

THE USE OF ICT IN TEACHING PROCESS BY PUBLIC JUNIOR HIGH SCHOOL ENGLISH TEACHERS IN TAMPAN SUB-DISTRICT PEKANBARU

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Abstract: This research aims to investigate to what extent the English teachers of public junior high schools in Tampan Sub-District Pekanbaru have used ICT and identify the barriers they face in the use of ICT in their teaching process. The researchers selected 16 English teachers as the sample using total sampling method. This research applied a mixed-method, combining quantitative and qualitative methods of data collection. The quantitative data were collected by distributing a set of questionnaires. The indicators of the questionnaire used are Perceived Usefulness and Perceived Ease of Use. The qualitative were acquired through semi-structured interviews. The combination of the two types of data was chosen to get more information to support the data. The findings show that teachers have integrated ICT in their teaching process was in good category level. This can be seen from the result of the study in which the overall mean score calculated was 3.67. Still, teachers faced some problems in its integration. In general, the problems related to lack of ICT facilities and electricity issues.

Key Words: ICT, English Teachers' perception, teaching and learning process.

PENGUNAAN TIK DALAM PROSES PENGAJARAN OLEH GURU BAHASA INGGRIS SMP NEGERI DI KECAMATAN TAMPAN PEKANBARU

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Abstrak: Penelitian ini bertujuan untuk menyelidiki sejauh mana guru bahasa Inggris di SMP negeri di Kecamatan Tampan Pekanbaru telah menggunakan TIK dan mengidentifikasi hambatan yang mereka hadapi dalam penggunaan TIK dalam proses pengajaran mereka. Peneliti memilih 16 guru bahasa Inggris sebagai sampel menggunakan metode total sampling. Penelitian ini menerapkan metode campuran, menggabungkan metode kuantitatif dan kualitatif dalam pengumpulan data. Data kuantitatif didapat dengan mendistribusikan seperangkat kuesioner, sedangkan data kualitatif diperoleh melalui wawancara semi-terstruktur. Kombinasi dari dua jenis data dipilih untuk mendapatkan lebih banyak informasi untuk mendukung data. Hasil data menunjukkan bahwa guru telah mengintegrasikan TIK dalam proses pengajaran mereka berada di tingkat kategori 'baik'. Hal ini dapat dilihat dari hasil penelitian di mana skor rata-rata keseluruhan yang dihitung adalah 3,67. Namun, di samping itu para guru menghadapi beberapa masalah dalam proses penggunaannya. Secara umum, masalah terkait dengan kurangnya fasilitas TIK dan listrik di sekolah.

Kata Kunci: TIK, Persepsi,

INTRODUCTION

The development of Information and Technology has increased greatly nowadays. ICT offers convenience to support human activities since it can process some data quickly and efficiently. Because of this, Wanjala (2013) stated that ICT integrates into the economic problem and any important institutions. One of them is an educational institution. In education field, ICT also requires along with the development of curriculum.

In Indonesia, ICT is recently applied in the educational field since the Minister of Primary and Secondary Education has made the 2013 Curriculum which is known as ICT-based Curriculum. It has provided usefulness, easiness and flexibility for teaching process. Moreover, teachers can use ICT to help in preparing until assessing their lessons easily. However, some teachers don't recognize those benefits of ICT usage which caused some barriers in utilizing ICT in the classroom. This happened because of several factors such as self-confidence, age, and the accessibility of ICT. One of the factors contributing to the issue is perception. If teachers' perception is positive towards the use of ICT, then they can easily provide useful knowledge on how to use and increase the successful usage of ICT and it gives contribution to this problem is the teachers' perception (Keengwe & Onchwari, 2011)

