Teachers' Perception on Digital Divide in English Language Learning at Senior High Schools in Lima Puluh Kota

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Abstract

The purpose of this research is to determine teachers' perceptions of the digital divide in English language learning at high schools in Lima Puluh Kota and the issues faced by teachers regarding the digital divide. The quantitative descriptive method was used to conduct this research. In addition, a total sampling technique with 8 participants was used for the interview sample in this study. Data collection requires 20 items using a Likert scale, along with 3 open-ended interview questions. Thus, there are three indicators used in the questionnaire instrument of this research, namely, ubiquitous learning, multi-modal meaning, and recursive feedback. The conclusion of this study shows that there is one indicator that falls into the category of negative perception: recursive feedback with an average score of 2.4. The majority of teachers agree that the use of technology makes it easier for them to teach English. Additionally, other indicators fall into the category of positive perception: ubiquitous learning with an average score of 2.6 and multi-modal meaning with an average score of 3.2. The results of this study indicate that teachers have a poor perception of digital deviations. They argue that the digital divide has a negative impact and makes it difficult for them to carry out the learning process, and teachers also feel that the limited access to technology and the internet, both in and out of school, hinders the effectiveness of teaching and reduces the quality of English learning they can provide to students. It can be concluded that the digital divide occurs due to the lack of technological devices and also the limited internet network in English learning at SMAN 1 Suliki and MAN Lima Puluh Kota.

INTRODUCTION

Technology has always played an important role in the English language learning environment. (Ahmadi, 2018). Technology continues to develop with the aim of

helping teachers support language learners as they go through the learning process. Youssef (2022) emphasized in his research that there are several advantages to using technology, namely: (1) Teachers can change passive students in class to active ones; (2) Teachers facilitate student participation in educational experiences that can increase their motivation during the learning process; and (3) Teachers can encourage student creativity, which can help them develop their digital skills in the future. In conclusion, technology has a significant impact on how well teachers can deliver and teach English to their students.

While there are many benefits to using technology in teaching and learning English, there are also disadvantages for teachers and students who are unable to take advantage of it. This is referred to as the "Digital Divide" (Rojas Rojas, 2019). According to Warschauer (2007), the phrase "digital divide" has been used widely in recent years to describe the uneven technological gap. In addition, the phrase "digital divide" has been used practically to describe those who experience the negative effects and disadvantages of unequal access to technology (Gorman, 2001). The gap in media availability and use among low-income, less educated, and rural populations is known as the "digital divide" (Hargittai, 2003). In addition, the term "digital divide" refers to the gap in access to the internet and related technologies (Rye, 2008). It is clear that the digital divide creates two groups of teachers: those who are privileged and adept at using technology, and those who have fewer opportunities to use it to teach English.

The digital divide affects all ages, including high school teachers who need to impart knowledge and help students achieve better grades in school. (Giebel, 2013). Moreover, the digital divide in education harms teachers and students who are non-native English speakers, illiterate, living in rural areas, or poor. (Underwood, 2007). Furthermore, the digital divide leads to the formation of teachers who lack access or skills, while others have knowledge or skills in using information and communication technology (ICT). (Naidoo & Raju, 2012). Additionally, Giebel (2013) states that the effects of the digital divide are: 1) Weakness in development and growth; 2) Asymmetric and lost knowledge; 3) Lower ability to manage knowledge; and 4) Lower ability to innovate. Based on the statement above, the researchers concluded that the digital divide can affect high school teachers in Indonesia. In addition, the digital divide has an important aspect in English language learning.

The context of the digital divide around the world can be seen, for example, in a survey of the digital divide in Canadian secondary schools, which showed that teachers in rural areas tend not to have access to computers at home (Tien & Fu, 2008, p. 422). In their research, Muskania & Zulela MS (2021, p. 160) claim that there are several contexts of the digital divide that occur in Indonesia. The first is the limited use of electricity in some areas where most of them only have access to electricity at night. The second is the limited learning aids in schools. Muskania & Zulela MS (2021, p. 160) added that several schools in Indonesia still lack adequate technology for the teaching and learning process. Furthermore, the learning process makes minimal use of technology. This is due to some teachers' lack of familiarity with technological devices like computers, smartphones, laptops, among others. Finally, internet access in some areas is still limited. Some teachers have to go to

higher places or even climb trees to get an internet connection. It can be concluded that several schools in Indonesia still have difficulty using the internet and technology, which will cause a digital divide.

