Junior High School Teachers’ Problems in Digitally Infected Clime: The ICT Utilization Sensibility

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Abstract. Nowadays, the digital era which is known as 4.0 era began to endemic the world of education. Teachers as an actors of education get a challenge to adapt with this development. The purpose of this study is to describe the teachers’ problems in using ICT in junior high schools in Bangkinang City. The type of research is descriptive research. The subjects of this study were all 87 teachers in SMP Negeri 1 Bangkinang City. Based on the results of the research, it can be explained that the problems faced by teachers in the use of ICT are 1) the mastery of teachers in the use of ICT is still in the low category, 2) there is no regulations for teachers to implement ICT in the teaching and learning process 3) the lack of training activities to increase the teachers’ ability to use ICT. The alternative solution that can be done is periodically implementing ICT training activities and increasing ICT facilities for teachers.

Key words: Teachers’ Problems, Digitally Infected Clime, ICT Utilization

1. Introduction

The development of information and communication requires capable people in carrying out all life activities. Regarding these conditions, Indonesia as one of the developing countries inevitably has to prepare its human resources in facing the industrial revolution era 4.0 which is characterized by its progress in the digital world. The reality that happens on the field today is very far from what is expected. One of the central issues currently developing in the world of education in Indonesia today is the low quality of Indonesia's human resources at the global level. The low level of Indonesian human resources is related to our lag in the world of education. Today indeed the world of education has experienced very rapid development along with the development of information and communication technology. Information technology initially began to develop rapidly at the beginning of the 1980s. The rapid development of technology is supported by the rapid development of processors (chips) that function as the brain of a personal computer. The development of hardware technology was also followed by advancements in the software field, although its development was far behind the development of hardware. At the beginning, the processor and software was designed for a stand-alone personal computer (stand alone PC). But in line with its development, these PCs can finally be integrated through a network physically. Therefore, nowadays we know various types of networks that integrate several PCs. Examples of networks that we often encounter are Local Area
Networks (LANs), Wide Area Networks (WANs), and the Internet. The use of ICT for learning in schools has received government attention in order to improve the quality of education. In 2001, the government issued an ICT utilization policy by issuing a presidential instruction No. 6 of 2001 [1] and its action plan in the field of education for five years which began in 2001 by emphasizing 1) the development and implementation of the curriculum, 2) the utilization of ICT as part of the curriculum and learning media in schools / colleges or education and training, 3) realizing distance education including participating and collaborating with institutions of distance education in the world, 4) facilitating the use of the internet to improve the efficiency of the learning process, currently the 2013 curriculum that has been implemented simultaneously by most schools in Indonesia has integrated ICT with learning. The learning approach in the 2013 curriculum uses the student centered learning approach. This learning approach allows students to get varied learning resources, not just teachers who are a source of learning. This is in accordance with the opinions [2] which are quoted as follows:

ICT has an impact not only on what students should learn, but it also plays a major role on how the students should learn. Along with a shift of curricula from “content-centered” to “competence-based”, the mode of curricula delivery has now shifted from “teacher centered” forms of delivery to “student-centered” forms of delivery.

Based on the policy issued by the government regarding the utilization of information and communication technology that has been stated above, its utilization in the field of education is also increasingly extended with government support through special funding to supplement all facilities for utilizing information technology in education. By utilizing ICT information becomes easier and more efficient and can optimize relations between the central and regional governments, especially at the school level, and can also be used to optimize the teaching and learning process, namely by creating a number of models in more practical learning using information technology. One form of ICT utilization in improving teaching and learning is the use of the internet in education. The use of the internet as a learning resource will provide many benefits for students and educators, because using the internet as a source of information has made the world unlimited. A person can access the internet anytime and anywhere without time limits because the internet is active 24 hours. Internet users are not only focused on students, but in this case it is also necessary for an educator to be able to improve his knowledge and enrich his literature in teaching. This is very important because through the internet an educator can obtain a variety of unlimited information. Responding to the Central Government's policy on increasing ICT use in education in the Bangkinang city government through the education office has also issued a policy to optimize its utilization in the field especially at every level of education, starting from Junior High Schools, Senior High Schools and Vocational High Schools (SMK). Related to this, SMP 1 Bangkinang is a school that has adequate ICT support facilities, as based on preliminary observations on ICT in SMP 1 Bangkinang gradually since 2002 has begun to use ICT in the teaching and learning process this is supported by the provision of various supporting facilities such as infocus, wifi network, and the provision of computer equipment, but the availability of these facilities and infrastructure is not well maintained, therefore many ICT facilities are experiencing moderate to severe damage, in addition teachers experience difficulties in using ICT facilities. Based on the phenomenon above, the researcher is interested to deeply analyze about “the constraints of utilizing information communication technology (ICT) in SMP 1 in Bangkinang City”.

