

Teachers' Views on the Use of ICT in Language Courses

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Abstract

This study aims to explore and understand teachers' perceptions regarding the integration of Information and Communication Technology (ICT) in English for Specific Purposes (ESP) instruction, with the goal of identifying both benefits and challenges in real classroom settings. A qualitative case study design was employed to gain in-depth insights into the phenomenon. Data were collected through semi-structured interviews with two experienced language instructors from a private university in South Sulawesi, Indonesia. The interviews were transcribed and analyzed thematically using Nvivo R14 software to ensure systematic coding and theme development. The findings revealed two primary themes: teachers' positive perceptions and the challenges they face in using ICT. The participants highlighted that ICT tools facilitate ESP teaching by supporting material delivery and increasing student engagement. Nonetheless, they also reported significant challenges, including limited internet connectivity, increased instances of plagiarism, and difficulties in monitoring student performance. This study provides up-to-date insights into the practical realities of ICT integration in ESP instruction within Indonesian higher education, offering valuable implications for educators, policymakers, and curriculum developers aiming to optimize ICT use in language teaching.

Keywords: *ICT, ESP, Language, Teacher Perception, Challenges*

Introduction

The integration of Information and Communication Technology (ICT) in education has become increasingly prominent, revolutionizing traditional teaching methodologies and reshaping how knowledge is delivered and acquired (OECD, 2021; Zhang & Yu, 2020). In the context of language learning, particularly English for Specific Purposes (ESP), ICT offers dynamic and interactive platforms that align with the demands of 21st-century education. Language instructors play a critical role in shaping students' learning

experiences, and their ability to integrate technology effectively can significantly impact learner outcomes, especially in specialized fields such as pharmacy.

The use of ICT in ESP instruction enables teachers to present authentic materials, simulate real-world professional communication, and enhance student engagement through multimedia tools and collaborative online environments (Rachmatullah et al., 2023; Ningsih & Rasyid, 2022). In pharmacy education, where the accurate understanding and communication of technical terminology are crucial, ICT can provide contextualized learning environments that traditional methods may lack (Rosmayanti et al., 2022). Bloch (2013) emphasized that technology plays an essential role in ESP instruction by supporting learners in understanding the context of professional communication.

Despite its potential, many teachers still struggle with integrating ICT in their classrooms. Factors such as limited technological infrastructure, lack of institutional support, inadequate digital literacy, and discomfort with digital tools pose significant barriers (Sari & Liu Ming-Chou, 2024; Rahayu & Wijaya, 2021). For ESP instructors in particular, these challenges are often compounded by a lack of familiarity with ICT applications tailored to specific disciplines, such as pharmacy.

Moreover, the success of ICT integration is influenced by teachers' perceptions and readiness. Teachers who perceive ICT as beneficial are more likely to experiment with and adopt new tools in their teaching practices (Hidayati & Fauziati, 2021). However, negative perceptions, stemming from previous failures or limited training, can hinder adoption. Recent studies have also highlighted concerns regarding increased academic dishonesty (e.g., plagiarism), time-consuming preparation for ICT-based teaching, and difficulties in monitoring student participation in virtual settings (Rosmayanti et al., 2023; Ardiansyah & Mahmud, 2020).

Understanding these perceptions and challenges from the teachers' perspective is crucial in developing practical and context-sensitive strategies to enhance the use of ICT in ESP courses. This study, therefore, explores language instructors' perceptions of using ICT in pharmacy-related ESP instruction at a private university in South Sulawesi, Indonesia, aiming to provide updated insights that can inform curriculum planning and teacher professional development programs.

Method

Participants

The research was carried out at a private University in South Sulawesi, Indonesia. The study's participants were two lecturers of Language. Before conducting this study, we obtained permission from the dean of Pharmacy Faculty, and we also negotiated our research project with the participants. As a result, the researcher and the participants meticulously planned the interview schedule. All project participants were fully informed. Upon their participation in the project, the participants were required to fill out an online consent form and return it signed. They had the option of leaving at any time during the research project.

