

PERCEPTIONS AND BARRIERS TO ICT USE AMONG ENGLISH TEACHERS IN INDONESIA

by **Asnawi Muslem, Yunisrina Qismullah Yusuf*** and **Rena Juliana**

Syiah Kuala University

Banda Aceh 23111, Indonesia

yunisrina.q.yusuf @ unsyiah.ac.id

Abstract

The purpose of this research is to investigate English teachers' perception and challenges of the implementation of ICT in ELT classrooms. This study used mixed methods, qualitative and quantitative in nature. A purposive sampling technique was used to select the study subjects, who are 26 English teachers from 16 public senior high schools in Banda Aceh. Questionnaires and interviews were used to collect data. The data were analysed and interpreted through qualitative and quantitative procedures. The results showed that the English teachers found ICT very helpful in teaching. However, the limited time and tools, coupled with a poor Internet connection as well as a lack of knowledge and experience of ICT training were obstacles for the teachers using ICT. The results of this study give meaningful insights for policy makers in relation to the implementation of ICT for teaching and learning in the classroom.

1. Introduction

English teachers in Aceh, Indonesia, have a low capacity for using Information and Communication Technology (ICT). Only a few schools in the bigger cities can easily access and utilize the facilities available (Silviyanti and Yusuf, 2015) even though the use of ICT or multimedia for teaching English language are generally regarded as useful to enhance students' language skills (Muslem & Abbas, 2017). In small cities such as Banda Aceh, as is explained by Maulida and Lo (2013), the financial difficulties, limited human resources and lack of government support result in less than half of the schools being unprepared to implement ICT in public school teaching and learning processes. Although Silviyanti and Yusuf (2015) discovered that most English teachers in Banda Aceh had high motivation to use ICT in their classroom, there was limited attention from the authority to provide the facilities to support their use of ICT. It is the duty of the government to meet people's needs in education by providing access to technology that can improve the quality of education in this country.

Information and Communication Technologies (ICT) have been developing rapidly in recent years. Salehi and Salehi (2012) point out that since the 1960s such technologies as televisions, tape recorders and video have been used as teaching tools. Today, ICT can be hardware such as computers, projectors, digital cameras, etc., and can also be software such as Microsoft Word, PowerPoint, etc. (Wang and Woo, 2007). In education, ICT is accepted as a meaningful medium to be used in the classroom to motivate students in learning (Wekke and Hamid, 2013). In the hands of teachers, Valk, Rashid and Elder (2010, p. 118) assert that “ICT can empower teachers and learners by facilitating communication and interaction, offering new modes of delivery, and generally transforming teaching and learning processes”. Moreover, Soska (1994) elaborated upon the benefits of using ICT in teaching for instructional testing and assessment, educating culture, assisting students learning academic content and advancing students’ critical thinking skills.

Schoepp (2005, p. 2) states that integrating ICT in education especially into classroom instruction is not as easy as flipping a switch; integration is a complex process and teachers may encounter difficulties or ‘barriers’. Various studies have acknowledged that although teachers appear to recognize the value of ICT in education, difficulties nevertheless continue to be encountered during the process of ICT integration (Balanskat, Blamire and Kefala, 2006; Silviyanti and Yusuf, 2015). The difficulties primarily deal with teachers as they are the executors of the integration. Bingimlas (2009) provides a list of difficulties which includes lack of teacher confidence, lack of teacher qualification, resistance to change and negative attitude, lack of time, lack of effective training, lack of accessibility and a lack of technical support as barriers to ICT integration.

Many teachers encountered the problem of perception when using ICT in the teaching and learning process in the classroom (Kurniawan, 2014). Ward, Gristein and Keim (2015, p. 73) describe perception as “the process of recognizing, organizing, and interpreting sensory information”. For those teachers with insufficient skills to use ICT in the classroom, it is important to provide them with special training on how to use ICT. Taiwo (2009) finds that the level and degree of technology usage further depended on the way teachers view the role of technology in classroom, and is “predicated upon what they feel technology can do in the teaching-learning process” (p. 75).

2. Literature review

Teaching English using technology is not a new concept or practice for teachers around the world (Rank, Warren and Millum, 2011), especially when English is taught in non-native speaking countries. ICT is mostly used to provide authentic materials to learners. These materials can support students in expanding their speaking, listening, reading and writing skills. There are two effective ways to improve students' language skills; staying abroad and using multimedia (Muslem & Abbas, 2017). With new information technology the world today has lost the previous barriers to communication across languages.