Related to the context of the digital divide, digital affordances enable to spot the digital divide in English language learning process. Digital affordances will enable us to understand how these technologies can be used effectively to enhance learning and teaching (Conole & Dyke, 2004). According to Noë & Thompson (2002), affordances are an ability of certain objects, such as being able to be used as a weapon or tool, being a barrier, being a shelter for the achievement of certain goals. Conole & Dyke (2004) claimed that, digital affordances in the learning process can be explained that they are ways that can be used to develop a better understanding of the properties of different technologies.

Furthermore, because teachers are the main aspects of the learning environment, teachers perception play an important role in this issue (Sinaga, 2018). Also, teachers perception are not new in the field of education (Ferreira & Santoso, 2008). Manalu (2019) states that, every the teachers' perception influences matters of learning. Therefore, to optimize the teaching and learning environment, teachers perception needs to be considered. The perception of the teachers toward the learning process will relatively impact the decision of the teachers in institution (Creswell, 2018). In educational field, teachers perception is one of the most important factors to discuss (Manalu, 2019). It can be concluded that teachers perception play an important role on digital divide in English learning environment.

The reason why the researcher chose SMAN 1 Suliki and MAN Lima Puluh Kota as the location for the research is because the two schools is not a schools located in the city with stable internet connection and advanced technology like the technology in other excellent schools. There are also some teachers who teach at the two schools who do not really understand the use of modern technology and have difficulty accessing the internet network.

Related to the issue of the digital divide, several studies have discussed it in several aspects. The first topic is about the impact of the digital divide in education in research by Naidoo & Raju (2012), Underwood (2007), and Tien & Fu (2008). The results of this study are that unequal internet access in students' residential and school environments creates differences in skill levels and abilities in using technology. The second topic is about digital divide innovation by Giebel (2013) and Hargittai (2003). The next topic is about the position of teachers in the digital divide by Warschauer (2007) and Youssef (2022). The findings in this study are that the digital divide creates asymmetry of knowledge and information; therefore, the digital divide is detrimental to the exchange of information and knowledge as well as the production and use of knowledge in the context of technology. Another topic is about students' and teachers' perceptions of the digital divide by Neupane (2016). From this research, it can be seen that the majority of the students and teachers responded that the English language learners who use new technology can show higher learning performance than others who do not use it. Reviewing these related studies, none of them discuss students' perceptions of the digital divide in the context of English language learning for high school students. However, the purpose of this study is to determine the perceptions of high school teachers about the digital divide in the field

of English language learning and what are the problems that teachers face in the digital divide.

METHOD

This research employs a descriptive quantitative design. This method is used because this research focuses on teachers' perceptions of the digital divide and the problems teachers face within the digital divide. The sample for this study consists of 8 English teachers. The researcher provided a questionnaire to the 8 English teachers. The questionnaire contains 20 statements that must be answered by teachers by choosing one of four options: strongly agree, agree, disagree, and strongly disagree. The researchers also conducted interviews with English teachers. The type of interview used is a structured interview.

RESULT AND DISCUSSION

Research Finding

1. Teacher's Perception Digital Divide in English Language Learning

This study used questionnaire to gather the data with divided into three indicators. The questionnaire contains 20 statement using Likert Scale that have four scales: strongly agree, agree, disagree, strongly disagree. The questionnaire was divided into three indicators: ubiquitous learning, multi modal meaning , recursive feedack. In addition, semi structured interview was used to determine the teachers' problem in digital divide.

No.	Indicator	Mean Score	Category
1.	Ubiquitous Learning	2.6	Positive
2.	Multi Modal Meaning	3.2	Positive
3.	Recursive Feedback	2.4	Negative
	Total	2.73	Positive

From the table above, the highest score was Multi Modal Meaning indicator with the mean score was 3.2 in positive perception category. Then, followed by Ubiquitous Learning indicator with the mean score 2.6 in positive perception category. The last was Recursive Feedback indicator with the mean score was 2.4 in negative perception category. It can be concluded that, there were digital divide in one indicators; Recursive Feedback.

a. Teachers' Perceptions on Digital Divide Viewed from Ubiquitous Learning Aspect

The first indicator to find out the teachers perception in English language learning was ubiquitous learning. The result started from the indicator of "ubiquitous learning" in English language learning which is learning in space and time. In the aspect of ubiquitous learning, the sub-indicator was learning in space and time which had 6 items of statement.