Procedure

The procedure for collecting data in this study consists of three stages. The first stage is contacting the dean of Pharmacy faculty for approval to conduct research. The second stage is Asking the lecturer of Language's willingness to participate in the study as a participant, and the third or the main stage is collecting the data. In collecting the

data, semi-structured interviews were performed. As DiCicco-Bloom & Crabtree (2006) suggested, the interview performed only once for a person and require 30 minutes to several hours to finish. In this semi-structured interview, the researcher followed the procedure conducted by Braun and Clarke (2013). There were be two main stages completed. Firstly, all participants were contacted and asked for their availability. Participants can freely choose to be interviewed at their convenient location. Secondly, participants were interviewed by the first and second authors. The researcher employed the semi-structured interview using an audio recorder with each participant's approval in this research. The semi-structured interview conducted in this research followed the model of the semi-structured interview guide proposed by Wilson (2014). The researcher interviewed the teachers to get information about how they percieve the use of ICT in teaching their Language class.

Data Analysis

The interview transcripts were analyzed using Thematic Analysis (TA) for identifying themes and patterns of meaning across a dataset concerning a research question (Braun & Clarke, 2006). One of the main strengths of TA is this flexibility. It can be used to answer almost any type of research and used to analyze nearly any kind of data with larger or smaller datasets. The TA were conducted in six stages such as transcribing the interview result into a written form to familiarize the researcher with the data (Riessman, 1993), generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the reports.

Results

Analysis of Findings Based on Theoretical Frameworks and ICT Integration

After generating the initial coding from the interview transcription, the thematic analysis in this study resulted in seven tentative themes related to teachers' perspectives on the implementation of ICT-based instruction in Language courses. These themes are: (a) Teachers' feelings in teaching Language, (b) Challenges in using technology for teaching, (c) The impact of technology on learning, (d) The impact of technology on students' engagement and achievement, (e) The impact of technology on lesson planning, (f) The shift from traditional to modern teaching through technology, and (g) Teachers' perceptions of teaching with technology. These themes were constructed by grouping similar codes based on shared meanings, as suggested by Braun & Clarke's (2006) six-phase framework for thematic analysis. The data were repeatedly reviewed and refined, ensuring alignment between the coding and the original transcripts. The thematic refinement process also involved a comparative analysis to identify interrelationships, overlaps, or contrasts between themes.

Teachers' Feelings in Teaching with ICT

The first theme highlights teachers' positive feelings when teaching Language using technology. Teachers reported that ICT enhanced their enjoyment and confidence in delivering lessons, especially when teaching English for Specific Purposes (ESP) in pharmacy contexts. One teacher initially felt unprepared due to limited knowledge of pharmaceutical terminology. However, digital resources helped bridge this knowledge gap, making the teaching experience more manageable and enjoyable. This aligns with Vygotsky's sociocultural theory, which emphasizes mediated learning through tools (Manca & Ranieri, 2016). In this case, technology acts as a mediating artifact, facilitating both teacher learning and instructional delivery.

Challenges in using Technology

Despite the benefits, teachers faced several challenges while implementing ICT, such as poor internet connectivity, difficulties in monitoring students online, and increased instances of plagiarism. These findings echo Almazova et al. (2020), who noted that limited infrastructure and digital literacy are major barriers in online education. Some teachers coped by recording lessons and sharing them asynchronously, allowing students to access content at their own pace and location. This asynchronous flexibility is essential in addressing the digital divide, particularly for students in remote areas.

The Impact of Technology on Learning

Teachers acknowledged that ICT had a positive effect on learning. Students were able to study independently, access materials repeatedly, and explore online resources beyond classroom content. Teachers also found it easier to prepare engaging lessons using online tools and platforms. These findings are consistent with blended learning theories, particularly the notion of “anytime-anywhere” learning (Horn & Staker, 2015), which supports flexible, self-directed learning pathways. Each of these findings is presented concerning the teachers’ view on the ICT-based instruction in learning Language. The following initial themes have been sorted based on the coding references from the highest to the lowest number of coding references. Tentative themes of the teachers’ view on the implementation of ICT-Based Instruction in Language are presented in the following table:

Table 1 Tentative themes of the teachers’ view on the use of ICT Language class.

No.	Purpose	Number of coding references	The aggregate number of coding references
1	Teachers' feeling in teaching Language	3	6
2	The challenges of using technology in teaching.	3	6
3	The impact of technology on learning.	3	6
4	The impact of technology on students' engagement and achievement	3	6
5	The impact of technology on the lesson.	3	6
6	Technologies change teaching from traditional to modern teaching	3	6
7	Teachers' perception on teaching with technology.	2	4

The first tentative theme is teachers' feelings in teaching Language which consists of six aggregate numbers of coding references. The data for this theme were obtained from interviews with two teachers of Language. Both respondents have been teachers of Language courses who applied ICT-based instruction. Based on the participants' responses during the interview, technology is very useful for them in learning English as can be seen in the excerpt of coding references in the table below. Each reference is supported by the percentage of coverage which indicates the volume of narration covered by each excerpt.