In line with Muslem and Abbas (2017), Jurich (2001) mentions a number of advantages of using ICT in the teaching and learning process, especially for ELT classrooms. The first is providing multi-sensory stimuli that could enhance English language skills in a short time (Garimella and Srinivasan, 2014). The second is motivation, since, as Granito and Chernobilsky (2012, p. 20) say, s“technology has the potential to be a powerful educational tool for those that have interest in it and needs to be taught and embraced at an early age”. Thus, students who use technology are likely to stay on task for longer periods of time. The third is collaborative learning. Domalewska (2014, p. 28) states collaborative learning, supported by technology, can boost language development because students learn within social interactions. For example, Silviyanti and Yusuf (2015) have found blogging encourages students to give comments on each other's work, share their experiences, reflect on their own and their classmates' work and analyse it, thus developing their critical thinking skills. The fourth is cultural understanding; this is where Hollenbeck and Hollenbeck (2009, p. 5) claim that ICT provides “teachers with tools to address equity and access issues, to accelerate students' linguistic and conceptual development, to provide support for students who learn in different ways, and to create authentic and meaningful learning experiences”. Technology can accommodate cultural understanding, in which students are able to interact and fully participate in their learning as they acquire language skills and cultural awareness. They can improve their ability in the English language and also learn the culture of the native speakers at the same time. Finally, technology implementation enables self-expression, which is labelled by McBride (2009) as one of the most important contexts for language use to create and encourage language acquisition.

On the other hand, the use of ICT in ELT classrooms also has some disadvantages. Kolbakova (2014) suggests that using ICT in the teaching and learning process adds more work and additional struggle from teachers to meet the needs of every student in class. ICT

may not be appropriate for all learners in all situations and purposes, and, therefore, it requires considerable learner training to make use of it successfully. Other barriers to ICT include class control, distraction, and the students' tendency to use short forms in their writing (i.e. Yusuf, Natsir and Yusra (2016) mention the limited characters in using Short Message Services (SMS) has progressed into the trends of multiple writing styles in texting). In view of that, Yunus, Nordin, Salehi, Embi and Salehi (2013, p. 1) argued that "teachers are generally weak in managing problems and planning activities involving the use of ICT in the teaching of ESL writing". One of the problems often faced by teachers using technology in writing is when students copy-paste from the Internet source, otherwise known as plagiarizing activities (Mustafa, 2016). The ease of obtaining quick and massive information from the Internet causes students to be apathetic in preparing their tasks (i.e. written tasks). Yunus et al. (2013) further explain that students' reading skills can lead to inaccurate understanding of the content when they are developed by merely scrolling the computer screen.

ICT in the classroom for teaching and learning a foreign language today is unavoidable as it is now a part of our daily life. Rabah (2015) has made a strong claim for the use of technology in learning, as it is a powerful and flexible learning tool that is needed and desired to encounter globalization challenges, advance a country's economic status, and motivate and assist students in learning. Liu (2009, p. 101) further wrote that technology has played "a greater role during class and home study, as computer-assisted instruction and interactive media technologies ... supplement the traditional use of the chalk and the blackboard". In a listening class, for example, teachers can use computers and the Internet to find rich sources of authentic oral models, such as YouTube video clips, which help learners with native pronunciation and also support teachers who do not feel as confident with their own language skills. Accordingly, Silviyanti (2014) has found that the use of YouTube appeared to be interesting and beneficial for students in which they became more enthusiastic and eager to watch a video and then later on practice to pronounce the words like the native speaker(s) rather than just practicing listening by using traditional audio instruments.

Based on the previous research, a study focusing on EFL teachers' perceptions and challenges on the use of ICT in their teaching for all public senior high schools in Banda Aceh was designed, with the following research questions in mind:

1. What are the perceptions of English teachers in public senior high schools in Banda Aceh on the use of ICT in English language teaching?
2. What are the challenges that they face in the use of ICT in English language teaching?

3. Do demographic factors (i.e. age, gender, degree and teaching experience) make a difference as regards their perceptions and challenges of using ICT?

Since ICT is now introduced at public schools in this country, this study is deemed important to further understand the teachers' perceptions and challenges on the use of ICT in their classrooms. The findings of this study can be further used to provide concrete solutions to its obstacles in implementation, either by the government, schools or the teachers themselves.

3. Methods

In this study, we employed a mixed method approach: quantitative and qualitative. This included both a quantitative analysis of questionnaire data and a qualitative analysis of focus group interview data to address the research questions (Creswell, 2003). The research questions were designed to see the Acehese teachers' perceptions and challenges of the implementation of ICT in ELT classrooms.

The questionnaire was designed and modified from Zare-ee (2011) and Karakaya (2010) for quantitative data. It is divided into three sections. The first and second sections are basic information of the participants and were constructed and modified from the questionnaire used by Karakaya (2010). The third section was constructed and modified from the questionnaire used by Zare-ee (2011), with 20 closed ended questions provided. It focused on English teachers' perceptions and challenges of the implementation of ICT in their teaching. It was formatted by using the Likert Scale of (1) strongly disagree (SD), (2) disagree (D), (3) neutral (N), (4) agree (A), and (5) strongly agree (SA). The questionnaire is available in the Appendix.

The instrument was given to 26 English teachers in Banda Aceh, Indonesia. There were 5 teachers aged 31-35 years, 6 teachers aged 36-40 years, 8 teachers aged 41-45 years, 3 teachers aged 46-50 years and 4 teachers aged 51 years and above. As regards gender, there were 5 male teachers and 21 female teachers. In degree, there were 18 teachers who had bachelor's degrees and 8 teachers who had master's degrees. In terms of teaching experience, there were 7 teachers with 7-10 years of teaching experience, 10 teachers with 11-15 years, 4 teachers with 16-20 years and 5 teachers with 21 years of experience and above. The teachers were assured that the information they gave was confidential and used strictly for research and academic purposes only. They were given 30 minutes to answer all the questions in the questionnaire completely in front of the researchers. The data from questionnaires were

analysed quantitatively using Microsoft Excel 2010 for frequency and percentages of each item.

