FACTORS AFFECTING THE USE OF ICT IN LEARNING ENVIRONMENT: TEACHERS’ PERSPECTIVES

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ABSTRACT

Information Communication Technology (ICT) has been used as a media in teaching that is a better movement in this 21st century. In relation to ICT, the purpose of this study is to analyze the factors affecting English teachers in using ICT in learning environment at junior high school. This issue is try to examine the teachers’ perspective from Junior High School 2 Sungguminasa, Gowa, Sulawesi Selatan, Indonesia. The research was qualitative research with data were taken from observation checklist of the availability of ICT hardwares and English teachers’ interview from Junior High School 2 Sungguminasa. The identified results are several factors affecting English teachers in the use of ICT in learning environment. They are the accessibility of ICT hardwares as teaching media in classroom incredibly needed to ease the learning process, teacher’s ICT skills that enable teacher to create new creative learning environment, and suitable training of ICT that is necessary for teachers that in classroom they enable to handle the use of technology from their direct experience. In conclusion, the use of ICT hardwares are importantly needed in sequence to strengthen the process of learning for an educational quality in interactive and supportive learning environment.

*Keywords*: ICT hardware, learning environment, teaching media, teachers’ perspectives

INTRODUCTION

ICT or Information Communication Technology is believed as an educational transformation. Using ICT for media in teaching and learning is a kind of a smart move in education (Junaidi, et.al, 2020). The ICT has been developing very fast nowadays (Meenakshi, 2013). Meanwhile, the influence of the ICT cannot be ignored from students’ life, so the learning activities should be integrated with ICT in their learning environment.

Contrarily, the ICT implementation in learning environment has been set not to be prioritized as trend of reformation of education and the numbers of ICT hardware are limited. In addition, acceptance of teachers for the newly technological tools became quite
controversial. As some succeeded to integrate ICT into the classroom, others became careful for the risk to accept, and others could easily reject the technologies (Alharbi, 2014, p. 20). Consequently, schools and government institutions should have active and initiative participation to heighten the ICT use at schools (Meenakshi, 2013). Also, they need to support teachers to gain the most benefits from the use of ICT in their classroom (Hennesy et.al, 2010).

Teachers become the key initiator and motivator of ICT implementation in class. They are the agent of change in creating learning environment. They turn to serve as participants of global change in modifying learning and teaching (Meenakshi, 2013). Organizing and utilizing ICT in settings in education still become rather uncertain. However, some teachers exactly use ICT as tools in teaching and learning in their daily collaboration with students in their own classroom (Player-Koro, 2012). Also, the positively effective implementation of learning through ICT maintain the goal, application and evaluation stages of English teaching and learning process (Marfu‘ah, 2012). By paying attention to the previous study and some problems found in the learning environment, then, this paper is interested in finding out factors that impact the ICT usage in the environment of learning based on the teachers’ perspectives.

REVIEW OF LITERATURE

Impact of ICT in Teaching and Learning

Under the right conditions, it is believed that ICT can provide a massive impact on the learning opportunities expansion for better and more distinct populations, beyond barriers of culture barriers, and the confines outside the institutions or geographical boundaries. Technologies are able to upgrade the process of teaching and learning process constructing standard system of delivery, increasing the quality of achievements of learning, providing formation of art skills, supporting lifelong learning and enhancing the institutional management (Institut de statistique de l’Unesco, 2009).

Information and Communication Technologies is worldwide and national high speed in vast web of networks of digital communication in scope and accessibility by the public. This maintains a strong effect for the citizens of a nation on education, economic and social life. Information and Communications Technology (ICT) has passed innovations...
and changed the way people think, work, study, and live in our society (Ghavifekr et al., 2014).

ICT performs several roles in enhancing productivity of economic by applying digital economies, increasing the public delivery and good services and getting broad socio-economic targets in health care, education, employment and social development. (UNESCO Institute for Statistics, 2015). Also, ICT provides the capability in providing a dynamic and proactive environment in teaching and learning. Because of the current digital era, the teachers are forced to combine ICT in the daily teaching and change the conventional methods with modern tools and facilities (Ghavifekr et al., 2014).