Table 2 Excerpt of coding references: Teachers' feeling in teaching.

Reference	Coverage	Excerpt
Reference 1	1.39%	Teaching English in pharmacy class is very fun because the students have good English. The students join the class seriously. And also, I'm happy to teach them.
Reference 2	4.14%	So, for the first time, I got the decree of teaching pharmacy class, I think it is going to be hard for me since this is ESP class. It will be difficult for me to teach English in the pharmacy field. I am not familiar with the terms in the pharmacy field. I have to study the field of pharmacy before teaching. The first step that I took that time was finding some sources or teaching references related to English for Pharmacy. Teaching language class is enjoyable
Reference 3	1.78%	I am very happy when teaching language. Firstly, I got general English, like general English for pharmacy students, and I have handled also English conversation for pharmacy students

Participants' responses during the interview stated that they felt happy teaching the Language course because the students they taught took the lectures seriously. One participant stated that when he was entrusted with teaching Language courses, he felt insecure about teaching ESP because he had been teaching general English. There were many technical terms in pharmacy that he was not familiar with. However, technology helps him handle this. There are so many resources and teaching materials in the field of pharmacy on the internet that can be studied and adapted in teaching Language. In the end, teaching Language is enjoyable.

The next tentative theme is the challenges of using technology in teaching. There are some challenges faced by teachers during their teaching in the Language course as shown in the following excerpt of coding references. Each reference is supported by the percentage of coverage which indicates the volume of narration covered by each excerpt.

Table 3 Excerpt of coding references: The challenges of using technology in teaching.

Reference	Coverage	Excerpt
Reference 1	7.31%	The only challenge I got teaching with technology is the limited internet connections. The way I cope with this problem is by recording myself teaching by using a screencast application, or zoom recording and then sending it to the students.
Reference 2	4.14%	And the challenge for teaching is somethings like unstable connections.
Reference 3	1.78%	Another problem teaching with technology is that I couldn't monitor the students one by one especially in virtual class sessions.
Reference 4	1.70%	The last problem is that it is easier for the students to copy and modify their friends' assignments before they submit them. I sometimes get them from

different students but the assignments they have submitted were the same

According to interview participants, the main problem they have got during their teaching is that limited internet connection. Poor internet access was coming from sides, teacher's side and the students' side. Teachers sometimes experience internet connection down due to bad weather or the WIFI available on campus is having problems. Not only teachers, but the problem of limited internet connection is also even more experienced by students. They complain that credit assistance from the government to access the internet is not enough to cover all learning. In addition, the internet network in remote areas for students studying from home is not strong enough to access good internet. One of the efforts made by teachers to overcome the problem of limited internet access is to make learning videos and then send them to students so they can download them when they get a good internet connection. So, students can study at different times according to their conditions, but they still get the same material. The other problem faced by teachers is the difficulty to monitor all the students at the same time especially in virtual meetings. The last problem is the plagiarism and copy-paste problem.

The next tentative theme is the impact of technology on students' learning. From the view of teachers, the use of technology has a positive impact on both students' learning and teachers' teaching as we can see in the following excerpt of coding references. Each reference is supported by the percentage of coverage which indicates the volume of narration covered by each excerpt.

Table 4 Excerpt of coding references: The impact of technology on learning.

Reference	Coverage	Excerpt
Reference 1	0.54%	I think the impact is very positive since the students can learn anytime and anywhere based on their phase of learning
Reference 2	0.32%	It helps me to prepare the program that I don't have any idea about it before
Reference 3	0.27%	So, it changes me from knowing nothing to being a user of the program.

According to participant recognition, the use of technology has a positive impact on students because they can learn anytime and anywhere according to their phase. Students who do not understand or are not as fast at catching learning as their friends can study harder by playing learning videos over and over and accessing various learning resources on the internet related to the topics, they discuss every week. In addition to students, the use of technology also has a positive impact on teacher teaching. According to participants, technology helps them prepare for learning well, especially when they run out of ideas in designing lessons. There are various forums for teachers on the internet as a place to share experiences related to their learning. In addition, various sources with various topics are also available on the internet, teachers only need to adapt according to the needs of the students they teach. One participant said that technology changed him as a teacher who previously did not know much about technology into a teacher as well as a user of various teaching programs and applications.

