

Teachers' Perspectives on the Implementation of Information and Communication Technology in Language Teaching

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Abstract—The development of technology used nowadays has become an important part of many activities in many fields, including language learning. In the 21st century, the development of technology also demands the integration of Information and Communication Technology (ICT) in the educational system. Thus, ICT has an impact on the quality of language teaching and learning process. This present study, therefore, aimed to investigate language teachers' perspectives and their competencies on the implementation of ICT in language teaching as well as the obstacles that they face while integrating them. To obtain participants' perspectives toward the implementation of ICT, questionnaires were distributed to twenty teachers chosen from the secondary level of education at Bengkulu City. The results of this study indicated that the teachers' practice and the use of ICT were affected by their subject knowledge expertise. This study also highlighted positive and negative effects regarding the integration of ICT in the process of teaching and learning. Mostly, teachers were aware of the potential use of ICT that becomes more essential nowadays in the learning process. Additionally, teachers were found to have limited confidence in using technology to support their creativity.

Keywords: *English as a foreign language, Information And Communication Technology (ICT), language learning, teachers' perspectives*

I. INTRODUCTION

Traditional approaches to language teaching and learning nowadays have been challenged by new and innovative approaches based on the latest advances in the digital era, such as in computers and the internet. In facing these challenges, there is a need for teachers to take advantage of the use of technology in teaching activity. Likewise, in 21st-century, the use of Information and Communication Technology (ICT) has brought great changes in education, especially in language teaching and learning.

The definition of ICT, according to Khan et al. (2015), is defined as any communication technology or any application associated with the communication. This concept allows teachers to increase their teaching skills by applying the concept of ICT in their classrooms. The Minister of Education and Culture also stated the policy on the utilization of ICT aimed at improving learning efficiency effectiveness. According to the 2013 curriculum, the use of ICT has become a necessity. This policy is stated on the Regulation Number 65/2013 of the Republic of Indonesia on the Standard Process of Primary and Secondary education (Nuh, 2013, as cited in

Mahdum, Hadriana & Safriyanti, 2019). To meet the goals of this new curriculum, many schools tried hard to equip ICT facilities in their schools, such as the provision of computer laboratories, projectors, etc. However, this opportunity and expertise are not yet utilized in language pedagogy on a broad scale. Furthermore, ICT is seen as an essential component that should be integrated, including in English.

Educators have the opportunity to shift their own beliefs and understanding the integration of technologies in their teaching activity. There have been many studies investigate the use of ICT for the teaching-learning process (Hennessy, Harrison & Wamakote, 2010; Ali, Haolader & Muhammad, 2013; Ali, Nargis, Yasmeen & Iqba, 2015). However, even though teaching methods using technology nowadays have been worked well developed, if the technology is not used fully by teachers in the teaching process, it would be hard to expect the implementation of technology is effective (Baek, Jung, & Kim, 2006). As pointed out by Dexter, Anderson & Becker (1999) that teachers' decisions regarding the use of ICT might be influenced by their perceptions of the advantages of utilizing ICT for language teaching (as cited in Kizil, 2011). Moreover, Karavas-Doukas (1996) stated that teachers' beliefs could make the mismatch between the actual teaching methods and their practice in the classroom (as cited in Tootkaboni, 2019). Teachers' perspectives on their implementation of ICT in the classroom needs to take into consideration what are the factors affecting teachers' decision to use technology in their classroom. Thus, teachers' attitudes and beliefs towards ICT in language teaching have a significant influence on ICT adoption and their implementation behaviors in the classroom.

Kandasamy and Shah (2013) investigate the secondary level teachers' attitudes towards using ICT. The result indicated that in spite of their positive attitudes of using ICT in the classroom, teachers tend to have difficulties to integrate ICT in the learning process. It was due to insufficient ICT materials in school and inadequate knowledge of ICT. Furthermore, findings by Ali et al. (2015) show that school education department should have to facilitate teachers' needs in the use of ICT and support them through the conduction of training in ICT. A similar study was done by Mahdum, Hadriana, & Sadriyanti (2019) the findings informed that teachers' motivations towards the use of ICT, self-efficacy, the values in using ICT, and training experience considered

as some factors that can motivate the teachers to use ICT more in learning activities.