After the questionnaires were collected and analysed, five teachers were selected to be interviewed. They were chosen because they were identified as those who had problems with the use of ICT based on the questionnaire distributed, in which further detailed information were deemed to be needed to complement the former data. Interviews were conducted with five teachers who were asked the following questions:

1. Do you think the use of ICT is important in teaching compared to no ICT use?
2. Do you think the ICT tools and techniques available in your school are accessible for use in teaching English by the teachers and students?
3. Do you think that ICT has noteworthy values for human societies in general? Give your reason.
4. Do you think ICT can be used as curriculum materials at school? Why?
5. What do you consider to be some of the challenges of using ICT in ELT?

The questions above are constructed based on the questionnaire. The interview was conducted to know more details about their perception of the use ICT. Interviews were conducted individually and lasted approximately 15 minutes. The interview sessions were recorded with a mobile phone.

4. Findings

The results of the questionnaire are described in three sections: ICT use and literacy, English teachers' perceptions and challenges of ICT, and the relation between age, gender, degree and teaching experience of English teachers toward ICT. They are elaborated in the following sub-sections. To achieve comprehensive results, the authors conducted the interview with the participants to further understand the conclusions.

4.1. ICT use and literacy

In the first part of the questionnaire, the participants were asked to select from a list the reasons why they use ICT and select how long they use ICT in a day. This section enabled the researchers to understand the functions and importance of ICT for the language teaching practices of English language teachers in Banda Aceh. The results of this part of the questionnaire are divided into 2 sub-sections, which present the results from reasons for the use of ICT and length of ICT use.

4.1.1. Reasons for the use of ICT

Teachers were asked to choose from a list of reasons why they use ICT; the results are presented in Table 1. Frequency refers to the number of teachers who chose the items.

Table 1. Teachers' reasons to use ICT

No.	Description	Frequency	Percentage (%)
1	Chatting with students and other teachers on school/subject matter	10	38.46
2	Educational games that can be used for teaching	8	30.77
3	E-mail and mail listing	18	69.23
4	Online discussion boards on language teaching	7	26.92
5	Shopping online for teaching tools and materials	7	26.92
6	Finding materials related to lessons	25	96.15
7	Preparing presentations	17	65.38
8	Assigning homework	10	38.46
9	Video conferencing and net-meeting	4	15.38
10	Presenting course material	10	38.46
11	Online dictionaries	21	80.77
12	Web blogs (e.g. blogger)	3	11.54
13	Giving feedback to students	7	26.92
14	Others (e.g. SNS)	7	26.92

Table 1 indicates that the most frequent reason for using ICT in the classroom is for finding teaching materials (96.15%), followed by using online dictionaries (80.77%), email and mail listing (69.23%), and preparing presentations (65.38%). The least frequent rationale for the use of ICT for the teachers is for web blogs (11.54%). In between, the table also reports that teachers use ICT for chatting with students and other teachers on school/subject matter, assigning homework and presenting course material to students, searching and learning on how to play educational games that can be used for teaching, participating in online discussion boards, shopping online for teaching tools and materials, giving feedback to students and other activities such as SNS (Short Networking Site, e.g. Facebook, Twitter and others).

4.1.2. Length of the use of ICT

In this section, the teachers were asked to select from a list of how long they use ICT in a day. The results are presented in Table 2.

Table 2. The length of ICT use by the teachers

Number of teachers	Length	Percentage (%)
4	Less than 1 hour	15.38
8	1-2 hours	30.77
6	2-3 hours	23.08

5	3-4 hours	19.23
3	More than 4 hours	11.54

Table 2 shows that most teachers spend 1-2 hours a day using ICT (30.77%), followed by 2-3 hours (23.08%) and 3-4 hours (19.23%). Only 11.54% of the teachers spent more than 4 hours using ICT.

4.2. English teachers' perceptions and challenges in using ICT

This section describes the English teachers' perceptions and challenges in using ICT in the classroom. The first sub-section presents the teachers' perceptions; the second sub-section presents the teachers' challenges. The results are followed by elicitations from the interviews to complement results from the questionnaire.

4.2.1. English teachers' perceptions of using ICT

A number of twelve items (out of 20) in the questionnaire focused on English teachers' perceptions on the implementation of ICT in ELT classrooms. Table 3 displays the results.

