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# High School Teachers' and Students' Perception of ICT Use in Learning English

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## Abstract

This study was conducted to find out high school teachers' and students' perceptions of the use of digital technology, commonly called Information and Communication Technology (ICT), in teaching and learning English. The research used a qualitative method with quantitative data collected from a questionnaire and interviews with high school English teachers and students at MGMP Jakarta Timur I. The results showed that both respondents perceive positive attitudes towards the potentials and benefits of ICT use in English teaching and learning activities. However, their mastery of ICT competencies is high, especially in the Basic Computer and Internet Basic competencies, but insufficient in ICT competencies for learning and Advanced Computer Competence. Even so, the teachers think that they need more training whereas the students do not think the same. This result can be used as evaluation for English teachers as implementers in the field and for institutions as policy makers.

**Keywords:** *High School Teacher Perception, ICT, English Language Learning, Obstacles in ICT Use*

## INTRODUCTION

The great potential of ICTs to develop learning inputs, processes and outcomes has accelerated the use of ICT in learning in the last three decades. ICTs help teachers prepare and organize learning through audio-visual media, multimedia presentations, digital learning materials, and various software that can be applied easily to carry out modern learning practices (Pardede, 2015). ICT has a significant influence on the process and learning outcomes both in class and outside the classroom. ICT enables individuation, acceleration, enrichment, expansion, effectiveness and productivity of learning which in turn will improve the quality of education as an infrastructure for developing human resources as a whole (Sodiq Anshori, 2017) maximizing students' ability in active learning (Jamieson-Procter et al., 2013; Young, 2003). Learning by using ICT requires creativity and independence of students so that it is possible to develop all their potentials (Sodiq Anshori, 2017). Besides, ICT also provides a variety of tools that allow educators to expand learning beyond the classrooms (Haygood, Garner & Johnson, 2012). Another equally important benefit is that ICT is very compatible with the characteristics of students at all levels of education at this time. Generation Z (born in 1996-2015) and the younger generation are *digital natives* in which the internet has become part of their lives. (Helsper & Eyon in Lucy Pujasari Supratman, 2018).

The development of the role of ICT in education makes the internet not only a tool of information but also a source of knowledge, a collaborative medium, a learning resource. As a learning resource, the internet is becoming more interactive, more massive, and more integrated into the daily lives of students. This is the trend of ICT in schools in today's global era (Ramli, Sarwoto, and Rusadi, in Binti Maunah, 2016). In addition, ICT is also effective in developing skills needed in the digital era, such as the use of word processors, email, internet, and other ICT skills (Khalid, 2014; Jones, 2011). The development of ICT has led to the creation of barrier-free traffic of information and communication between countries and regions. (Sofyan Djalil in Peni Hanggarini and Retno Hendrowati, 2010). This has resulted in many countries in other continents also promoting the integration of ICT into learning. The results obtained are still very diverse from one country to

another, one region to another in the same country, even from one school to another in the same city. The types of ICT used also vary widely.

In Indonesia, the use of ICT in learning began with Educational Radio Broadcasts in 1977, which was then followed by the launch of educational television by the Ministry of Education and Culture's Pustekkom in 2004. In the same year, ICT subjects in the 2004 Curriculum were presented as compulsory subjects in all classes of middle and high schools. The use of ICT is increasingly being encouraged through the implementation of the 2013 Curriculum which outlines that ICT is no longer taught as an independent subject but is integrated into all other subjects and is used as a source as well as a learning medium. Similar to conditions in other countries, the results of integrating ICT in Indonesia still vary widely from one school to another. The diversity of these results is related to the existence of various obstacles in the integration of ICT which are usually classified into two groups: external factors and internal factors (Kopcha, 2012; Wachira & Keegwe, 2011). External factors refer to hardware (computers, laptops, smartphones and internet networks), software (ICT programs or applications) and policy support or leadership. Lack of access to ICT facilities and infrastructure, poor design of ICT applications and a lack of policy, administrative, funding, and technical support often become barriers to the integration of ICT into learning (Tarman, et al, 2019). Internal factors refer to the attitudes, beliefs, knowledge, and ICT skills of teachers and students. Thus, to optimize the positive effect and encouragement, the use of ICT in learning should essentially form a learning environment that requires a student-centered approach.

