THE USEFULNESS OF INFORMATION AND COMMUNICATION TECHNOLOGY IN ENTREPRENEURSHIP SUBJECT

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ABSTRACT

The purpose of researcher is analyze responses of teachers perceptions of school and teacher readiness in utilization Information Communication Technology (ICT) systems in Entrepreneurship Subject at Vocational High School in East Java, Indonesia. This research used descriptive quantitative survey method to identify the conditions of schools and using observation with deep interviews to respondents who selected according to the criteria. They were 102 entrepreneurship teachers from Vocational High School in Indonesia. The result are

1. *Schools already have readiness in the utilization of ICT.*

2. *The utilization of the ICT system is still lacking by the teachers even though the school is ready in the system.*

3. *Lack of teachers' willingness to learn.*

4. *Based on the criteria of the respondent the female teacher needs training in using ICT system and teachers with undergraduate background still lack the mastery of ICT system.*

INTRODUCTION

Education quality improvement continuously conducted by the Government and the organizers education. This is necessary efforts to improve the quality of education, especially starting from the teacher, because the teacher as educators at the forefront of the task and its function is directly related to students, teachers have a major role in learning at school to create atmosphere learning is fun so it impacts positive in achievement of student achievement (Gita, 2007).

Learning needs to be made creative and interactive to make students interested and active in learning process and the output is to improve the quality of human resources of education. To create an interactive learning atmosphere should also be supported by good infrastructure and facilities that is utilization of Information Communication Technology (ICT) systems in school. According to Uhibbukafillah (2017), the utilization of ICT is needed in order to effectiveness and efficiency of learning. Similarly, according to Ahmadi (Sribina, 2016) that the rapid advancement of information and communication technologies that offer new conveniences in learning allows for a shift in learning orientation from outside-guided to self-guided and from knowledge-as-possesion to knowledge-as-construction. That means, technology is needed for ease of learning in the world of education today.

Then, how many teachers have used ICT in their learning? The low ability of teachers in using ICT is seen from the very few teachers who can operate the computer, at least teachers who can use internet including those who have e-mail, facebook, blogs, and others. Whereas in this era of globalization now the use or utilization of technology is very important. In line with Nurhayati's research (2016) that the basic ability of teachers in ICT field is still low and the

school does not require teachers to use ICT in the learning process. So the teacher is less aroused to further develop themselves.

Teachers should be able to apply ICT which has the advantage of the availability of information widely, precisely, quickly, and the ease of learning process and technology support to facilitate the teaching and learning process, because the teacher has not applied the full use of ICT.

Entrepreneurship teachers need creative, innovative and productive learning processes so that their students are interested and can apply their ideas directly into the learning process. Uhibbukafillah (2017) said that teachers should think more creative, innovative, and broad-minded so that they can teach more qualified ICT-based.

In this Entrepreneurship subject, the student's idea of a product is then shown to be a business plan that will be presented using information technology to make it more convincing and interesting, followed by product creation up to the sales of their products through online access via internet or social media such as sms, whatsapp, e-mail, facebook, blog, twitter and Instagram.

But then that should be considered whether the school facilitates the facilities and infrastructure or facilities adequate to support the learning process of entrepreneurship subjects? Still according to Nurhayati (2016) that the availability of ICT facilities are still inadequate from the school. Do entrepreneurial teachers also use demonstration to students in the classroom using ICT? Elly (Sanjaya, 2006) states that the teaching aids is a learning medium that contains or carries the characteristics of the concepts studied. Because props are part of the learning media, then its function is also the same as the learning media. By using props, the teaching and learning process motivated both students and teachers, and especially students, interest will arise.

Based on the above problems, the researchers want to analyze responses of teachers perceptions of school and teacher readiness in utilization Information Communication Technology (ICT) systems in Entrepreneurship Subject: State Vocational High School in East Java, Indonesia to improve the quality of learning.

LITERATURE REVIEW

The Concept of ICT (Information and Communication Technology)

The word Information Technology when viewed from the composition then consists of words technology and information. Therefore information technology is the result of artificial or human engineering to the delivery of information from the sender to the recipient so that the information submitted will be faster, wider spread, and longer storage.