2. Method
This study uses a qualitative approach where researchers try to find out and understand the reality in the field about the use of information technology in schools that are connected to the ICT center of Bangkinang City. A qualitative approach is chosen to more easily obtain information, as [3] stated: A qualitative approach is an effective method of gathering information about: (1) the meanings of individual behavior studied, (2) complex background descriptions and interactions the individuals studied, (3) exploration to find new information studied, (4) in-depth and detailed focus of a limited number, (5) description of phenomena used to compile the theory, (6) focus on interactions individuals and the processes they use and (7) rich descriptions and contexts and conclusions. In qualitative
research, the researchers get information directly from the reality of the field. "The type of research used in this study is descriptive analytical, which attempts to describe a symptom of events that occur at the present time. Data obtained from qualitative research results such as observations, interview and they are described in the form of narrative descriptions.

3. Results and Discussion

Using a computer is one of the activities that is a supporter in displaying computer-based media, but not all teachers are proficient in using computers, many of them are lack of ability in using it. This is caused by the age and high prices of computers and laptops. It is supported by the opinion of [4] "costs incurred to obtain and use the media should be truly balanced with the results achieved". Even though computers and laptops are one of the tools that must have in today's life. Furthermore, the obstacle experienced by teachers is not proficient in the use of infocus because they do not have the skills to use these facilities, this opinion is supported [5] "Teachers are reluctant to use because they do not have the technical skills to control it". In order to be clear, the problems in terms of facilities are also seen in SMP 1 Bangkinang can be seen from the following table:

| Types of facilities | Number of unit | Explanation |
|---------------------|----------------|-------------|
| Computer            | 30 unit        | 10 units were damaged |
| wifi                | 1 unit         | Only includes the teacher's and principal's room |
| infocus             | 5 unit         | 2 units were damaged |
| web                 | -              | -            |
| School email        | -              | -            |

Based on the table above, it can be stated that many facilities that have suffered damage such as computers and information are certainly obstacles to the use of technology in the teaching and learning process, with a class of 24 rooms this facility is very inadequate, besides wifi facilities which only amount to 1 unit reaching teacher and principle rooms are certainly an obstacle for teachers and students to use student-based learning, besides that webs and school e-mails that are not yet available restrict students from getting information about schools even though school facilities are very supportive in using technology-based media. Also argue "although a media is considered very appropriate for achieving learning goals, the media cannot be used if it is not available" [4]. The condition of the classroom makes it possible to use technology-based learning media because all classrooms are made of cement so the lighting is also good. The number of students influences the use of technology-based learning media, if the number of students exceeds the capacity it will disrupt the learning process due to not focusing and disturbing the concentration of other students. Not all teachers can operate computers as learning media. Based on the result of interviewed six teachers, here were two teachers who could not operate the computer at all due to the advanced age, lack of training provided and difficulty in seeing and the variety of applications provided that made it difficult for teachers to use it. That learning media can be interpreted as everything that is used to channel messages and can stimulate students' thoughts, feelings, attention, and willingness so can encourage a deliberate, purposeful and controlled learning process [6].

However, there are still teachers who use technology-based learning media as learning media by requiring the help of technicians, namely more expert colleagues to assist in displaying technology-based media. To overcome these obstacles, it is necessary to complete the steps which also function as a prerequisite for the successful implementation of ICT in learning. According to [7] in his book entitled ICT for Superior Schools, there are several requirements to be able to apply information and communication technology-based learning, namely the availability of infrastructure facilities that
support ICT-based learning. Further explained several requirements that must be met in implementing ICT-based learning are:

- Learners and Teachers must have access to digital technology and the Internet in classrooms, schools and educational institutions. This means that schools must have adequate infrastructure facilities related to information and communication technology, such as the availability of computers / laptops, computer networks, the internet, computer laboratories, multimedia equipment such as CDs, DVDs, Web cameras and others.
- It must be supported by quality, meaningful material and cultural for learners and instructors. These materials can be in the form of computer-assisted interactive learning materials, such as CDs, Interactive Learning DVDs.
- Teachers must have the knowledge and skills to use digital tools and resources to help learners achieve academic standards.
- There must be sufficient budget or funds to hold, develop and maintain the infrastructure of the Information and Communication Technology.
- And what is equally important is the willingness of all parties, in this case teachers and students to apply learning with the support of communication and information technology.

4. Conclusion

Based on the results of this research and discussions that have been conducted regarding the constraints experienced by teachers in utilizing computer-based media in SMP I Bangkiang is the lack of teacher understanding of the use of TIC in learning, expensive media costs such as computers and infocus, limited facilities owned by schools, the big classroom, there is no training in using computers at school, teachers are unable to use computers, not all teachers have a capable background in using computers. Therefore, it is advised to the school to provide training in using computers at school so that all teachers are able to use and apply to use of computer-based media.

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