The next tentative theme is the impact of technology on students' engagement and achievement. The following excerpt of coding references shows teachers' view on the

impact of technology on students' engagement and achievement. Each reference is supported by the percentage of coverage which indicates the volume of narration covered by each excerpt.

Table 5 Excerpt of coding references: The impact of technology on students' engagement and achievement.

Reference	Coverage	Excerpt
Reference 1	1.26%	Using technology in teaching can increase student engagement and I think the teaching and learning process is more effective. Students can learn independently by watching video recordings about the materials and they can rely on the internet connection to brows everything they need to learn.
Reference 2	1.26%	I could see that from the previous classes, some of the students are still thinking about how to make the project by mixing and matching some apps. But during this pandemic, I can see that wow, my students can make their project amazing you know. And so far, the students' achievements are good and quite satisfying.

According to the teachers, the use of technology in teaching makes learning more effective and student engagements also increase. Technology provides opportunities for students to do self-study outside the classroom by accessing various sources to learn according to what they need. Students can also play back teaching videos from teachers when they don't understand. One activity that can make students highly engaged is when they are doing the project. Previously, the students were still confused about what to do with the project, but in the end, the result is so satisfying. In addition, based on the teacher's observations after teaching the Language course, the use of technology in this teaching has made student achievements so far quite good and satisfying.

The next tentative theme is the impact of technology on the lesson. According to the teachers, the use of technology impacts the lesson they delivered in teaching Language as shown in the following coding excerpt. Each reference is supported by the percentage of coverage which indicates the volume of narration covered by each excerpt.

Table 6 Excerpt of coding references: The impact of technology on the lesson.

Reference	Coverage	Excerpt
Reference 1	1.10%	Technology helps me to find authentic materials for pharmacy students like prescription, sample of dialogue, equipment list, and other materials related to pharmacy field including the reading text.
Reference 2	0.77%	The students use their smartphone and their laptop in learning. So, it makes me as a lecturer easier to deliver the lesson and it is also easier for the students to understand
Reference 3	0.90%	I don't need to present everything manually; I just need to share the link to the chat group and let the students observe it by themselves.

The use of technology has a positive impact on the lesson. One of the participants stated that technology is very helpful in finding authentic materials related to the pharmaceutical field, such as prescriptions, drug lists, drug brochures, and others. In addition, technology makes it very easy for teachers to deliver the lesson. Teachers simply send a link to students to access the material that has been created. Technology such as smartphones makes it easier for students to access learning materials anywhere. For example, listening material which is usually accessed in a language laboratory with adequate speakers can be accessed via a smartphone and can be listened to properly by using a headset. Learning materials, which are usually presented by the teacher in front of the class, can be presented virtually or recorded and sent to students.

The next tentative theme is the change of teaching from traditional to modern teaching. One of the impacts of the use of technology in teaching is that technology can change the way the teachers teach from traditional teaching to more modern teaching as we can see in the following excerpt. Each reference is supported by the percentage of coverage which indicates the volume of narration covered by each excerpt.

Table 7 Excerpt of coding references: Traditional to modern teaching.

Reference	Coverage	Excerpt
Reference 1	1.81%	Yes, it does, from traditional class to more modern class. I mean we need to keep updated with technology and follow the trend of teaching to survive
Reference 2	1.92%	When people ask me whether technology change the way I teach, I said yes, It's really yeah... before using the laptop, LCD projector, we must deal with the whiteboard in the classroom all the time, but now it becomes a complementary tool for teaching in the classroom

According to the teacher, the use of technology in learning is very different from traditional teaching that has been mostly done by teachers. Previously, whiteboards and board markers were the most important equipment in learning, but now with the use of technology, student smartphones can also be used as learning media in the classroom. Learning materials sent by lecturers in the form of links can be easily accessed by students via smartphones. In the end, whiteboards and board markers will only be complementary learning media, especially for teachers who apply ICT-based Instruction. The use of technology in learning has become a necessity for teachers in teaching to be able to compete and survive. The characteristics of today's millennial students, who are technology literate, require a teacher to be updated and follow learning trends so as not to be left behind. One of the participants during the interview stated that he has never been separated from technology such as laptops, LCD projectors, and internet connections while teaching Language. LCD projector and internet connection are facilities provided by the campus in each class to support effective learning.