The promotion of ICT through English language teaching (ELT) materials has spread widely throughout the country. The popularity of ICT keeps increasing as many teachers apply the concepts of ICT in their classrooms. Meanwhile, a similar curriculum might be implemented differently in some schools due to schools' facilities, infrastructure development, or locations. Likewise, many English teachers in rural areas haven't integrated ICT into their teaching activity completely. It is probably due to some factors that may prevent teachers from implementing ICT. Accordingly, this study focuses on the context of English teachers in Bengkulu in which the traditional teaching approach widely used by English teachers and has been the norm for many years. Despite the widespread promotion of ICT in practice, in some areas of Indonesia including Bengkulu, little attention is paid to how well the teachers correlate with their ICT usage behavior in the classroom. Therefore, this study aims to fill the gap, to seek the information on whether the implementation of ICT in several secondary schools correlates with the curriculum design that requires incorporate the integration of ICT in their teaching activities concerning their perspectives and also the challenges in using ICT in their classrooms.

II. METHOD

In this study, a qualitative methodology was used to collect and analyze the data obtained from all the respondents. The current study aims at identifying teachers' perspectives towards the implementation of ICT in teaching activity. More specifically, this study focuses on teachers in Bengkulu to investigate the following questions: 1) What are the teachers' perceptions toward the use of ICT in teaching activities, 2) To what extent teachers usage of technology tools in the classroom and 3) What are the obstacles faced by teachers to use ICT in teaching activities.

The overall total of participants who participated in the study was twenty language teachers consisted of 15 females and 5 males from 4 secondary schools in Bengkulu. All teachers taught English subjects, 14 of them were bachelor's degrees and 6 of them were master's degrees. Their teaching experience was varied, 15 teachers had been teaching less than 5 years, and 5 teachers had been teaching for 11-15 years.

The data for the present study were elicited using a survey questionnaire referring to the technology acceptance model by Davis (1989). Few sections on the questionnaire were designed specifically to ascertain the perspectives of teachers on the implementation of ICT in their language teaching, the questions comprise of 28 items. The items are divided into 3 categories, namely teachers' perception (29 items), teachers perceive their usage on ICT tools (6 items), and ICT implementation (3 items). A 5-point Likert-type scale with 1= strongly disagree to 5= strongly agree, and the participants also had the opportunity to add responses in their own words in some open-ended questions in the questionnaire. The reason for this was to ensure that no relevant response was missed. The participants were asked to respond to the survey

within two weeks. Therefore, the questionnaire was distributed to obtain data from the respondents. After 2 weeks, all the completed questionnaires were gathered and collected for further data analysis by the research to get the findings for the study.

All the data collected from the participants were gathered together to be analyzed using Google form. The analysis includes descriptive analysis to analyze the frequency and percentage of the overall participants. Besides, it is also used to determine the frequency and percentage to identify the teachers' perspectives on the implementation of ICT in language teaching.

III. FINDINGS AND DISCUSSION

The following are the results of the questionnaire distributed to 20 teachers covering the data on teachers' perceptions, and frequency of ICT use. The findings of this study will give the output needed by the researchers to answer the research questions.

The present study aims at exploring ELT teachers' perspectives towards the implementation of ICT in Bengkulu. Thus, the findings are divided into 3 categories, teachers' perspectives, teachers' use of ICT for teaching and learning in the classroom, and the obstacles in integrating ICT in their language teaching.

A. Teachers' Perspectives

The first research question dealing with the teachers' perception towards the use of ICT in teaching activities. As mentioned previously, the perception of teachers towards the use of ICT in teaching activities can be seen from the perceived usefulness, and perceived ease of use.

a) Perceived Usefulness

In the questionnaire responses, the perceptions of teachers on the implementation of ICT in learning activities is good. Regarding the usefulness in the learning process, 59.1% of teachers viewed that the use of ICT can make the learning process more effective. Most of them agree that ICT is suitable for different learning styles (72.7%); appropriate for many language learning activities (59.1%), and makes the learning activities more interesting and enjoyable (50%).

The majority of teachers also agree that students become more active through the use of ICT (68.2%), as well as improve the quality of students' learning (77.3%), and foster positive attitudes of students (77.3%). The results also indicated that 72.7% of teachers viewed that ICT offers real advantages over traditional instruction. The majority of teachers acknowledged the benefits that they can obtain benefits from the use of ICT (66.7%), 54.5% of them acquire benefits to improve their skills and improve their teaching performance (59.1%).

b) Perceived Ease of Use

Results also indicated that most teachers viewed there are many conveniences to use ICT in teaching. The majority of teachers responding positively to the

statements. 63.6% of teachers viewed that ICT fits well into their curriculum goals, helps them in monitoring (50%) and assessing students' progress (50%; 59.1%), and controlling students' activities (72.7%). Teachers also viewed that ICT provides convenience in meeting the learners' needs (68.2%), provides convenience in communication (72.7%), and helps the teacher to explain the concept of lessons more easily (54.5%). However, many teachers were not sure that ICT is quite easy and isn't troublesome (40.9%).