ICT stands for Information Communication and Technology. Information means the result of a group of data in which its process, manipulation and organization steps give some knowledge to users. Communication is the process of the information (message, idea, and concept) from individuals to others in order to influence each other afterward. Technology defines as the development and application of device, machine, material, and process which help human to solve their problem. According to Морська (2008) as quoted by Kozlakova and Strelchenko (2014) ICT as an extended synonym for information technology (IT), but is a more specific term that stresses the role of unified communications and the integration of telecommunications (telephone lines and wireless signals), computers as well as necessary enterprise software, storage, and audio-visual systems, which enable users to access, store, transmit and manipulate information. Currently in Indonesia, ICT for educational purposes is needed since the 2013 curriculum all teaching and learning processes should be integrating the configuration of ICT tools for all subjects. During the teaching process, teachers maintain on how to manage the suitable approach, media and technique in order to deliver the material that teachers already have done in the lesson plan. That clearly shows that teachers take the most important role in it. In English teaching, the implementation of ICT will lead to a variety in English content contexts and pedagogical methods in teaching environment. According to Mwendawa (2017), there are several factors that influence teachers' perception in using ICT such as pedagogical benefits, personal familiarity with computers, hardware and software, time factor and teacher training. Indeed, it is beneficial to So, the meaning of teachers' perception in using ICT is the way of teachers in accepting the use of ICT, gain more informations about ICT and integrate, However, the intention of teachers to use technology can be found in the Technology Acceptance Model (TAM) which is developed by David, Bagozzi and Warshaw (1989). TAM is gained from four factors namely *perceived usefulness (U)*, *perceived ease of use (EU)*, *attitude toward using (A)* and *behavioral intention to use (B)*.

RESEARCH METHODOLOGY

This study was descriptive mixed-method research which intended to investigate the level of public junior high school English teachers' perception in Tampan Sub-District Pekanbaru and barriers in using ICT during their teaching process. The mixed-method is the type of research that used some data collection, analysis or techniques from the elements of both quantitative and qualitative approaches in order to gain more depth information and understanding. (Johnson *et al*, 2007). The population of this research was 16 English teachers on four different public junior high schools in Tampan Sub-District. The researcher decided to include the population as the sample of research since the number of teachers is small by using total sampling technique. This research was conducted from June to November 2019. To gain quantitative data, the researcher delivered a set of questionnaires. The questionnaire adopted from Silviyanti and Yusuf (2015) to find out the level of teachers' perception in the use of ICT. It was tried out to the non-sample which also has the same characters as the sample of the research. The researcher used SPSS 26 for Windows to calculate the validation and reliability of the questionnaire. The result showed there were six items that were invalid and had to be removed and the Cronbach Alpha of the questionnaire was 0,858. After deleting the invalid statements, the questionnaire was distributed to the sample of the research. The result of questionnaire was analyzed by using Microsoft Excel 2010 to get the frequency and percentage of data. To identify which level teachers' perception on, the calculation of the mean is needed by using this formula as stated by Gay (2000):

$$\bar{x} = \frac{\sum x}{N}$$

\bar{x} = mean score (average score)

$\sum x$ = the sum of respondents' score

N = number of respondent

From the mean of respondents' score is categorized into these levels to figure out which level teachers' perception as follows:

Table 1. The Level of Categories

Interval	Category
4,21-5,00	Very Good
3,41-4,20	Good
2,61-3,40	Acceptable
1,81-2,60	Poor
1,00-1,80	Very poor

Source: Brown (2011)

RESEARCH FINDINGS

A. The Result of Questionnaire in General

The questionnaire consists of 24 items provided with a 5 point-Likert Scale. As mentioned previously, the perception of teachers toward the use of ICT in teaching process can be seen from 1) Perceived Usefulness; 2) Perceived Ease of Use. In each section, the score of each response was calculated to find the percentage. A higher percentage shows the level of English teachers' perception toward the use of ICT. The overall result showed in the following table:

Table 2. The Summary of the Questionnaire

Participant	Average Score	Average	SD	Max	Min
16	88.1	3.67	1.04	104 (4.33)	77 (3.21)

In terms of the calculation of the teachers' responses, the average of the teachers' total score is 88.1 and the standard deviation is 1.04. The average score of the participants was also calculated, with the mean of 3.67. The maximum score obtained is 104 (Mean= 4.3) and the minimum score is 77 (Mean=3.21). The classification of teachers' perception towards the use of ICT in their teaching process can be seen in the following table:

Table 3. The Level of English Teachers' Perception in Teaching Process.

No	Mean	Frequency	Percentage	Description
1	4.20 – 5.00	1	6.25%	Very Good
2	3.41 – 4.20	10	62.5%	Good
3	2.80 – 3.40	5	31.25%	Acceptable
4	1.81 – 2.80	0	0	Poor
5	1.00 – 1.80	0	0	Very Poor
Total Mean: 3.67		N= 16	100%	Good

The table for the percentage of the level English teachers' perception toward the use of ICT shows that teachers' perception is on different levels. The highest number is in the level of good category, it is 62.5% of the teachers (10 teachers). Meanwhile, at very good level there is 6.25% of the teachers (1 teacher). And the other is in acceptable level category, it is 31.25% of the teachers (5 teachers) Therefore, it can be stated that English Teachers' Perception toward the Use of ICT is in good level category.