As parties directly involved in learning, teachers and students play a crucial role in the successful integration of ICT into learning. If both parties are committed to using this powerful tool, it is possible to improve learning. (Hery Fitriyadi, 2013). Thus, ICT-based learning will be successful only if teachers and students have a positive attitude towards the practice. In this connection, an empirical picture of teacher and student perceptions is absolutely necessary as a basis for integrating ICT into the learning process. The number of studies on the integration of ICT in learning in Indonesia from the perspective of teachers and students continues to increase. However, most of the research was conducted in the context of higher education (Kristianto, 2017; Pramana, 2018), has a rural background (Mahdum et al, 2019) or focuses only on certain subject areas, especially English (Cakrawati, 2015; Lubis, 2018) ; Pardede, 2019). Research that focuses on the integration of ICT in learning from the perspective of teachers and students in secondary schools still needs enrichment, and this research was conducted to fill that gap.

Therefore, this study was conducted to explore teachers and students' perceptions of the use of ICT in learning at high schools in Jakarta and its surroundings. To achieve this goal, data were collected to answer the following seven research questions: (1) What are the perceptions of teachers and students about the potentials of ICT to increase students' interest and motivation? (2) What are the perceptions of teachers and students about the benefits of ICT in learning? (3) What are the views of teachers and students about the educational benefits of ICT? (4) What are the views of teachers and students about their competence in using ICT in learning? (5) What is the level of confidence of teachers and students about their mastery of ICT competencies? (6) How is the intensity of daily use of ICT by teachers and students based on objectives? (7) What are the perceptions of teachers and students about the essence of ICT training for the successful use of ICT in learning?

## RESEARCH METHOD

The research method used was a qualitative method with quantitative data. In the data collection process, the authors used two research tools in the form of a questionnaire and interviews, collecting information related to teachers' perceptions of ICT use in English learning, and its obstacles. The stages used in data collection in this study were (1) reading literature study, (2) making questionnaires, testing them, and distributing them to respondents, (3) recording data sources to be used, calculating the percentage of survey results through questionnaires, (4) conducting interviews with respondents, (5) classifying data based on mastery and experience of using ICT, the level of difficulty in using ICT, problems in using ICT in learning English. Respondents of this study were English teachers and students at MGMP East Jakarta I. Of the 40 teacher questionnaires and 450 student questionnaires that were circulated to collect data, 34 were obtained. The collected data were analyzed using descriptive analysis techniques using percentages and average scores (X) with the intervals shown in Table 1 as benchmarks.

No	Interval X	Category
1	3,36—4,00	Very high
2	2,72—3,35	High
3	1,42—2,71	Low
4	0,00—1,41	Very low

Table 1. Approval Level Index, Confidence, or Frequency

## RESULTS AND DISCUSSION

### The Potentials of ICT to Increase Students' Interest and Motivation

Motivation is one of the main factors in learning because motivation increases interest and desire to achieve goals (Frydrochov Klimova & Poulova 2014). Gray in Siti Supriyatin (2015) emphasizes that motivation is a number of processes, which are internal or external to an individual, which lead to enthusiasm and persistence in carrying out certain activities.

No	Respondents	X	SB	approval level
1	Teacher	2,82	0,21	High
2	Students	2,84	0,08	High

Table 2. Respondents' Perceptions of the Potential Use of ICT to Student Interest and Motivation

The findings reveal that both groups of respondents (teachers and students) share a positive view and have a high level of agreement about the potentials for using ICT to increase students' interest and motivation (Table 2). This finding is reinforced by the findings through the teacher's answers to open questions, stating, "*Making learning more interesting*" as one of the main motives for teachers to use ICT in learning and "*Increasing student motivation to learn*" as one of the benefits of using ICT. The high level of student approval was reinforced by 88% of students' answers to open questions that they "*feel interested in using ICT in learning*". These findings confirm the paradigm that one of the most effective strategies to increase learning motivation is to present interesting activities and media for students and ICTs facilitate teachers to make learning challenging and fun that can prevent the monotony of learning activities and at the same time increase student attractiveness (Frydrychova Klimova & Poulova, 2014)

