. (2015).

Moreover, study about the use of ICT in Higher education context done by Stensaker et al. (2007) who investigated the integration of ICT in five Norwegian universities and colleges. Around 12 to 15 interviews were undertaken from each of institution to get the data. But the investigation is focus more on the administrative work and implementation of ICT policy. Students were not part of the informants, only ICT staff, institution leaders, academic and administrative staffs. There were many contradictions between normative assumption and real practice of ICT in higher education. There were missing links between ICT and human resources management activities, between ICT and organisational development initiatives, between the facility and technical supports of ICT. In summary, the use of ICT was not yet established and well-supported by the policy-makers in university levels and not explored much in the teaching and learning management activities in class.

As technology, rapidly 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 fulfil students need in current time. Technology had been the medium that support 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. Further study on complete teachers cognition; include teachers knowledge and experiences of ICT, Teachers' belief and attitude toward ICT, and Teachers practices of ICT

in English language teaching context need to be done.

## CONCLUSION

The above research results show how ICT has great role and impact toward current language teaching. ICT has been basic requirement and essential aspect in 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. For that reason, teachers as the front-liners in education need to master digital literacy; having the ability of using ICT to find, create, and communicate information, requiring both cognitive and technical skills.

It can be concluded that more research on teachers' perspective on ICT implementation in Language teaching used Quantitative approach. It uses Survey, Correlation and Multiple Regression design to see factors influencing and affecting the ICT employment. The main instrument used in the design is questionnaires. Some research used qualitative approach like case study and ethnography designs to explore findings in depth on the reasons and background that might stimulus teachers' perspectives of ICT in ELT. Interview is used to have deep elaboration on the findings. Mixed method and comparative study are also accounted in this research area. The research subjects are mostly senior high school teachers, but different samples of pre-service teachers and elementary school teachers are also investigated. Nevertheless, teachers' perspective of ICT in ELT investigation on higher education level is still limited.

Most of the findings show positive attitude or perspective of teachers in the integration of ICT for teaching and learning. Some variables of teachers perspectives such as ; institutional, social, facility, belief, understanding, and practices of ICT were investigated. Some of the ICT media like social media, CALL, laptop are explored. Strategies, problems and challenges of ICT implementation were also discussed in research findings. To sum up, most of the study recommend 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.

Based on the previous studies, further research on teachers' perspective should be conducted to fill in the gaps of the previous findings. The further study should investigate Teachers cognition of ICT in ELT in Higher education setting to map the condition of teachers' capacity and experiences in the ICT integration in the classroom as well as their practices on ICT integration in ELT. The previous studies are mostly done quantitatively investigating factors that affect teachers' perspectives on ICT integration in ELT in secondary school setting, using survey design and multiple regression and the samples are mostly senior high school teacher. Hence, further study might use path Regression analysis to see which cognition contribute most to the ICT integration in a real teaching setting. The samples will

be the teachers of English in higher education setting, since it study on Higher education teachers ICT competency is not yet done in Indonesia. Online questionnaires could be distributed to lecturers of 110 Educational English Department existed in Indonesia, with the support of English Department Association. Finally, the result can be used as a mapping of Teachers cognition of ICT in Indonesia context to have further suggestion to improve the teaching and learning quality of ELT in current era.

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**Conflict of Interest Statement:** The author declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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