B. The Result of Questionnaire for Each Section.

The result of the questionnaire analysis for each section are described as in the following:

1. English Teachers' Perception toward the Use of ICT

In this section, there are two sub-sections discussed: 1) Perception of English Teachers' based on Perceived of Usefulness, 2) Perception of English Teachers' based on Perceived of Ease of Use.

1.1 Perception of Teachers' Based on Perceived of Usefulness

There are 12 items of the questionnaire discussed in this part. The purpose of this part to find out how teachers' perception in terms of usefulness. The summary of Teachers' Perception toward the Use of ICT in Teaching Process can be seen in the following table:

Table 4. The Perception of English Teachers' Based on Perceived Usefulness.

Participant	Average Score	Average	SD	Max	Min
16	44.25	3.69	1.17	51 (4.25)	38 (3.17)

In terms of the calculation of the teachers' responses, the average of the teachers' total score is 44.25 and the standard deviation is 1.17. The average score of the participants was also calculated, with the mean of 3.69. The maximum score obtained is 51 (Mean=4.25) and the minimum score is 38 (Mean=3.17). The classification of teachers' perception towards the use of ICT based on perceived usefulness can be seen in the following table:

Table 5. The Level of Perception of English Teachers' Based on Perceived Usefulness.

No	Mean	Frequency	Percentage	Description
1	4.20 – 5.00	1	6.25%	Very Good
2	3.41 – 4.20	11	68.75%	Good
3	2.80 – 3.40	4	25%	Acceptable
4	1.81 – 2.80	0	0	Poor
5	1.00 – 1.80	0	0	Very Poor
Total Mean: 3.69		N= 16	100%	Good

The table for the percentage of the level Perception of Teachers based on Perceived Usefulness shows that it is in different levels. The highest number is in the level of good category, it is 68.75% of the teachers (11 teachers). Meanwhile, in very

good level there is 6.25% of the teachers (1 teacher). And the other is in acceptable level category, it is 25% of the teachers (4 teachers) Therefore, it can be stated that the Perception of Teachers based on Perceived Usefulness is in good level category.

1.2 Perception of English Teachers' Based on Perceived of Ease of Use

There are 12 items of the questionnaire discussed in this part. The purpose of this part to find out the perception of teachers on the use ICT based on perceived Ease of Use. The summary of Teachers' Perception toward the Use of ICT in Teaching Process can be seen in the following table and can be seen for detailed in Appendix 5.

Table 6. The Perception of English Teachers' Based on Perceived Ease of Use.

Participant	Average Score	Average	SD	Max	Min
16	43.88	3.66	0.92	53 (4.42)	39 (3.25)

In terms of the calculation of the teachers' responses, the average of the teachers' total score is 43.88 and the standard deviation is 0.92. The average score of the participants was also calculated, with the mean of 3.66. The maximum score obtained is 53 (Mean=4.42) and the minimum score is 39 (Mean=3.25). The classification of teachers' perception towards the use of ICT based on perceived usefulness can be seen in the following table:

Table 7. The Level of Perception of English Teachers' Based on Perceived Ease of Use.

No	Mean	Frequency	Percentage	Description
1	4.20 – 5.00	1	6.25%	Very Good
2	3.41 – 4.20	12	75%	Good
3	2.80 – 3.40	3	18.75%	Acceptable
4	1.81 – 2.80	0	0	Poor
5	1.00 – 1.80	0	0	Very Poor
Total Mean: 3.66		N= 16	100%	Good

The table for the percentage of the level perception of teachers based on Perceived Ease of Use shows the highest number is in the level of good category, it is 75% of the teachers (12 teachers). Meanwhile, at very good level there is 6.25% of the teachers (1 teacher). And the other is in acceptable level category, it is 18.75% of the teachers (3 teachers) Therefore, it can be stated that the Perception of Teachers based on Perceived Ease of Use is in good level category.

2. Barriers Faced by Junior High School English Teachers in Tampan Sub-District in using ICT.

Based on the results in open-ended question section, the researcher found the most common problems or barriers often faced by Junior High School English Teachers in Tampan-Sub-District are the lack of infrastructure and limited access to the internet and other ICT facilities at schools. These are other problems encountered by the teachers in using ICT in their teaching process: (R refers to Respondent)

(R1) School does not have enough ICT facilities such as infocus, laptop and speaker.