Table 3. English teachers' perceptions on the use of ICT

No	Statement items	Scales				
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	In my view, ICTs are more powerful in teaching than discussion and teaching without the use of ICT.	0%	1 teacher (3.85%)	6 teachers (23.08%)	11 teachers (42.31%)	8 teachers (30.77%)
2	ICTs (referring generally to computers, videos, hardware, software, and networks) increase my knowledge and skills as an English teacher.	0%	0%	2 teachers (7.69%)	12 teachers (46.15%)	12 teachers (46.15%)
3	ICTs are highly needed by teachers in teaching English.	0%	0%	6 teachers (23.08%)	12 teachers (46.15%)	8 teachers (30.77%)
4	ICTs can be used as advanced instructional tools in teaching English to my students.	0%	0%	1 teacher (3.85%)	20 teachers (76.92%)	5 teachers (19.23%)
5	In my view, ICTs can replace teacher in teaching English.	17 teachers (65.39%)	9 teachers (34.62%)	0%	0%	0%
6	As far as I know, ICTs can be used to effectively manipulate instructional contents and materials.	0%	3 teachers (11.54%)	11 teachers (42.31%)	12 teachers (46.15%)	0%
7	I know that ICTs can spread knowledge and information fast.	0%	0%	0%	12 teachers (46.15%)	14 teachers (53.85%)
8	In my view, ICTs are more effective for teaching and learning than books and other	0%	2 teachers	8 teachers	13 teachers	3 teachers

	printed materials.		(7.69%)	(30.77%)	(50%)	(11.54%)
9	I think ICT use does NOT have noteworthy values for human societies in general.	3 teachers (11.54%)	19 teachers (73.08%)	1 teacher (3.85%)	3 teachers (11.54%)	0 teachers (0%)
10	I think ICT use does NOT offer educational/instructional values for student in learning English.	1 teacher (3.85%)	23 teachers (88.46%)	2 teachers (7.69%)	0%	0%
12	In my view ICTs can be used as curriculum materials at school.	0%	1 teacher (3.85%)	8 teachers (30.77%)	15 teachers (57.69%)	2 teachers (7.69%)
14	I use/have used ICTs for teaching and in daily life.	1 teacher (3.85%)	0%	2 teachers (7.69%)	19 teachers (73.08%)	4 teachers (15.39%)

Table 3 shows that 100% of the respondents agree that ICT can spread knowledge and information fast, about 89% of teachers have used ICT in their teaching and daily life, 88% agree that ICTs offer educational values for students in learning English, about 77% agree that ICTs increase teachers' knowledge and skills as English teachers, about 77% agree that ICT is highly needed by teachers in teaching English, about 77% agree that ICT can be used as advanced instructional tools in teaching English to students, roughly 73% of the teachers agree that ICTs are more powerful tools of teaching than discussion and teaching without the use of ICT, roughly 73% agree that technology has noteworthy values for human societies in general, roughly 65% agree that ICT tools can provide curriculum materials at school, nearly 50% agree that ICTs are more effective for teaching and learning than books and other printed materials, and nearly 46% agree that ICT can be used to effectively manipulate instructional contents and materials. Nonetheless, 100% of teachers disagree that ICT can replace teacher in teaching English

It is principally concluded that teachers do believe that ICT supports their teaching and learning processes in the ELT classrooms. Some excerpts from the teachers that support the use of ICT in teaching corroborate that claim as below (E refers to Excerpt from the interview and T refers to Teacher):

(E1) T2: I agree that ICT are powerful tools of teaching. Compared to printed books, ICT are more interesting. The students will not feel bored when learning English. For example, students can directly watch conversation videos and find many pictures related to the lesson. ICT makes teaching time efficient and makes teaching easier. If we do discussions using ICT, the information that we get is more varied. It makes discussion easier.

As evidenced in E1, T2 agreed that ICTs are powerful tools in teaching and this is as what Granito and Chernobilsky (2012) have earlier mentioned in their study. With ICT, students can watch videos that are closer to real life presentation compared to printed books.

It facilitates teachers' job since students can easily access more information through ICT and their increased information knowledge livens class discussions. Similarly, Hollenbeck and Hollenbeck (2009) also discuss how ICT can create a more meaningful and authentic learning environment for the students. Furthermore, most teachers believe that ICT has noteworthy values for human societies in general. An example is the fast spread of important information for the society, as provided by T3.

(E2) T3: From positive point of views, ICTs are very helpful in our society, for example in communication and getting rapid information. For example when there is an earthquake. Aceh is prone to earthquakes. We can get information about the earthquake from our friends quickly. We can use the Internet to communicate with each other. If there is a tsunami, we can communicate with each other on where we should run for safety.

However, those who do not fully agree that ICT are more effective for teaching and learning than printed materials and that technology can be used to effectively manipulate instructional contents and materials are expressed by T1 because of the following reasons:

(E3) T1: ICT is just to assist us in teaching, but I see ICT sometimes makes the students lazy to think. You see, discussion in the classroom is to provoke students' critical thinking, but when they can easily get the answers from the Internet, they don't make the effort to think for the answers anymore. I can teach with or without ICT. ICT is important, but the most important thing is how the teachers teach the students. How they make the materials better understood by the students. To me, the important thing is the innovation and motivation of the students to think creatively.

Based on T1, one teacher openly pointed out that despite usefulness of ICT, technology can lead to students' apathy in thinking. By the same token, Yunus et al. (2013) as well as Mustafa (2016) have similar thoughts on students' reading and writing development if the students rely too much on ICT. What is more, T1 believes that information that is easily accessible by students in technology-based instruction can lessen their creativity in learning and thinking. Therefore, these teachers did not put the use of ICT at the forefront in their teaching; this tool is merely an addition to their teaching activities in the classroom.