### The Benefits of ICT in Learning

Besides increasing students' interest and motivation, ICT use is also useful for facilitating various other aspects of learning, such as enriching learning resources, content and media, monitoring the learning process, increasing student achievement and satisfaction levels, managing the archiving of learning documents, increasing the intensity and quality of student communication with teachers and other students, and various other benefits. Table 3 shows that students and teachers both have a high level of agreement on the benefits of using ICT in learning. Teachers view that ICT is very useful to help provide learning resources, monitor learning activities, archive learning documents, and increase self-confidence. It is because ICT helps them acquire new experiences, knowledge and skills when interacting with students through ICT (Yieng & Daud, 2018). On the other hand, students view ICT as very useful because it can help acquire new knowledge and skills, facilitate communication, and make learning more varied.

No	Respondents	X	SB	approval level
1	Teacher	3,08	0,13	High
2	Students	3,06	0,05	High

Table 3. Respondents' Perceptions of the Benefits of ICT in Learning

This is in accordance with the findings of Herry Fitriyadi (2013) where in the 21st century technology integration of education, students and teachers are involved in ways that were previously impossible, allowing

the creation of new teaching and learning activities, increasing achievement, and expanding interactions with local communities. and global.

**Educational Benefits of ICT**

In the context of this research, the educational benefits of ICT refer to the benefits that ICTs offer to the entire process of developing knowledge, skills, and values that students need for their future. Because education aims to prepare students to become successful human beings in the future, educational practice needs to be adapted to the socio-cultural background of students and society and be oriented towards the future. According to Coyle, Hood & Marsh (2010), ICT is useful for making learning synchronous with the socio-cultural conditions and needs of students and society. Therefore, its great pedagogical potential allows ICT to contribute greatly to efforts to develop an effective education process (Jamieson-Procter et al., 2013).

The findings in this study indicate that both respondents have a high level of approval for the educational benefits of ICT (Table 4). These findings support the research results of Kreutz and Rhodin (2016) who report that ICT is effective in aligning educational practices with the conditions and needs of the 21st century students, Balash, Yong and Bin-Abu's (2011) research which shows that ICT facilitates teachers to combine human elements, time, and space effectively to ensure learning processes and activities lead to high learning outcomes, and the findings of Frydrychova Klimova and Poulova (2014) which state that the use of ICT not only develops student independence in learning but also enhances interactive and collaborative learning.

No	Respondents	X	SB	approval level
1	Teacher	3,07	0,15	High
2	Students	3,1	0,03	High

*Table 4. Respondents' Perceptions of the Educational Benefits of ICT*

**Ability to Use ICT for Learning**

The findings in this study show different views between teachers and students about their ability to use ICT for learning. Teacher respondents' level of approval of their ability to use ICTs for learning was low, while the level of student approval was high (Table 5).

No	Respondents	X	SB	approval level
1	Teacher	2,63	0,16	low
2	Students	3,15	0,04	High

*Table 5 Respondents' Perceptions of the Ability to Use Learning ICT*

This difference may be due to generational differences between teachers and students. While almost all teacher respondents were Generation Y (born in 1980-1995), all students were Generation Z (born in 1996-2010) who use a lot of ICT tools to communicate and tend to learn better in an ICT-based environment.

**Level of Confidence on Mastery of ICT Competencies**

ICT competence refers to the skills and knowledge or ability to use or apply ICT hardware and software to complete certain tasks. According to Gilakjani et al (2013), the level of teacher confidence in their ICT competencies plays an important role in integrating ICT into learning. The very complete and sophisticated ICT facilities available in schools will not be of any use if teachers are not competent to use them. Olasina (2012) reports that teachers and students need to master basic computing skills in order to integrate ICT in learning successfully.

In this study, the ICT competencies include four types: (1) basic computer competencies, basic internet competencies, competencies in using ICT for learning, and advanced ICT competencies. The results showed that the level of ICT competence of teachers and students based on their own perceptions is quite varied (Table 6). The respondents view their Basic Computer and Basic Internet Competencies as high. However, the average score obtained for these two competencies shows that the level of teachers' ICT competence is higher than that of students. This finding is closely related to the fact that teachers have been using ICT for much longer than students.