Furthermore, the use of ICT in class presents well-planned lessons and the students find these in an attractive environment. ICT assists students to undergo autonomous learners which are able to grow strategies of critical thinking and problems-solving, cooperative tasks and challenging inquiry. It permits the searches of information, modelling computer, work in team, brainstorming and revision. It is undeniable that ICT provides great impact on performance of students in integrating the learning to the environment. In particular purpose, schools with adequate ICT resources greatly achieve improved results than not well-equipped. In addition, teachers enable to implement ICT usage as creative pedagogy in teaching and learning. For the reason, ICT enables to enhance teaching by improving a practiced knowledge and leading to new paths of teaching and learning. (Oni et al., 2013). Teachers finally agreed that ICT becomes a necessary tool in education and use of practice to enhance process of teaching and learning. (Kennah, 2016).

**Principles of Learning Environment**

There are several principles of the learning environment. (OECD, 2017). Firstly, the learning environment recognizes the learners as its core participants, encourages their active engagement and develops in them an understanding of their own activity as learners. Also, the learning environment is founded on the social nature of learning and actively encourages well-organized cooperative learning. The learning professionals within the learning environment are highly attuned to the learners’ motivations and the key role of emotions in achievement. Additionally, the learning environment is acutely sensitive to the
individual differences among the learners in it including their prior knowledge. It devises programmers that demand hard work and challenge from all without excessive overload. Furthermore, it operates with clarity of expectations and deploys assessment strategies consistent with these expectations. There is strong emphasis on formative feedback to support learning. Finally, it strongly promotes “horizontal connectedness” across areas of knowledge and subjects as well as to the community and the wider world.

**Impact of ICT on Learning Environment**

Information Communication Technology (ICT) provides new learning environment for students, so that requesting a distinct skill set to be prosperous. Research, critical thinking and evaluation skills are putting importance when students need to boost information volume from a kind of sources to consider through. ICT is replacing teaching and learning processes by including parts of power to environment of learning such as online environments. ICT is a vitally powerful tool for suggesting opportunities in education. It is quite difficult and seemingly impossible to identify future environments of learning that are not helped in one way or another by ICT (Noor-Ul-Amin, 2013).

ICT is incredibly able to contribute to making powerful learning environments in a lot of ways (Vosniadou, 1996). Also, ICT has chances to openly access an abundance of information by resources of information and providing it from numerous perspectives. In addition, it is important to advance the learning environment authenticity. ICT could make complex processes easier to comprehend through simulations that affect to the authentic environments of learning. Hence, ICT might serve as a facilitator of attractive learning and higher-order thinking skills (Noor-Ul-Amin, 2013).

Successful use of educational technology relies on both on technical proficiency with a tool to the ability for faculty and students to make it functions and on pedagogical techniques that funding on potential of technology’. For many cases, faculty accepts that the former will simply paying attention to the latter that implementing the technology within pedagogy which exists will be adequate but effective usage of technology ask the modification of teaching techniques to take advantage of the addition of technology (Warger, 2009).

**METHOD**
The research used qualitative research for the purpose of the study. The subjects of the research are three English teachers in Junior High School 2 Sungguminasa, Gowa, South Sulawesi. The research used observation checklist to check the availability of ICT hardware and interview to collect the data. The observation checklist was used to identify the numbers of ICT components at school. Furthermore, an interview consisted of some questions related to the use of ICT components by English teachers. Finally, the data analysis comprised with some steps: reading/memoing data, categorizing/coding data, organizing and interpreting data.

FINDINGS AND DISCUSSION

Table 1. ICT Hardware at SMPN 2 Sungguminasa

<table>
<thead>
<tr>
<th>ICT HARDWARE</th>
<th>UNIT TOTAL</th>
<th>CONDITION</th>
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<th>USED</th>
<th>USER</th>
<th>PLACE</th>
<th>SUGGESTION</th>
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The table above shows the lists of the ICT hardware in Junior High School 2 Sungguminasa. There are several things this school does not own; camera, wifi, server, interactive whiteboard, flashdisc, and handphone. From all the lists, computer and headphone have the biggest total which are 21 units for each and followed by five speakers. There are also four laptops, microphones, and printers for each. While others are three televisions, two scanners, a projector, a radio and a recorder.