B. ICT Usage for Teaching and Learning in Classroom

Regarding the second research question, a variety of ICT implemented by the teachers. The variety ranging from the use of computers, mobile devices, and the internet (see Table 1). The greatest intensity of ICT use by teachers is the use of personal computers (77.3%), PowerPoint presentations (72.7%), and the use of audio equipment (68.2%). Computer and PowerPoint presentations are widely used by teachers as learning media when explaining a subject matter and to present the information. The lower intensity of ICT use by the teachers is the use of online games (27.2%).

Furthermore, findings informed that the majority of teachers rarely use ICT in their classrooms (see Figure. 1). Despite most of them have been familiar with ICT at school, yet the practice of using ICT in the classroom still depends on the schools' facilities and also on teachers' subject knowledge expertise to make an enjoyable learning environment. As shown in Table I.

TABLE I. ICT TOOLS USAGE OF TEACHING AND LEARNING IN CLASSROOM

Variable	f	%
Personal computer	17	77.3%
Audio equipment (including software)	15	68.2%
Mobile Phones	11	50%
Projection system	10	45.5%
PowerPoint	16	72.7%
Online Games	6	27.2%
Online Quiz	7	31.8%

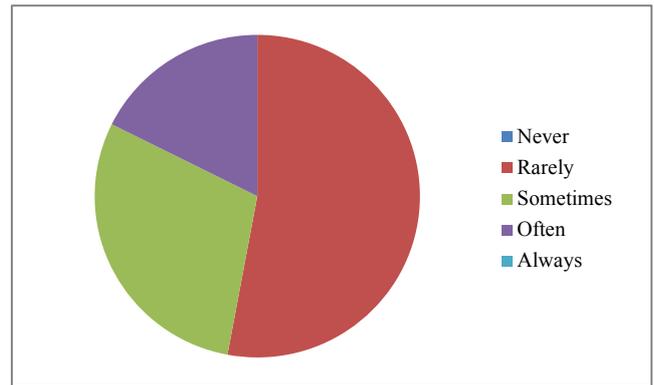


Fig. 1. Teachers' Perceptions on Their Usage of ICT in Classroom

C. Obstacles in Integrating ICT

Regarding the third research question, the teachers were required to indicate the obstacles they faced when integrating ICT in the classroom. The obstacles are as follows:

1. The electricity often goes out
2. Internet connection is low
3. The facilities in using ICT are limited
4. Hard to maintain students focus on the material
5. Students' anxiety in English
6. Students' less knowledge about how to operate PC

Concerning the constraints in implementing ICT in language teaching, it informed above that despite the findings of this research show that teachers have positive perspectives on using ICT, the data reveal that there were various obstacles they encountered to utilize ICT in teaching activity. Mostly the problems are related to the electricity, limited facilities, internet connection, students' focus, students' anxiety, and students' knowledge about how to operate PC. These findings reveal that electricity, internet connection and fewer computers in their school is a significant obstacle to integrate ICT in teaching activity. What has happened is not surprising, because almost in some rural areas in Indonesia electricity seems to be the main obstacle which they faced, followed by students' factors, and lack of facilities in the school. Lack of these facilities inhibits and requires teachers to use more conventional methods.

From the finding above, the majority of English language teachers in Bengkulu have positive responses towards the possible advantages of the integration of ICT in language teaching practice, especially concerning students' engagement and learning regarding the perceived usefulness and also perceived ease of use. These results are in line with the studies which reported that teachers view the use of ICT in teaching and learning as the assistance needed by teachers to ascertain the effectiveness of teaching and learning (Almekhlafi & Almeqdadi, 2010; Mahdum, et al., 2019).