As R1 stated above, it is clear enough that the most common barriers or problems that English Teachers often faced in school are the availability of ICT facilities. Those are still limited in their schools because it is too expensive to be purchased by the school. Even some teachers have to share the LCD Projector (infocus) with other teachers. Indeed, it consumes much time for teachers to wait their turn to use the tools. R2 describes that the lack of electricity is also their barriers to integrating ICT in the classroom:

(R2) The teachers have integrated ICT based on lesson plans where they use media video, but suddenly there are some problems with electricity, LCD or laptop.

As we know, ICT connects with electricity thus it can be operated by teachers. They utilized ICT in their teaching and learning process yet there was a problem with the electricity in the school. It is obvious and it potentially decreases teachers' performance during teaching and learning process in using ICT.

(R3) Some students do not have smartphone.

As R3 stated above, in this case, teachers tend to use social media (WhatsApp, Telegram, Line, etc) in order to ask students for submitting their assignment while there are students are still do not have smartphones. Other teachers also agree this issue is caused by the differences in economic background of students that affect the ownership of ICT devices in this case the smartphone.

Overall, the result from the open-ended question, it is found the barriers from English Teachers in using ICT during their teaching process are still the same from time-time. The most common barriers such as the lack of availability of ICT tools and electrical power at school.

C. The Result of Semi-Structured Interviews

As pointed out in the introduction section of this paper, the semi-structured interview was conducted to explore more information about English teachers' perception and their barriers in using ICT in the teaching process. One of the questions asked during the interview was "How is your perception about using ICT in your teaching process? When asked about the question, the teachers gave some similar

answers. Generally, the answers can be classified into three main results of integrating ICT in the classroom:

Table 8. Teachers' Perception in using ICT

No.	Teachers' Perception in using ICT
1.	The efficiency of time and cost
2.	Make a better learning environment
3.	Development of students' performance

They found that ICT gives some positive impact on their teaching and learning process. Based on their perception, ICT provides convenience in monitoring students' activities during the class, finding the needs of learning resources, to explain the concept of lesson and storing students' documents. And also teachers found much more efficient especially in time and cost as stated by AN:

- (1) "ICT changes the learning activities become *paperless* and the other hand it is also saving my money when I should prepare the materials hahaha because for example, I don't need to print out the exam sheet for students, they can simply send their answer through E-mail."

[AN]

- (2) "... I used to show a video to their table um... one by one because of its size is too small. But when I utilize LCD projector in the classroom, it feels so effortless."

[YE]

YE also found that ICT helps to construct a better environment in the classroom. Most teachers agree the use of ICT can create teaching and learning environments become interesting. This helps teachers to achieve the purpose of study in their teaching process which makes students understand the concept of English learning easily. As explained by YE:

- (3) "ICT usage in the classroom gives some benefits for me, um... one of them is students look more enthusiastic."

[YE]

Also, their performance improves along with students' performance. Most teachers agreed there are some significant differences in students' performance during English class. YT and AN explained the creativity of students developed while integrating ICT during their English learning process. It also attracts students to be more focused and follow the class under teachers' management easily.

- (4) "Hmm... when I utilize ICT during English class, the classroom doesn't feel boring for students, so it becomes more enjoyable and they can improve their own creativity as well."

[YT]

- (5) “By using ICT in the classroom, for some reason um... students can freely express and perform themselves better in front of the classroom. Since ICT is interesting so it attracts their attention easily and students are less afraid of making mistakes.” [AN]

The other question asked during the interview was “Have you found any barriers or obstacles in using ICT. Generally, the answers are same as in the open-ended questionnaire section yet those barriers can be classified into three main results:

Table 9. The Barriers of teachers in using ICT

No.	Teachers’ Perception in using ICT
1.	The limited access to ICT
2.	Requiring more effort
3.	Distracting students’ concentration easily

The researcher found that limited access to ICT facilities is still the major barrier among English teachers in using ICT during their teaching process. YT found the limited speed of the internet is also problem:

- (6) "Actually our school provides Wi-Fi, but the problem is um... the speed is too slow.. ” [AN]

On the other hand, AN stated the electrical problem in the school which also contributed to this problem since ICT devices need to be connected to the electricity power.