In the beginning, humans exchange information through the language used. Language allows a person to understand the information conveyed by others. But the language spoken by word of mouth lasts only briefly, i.e. only when the sender conveys the information through his speech only. Once the speech is finished, then the information in the hands of the recipient will quickly be forgotten and cannot be stored for long. In addition the voice range is also limited. For some distance, though still heard, the information conveyed through the language of the voice will be less than perfect or even completely lost.

Then the information delivery technology evolves from the Language into the image. With images, then the reach of information can be even further. This image can be carried and delivered to others. In addition, the existing information will last longer than the language.

Furthermore, the discovery of the alphabet and Arabic numbers facilitate human information to deliver more efficiently from the previous way. An image representing an event is made with a combination of alphabet, or by numerical writing, to electronic technology such as radio, television, computers affecting information faster spread over a wider and more secure area.

Information and Communication Technologies (ICT) is a large terminology covering all technical equipment for processing and conveying information and communications. ICT covers two aspects: information technology and communication technology. Information technology includes all things related to the process, use as a tool, manipulation, and management of an information. While communication technology is anything related to the use of tools to process and transfer data from one device to another. Therefore, information technology and communication technology are two concepts that cannot be separated from each other.

So Information and Communication Technology contains a broad understanding of all activities related to processing, manipulation, management, transfer of information between media (Prahani & Supeno 2012). The term of ICT emerged after a mix of computer technology (both hardware and software) with communications technology in the mid-20th century.

According to the State Ministry of Research and Technology (Asmani, 2011), Information and Communication Technology (ICT) or in the English language is known as information and communication technology, dissemination and presentation of information. Information and Communication Technology are various aspects involving technology, engineering and management techniques used in the control and processing of information and their use, computer and machine (computer) and human relationships, and matters relating to social, economic and cultural (British Advisory Council for applied Research and Development: Report on Information Technology, 1980).

Information, Communication and Technology is a part of science and technology (IPTEK) in general are all parts of which are related to the collection, collection (acquisition), processing, storage, dissemination, and presentation of an information (State Ministry of Research and Technology, 2006).

According to Anatta Sannai (Asmani, 2011) information and communication technology is a medium or tool in obtaining knowl edge between someone to others. The wave of technology and information developed through several stages as follows:

1. The first wave, ICT utilization is focused on increasing productivity and minimizing costs.

2. The second wave, ICT focused on increasing the effectiveness of computer use through the construction of computer networks.

3. The third wave, ICT is focused to generate profits through the development of information systems programs.

4. The fourth wave, ICT focused on helping the process of decision-making from qualitative data.

5. Fifth wave, ICT focused on reaching customers (consumers) through the development of the Internet network.

6. The sixth wave, ICT is developing a wireless network system (wireless).

Information and communication technology (ICT) has become an important part of most organizations and businesses. Computers began to be placed in schools in the early 1980s, and some researchers point out that ICT is an important part of education for the next generation. Modern technology (ICT) offers many in the world of education, namely: Improve teaching and learning in the classroom, The view that new technologies are potential to support education

across the curriculum, and Provide opportunities for effective communication between teachers and students in a way that has not been possible before.

In addition, the utilization of Information and Communication Technology (ICT) in learning also supports the theory of socio constructivism, i.e. students gain experience learning together with other students or through interaction with teachers with ICT-based communication media. Recent development is the integrated use of Information and Communication Technology (ICT) in the learning process in the classroom combines the various skills and functions of ICT in the learning process. The use of Information and Communication Technology (ICT) as a medium of learning in the classroom can be in the form of Power Point slide files, images, animations, video, audio, CAI (computer asissted instruction) programs, simulation programs, etc. These files can also be uploaded by teachers on their blog or deployed by e-mail class.

Based on research of Aktaruzzaman et al. (2011), the teacher combines the application of ICT in learning such as internet, video, audio, graphics, text and picture for student learning process. Utilization of ICT according to Wena (2009) is to overcome the weaknesses that occur in learning in the classroom which leads to classical learning by using lecture method. The weakness in question is the impact of the use of the explanation method that tends to make participants bored quickly and do not pay attention to the material. He further explained that learning resources related to IT is currently the concern of the world of education, namely computer-based learning and web-based learning. Added by research of Bachtiar & Abdul (2013) that it's good if the teacher provides the material as well as practice it to students, so that students can understand the true nature of entrepreneurship.

In this paper, the researchers want to show that the use of Information and Communication Technology (ICT) can also be applied to entrepreneurship subjects by teachers so that the learning process can run more interesting, interactive, effective and efficient because the teacher directly asks students to apply from making product design using computer until the sale of the product through online which means using ICT from the initial stage up to the final stage of learning for 1 semester.