Compared with another study that reported between teachers' positive attitude and their level of ICT use as a

learning tool to support students' learning in the classroom are balanced (Kandasamy & Shah, 2013). However, in this particular study, despite that teachers' perspectives are positive, they may still have limited knowledge of both technical and pedagogical related to ICT integration in their current practices. It can be seen from the findings that indicate most of the teachers have been familiar with ICT at school but they mainly use it only to prepare their teaching or to find learning resources, only a few of them use it to work with students during lessons. Thus, teachers only tend to use certain ICT tools that they already mastered in using them as mentioned previously. These findings reaffirmed existing literature results regarding the low rate of adopting ICT in the schools as a learning tool to support students' learning activity through their engagement in ICT-based activities, in both classroom practice and beyond the classroom boundaries (Jimoyiannis & Komis, 2007; Jimoyiannis, Tsiotakis, & Roussinos, 2011; Wikan & Molster, 2011; Player-Koro, 2012).

Furthermore, the issues due to the obstacles faced by the teachers, such as lack of facilities, limited confidence in using ICT, and a low internet connection was found to be the biggest challenge for the teachers. These findings oppose with a study by Kandasamy and Shah (2013) the findings reported that due to the obstacles faced by the teachers in using ICT tools majority is caused by lack of time in school and only a few of the teachers have problem with technical support and adequate knowledge to use ICT. The findings from this particular study in line with a study by Ali et al. (2015) as the research indicates that secondary teachers encountered many obstacles related to the lack of facilities in the way of using ICT in the classroom. It also supports the statement of Hennessy et al. (2005) stated the factors that can act as obstacles to use ICT include lack of experience, unreliability access to resources and interactivity within the technology-based activity. What has happened is not surprising, because almost in some rural areas in Indonesia electricity seems to be the main obstacle, followed by students' factors, and lack of facilities in the school. Lack of these facilities inhibits and requires teachers to use more conventional methods.

As discussed above, the relationship between access to technological resources and the competence of teachers to use them is complicated. This relationship connects those factors with other issues such as time, training, and technical support. Also, there is a relationship between obstacles of lack of accessibility and lack of competence. In other words, teachers may not be able to access ICT resources unless they have skills in the use of technology and can work with it efficiently in their teaching. Access to the resource might be available, but teachers cannot use ICT in the classroom because it may be difficult for them to operate ICT tools. Thus teachers always need technical assistance because this assistance may provide them with up-to-date equipment in the new world of technology. Additionally, the obstacles and the use of ICT from the findings highlighted in the questionnaire indirectly speak to the importance of supporting facilities related to the integration of ICT in teaching activities. Technical support in technology such as

the internet, computer equipment, and other required machinery is needed to make effective implementation of ICT in schools. Hence, considering the positive attitude in integrating it, the government as a policy-maker has a role to provide ICT equipment needed in schools, as well as to prepare necessary facilities and infrastructure. In sum, from the findings, although teachers appear to acknowledge the value of ICT tools in schools, difficulties continue to be found during the processes of adopting these technologies.

IV. CONCLUSION

This study focused on finding out the teachers' perspectives on the implementation of ICT in classrooms. The variables of perceived usefulness, perceived ease of use, ICT usage and also the obstacles in integrating it indicated the teachers' actual use of ICT in classroom practice. By average, the teachers strongly agree that ICT aids in improving classroom management as learners are more focused, foster their positive attitudes and students' learning. As stated by Roger (1999) that teachers' perspectives play an important role in the innovation-decision process (as cited in Albirini, 2006). Students may not have an opportunity to use ICT in the classroom if the teachers are reluctant to integrate it into their teaching and learning process. However, helping teachers to develop positive attitudes towards the integration of ICT in education is quite challenging. This is determining by many factors such as school factors and also the pedagogical aspect which affects teachers' decisions practice in using ICT (Jimoyiannis, 2007).

The teachers also considered facilitating conditions such as classroom infrastructure and their subject knowledge as the main factors determining their intentions and efforts to put ICT into practice. Facilitating conditions have the greatest impact on teachers' intention to use ICT in their instruction. The perception of requiring enhanced resources and adequate support to apply ICT in classroom learning tasks has more influence on teachers' intention to use ICT. The barriers include factors such as lack of school support, teachers' personal beliefs, knowledge and skills that hinder the implementation of technology integration in the classroom. It further recommends that encouraging teachers with adequate facilitation as well as a training program in ICT will go a long way in improving their perceived proficiency in using ICT in the classrooms.