From this learning in space and time sub-indicator, it was found that the total score was 128 and the final mean score was 2.6 in a good or positive perception category. It can be concluded that, there was no digital divide found in this sub-

indicator and the students got the digital affordances in English language learning process.

b. Teachers' Perceptions on Digital Divide viewd from Multi Modal Meaning Aspect

The second indicator of teachers perception on digital divide in English language learning is multi modal meaning. The sub-indicator of this aspect is "New Digital Technologies" that has 7 items of statement. The mean score of this statement 3.5 which was a positive perception. In conclusion, the total score of the indikator Multi Modal Meaning is 128 and the final mean score 2.6 which is positive perception.

It can be concluded that there was no digital divide found in this sub-indicator and the students got the digital affordances in English language learning process. It shows that teachers' perceptions of the digital divide in English language learning at senior high schools in Lima Puluh Kota in this indicator are generally positive. The results of the questionnaire indicate that the majority of teachers do not perceive a significant digital divide, suggesting that the use of technology in learning is fairly evenly distributed among teachers.

Nevertheless, there are still some teachers who have not fully mastered technology or face difficulties in accessing the internet. This shows that although the digital divide as a whole has decreased, there are still technical challenges that need to be addressed to ensure that all teachers can optimally utilize technology. Efforts to improve digital literacy and enhance network infrastructure in schools will be an important step to support the sustainability of technology integration in the learning process.

c. Teachers' Perceptions on Digital Divide Viewed from Recursive Feedback Aspect

The third indicator of teacher's perception on digital divide in English language learning is . The sub-indicator of this aspect is "Use of media by teachers at school" that has 7 items of statement. In conclusion, the total score of the indicator Recursive Feedback is 139 and the final mean score 2.4 which is a negative perception. It can be concluded that, there was digital divide in one indicators; Recursive Feedback.

2. The Problem Faced by Teachers in Digital Divide

The interview was done with all teachers from SMAN 1 Suliki and MAN Lima Puluh Kota. The interview was done to know what are problems the teachers have in using digital technology in English language learning at SMAN 1 Suliki and MAN Lima Puluh Kota.

a. Difficulty Obtaining Education

Based on the interview results, researchers obtained some data on the problems faced by teachers in the digital divide. The first reason is that it is difficult for teachers to find websites or applications that can be used to learn English. This can be seen from the statements of the teachers interviewed.

> "I have some problems when operating technology sometimes I can't access the web to search for learning materials. sometimes I feel like I can't find a web

that matches the material I'm looking for and also my lack of knowledge in using applications that can support this learning process."

From the results of interviews many teachers face challenges when integrating technology into their English teaching practices. The main difficulties include operating computers or laptops during the teaching process, and navigating online platforms to search for appropriate teaching materials or educational applications that could benefit students.

b. Economic Disparities

Each person's economic well-being is different, and the economic level of each school is certainly different. This can be seen from teachers' opinions about the technology provided by schools and the role of technology in English learning.

"Of course, the use of technology in English learning is very helpful in the learning process. There are several teachers at this school who can use technology as a learning medium, but there are still some who do not really understand how to use technology."

It can be concluded that almost all teachers share a common view: they agree that technology has the potential to enhance learning methods. However, these educators still face challenges in fully understanding and utilizing technology effectively in their classrooms, especially when it comes to using it as a medium for teaching English.

c. Geographical Differences

One of the most common problems of the cause of the digital divide is the different internet networks in each place. It can be seen that almost all teachers experience problems in internet access and networks at school because the internet network at school is unstable.

"Of course sometimes the network at this school is unstable. Sometimes it is very smooth to access the internet but there are some problems such as slow networks and inadequate quotas or wifi."

Teachers' statements highlight a common problem faced in schools: challenges with internet access and network connectivity. Almost all teachers struggle with unstable and unreliable network infrastructure, which significantly impacts their ability to incorporate digital tools into their teaching practice. It can be concluded that the teachers can not use internet and technology because the limited internet network in the schools environment causes teachers to not optimally use technology and also utilize technology as a learning media, compounded by the lack of availability of technological tools such as projectors and laptops.

d. Age or generation

The younger generation is more interested in receiving or carrying out every experience of using new technology because they grew up with digital media and they have a broad sense of curiosity.