Notwithstanding the positive views from the teachers on the use of ICT in the classroom and its important values for the society in general, all teachers believed that technology cannot replace their role in teaching English because ICTs cannot provide direct immeasurable emotional influence on the students such as encouragement, support, safety, character and inspiration. As summed by T4:

- (E4) T4:No tool can replace teachers in the classrooms. A tool cannot make a student happy when she is sad through expressions, emotions and encouragement. Only a human being, a teacher, can do that. A tool cannot motivate a student through real life experiences, stories and positive actions. Only a human being, a teacher, can do that. A tool cannot protect a student when she in trouble in school, again, only a teacher can do that.

4.2.2. English teachers' challenges in using ICT

Table 4 shows the findings from the questionnaire the teachers completed on the challenges they face while implementing technology in the classroom.

Table 4. English teachers' challenges in ICT use

No	Statement items	Scales				
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
11	I know that many forms of ICT tools and techniques at school are accessible for use in teaching English.	2 teachers (7.69%)	1 teacher (3.85%)	1 teacher (3.85%)	18 teachers (69.23%)	4 teachers (15.39%)
13	I can avoid problems in many areas such as in handwriting and in organizing ideas when I use ICT.	1 teacher (3.85%)	3 teachers (11.54%)	10 teachers (38.46%)	10 teachers (38.46%)	4 teachers (15.39%)
15	I have no difficulty in using ICT.	1 teacher (3.85%)	3 teachers (11.54%)	6 teachers (23.08%)	13 teachers (50%)	3 teachers (11.54%)
16	I know about ICT materials related to English language learning that I can use for my teaching.	1 teacher (3.85%)	0%	4 teachers (15.39%)	14 teachers (53.85%)	7 teachers (26.92%)
17	I know how to access the Internet and get some information from it.	1 teacher (3.85%)	0%	0%	15 teachers (57.69%)	10 teachers (38.46%)
18	The Internet is easily accessible and available at school.	0%	4 teachers (15.39%)	2 teachers (7.69%)	14 teachers (53.85%)	6 teachers (23.08%)
19	Generally speaking, I have enough experiences and training on available computers and/or software.	1 teacher (3.85%)	4 teachers (15.39%)	11 teachers (42.31%)	9 teachers (34.62%)	1 teacher (3.85%)
20	I have limited time to integrate ICT in my teaching.	0%	8 teachers (30.77%)	10 teachers (38.46%)	4 teachers (15.39%)	4 teachers (15.39%)

Table 4 proves that most teachers know how to access the Internet and get some information from it, about 85% of the teachers agree that many forms of ICT tools and techniques at their school are accessible for use in teaching English, while nearly 81% know about ICT materials related to English language learning that can be used for their teaching. At the same time, about 76.93% agree that the Internet is easily accessible and available at their school, roughly 54% agree that they can avoid problems in many areas such as in

handwriting and in organizing ideas when they use ICT, and roughly 50% agree that they have no difficulty in using ICT. However, only 38.47% have enough experiences and training in using available computers and/or software, and nearly 30.78% have limited time to integrate ICT in their teaching.

Hence, it can be concluded that most public schools in Banda Aceh provide many forms of ICT tools and techniques accessible for use in teaching English and most teachers know how to use the ICT tools. Even so, problems exposed by the teachers on its accessibility in schools are as follows:

(E5) T1: ICT tools and techniques at school are accessible but still limited. For example, the teachers have to wait for the chance to use the projector. It would be more efficient if the school provides one projector for each class so we can use it properly without wasting time to wait for a projector from each other. We also have a problem of low Internet connection. I often waste time just to prepare the tools provided by the school. So, luckily, I have the tools I need myself. I always bring a laptop, a small projector, a set of loud speaker and any kind of cables in my car. But not all teachers can afford that. More money is needed if the school wants to make the most use of ICT in teaching.

T1 basically rendered that if the school intends to provide ICT for the teachers, then the facility should be provided for every teacher. If the facility is only available to one or two teachers, then using it effectively in teaching would be a problem since every teacher would need to wait for their chance or share. T1 also referred to the setback in which not all teachers in Indonesia with their income can afford ICT facility for their own class in school. T2 further explains the ICT tools available in his school, but the school does not provide the Internet to assist the teachers in searching for materials that can be used for teaching.

(E6) T7: Our school provides some tools such as computers and projectors but we do not have the Internet to be accessed. We have to use our own hotspot from our smartphones to look for teaching materials, or when we really need the Internet for teaching.

Another challenge that the teachers faced in using ICT is the inadequate time that they have to integrate technology in their teaching. About 5 teachers said that they did not have enough experience and training in the use of ICT in the classroom. T5, who lacks experience in using ICT, bluntly explained:

(E7) T5: The tools are accessible in my school. The Internet is also connected. But the problem is that I cannot use it. I do not know how to use any of the tools. So I decided to not use it for my teaching. To learn it would need more time, I think. I don't have time; there is a lot of paperwork

and also administrative work that I need to do for the school. I know a teacher who can use ICT but rarely uses it for teaching, because like I said, a lot of paperwork to do. So he come to class and teach by the textbooks; no time to search for new materials from the Internet and prepare them for teaching. Anyways, I am comfortable with teaching traditionally without the use of ICT.

