The Effect of Information Technology on the Quality of Teaching Learning Process in Junior High School in Bandung

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Abstract

A focus of this research is to analyze the effect of information technology on the quality of learning process in junior high school in Bandung. This research is to analyze the impact of information technology in improving the quality of learning process consisting of a plan, organization, technical procedures, and learning process in the school. This research uses qualitative approach using descriptive analysis method. The technique of data collection is interview, observation and document analysis. The research result shows that information technology currently is a vital part of learning process however it is still needed a teacher role in collaborating all information from the class, so the school rule or policy based on information technology is formulated into school vision, mission and goal regarding the use of information technology needed in learning process in the school, so the result of study is qualified.

Keywords: information technology, management information system-based school, teaching and learning quality

1. INTRODUCTION

Education institution in globalization era needs to improve collaboration, innovation, adaptation, and technology mastering as well as intellectual asset management. The advancement of technology as well as information, communication, and technology are marked by the needs of computerized relation and communication is more increased. Therefore, it emerges ICT revolution in which needs innovation to find a standard living solution, so the need for education to face a current challenge is needed.

Learning is to teach the student using education principle or learning theory. Learning is a two-way communication process between student and teacher (Suherman, 2010). Learning is also interpreted as an effort to create a condition, which allows students to learn, so it can push or facilitate the student in learning. Six characteristics of effective learning due to Eggen and Kauchak (2001) as follows; students actively study their environment, the teacher provides material as thinking and interaction focus; students activities are fully based on study, teacher actively involves in giving directives and challenge to students in analyzing the information; learning orientation is mastering a subject content and thinking skill development; and teacher uses varied teaching techniques using challenge and teacher's teaching style.

Learning quality is a series of a learning process which must be done by educator and student to continually improve quality or level of that learning aiming the learning can be effectively and efficiently performed, so it gives added value on graduation from an education institution.

In 2018, Indonesia was ranked 116, below the Philippines, and even lower than its ranking in 2016 (UNDP, 2018). There were three main causes suspected lead this condition. Firstly, it was caused by an education policy implementation, which was not consistently using an education production function approach. Then, education implementation was bureaucratic centralism, which considered the school only as a subordinate bureaucracy. Finally, the role of school community particularly teacher, people, and stakeholders in the decision-making process were low (Ministry of Education and Culture, 2016).

Those challenges must be answered by an organization. In this term, the school must win the competition in this globalization era such as collaboration, innovation, adaptation, and technology mastering.

In this paper, the research is focused on how the effect of information communication and technology in improving the quality of learning process to prepare junior high school students in the globalization era.

2. METHOD

The method employed in this study is qualitative method with analytical descriptive approach taken from school learning activities. The research is conducted at the A-accredited Public and Private Junior High Schools located in Bandung. The technique of data collected covers field observations, interviews and literature studies. Interviews were conducted with the teachers, the students, the school principals, and the administration staffs. Moreover, the teachers who become the object of the study are those whose age is 45 years and under 30 years old. On the other hand, data analysis is done by describing the obtained data. An observation technique used by a writer is a participative observation through an observation process manifested by involving in several events in the school while the documentation study used is documentation related to this research.

3. RESULTS AND DISCUSSION

3.1 The Use of IT in the Teaching and Learning Process

Firstly is the ability to use information technology by school member. The ability to use information technology is the capacity of a person in utilizing the information technology. Based on the interviews and observations, it can be concluded that there is a gap between senior teachers (age over 45 years) and junior teachers (age less than 35 years). Senior teachers face some difficulties in using IT, such as the need of assistance from others in order to operate the system and have limited access to the teaching resources. On the other hand, junior teachers are capable in using IT (computers, smart phones and other gadgets), understand how to operate the system and interested in accessing teaching resources. Meanwhile, students have the characteristics of being able to understand and operate IT devices (computers, smart phones and other gadgets) and rely on their gadgets a lot. The capability of the principals, on the other hand, is determined by their age, educational background and knowledge of IT.

Secondly is the intensity in using information technology in the learning process. In this research, the term intensity is interpreted as how often teachers and students utilize information technology. The senior teacher prefers to use information technology using presentation media such as PowerPoint and Word. While the junior teacher often uses information technology media such as computer and cellphone. They use as presentation materials and media for looking teaching resources.

From observation and interview result, it is obtained a school, which has adequate information communication and technology infrastructure, a clear rule and policy regarding the use of information communication and technology in the school affecting the success of learning process in the class. The need for information technology for teacher, student, and parents is shown below.

The students are happier to use information technology because they can quickly see and find out information. They firstly find out information regarding a topic that they will learn. Then they cannot be separated from their gadget.

3.2 Learning Assistance Based on Information Technology

The access of information and technology systems during learning process will give faster information for the need of learning and teaching process. Besides, the policies and regulations relating to the use of information technology at schools are considered important and ought to be regulated by school principals.

Principal leadership factor becomes one of stimulants and guarantors the implementation of school management based on ICT in academic service. In two researched schools, the principal becomes an important factor in stimulating the school citizens to use ICT as part of school management. Good communication in the school can affect the quality of information and school service in academic service to reach the effective school academic service.

3.3 The Effect of IT towards the Learning Teaching Quality

The quality of good teaching and learning process according to several theories includes student direct participation, positive behavior changes, teacher-student transferring act and self-motivation support (Knowles, 1984: Salvin, 2008).

According to Siagian (2012), the effect can be divided into two such as positive and negative effect. From interview and observation result in the learning process in two schools for a year shows that students learning behavior while using information technology in the learning process increases the motivation in finding out information resources and collaborate their information result to friends and teachers. It is shown from several student opinions. "I prefer this current learning process. We can discuss anything to our teacher on one topic". "I always open my subject notebook and try to find out the next material before starting the class". " I want to immediately go into the class, so I can discuss with teacher about a new thing that I find ".

The behavior change is shown when the teacher gives material by giving fact and information delivered using information technology. The students easily understand the subject shown by the increase in study result. It is shown from a final examination test in 2016. The students reached the minimum score >70 without remedial with the average 60% in 5 subjects (Indonesia, Mathematics, Science, Social, English) and 2017, it increased to 80%.

Besides, the interview and observation result shows that the ability of teachers in utilizing information technology can improve their class management because the learning condition in the class becomes easier to control. The teachers conduct 5 stages: Engage, explore, explain, elaborate, and evaluation. Those stages can be well done and the material is delivered according to the plan as stated by several teachers.

"I easily control the class, with IT students are more passionate and the discussion becomes more meaningful". "I can innovate in teaching, so I am more confident in teaching. By that confidence, students more appreciate me".

The negative effect occurred by information technology is minimized using school policy in ICT use, teacher and parents' control as well as giving knowledge and information to the students regarding how to filter and choose their obtained information.

4. CONCLUSION

This research explores the effect of information technology on the quality of learning in the class by approaching taken by teachers and student to answer the emerged problem in the learning process. The teachers who have good competence in information technology show capable to have innovation in teaching and their class management.

Government policy in a school information technology and principal as a leader hold a vital role in the learning process. It is needed the principal who strategically and technically understands ICT problem, so the principal placement and voting will be more selective using competency standard which is high by regularity. The gained policy regarding information technology is expected capable to help teachers, students and parents in achieving study result from the good process.

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