This article supported the need for a holistic, coherent framework regarding teachers' preparation aiming to provide authentic professional development and help teachers a) to adopt ICT as an important and efficient learning tool, and b) to integrate ICT in their regular instructional practices. It is important to be aware of findings from research showing that teachers' use of ICT is influenced by many interrelated factors. According to the research literature, it seems obvious that factors stemming from different categories determine the successful implementation of ICT. To fully understand these factors, perhaps similar studies could be carried out on a larger scale in order to have a wide view of teachers' perspectives. Since this study was based on a qualitative study, it did not investigate the actual teaching practice of the teacher.

Thus, it is necessary to conduct research about teachers' perspectives and their actual teaching practice. Further investigations in this area are important in order to make teachers competent in implementing the use of ICT in the classroom.

REFERENCES

- Albirini, A. (2006). Teachers' attitudes toward information and communication technologies: The case of Syrian EFL teachers. *Computers and Education*, 47(4), 373-398. doi: 10.1016/j.compedu.2004.10.013
- Ali, G., Haolader, F. A., & Muhammad, K. (2013). The role of ict to make teaching-learning effective in higher institutions of learning in Uganda. *International Journal of Innovative Research in Science, Engineering and Technology*, 2(8), 4061-4073.
- Ali, M. Q., Nargis, N., Yasmeen, R., & Iqba, Z. (2015). ICT use for effective teaching-learning process in secondary schools in Punjab province. *Asian Journal of Social Sciences & Humanities*, 4(3), 138-143.
- Almekhlafi, A. G., & Almeqdadi, F. A. (2010). Teachers' perceptions of technology integration in the United Arab Emirates school classrooms. *Educational Technology & Society*, 13(1), 165-175.
- Baek, Y., Jung, J., & Kim, B. (2006). What makes teachers use technology in the classroom? Exploring the factors affecting facilitation of technology with a Korean sample. *Computers & Education*, 50(1), 224-234 doi: 10.1016/j.compedu.2006.05.00
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance. *MIS Quarterly*, 13(3), 319-340. doi: 10.2307/249008
- Hennessy, S., Ruthven, K., & Brindley, S. (2005). Teacher perspectives on integrating ICT into subject teaching: commitment, constraints, caution, and change. *Journal of Curriculum Studies*, 37(2), 155-192. doi: 10.1080/0022027032000276961
- Hennessy, S., Harrison D., & Wamakote, L. (2010). Teacher factors influencing classroom use of ICT in sub-saharan Africa. *Itupale Online Journal of African Studies*, 2(1), 39-54.
- Jimoyiannis, A., & Komis, V. (2007). Examining teachers' beliefs about ICT in education: Implications of a teacher preparation programme. *Teacher Development*, 11(2), 149-173. doi: 10.1080/13664530701414779
- Jimoyiannis, A., Tsiotakis, P., & Roussinos, D. (2011, November). *Pedagogical and instructional design issues towards the integration of web 2.0 tools in instruction: Implications of teachers' training pilot courses in Greece*. Paper presented at 7th International Conference on Next Generation Web Services Practices, Salamanca, Spain.
- Kandasamy, M., & Shah, P. B. H. M. (2013, January). *Knowledge, attitude of ICT among ESL teachers*. Paper presented at Global Summit on Education.
- Khan, M. S., Khan, I., Din, S., & Ismail, H. M. (2015). The impacts of ICT on the students' performance: A review of access to information. *Research on Humanities and Social Sciences*, 5(1), 85-94.
- Kizil, A S. (2011, May). *EFL teachers' attitudes towards information and communication technologies (ICT)*. Paper presented at 5th International Computer & Instructional Technologies Symposium, Firat University, Turkey.
- Mahdum, Hadriana, & Safriyanti, M. (2019). Exploring teacher perceptions and motivations to ICT use in learning activities in Indonesia. *Journal of Information Technology Education: Research*, 18(1), 293-317. doi: 10.28945/4366
- Player-Koro, K. (2012). Factors influencing teachers' use of ICT in education. *Education Inquiry*, 3(1), 93-108. doi: 10.3402/edui.v3i1.22015
- Tootkaboni, A. A. (2019). Teachers' beliefs and practices towards communicative language teaching in the expanding circle. *Revista Signos Estudios de Lingüística*, 52(100), 266-289. doi: 10.4067/S0718-09342019000200265
- Wikan, G., & Molster, T. (2011). Norwegian secondary school teachers and ICT. *European Journal of Teacher Education*, 34(2), 209-218. doi: 10.1080/02619768.2010.543671