Based on the explanation by T5 in E7, extensive paperwork from the school also hinders the teachers' motivation and effort to implement ICT in the classroom. Much of their time at school is about completing paperwork, and this becomes even harder when classes comprise large numbers of students. In Indonesia, it is very typical that a classroom of a public school consists of 40-50 students. Besides, this negative attitude is also one of the factors that hinder technology integration in the classroom for the teachers (Bingimlas, 2009).

4.3 English teachers' demographic factors and their perceptions and challenges in using ICT

The questionnaire inquires about the demographic factors such as age, gender, degree and teaching experience of the English teachers. The purpose is to see whether these factors make any difference to their perceptions and challenges in using ICT. The results are described in the following sub-sections.

4.3.1. Age

The current findings are in line with the previous studies in which the age of teachers had no effect on the implementation of ICT in language learning. Nevertheless, there was only one teacher, T5, who revealed in the interview that his age had an impact on the integration of ICT into his language teaching, "I never took part in the ICT training because I'm old".

Figure 1 shows that there is no significant difference between the age of the English teachers and their perceptions and challenges in using ICT. The mean of the teachers aged 36-40 years is slightly higher than others but not significantly different among the age of the English teachers as regards perceptions and challenges in using ICT.

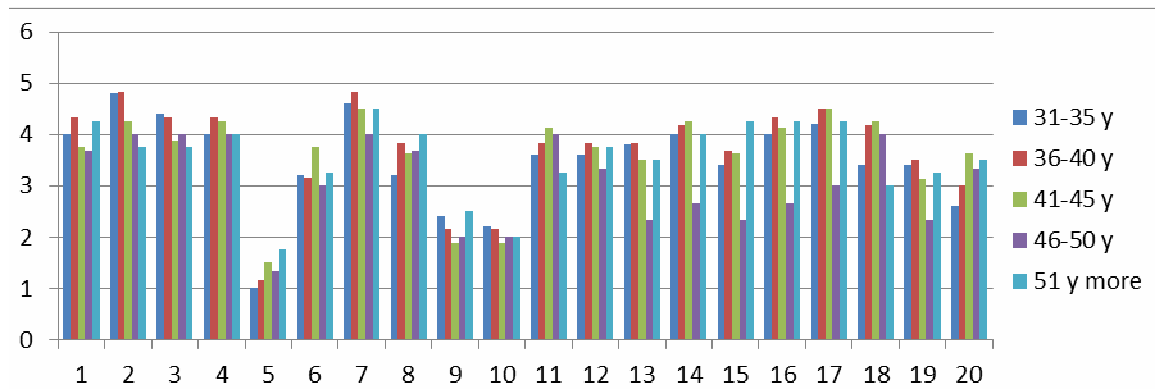


Figure 1. Age and English teachers' perceptions and challenges in using ICT.

In conclusion, the age of English teachers in this study does not have significant differences on their perceptions and challenges in their use of ICT in their language classes. However, it may have indirect effects regarding to the teaching experience. In others words, young teachers may have less teaching experience than senior teachers (Mahdi and Al-Dera, 2013, p. 62).

4.3.2. Gender

Elsaadani (2012) found that there is no difference between males and females in terms of attitude toward ICT among teaching staff; and so, gender is not a significant factor when considering attitude toward ICT by teachers. The result of other studies also revealed no significant differences between ICT attitudes of teachers in terms of gender (Cavas, Cavas, Karaoglan and Kislak, 2009). Similarly, the present study also shows no significant difference between the gender of the English teachers and their perceptions and barriers to using ICT. As evidenced in Figure 2, the mean (1 to 5) is almost the same. The mean of males is slightly higher than that of females but it is not significant. It can be concluded that both male and female teachers have the same perceptions and challenges in using ICT.

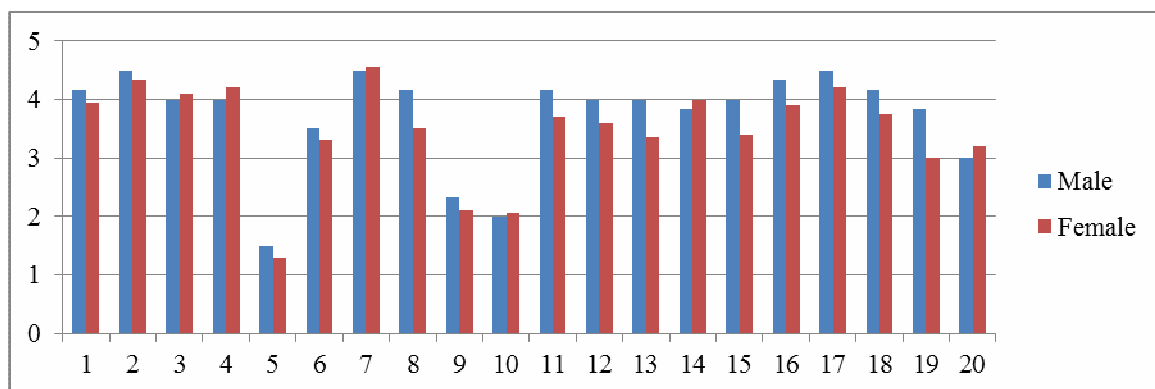


Figure 2. Gender and English teachers' perceptions and challenges in using ICT

4.3.3 Educational degree

Figure 3 illustrates that there is no significant difference between the degree of the English teachers and their perceptions and challenges in using ICT. It can be seen that the mean (1 to 5) is almost the same. The mean of teachers with a master's degree is slightly higher than that of teachers who hold a bachelor's degree.