By using Information and Communication Technology (ICT), the student is expected to be able to nurture creativity. Students with high creativity will be able to resolve the problem quickly and respond to emerging issues. Thus, the goal of Information and Communication Technology (ICT) will be in line with the purpose of education itself when used in learning. The use of ICT is not a barrier to learning, but will give more benefits in learning.

METHODS

This research used descriptive quantitative survey method. Data analysis uses content analysis. For the purpose this research uses primary data through observation with deep interviews to respondents. The respondents in this study were 102 entrepreneurship teachers from Vocational High School in Bekasi City West Java, Indonesia. The respondents was selected according to the criteria. The criteria are sex, age, level of education and length of work.

This research approach is a survey method to identify the conditions state vocational high schools in Bekasi City West Java, Indonesia. The instrument used to interview respondents is the utilization of Information and Communication Technology (ICT) systems in learning process.

The characteristics of respondents will be described and grouped by sex, age, education level and length of work. The profile of respondents is listed in the Table 1.

No	Characteristics	Criteria	%
	Table 1 CHARACTERISTIC OF RESPONDENTS		
1	Sex	Male	22.6
		Female	77.4
2	Age	$\leq$ 30 Years	28.4
		>30 Years	71.6
3	Level of Education	Postgraduate	25.5
		Undergraduate	74.5
4	Length of Work	$\leq$ 15 Years	41.2
		>15 Years	58.8

Sex

In the above table it is explained that the female teacher is 77.4%. The basic personality differences between women and men are generally aggressive, impatient, individualistic, more confident, more assertive, and more in control of the job while female tend to be less relational and have a responsibility to take care of larger families than men. But this condition is not absolute in every place. About ICT, female teachers are less able to use ICT in learning activities.

Age

Based on our research of utilization of ICT in entrepreneurship subject, there is 71.6 % of teachers who are over 30 years of age. That is, they must develop their ability to use modern technology. As Teddy (2008) says that the age variable is also a very real control variable that affects the relationship between independent variables (performance expectations, social expectations and social influence) on the intention to use information technology. Morris in Ahadiat (2008) also found the same result, that younger individuals would be more positive in the utilization of ICT in learning.

Level of Education

74.5% of entrepreneurship teachers in Bekasi City, West Java, Indonesia have an undergraduate education background and their education background relates to their less computer abilities, because the Indonesian Government Regulation concerns teachers that they must have a bachelor's degree in education. With the regulation, government wants to develop the world of education with good teacher ability. As Robbins (2010) says education is vital to improving its capabilities, higher education teachers are able to work with higher levels of difficulty and responsiveness.

Length of Work

The working period affects teacher's detailed control, longer teaching time will give more experience in teaching, from the table we know that more senior teachers whose teaching period is over 15 years is 58.8%. It means they have gained much experience in teaching. This is related

to the results of the Ahadiat's sudy (2008) that found that fewer respondents had higher scores than respondents who taught more. Morris in Ahadiat (2008) also found the same result, that younger individuals would be more positive in ICT utilization in learning. The argument that can be conveyed is that, the long-time teaching response may be in a *"save"* condition that does not change his teaching style. They may be reluctant to change it especially with ICT users.

RESULT AND DISCUSSION

By the results of interviews and data analysis conducted, then produce the results are:

Teachers Stated that Schools Already Have Readiness in the Utilization of Information and Communication Technology (ICT) Systems

Physically, the readiness of schools in the utilization of Information and Communication Technology (ICT) can be in the form of providing adequate facilities and infrastructure in schools. If there is no adequate facilities and infrastructure, both in terms of quantity and quality of the equipment, schools are still using the multimedia devices used in their institutions. This former multimedia device is certainly still using the specifications that have been left behind his era. So its use must be able to compete with the rapid rate of Information and Communication Technology (ICT) development. Schools should continue to develop ICT-related infrastructure to improve learning quality. In this research, most of respondents stated that their school already for that.

A budget or sufficient fund must be available to establish, develop and maintain the infrastructure of the Information and Communication Technology. In this research, most respondents agree that need a budget or sufficient fund for that problems.