The last tentative theme related to the teachers' view on the implementation of ICT-based instruction in the Language course is that teachers' perception of teaching with technology as we can see in the following excerpt. Each reference is supported by the percentage of coverage which indicates the volume of narration covered by each excerpt

Table 8 Excerpt of coding references: Teachers' perception on teaching with technology.

Reference	Coverage	Excerpt
Reference 1	2.27%	In my opinion, ICT-based instruction in teaching Language is very helpful. It helps me a lot when preparing my teaching materials. I rely on internet connection to learn more about the field of pharmacy and to find suitable material for teaching my class. And during the class, it helps me to promote students' engagement and motivation. The class is more fun and the teaching process is more effective.
Reference 2	1.38%	ICT-based instruction gives a positive impact on me as a lecturer and of course for the students as well. And in my opinion, all teachers should apply it in their class

According to the teachers, the implementation of ICT-based instruction in teaching Language courses is very helpful for both teachers and students. Technology is very helpful for teachers to prepare for learning such as finding materials that can be used in learning, both in the form of authentic materials and learning materials. One participant stated that by using technology learning becomes more effective. Technology helps teachers to promote students' engagement and motivation so that learning becomes more fun and effective. For that reason, the participant suggested the teachers out there implement ICT-Based Instruction, especially those who teach ESP classes.

The next stage of thematic analysis, according to (Braun & Clarke, 2006) is to look for motifs or themes that are relevant to the research objectives. This theme highlights a key finding in the data about the teachers' view on the implementation of ICT-based instruction in the Language course. The result of data analysis in this study indicated two primary themes: positive perception and challenge. The map of primary themes is presented in the following figure.

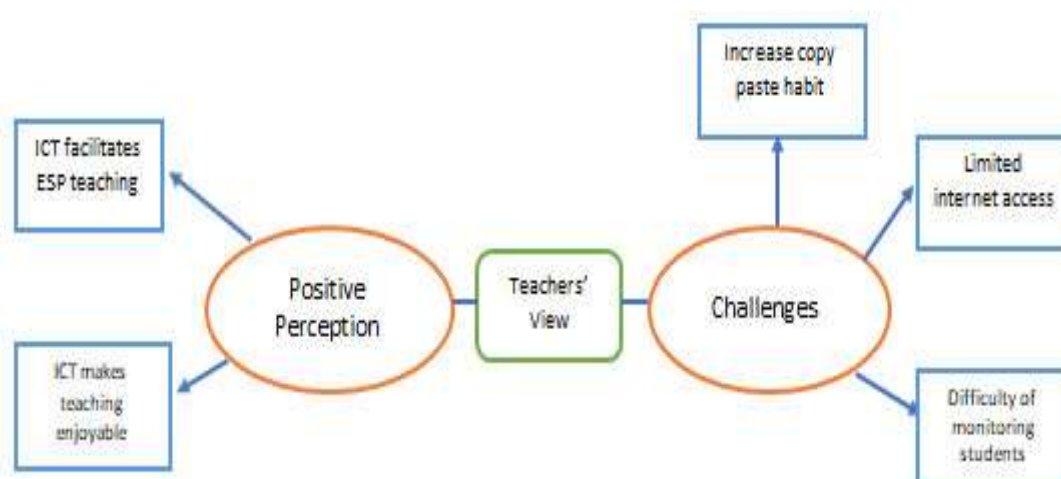


Figure 1 Thematic Map of the teachers' view.

After reviewing the tentative themes discussed previously, the researcher highlighted three primary themes related to the students' view on the implementation of ICT-based instruction such as teachers' positive perception and teachers' challenges. The theme of teachers' positive perceptions consists of two subthemes such as ICT

facilitates ESP teaching and ICT makes teaching enjoyable. The theme of teachers' challenges consists of three subthemes such as copy-paste syndrome, limited internet access, and difficulty of monitoring students. The discussion of each theme is discussed in the following session

Discussion

The review of tentative themes in the previous chapter resulted in two primary themes related to the teachers' view on the implementation of ICT-based instruction such as 1). Teachers' positive perception on the implementation of ICT-based instruction and 2). The challenge of teaching with technology. The discussion of each theme is discussed in the following session.