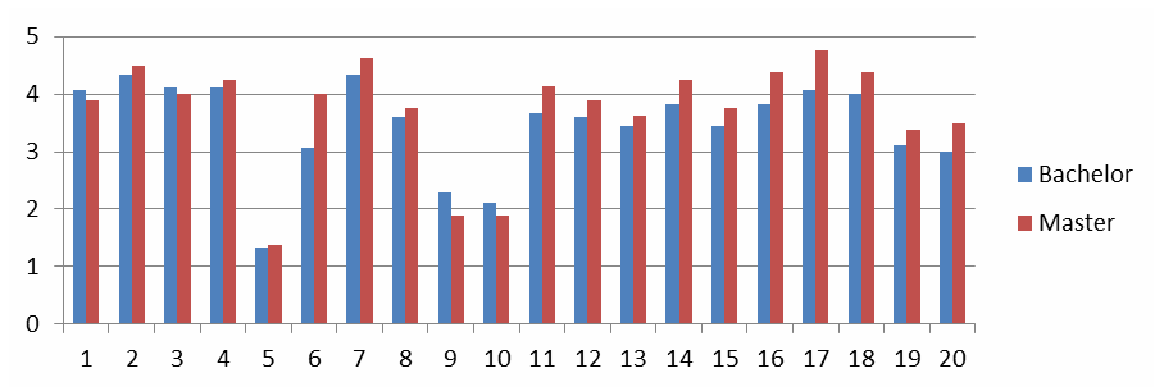


Figure 3. Educational degree and English teachers' perceptions and challenges in using ICT.

This finding is in line with the research conducted by Chemwei, Kiboss, and Njagi (2016). Their study showed that teacher-educators' educational qualifications had a positive relationship with their level of ICT integration, however, this characteristic was not found to be statistically significant. There was also no mutual supportive relationship between the ICT literacy level and the varying academic qualification attained or earned by the various teachers who participated in this study. In addition, Alazzam, Bakar, Hamzah, and Asimiran (2012) found no significant effect of the teachers' educational background and support factors on ICT use as well. It can be concluded that teachers with master's and bachelor's degrees have similar perceptions and challenges in using ICT.

4.3.4. Teaching experience

The teaching experience and their perceptions and challenges of ICT have almost the same result, in which there was no significant difference. However, as demonstrated by Figure 4, for question 20 teachers with 16-20 years experience had a different result regarding the limited time for ICT implementation, but the difference is not striking because it is between the "neutral" and "agree" options. Likewise, Niederhauser and Stoddart (2001) also did not find differences in their research for length of teaching experience. It can be concluded that

English teachers have similar perceptions and challenges in using ICT regardless of how long they have been teaching for.

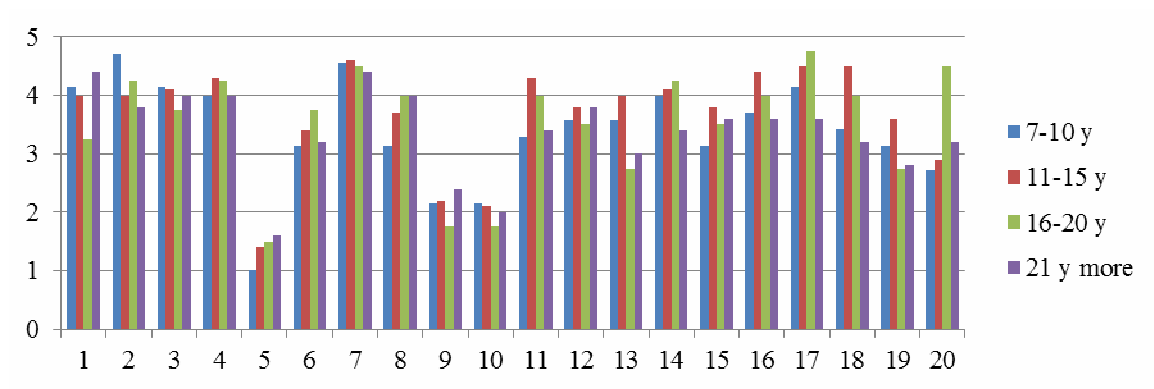


Figure 4. Teaching experience and English teachers' perceptions and challenges in using ICT.