"I think it is very useful, but it is difficult to do with my condition as I am old and have difficulty understanding technology."

The statement "age gaps can create a digital divide for teachers" highlights how generational gaps impact the adoption and use of technology in educational settings. Older teachers, who may not have grown up with the same level of exposure to digital devices as their younger counterparts, often face challenges in adapting to new technologies. This can impact their ability to effectively integrate technology into their teaching methods, creating a gap between them and younger teachers who may be more understand to technology.

Discussion

This study aimed to explore teachers' perceptions regarding the digital divide in English language learning within senior high schools in Lima Puluh Kota. According to the three indicators identified in the study; Ubiquitous Learning, Multi Modal Meaning, and Recursive Feedback the discussion of each indicators on teachers perception on digital divide were:

The first indicators of ubiquitous learning is that teachers hold a positive opinion of acquiring English skills at any time and in any location, enabling them to engage in learning whenever and wherever they choose. This pertains to the study conducted by Nehe et al. (2023). The findings of the study revealed that the educators confirmed their capability to effectively use the internet and mobile learning to improve their English learning outside the classroom, supported by easy access to learning resources. However, the individual conducting the study identified several issues following the interviews with the participants. Several participants noted that the connection experiences instability while they are at home. The findings of Muskania & Zulela MS (2021) indicate that access to internet and electricity is not uniform across all regions in Indonesia. The phenomenon can be linked to the reality that certain educators live in rural areas. Onitsuka et al. (2018), Hamilton & Hunter (2019), and Rojas Rojas (2019) highlight that individuals living in rural areas play a role in the digital divide.

The next indicator was multi modal meaning with sub-indicator new digital technologies indicated about the teachers perception on new digital technologies used to teaching English. This indicator was also in a positive perception category. Some teachers disagreed that the educational tools to learn English provided at their school are inadequate and learning and submitting assignments manually is more fun than using the technology and never used the internet and technology provided at their school to teaching English. According to the research by Bélanger & Carter (2009), Elena-Bucea et al. (2021) and Dijk (2016), the cause of the digital divide were economic problem to afford an adequate educational device to learn English and the mental access types of digital divide. In connection with their discovery, teachers who possessed a certain level of mental access to Information Communication Technology often experienced a deficiency in fundamental digital skills, attributed to a lack of motivation or interest in utilising ICTs.

After discussing with the English teacher at SMAN 1 Suliki and MAN Lima Puluh Kota, the researcher concluded that the frequency usage of the technology in learning English process was not often enough. The teachers barely used the technology for learning English. They sometimes used projector and speaker to serve a video or practice the listening skill in the classroom but not often. Also, teacher and student rarely had an online discussion about the learning material outside the school.

It can be the reason why the teachers had different perception about the digital divide influenced by their experience and situation in using the technology.

Related to the indicator recursive feedback statement number 14-20 that had a negative perception category, it was found that teachers rarely used the technology to teaching and discussion between the teacher and the students. This factor can influence the frequency of the use of the technology in SMAN 1 Suliki and MAN Lima Puluh Kota. In the aspect of recursive feedback in Indonesia, it is related to the research by Bloom & Reenen (2013). They claimed that, the low of frequency of the technology used is because many teachers in Indonesia still lack in using the technology for teaching and learning purposes. Moreover, in his research, Haryanto (2021) stated that, lack of training of the use of the technology in teaching learning is a major problem faced by the teachers. That is the reason why the teachers do not the adequate ability to use technology.

CONCLUSION

The purpose of this research is to determine English teachers' perceptions of the digital divide. The research results indicate that teachers' perception of the digital divide is negative, with the lowest score of 2.4. Teachers give a negative perception because they realize that the digital divide adversely affects the learning process in the classroom. Based on this, we can conclude that teachers have not fully utilized technology, and the limitations in their school's internet network prevent them from utilizing it to enhance the English language learning process.

Based on the interview results, it was found that teachers have issues with the digital divide. The teachers are not yet able to use technology devices effectively; for example, they struggle when they have to teach using laptops and projectors. Additionally, the teachers also face problems with the limited internet network available at the school. Not all rooms or places in the school have Wi-Fi access, which makes it difficult for them to access the internet.

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