No	Kind of Competence	Teacher			Student		
		X	SB	Level	X	SB	Level
1	Basic computer	3,26	0,18	High	3	0,2	High
2	Basic internet	3,38	0,09	High	3	0,2	High
3	Learning TIK	2,63	0,06	low	2,7	0,1	low
4	Following TIK	2,25	0,16	low	2,2	0,25	low

Table 6. Respondents' Perceptions of Mastery of ICT Competencies

These findings indicate that the level of teacher and student confidence regarding the competence of using ICT for learning is both 'low'. It is also indicated that a high level of mastery of Basic Computer and Basic Internet competences does not automatically enable someone to be competent in using ICT for learning. Teacher and student respondents also view their advanced ICT competence (including skills in creating and editing images / videos, managing personal blogs, designing personal websites, and using various design programs) as low. Advanced ICT competences require intensive training in a relatively long time. On the other hand, demographic data show that quite a lot of respondents do not have their own laptops / personal computers and the availability of computers for learning in schools is still very limited. As a result, the opportunities for teachers and students to pursue advanced computer skills are limited.

### The Intensity of the Use of ICT in Everyday Activities

Respondents' high mastery of basic ICT competencies and basic internet actually is affected from the intensity of using ICT in their daily activities. However, the intensity of using ICT is still different for different purposes. Teacher group respondents rate the intensity of their use of ICT for learning as low, but high for purposes of entertainment and socio-economic activities. Meanwhile, a group of students view the intensity of their use of ICT as low for learning and social-economic activities but high for entertainment purposes. Judging from the average score, the intensity of students' use of ICT for entertainment is higher than that of teachers, namely 3.2 vs. 2.97 (Table 7).

No	The purpose of using TIK	Teacher		Student	
		X	Level	X	Level
1	Learning	2,71	low	2,67	low
2	Entertainment	2,97	High	3,2	High
3	Social-economy	3,12	High	2,3	low

Table 7. Respondents' Perceptions of Intensity of Use of ICT by Purpose

Although both respondents admit that they spend relatively little time accessing the internet for learning, the score of the teacher is slightly higher (3.71) than students (2.67). This finding reinforces previous findings that show that the ability to use ICT tools does not automatically enable someone to be competent in using ICT for learning. Although basic ICT competencies and basic internet are sufficient to facilitate teachers to use ICT intensively to obtain entertainment and carry out socio-economic activities, these competencies have not enabled them to use ICT for high-intensity learning. This finding is supported by qualitative findings which state that the main obstacle most often faced when integrating ICT in learning is the limited skills to design ICT-based learning. This situation affects the use of ICT for learning among students. In this connection, in order for the benefits of using ICT to be realized, technology needs to be intensively and meaningfully integrated into learning, and this can be done if ICT is used in all subjects.

### The Essence of ICT Training

The data shows that teacher respondents agree to the statements about the importance of ICT training (Table 8), reinforced by the teacher's answer to the open-ended question, *Are you training to enable yourself use ICT in learning effectively?*, in which 82.35% respond positively, 8.82% respond negatively, while 8.82% do not answer. Based on the teacher's answers to open-ended questions about the types of skills that need to be developed through training, it further strengthens the high level of teacher approval of the essence of ICT

training, especially on making Power point, making sound-based materials, making learning videos, operating LMS effectively, using Microsoft Excel, making three-dimensional graphics /images, and making/editing films/videos. These findings indicate that teachers need to attend training that enables them to select, use, evaluate, and develop the use of ICTs so that they can use ICTs in learning effectively.

No	Respondents	X	SB	approval level
	Teacher	3,16	0,12	High

Table 8. Respondents' Perceptions of the Essence of ICT Training

These findings confirm various research results that show the important role of ICT training in enabling teachers to integrate ICT into learning (Galanouli, Murphy & Gardner, 2004; Pardede, 2020) because the provision of ICT competence in teacher education (teacher training faculty) is in fact very minimal, and this condition is one of the main obstacles to the integration of ICT into learning (Gotkas & Yildirim, 2009; Ali, Haolader & Muhammad, 2013).