From the table above, twenty-one computers are not enough to cover the numbers of the students of that school. This is insufficient for them to use the computers all the time. This is supported by the statement of Ms. N,”I do not use ICT in all of my class, only in
“some materials”. It means that they are still able to use all the ICT components in their learning environment.

After identifying the facilities and the teacher’s interview result, then, factors affecting the use of ICT hardware in learning environment based on the teachers’ perspectives can be described as below:

**Accessibility of ICT hardwares in the classroom**

Teachers should be supported to find out the most from the use of ICT in classroom. This supports what Hennesy has stated before. It shows from the teachers’ statement that they think that the ICT is really helpful and important in the classroom. Furthermore, ICT supports need to be provided by decision of appropriate technological solutions for the requirements found by communities. Those applying technological solutions are necessarily important to ensure they are based on the context-specific, and adapted to needs of identified location and conditions. It is also mandatory that ICT initiatives are important and effective by making sure that the technologies combined within them suit with the users’ demands in compatible ways. It is also obvious that numerous different kinds of technology can easily be employed to empower and improve learning. They emplace technology solidly in the hands of learners and this is able to heighten students’ motivation and time spent on learning.

In addition, a related, much more widely available technology with a great deal of promise is mobile phone. It is used especially in rural areas without supports of main electricity or connective internet. However, the technology arises some technical limitations and issues of security. Therefore, the technology accessibility in the classroom provided sufficiently. Technology is found to play various roles in students’ learning and it is understandable that we are strengthened to think about kinds of technology are applied in the classroom, and for what needs.

Even though most people agree that the use of ICT is very helpful. It is also making some challenges to solve by the teachers. They found that not all classes in the school have electrical supports. The lack of the electricity can create some obstacles in using the ICT and correlates with many problems that will arise in the classroom.

**Teacher ICT skills**
The teacher has a few needs to acquire basic ICT skills. It is also stated by Ms. N that she needs the ICT skills to ease the use on ICT in learning process, such as making Google form and online classroom applied. Even though the technology is there, the teacher skills on ICT play an important role. This is to lead the teachers to identify which applications have provided value for learning in specific subject area. In doing the learning process, they are importantly suggested to be fully aware that this is not a one-time activity, when the environment of information is changing continuously. It is likely most important and challenging for teachers in deciding which the basic subject, social and management skills students are necessary to function in such environments. The difference can make an effect on tasks of assessment, with new learning environments changing from summative methods of assessment to formative approaches and open-ended products (such as reports and research papers created by groups of students). These various aspects are likely to serve as time consuming, and result in the increasing in teacher workload.

Suitable Training

A suitable training is necessary for teachers that they have the experience in using technology in classrooms. This incredibly supports the statement of Player-Koro. In addition, teachers are required some specific professional development opportunities so that they enable to improve their ability in using ICT for learning assessments, instruction, online resource access, and for empowering students’ interaction and collaboration. Also, most teachers have acquired ICT training held by the government. They stated they get the ICT training from the government about ICT-based teaching. Various kinds of training in ICT have completely impacted teachers’ attitudes towards ICT in their own classroom. However, they should be provided specific guidance on ICT in the learning and teaching within specific discipline. Teachers may use ICT for skill-based applications and try to limit student academic thinking if they are not provided support in using the ICT in their classroom.

CONCLUSION

There are some crucial factors to consider the use of ICT in learning environment by paying attention to the teacher perspectives. They are the ICT access in the classroom. The teachers need the easiness to access the ICT components so that they could be easily apply it in their learning environment. Even though ICT has been found important, most of the
classes of the school have no electricity support. This is a commonly problem found by the teacher. This makes teacher creatively thinking out of the box about the use of the ICT. Secondly, it is important to make teachers have the skills on the use of ICT. They must think the application needed in order to determine which is best for their subjects. Finally, the suitable training is necessarily needed by the teacher to support them in using the ICT. The use of ICT in learning environment must be improved because it has a lot of impacts to increase educational quality.

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