The teachers' positive perception on the implementation of ICT-based instruction

The result of this research revealed some positive perceptions from teachers related to the implementation of ICT-based instruction in teaching Language. The teachers perceive that implementing ICT-based instruction in the Language course is enjoyable. Richards (2015) pointed out that one of the benefits of integrating technology in learning is that technology can create a better learning environment where students are engaged in interactions and communication among themselves. One of the reasons why teachers enjoy teaching is because students are engaged and motivated in learning. The learning environment is quite fun because students have actively participated in every activity. In addition, teachers perceive ICT-based instruction to change the way they teach from traditional teaching to more modern teaching. Teachers' use of ICT in the classroom has resulted in a shift in the teacher's role, from lecturer to facilitator of learning. As a result, assisting students in becoming more self-sufficient and autonomous (Murray, 2005; Sari et al., 2025).

Another perception from teachers concerning ICT-based instruction is that they perceive that technology effectively facilitates their ESP teaching started from preparation, presentation, and assessment. This perception is in line with Macià (2012) pointed out that technological instruments are used to construct appropriate materials or specific environments to learn English. Technology helps teachers to prepare their learning by finding various resources both teaching materials and authentic materials related to the pharmacy field. The need of finding appropriate materials is in line with the needs of ESP learners pointed out by Smoak (2003) stated that ESP students need to understand authentic texts and how to interact efficiently in the circumstances they face in their discipline. Most teachers of English are familiar with teaching general English but few of them teach ESP. ESP teaching is quite different since the teachers need to be familiar with specific field before teaching the students. The teachers need to facilitate teaching with authentic materials which are available in the internet, the teachers' just need to adopt them based on the students' needs. Authentic materials allow students to involve in real-life conversation, cross the intercultural divide, work together in their professional community to access up-to-date knowledge related to their discipline (Arnó, 2006; Sari et al., 2024). In delivering the language, technology help teachers to present the topic or the content in any form including in form of video instruction, presentation slide, or virtual presentation. In addition, the assessment can be conducted with the help of technology in form of a quiz to obtain more objective results. The teachers usually give a quiz at the end of every meeting to see the students' understanding related to the topic presented.

The challenge of implementing ICT-based instruction

During the implementation of ICT-based instruction in Language class, the main challenge the teachers faced is the problem with internet access. These findings are in line with the study conducted by Vien *et al.*, (2019) which revealed that the major challenges faced by English teachers in CIHS in West Malaysia included insufficient training provided, lack of time to learn and use ICT during lessons, poor internet coverage and inadequate technical support by the school management. Limited internet access is experienced by both teachers and students in learning. As discussed in the previous session, the limitations of internet access from the student's point of view are caused by two things; they are unstable or unavailable internet connections, especially in remote areas. This problem is faced by students who live in remote areas and conducted learning from home. Another challenge related to internet connections experienced by students is the lack of credit provided by the government. The government provides credit for students to access the internet for free; however, these credits are not enough to cover learning for all courses which are mostly done virtually. Thus, students have to spend extra to accessing the internet. The problems regarding internet access are not only experienced by teachers in Indonesia, as stated by Ahmed *et al.* (2020) that one of the problems faced by teachers in India concerning the implementation of ICT-based instruction is the unavailability of internet networks in certain areas.

From the teacher's side, internet connection problems may not be as complicated as those faced by students because unstable internet connections only occur at certain times. However, learning is a series of activities carried out by two parties, teachers and students. Thus, when students experience serious problems related to internet connections which are the main support for learning during a pandemic, learning activities will also be disrupted. In addition, when the internet connection is down, certain applications cannot work. In this case, the teacher must be able to cope with the challenges faced to make learning effective.

To cope with this internet connection problem, the teacher decided to make learning videos for students who could not participate in virtual learning and for all students when the network was down or in error. After making an instructional video, the teacher shared it with the students to be learned. After watching the video, they continued the discussion in the chat room. For students in remote areas, they can download materials by looking for areas that have a stronger internet connection. The other challenges faced by teachers in Language class are that teachers perceive it is difficult to control the students. Besides that, technology allows students to develop copy-paste syndrome. Certain students used easy ways to do the assignment by copying their friends. The Copy-Paste Syndrome describes a situation whereby students at all levels are becoming more and more reliant on a wide-range of easily-available digital content (Kullathuramaiyer & Maurer, 2010).

Conclusion

Based on the analysis of research results and discussion in the previous section, it can be concluded that according to teachers' view, using ICT in teaching is challenging because they have to deal with students' copy-paste syndrome, limited internet access, and difficulty of monitoring the students. However, ICT facilitates them in ESP teaching and it makes teaching more enjoyable.

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