The unequal distribution of infrastructure or infrastructure supporting the application of Information and Communication Technology (ICT) in education is one of the problems that must be solved by the stakeholders, because without the infrastructure or infrastructure facilities that support the application of ICT in the field of education will only be a dream. Facilities infrastructure is a very important component that serves as the initial and main capital in the application of ICT in the field of education. At present, there is a tendency that only certain regions in Indonesia will gain access to Information and Communication Technology (ICT). This is because there are still many remote areas that even to have telephone access just does not exist, especially for access to the Internet. Whereas the real potential human resources can emerge and be in any area. If this continues and there is no follow-up from the government then the potential of human resources owned area will be dormant and cannot be utilized for the progress of the Indonesian people in general.

The Teacher Stated that the Utilization of the Information and Communication Technology (ICT) System is Still Lacking by the Teachers Even Though the School is Ready in the System

Teachers should have the knowledge and skills in using digital tools and resources to help learners to achieve academic standards. In this research, less of respondents are agree that teachers should have the knowledge and skills in digital or Information and Communication Technology (ICT) utilization. This means there are still many teachers who consider the use of

Information and Communication Technology (ICT) in the learning process is still not fully needed.

According to this research, teachers who have not agreed about the use of Information and Communication Technology (ICT) must be a conventional teacher and aged. The other thing that affects their perception is the suitability of the subjects they teach. Any subject now requires minimal Information and Communication Technology (ICT) use of the power point slide in explaining the material to the students so that the students are more interested in paying attention to the material being taught.

This is supported by the opinion of Totok who said that unfortunately not all teachers can take advantage of computers and internet with the maximum. As a result, in some places many students who cannot use technology because the teacher also cannot use it (www.cnnindonesia.com access on June 13, 2018). This is in accordance with the characteristics of respondents in this study that many respondents who are old, it means relate to Morris in Ahadiat (2008) also found the same result, that younger individuals would be more positive in the utilization of ICT in learning. The utilization of ICT system is still lacking by old teachers.

Lack of Teachers' Willingness to Learn

The findings show that teachers have a strong desire to integrate Information and Communication Technology (ICT) into education, but that, they encounter many obstacles, such as

1. Lack of confidence.

2. Lack of competence.

3. Teacher attitudes and inherent resistance to change.

Teacher confidence is lacking in using Information and Communication Technology (ICT) in implementing learning process. Teachers are afraid of failing to teach through the use of Information and Communication Technology (ICT) that is currently highly recommended. Although the use of ICT in the learning process is highly recommended by experts.

Teachers who lack confidence use Information and Communication Technology (ICT) in their learning activities, on average, are older teachers, it means teachers who have longer of work time. They lack confidence because they did not learn much beforehand about computers. They can only apply a little bit for example in the making of slide material, even some are not able to use to make slide material using power point. This is related to the results of the Ahadiat's sudy (2008) that found that fewer respondents had higher scores than respondents who taught more. Morris in Ahadiat (2008) also found the same result, that younger individuals would be more positive in ICT utilization in learning. The argument that can be conveyed is that, the long-time teaching response may be in a *"save"* condition that does not change his teaching style. They may be reluctant to change it especially with ICT users.

The use of computer and language laboratories in established schools is also less than optimal. The reason teachers are reluctant to use the laboratory is: teachers lack confidence and have been comfortable with learning verbal learning methods and yet comfortable with learning using Information and Communication Technology (ICT) devices. In terms of means of infrastructure, the computer that is damaged is not directly repaired so that the number of computers that can be used is less than the number of students who will use (Sari, 2017).

Lack of Teacher Competence

What is meant here is the lack of teacher competence in integrating Information and Communication Technology (ICT) into pedagogical practice, ie lacking the knowledge and skills in computer use and not enthusiastic about changes and integration with learning using computers in their classroom.

This is in line with Tagor's opinion that said to increase the competence of teachers in the utilization of Information and Communication Technology (ICT) is through the role of government in terms of providing training. The government also gave an appeal to them. Supposedly if teachers want to get professional allowance, they should be able to increase their capacity including trying to technology literate. Furthermore, Totok provides two recommendations for the government if it is to seriously increase the use of computer and internet technology in schools. First, the government must make sure teachers can use it and second, the government must take care of the technology (www.cnnindonesia.com).

Another factor contributing to the increase in teacher competence in using Information and Communication Technology (ICT) for learning is the support of school facilities and infrastructure, such as wifi, projectors, and computer laboratories. The data window of the Ministry of Education and Culture of Indonesia shows that the number of primary schools in Indonesia that already have laboratories is still around 4% and has a library of about 55% (Dapodikbud Team Education and Culture Window, 2017).