- (7) “The school doesn't have enough umm...electrical power, and umm it also a problem for teachers when we are going to use ICT in the classroom. ” [YT]

AN stated that using ICT requires more effort, especially in their pre-teaching process. It is because the teachers have to prepare the teaching aids by using ICT meanwhile they have other things to be done at the same time.

- (8) “Teachers also have another thing to do. But-um, on the other hand, integrating ICT in teaching process also need a lot of time” [AN]

Regarding Perceived Usefulness in using ICT, teachers still faced that ICT is also distracting to students who lost their concentration easily during teaching and learning process. AN stated one of the factors that the most giving contribution to this issue is their screen time on social media (Whatsapp, Instagram, Tik Tok).

- (9) "... the bad side of using ICT is umm...once I caught one of my students see my status on Whatsapp at 3 am while I was working on my preparation for teaching needs. And in the morning, I looked at her sleepy during the learning process. I expect they will use ICT to help them to finish their assignments at home last night."

[AN]

In addition, the use of ICT will be more beneficial for making teaching process become better by including the role of parents. Their support is needed in order to support students morally at home. This statement is expressed by teachers during the interviews as well.

DISCUSSIONS

This research provides information regarding teachers' perceptions and the barriers in using ICT in their teaching process. This research was conducted to find out the level of teachers' perception toward the use of ICT and their barriers in using ICT. The sample of this research was public junior high school English teachers in Tampan Sub-District Pekanbaru. A semi-structured interview was also conducted to explore more information contributing to it.

From the data analysis of questionnaire to what extent the teachers' perception toward the use of ICT in their teaching process, the average score of 24 statements, in general, was 3.67 which indicated that the perception of teachers on the use of ICT in teaching process is in good level. They believe that using technology will increase his or her teaching performance. It also means teachers have shown some positive responses toward the use of ICT.

The same positive responses of English teachers in integrating ICT is also shown in some other schools through some studies by Silviyanti and Yusuf (2015). They found that teachers believe ICT is essential in teaching and learning to improve students' motivation in which making the process of English learning become diverse, interesting and effective. The discussion above has answered the first question of research question "How is the perception of public junior high school English teachers in Tampan Sub-District Pekanbaru toward the use of ICT in teaching process?"

The other findings are the answer to the second research question "What are the barriers faced by the public junior high school English teachers in Tampan Sub-District Pekanbaru in using ICT in teaching process?" From the open-ended question in the questionnaire, it can be seen that teachers still encountered some barriers while using ICT. The most common barriers; namely 1) ICT tools are limited 2) Electricity issue, 3) The lack of ownership of ICT devices among students. Some teachers also explained the barriers in detail for example, the school has regulations that not allowing the students to bring any devices such as smartphones or laptops. It may cause the utilization of ICT especially social media platforms (Whatsapp, Line, Youtube) was impossible to be used in the classroom. The barriers from semi-structured interviews also showed other problems in using ICT among teachers in general: The limited access to ICT, requiring more effort and distracting students' The findings of this research are similar to the result of the research done by Hadijah and Shalawati (2017). It is also found teachers faced some barriers in using ICT, namely: lack of time, facilities and technical supports.

They also found the IT training was required by teachers in order to gain more updated information regarding the approach of ICT integration in English language teaching context.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The findings showed that English teachers' perception toward the use of ICT in teaching process by public junior high school English teachers was generally in good level, with the mean 3.67. The teachers agree that the use of ICT in their classroom gives benefits both for teachers and students, especially in English teaching and learning process. Although the result of teachers' perception was good, the reality shows barriers faced by teachers were also still the same problems in the form of classical issues such as the lack of availability of ICT facilities and infrastructures and limited access to ICT. The teachers had made solutions to overcome these barriers in teaching process.

Recommendations

The recommendations that can be given are: (1) It is recommended for teachers to continue improving their knowledge about ICT by joining IT training held by schools or other institutions that still related to education. So teachers can create more various English teaching methods and strategies in their teaching process (2) Teachers have to work together with students' parents in managing the use of ICT among their children in order to prevent some negative impacts in using ICT in teaching and learning process. (3) It is also recommended that the schools add more multimedia room or computer laboratory with a good quality of computers, Internet and electrical power in order to support English teaching and learning process as well as other subjects (4) The Minister Primary and Secondary Education should provide more financial support to facilitate more ICT facilities and infrastructure in schools.

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