5. Conclusions and suggestions

Based on the results of the research on English teachers' perceptions and challenges to the implementation of ICT in ELT classrooms, several conclusions can be drawn. First, the English teachers involved in this study have positive perceptions of the implementation of ICT in the ELT classroom. ICT helps them obtain information easily and swiftly. They also think that ICT makes class more interesting than discussion and teaching without using any tools. They all agree that technology is very useful as it can assist them in teaching English. Nevertheless, ICT can never replace teachers because it cannot be the living role model that the teachers can offer the students. The interviews showed that they proposed that the school should have enough funding and provide sufficient facilities for the teachers to be encouraged to use ICT in their teaching.

Second, this study demonstrates that the teachers have three major challenges in using ICT. Limited ICT tools and low Internet connection at schools are the dominant challenges. The teachers have to share the tools with other teachers and this wastes time to wait for their turn to use ICT. The last challenge is the lack of knowledge and training experience that teachers have. Some teachers have difficulty using ICT and need to learn more to improve their knowledge and skills. A solution would be to provide joint ICT workshops for school teachers so that they can learn from one another how to make effective use of technology in their teaching.

Third, the demographic factors which include age, gender, educational degree and years of teaching experience do not bring significant differences on their perceptions and

challenges to using ICT. Teachers with different demographic factors still have the same perceptions on the use of ICT and face the same obstacles or challenges in its implementation in the ELT classrooms.

Nevertheless, this research has a number of limitations. The number of respondents was restricted to English teachers in public senior high schools in Banda Aceh. Future related research should also consider all English teachers from junior high schools and all English lecturers in universities in the city. This research has discovered the perceptions and challenges generally faced by teachers in implementing ICT in the classroom. The findings can have important implications for ensuring the successful and effective use of ICT in the classroom. Therefore, school authorities must consider the cost-benefit of effective technology use by ensuring that their investments support the teachers and can overcome some of the challenges to ICT use.

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Appendix. Questionnaire

Section (1) Background Information

Please indicate your response to the following questions by checking on the appropriate circles:

1.1 Age:

- 21-25
- 26-30
- 31-35
- 36-40
- 41-45
- 46-50
- 51 and over

1.2 Gender:

- Male
- Female

1.3 The last degree completed:

- Bachelors
- Masters
- Doctorate

1.4 Teaching Experience:

- Less than a year
- 1-3 Years
- 4-6 Years
- 7-10 Years
- 11-15 Years
- 16-20 Years
- 21 Years and over

Section (2) ICT Use & Literacy

Please indicate your response to the following items:

2.1 What do you use ICT for? Please tick (✓) the appropriate ones. You can choose more than one choice. You can list the choices from 1 to 15 according to your frequency of use and preferences.

- chatting with students and other teachers on school/subject matter
- educational games that can be used for teaching
- e-mail and mail listing
- online discussion boards on language teaching
- shopping online for teaching tools and materials
- finding materials related to lessons
- preparing presentations
- assigning homework
- video conferencing and net-meeting
- presenting course material
- online dictionaries
- web blogs (e.g., blogger)
- giving feedback to students
- other

2.2 How many hours do you have access to the Internet in a day?

- Less than one hour
- 1-2 hour(s)
- 2-3 hours
- 3-4 hours
- 4 hours and over

Section (3) EFL Teachers' Perceptions and Challenges

Please indicate your reaction to each of the following statements by circling the number that represents your level of agreement or disagreement with it. Make sure to respond to each statement: SD = strongly disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree

Item #	Statements	SD	D	N	A	SA
1.	In my view, ICTs are more powerful tools of teaching than discussion and teaching without the use of ICTs.	1	2	3	4	5
2.	ICTs (referring generally to computers, videos, hardware, software, and networks) increase my knowledge and skills as an English teacher.	1	2	3	4	5
3.	ICTs are highly needed by teachers in teaching English.	1	2	3	4	5
4.	ICTs can be used as advanced instructional tools in teaching English to my students.	1	2	3	4	5
5.	In my view, ICTs can replace teachers' role in teaching English.	1	2	3	4	5
6.	As far as I know, ICTs can be used to effectively manipulate instructional contents and materials.	1	2	3	4	5
7.	I know that ICTs can spread knowledge and information fast.	1	2	3	4	5
8.	In my view, ICTs are more effective for teaching and learning than books and other printed materials.	1	2	3	4	5
9.	I think ICTs do NOT have noteworthy values for human societies in general.	1	2	3	4	5
10.	I think ICTs do NOT offer educational/instructional values for student in learning English.	1	2	3	4	5
11.	I know that many forms of ICT tools and techniques at school are accessible for use in teaching English.	1	2	3	4	5
12.	In my view ICTs can be used as curriculum materials at school.	1	2	3	4	5
13.	I can avoid problems in many areas such as in handwriting and in organizing ideas when I use ICTs.	1	2	3	4	5
14.	I use/have used ICTs for teaching and in daily life.	1	2	3	4	5
15.	I have no difficulty in using ICTs.	1	2	3	4	5
16.	I know about ICT materials related to English language learning that I can use for my teaching.	1	2	3	4	5
17.	I know how to access Internet and get some information from it.	1	2	3	4	5
18.	Internet access is easily accessible and available at school.	1	2	3	4	5
19.	Generally speaking, I have enough experiences and training on available computers and/or software.	1	2	3	4	5
20.	I have limited time to integrate ICTs in my teaching.	1	2	3	4	5