In contrast, as many as 40.6% of student respondents agree, 39.2% disagree, and 20.3% do not respond to the question *Do you need training to be more effective in using ICT in learning?*. This finding indicates that some of them perceive that they do not really need ICT training to enable them to use ICT in learning. This difference is essentially related to the generational difference in which Generation Z are more technology savvy - possessing a wide range of technological knowledge and skills – and see ICT as a natural part of life (Bliss, in Global News, 2018). For them, technology is not a kind of tool, but rather a way of life, so that this familiarity enables them to use ICT skillfully without having to devote special time to learning it.

## CONCLUSION AND RECOMMENDATION

Based on the explanation in the results and discussion section above, the following seven conclusions can be drawn, which are sorted according to the order of the research questions. First, teachers and students have positive perceptions with a high level of agreement on the potential use of ICTs to increase students' interest and motivation. Second, teachers and students both have a high level of agreement on the benefits of using ICT in learning. Third, both respondents benefit ICT not only for learning activities, but also developing independence, and increasing communication and collaboration skills, and other 21<sup>st</sup>-Century skills. Fourth, teachers and students have different perceptions towards their ability to use ICT for learning. Teachers think that their ability to use ICT for learning is low, while students think that their ability to use ICT for learning is high. Fifth, both perceive that their level of confidence in the mastery of ICT competencies is high, especially in the Basic Computer and Internet Basic competencies, but low in ICT competencies for learning and Advanced Computer Competence. Sixth, both view themselves use ICT more frequently for entertainment activities that they do for learning activities. However, the intensity of teachers' use of ICT for socioeconomic activities is higher than that of the students. Finally, teachers have a high level of agreement with the essence of ICT training to enable them to use ICT in their learning effectively, while students do not think the same.

This study has at least two limitations. First, the method used is a cross-sectional survey so that the information collected is limited to the perceptions of the respondents at the time the data is collected. Second, the research sample is determined using convenient sampling so that the results of the study cannot be generalized to the entire population. The findings obtained were valid only for participants in the 15 schools used as research locations. In this regard, the researcher recommends two suggestions for further research. First, conduct longitudinal studies, whether in the form of trends, panels, or cohorts, so that the information obtained is more stable. Second, determine the sample randomly so that the results of the study can describe the perceptions of the entire population. In other words, research results can be generalized to the population.

## REFERENCES

- Ali, G., Haolader, F. A., & Muhammad, K. (2013). The Role of ICT to Make Teaching- Learning Effective in Higher Institutions of Learning in Uganda. *International Journal of Innovative Research in Science, Engineering and Technology*, 2(8), 4061-4073.