Teacher Attitudes and Inherent Resistance to Change

Teacher attitudes and resistance to change about the use of new strategies is the integration of Information and Communication Technology (ICT) in learning process. This is meant by the teacher's attitude that the use of Information and Communication Technology (ICT) in learning process has no clear benefits or advantages.

Teachers who resist change are usually conservative teachers and judge that their learning process has been the best for students and the results obtained are maximal. They see that change is something that makes them difficult. They have to change all the learning administration to adjust to the latest developments. Teachers who are comfortable with their daily patterns are usually lazy to develop. Unless there is coercion from the government to develop themselves. With the threat that they cannot rise, they begin to try to change.

According to Syukur (2014), teachers who are less than 30 years old, most many claimed to be able to set the animation on the slide presentation. Teachers who are 30 years old until 45-year-old, most admitted could manage animation on presentation slides. Teachers are aged more than 45 years, most admitted not can arrange animation on slide presentation. This is due to the age factor, i.e. the teacher young people still have a passion for continue to learn and develop themselves, whereas older teachers are less have a passion for learning and resistance to change because of feeling already cannot and soon already enters retirement.

Based on the Criteria of the Respondent the Female Teacher Needs Training in Using ICT System and Teachers with Undergraduate Background Still Lack the Mastery of ICT System.

Several studies have also reported that students can be helped to learn when taught by teachers of the same gender. Dee in Cruickshank et al. (2014), although many teachers who

refuse to believe the difference between the sexes and equality is sex, but in practice they may not be together in the learning process. Female teachers tend to pay more attention to boys than girls, teachers are more tolerant of boys' mistakes, and vice versa. High appreciation is given by the teacher to students of opposite sex. But this condition is not absolute in every place. About ICT, female teachers are less able to use ICT in learning activities.

In line with Syukur (2014), male teachers are more capable install a new app. More female teachers many cannot install new applications. Male teacher are also more able to teach others to install new apps when compared with female teachers. However, female teachers pleaded more with help for installing new apps instead of male teachers. This happens because male teachers tend to be more likes things that are new and challenging, especially in the field of ICT, so they are better able to install new applications.

Most of teachers in Bekasi City, West Java, Indonesia have an undergraduate education background and their education background relates to their less computer abilities, because the Indonesian Government Regulation concerns teachers that they must have a bachelor's degree in education. With the regulation, government wants to develop the world of education with good teacher ability. As Robbins (2010) says that education is vital to improving its capabilities, higher education teachers are able to work with higher levels of difficulty and responsiveness.

CONCLUSIONS, IMPLICATIONS AND SUGGESTIONS

Conclusions

1. Teachers assessed that schools already have readiness in the utilization of ICT.

2. Lack of teachers' willingness to learn.

3. Teachers assessed that there are still ends in utilizing ICT such as infrastructure provided in schools, internet and electricity, there are still teachers who are less able to use ICT such as teachers who are old.

4. Based on the criteria of the respondent the female teacher needs training in using ICT system and teachers with undergraduate background still lack the mastery of ICT system.

Implications

1. Theoretical implications, the use of ICT in entrepreneurial learning is very useful to improve the quality of learning and this study sees that entrepreneurship subjects can optimize the use of ICT in the learning process because school already for the utilization of Information and Communication Technology (ICT) systems.

2. Practical implications (policy), The results of this study are used as input for schools based on the analysis obtained that according to the criteria of respondents, the female teacher with undergraduate background needs training in using Information and Communication Technology (ICT) systems.

Suggestions

From the conclusion above, the researcher want to give suggestions for improvement Information and Communication Technology (ICT) utilization systems in State Vocational High School, that are:

1. Schools should be able to facilitate teachers to follow Information and Communication Technology (ICT) training as required to use ICT and in order development of human resources The use of ICT must be implemented in the learning process by both teachers and students.

2. Based on the respondents criterion, then Information and Communication Technology (ICT) training is aimed for female teacher of undergraduate background with working period above 15 years.

3. Teachers supported by schools to always innovate in teaching and learning activities.

4. Schools enhance Information and Communication Technology (ICT) infrastructure and facilities for the benefit of improving the quality of learning and also the quality of teachers.

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