- Anshori, S. (2017). Pemanfaatan TIK Sebagai Sumber dan Media Pembelajaran di Sekolah. *Civic-Culture: Jurnal Ilmu Pendidikan PKn dan Sosial Budaya*, 1(1).
- Balash, F., Yong, Z. and Bin-Abu, B., (2011). Lecturers and Educational Technology: Factors Affecting Educational Technology Adoption in Teaching. *2nd International Conference on Education and Management Technology IPCSIT*, Vol. 13, Singapore.
- Cakrawati, L.M. (2015). Students' Perceptions on the Use of Online Learning Platforms in EFL Classroom. *English Language Teaching and Technology Journal (ELT-Tech Journal)*, 1(1), 22 – 30.
- Coyle, D., Hood, P. & Marsh, D. (2010) *CLIL: Content and Language Integrated Learning*. Cambridge: Cambridge University Press.
- Fitriyadi, H. (2013). Integrasi Teknologi Informasi Komunikasi dalam Pendidikan: Potensi Manfaat, Masyarakat Berbasis Pengetahuan, Pendidikan Nilai, Strategi Implementasi dan Pengembangan Profesional. *Jurnal Pendidikan Teknologi dan Kejuruan*, Volume 21, Nomor 3.
- Frydrychova Kl imova, B., & Poulouva, P. (2014). Forms of Instructions and Students' Preferences - a comparative study. *Proceedings of the 7th International Conference, ICHL 2014* (pp. 220-231). Springer.
- Gilakjani, P. A, Sabouri, B. N. & Zabihniaemran, A., (2015). What Are the Barriers in the Use of Computer Technology in EFLL Instruction? *Review of European Studies*. 7 (10). 173-181.
- Global News (2018). *Is generation Z glued to technology? It's not an addiction; it's an extension of themselves*.
- Haygood, E., Garner, R., & Johnson, S. (2012). *Blended Learning: Using Web 2.0S to Enhance Classroom Instruction*. Interlink Alliance. Diunduh Juni 2019 dari <https://www.ohio.edu/education/>
- Jamieson-Proctor, R., Albion, P., Finger, G., Cavanagh, R., Fitzgerald, R., Bond, T., & Grimbeek, P. (2013). Development of the TTF TPACK Survey Instrument. *Australian Educational Computing*, 27(3), 26-35.
- Khalid, F., Joyes, G., Ellison, L., & Daud, M. D. (2014). Factors Influencing Teachers' Level of Participation in Online Communities. *International Education Studies*, 7, 23-32. <http://dx.doi.org/10.5539/ies.v7n13p23>
- Kopcha, T. (2012). Teachers' Perceptions of the Barriers to Technology Integration and Practices with Technology under Situated Professional Development. *Computers & Education*, 59: p1109–1121.
- Kreutz, J. and Rhodin, N. (2016). *The Influence of ICT on Learners' Motivation Towards Learning English* (Master's thesis). Diunduh Juni 2019.
- Kristianto, B. (2017). Factors Affecting Social Network Use by Students in Indonesia. *Journal of Information Technology Education: Research*, 16, 69-103. <https://doi.org/10.28945/3675>.
- Mahdum, Hadriana, and Safriyanti, M. (2019). Exploring Teacher Perceptions and Motivations to ICT Use in Learning Activities in Indonesia. *Journal of Information Technology Education: Research*, 18, 293-317.
- Maunah, B. (2016). Dampak Regulasi di Bidang TIK terhadap Perubahan Perilaku Sosial Siswa di Sekolah Menengah Kejuruan. *Jurnal Cakrawala Pendidikan*, Thn. XXXV, No. 2 DOI: 10.21831/cp.v15i2.8953.
- Olasina, G. (2012). Students' E-learning/M-learning Experience and Impact on Motivation in Nigeria. *Proceedings of the IATUL Conferences*, 31(1), 1-10.
- Pardede, P. (2020). Secondary School EFL Teachers' Perception of ICT Use in Learning and Teaching: A Case Study in Greater Jakarta. *Journal of English Teaching*, 6(2), 144-157. DOI: <https://doi.org/10.33541/jet.v6i2.1976>.
- Pardede, P. (2019). Pre-Service EFL Teachers' Perception of Blended Learning. *Journal of English Teaching*, 5(1), 1-14. <https://doi.org/10.33541/jet.v5i1.955>.
- Pardede, P. (2015). Pre-Service EFL Teachers' Perception of Edmodo Use as a Complementary Learning Tool. *In: Proceeding English Education Department Collegiate Forum (EED CF) 2015-2018*. Jakarta: UKI Press.
- Pramana, E. (2018). Determinants of the Adoption of Mobile Learning Systems among University Students in Indonesia. *Journal of Information Technology Education: Research*, 17, 365-398. <https://doi.org/10.28945/4119>.
- Supratman, L.P. (2018). Penggunaan Media Sosial oleh Digital Native. *Jurnal Ilmu Komunikasi*, Volume 15, Nomor 1.
- Wachira, P. & Keengwe, J. (2011). Technology Integration Barriers: Urban School Mathematics Teachers Perspectives. *Journal of Science Education and Technology*, 20, pp. 17–25 DOI: 10.1007/s10956-010-9230-y.

Yieng, W.A. & Daud, K. (2018). ICT Competencies among School Teachers: A Review of Literature. *Journal of Education and Learning (EduLearn)*, 12(3). DOI: 10.11591/edulearn.v12i3.5579.