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# The Implementation of Learning Quality Management in Increasing Graduates Quality

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**ABSTRACT**

**This research aims to describe the implementation of planning, organizing, learning execution, and evaluation of learning outcomes based on information and computer technology at SMAN 5, SMK N 10, SMAN N 11 of Tangerang Regency. The programs to improve the learning quality in these 3 high schools were conducted continuously through programs of enhancing the teachers' competency based on information and communication technology (ICT). Teachers as educators generally have interesting ideas and innovations in teaching by implementing ICT when compiling, executing, and evaluating learning outcomes. ICT-based learning seemed more dynamic, interactive, flexible, and interesting for the students. Educators searched for strategies in teaching-learning process by deploying inspiring techniques for the talented students. The students interested with the learning materials could interact with the teachers intensively, not only at the learning time. The quality management of technology-based education was a profound learning for the educators and education staff. This was because they acquired knowledge and understanding in planning, organizing, directing, and controlling the sources of education in order to effectively, efficiently, autonomously achieve the education targets and to produce quality they were proud of.**

**Keywords:** learning, information and technology based, graduate quality.

## BACKGROUND OF THE STUDY

The success of education system may be viewed from its graduates. Competences achieved are in line with the related learning curriculum. Meanwhile, the successful learning is related to the teachers and their mastery on the competences, which are the objectives of the learning. The graduates of Senior High School (SMA) are prepared to enter Higher Education, meanwhile the graduates of Vocational High School (SMK) are prepared to be work force of business and industrial sectors. This is why the measure of success of both school systems is relatively different. The number of graduates accepted in higher education institution can be made as a success indicator of school system of SMA. On the other hand, the success indicator of SMK can be viewed from the percentage of the graduates who work or who become entrepreneurs.

Quality of the graduates affects the absorption of labor force. Goetsech (2000) states that employers quickly absorb the qualified graduates with great skill and productivity to compete in various job vacancies. Thus, schools should be able to produce graduates who are able to answer challenges for the needs of future Human Resources. According to indicators to see a nation's development is its excellent human resources, which can compete in the education or in the job there are 3 components to consider together: (1) ability to fulfill customers' wants, (2) focus on the resulted products; (3) continuous adaptation over demands for changes to dynamically move in order to maintain customers' satisfaction.

Education quality becomes something that cannot be underestimated by the school management. How the customers feel satisfied, how the educational institutions are able to bring innovations that satisfy the customers. A product is said to be qualified when it can provide satisfaction to the customers. Customers appreciate every school institution and assess the products resulted in the middle of competitions with other institutions.

Vocational Schools are still facing problems related to the qualitative and quantitative equalities. Qualitative equality happens because the rapid technology development in industry causes gaps between the competence the vocational school graduates have and the competence the industries need. Meanwhile qualitative equality happens because there is inequality between the available job vacancies and the education outputs who are searching for jobs.

There were researches related to education quality that the good school standards brought up alternative aspects and indicators to determine the quality education. Education quality depended on the teachers, adequate education process of teacher candidates (Puustinen, Santti, Koski, and Tammi, 2018), induction process and continuous development of profession (Avalos, 2011). Thus, it is interesting to deeply examine on how the executing system can guarantee the quality of the graduates, strategies to achieve schools' quality in order to improve their graduates', and the impacts resulted from the internal quality guarantee system.

Government issued the quality standards of education on Law of National Education System Number 20 of 2003, which came along with other policies such as Government Regulation (PP) no. 19 of 2005, Minister Education Regulation Number 22, 23, and 24 of 2006 which are related to the management of education system in Indonesia, which were directed to execute autonomous education management. Schools are autonomously expected to implement open principles and transparent management to improve quality. Openness/transparency is shown in decision-making,

planning and executing activities, using the funds, etc. Schools are required to continuously evaluate and improve in order to increase the quality of students and the schools progressively and entirely. Continuous improvement should be a habit for the school. There is no day without improvement. Thus, there should be fixed quality system used as guide for improvement. The quality system must involve organization, responsibility, procedure, process, and source to implement quality management.

One of problems faced by Indonesia is the low quality of education, especially in the elementary and middle educations. The gaps between quality of education and qualification of required work force by the working world indicate the fundamental weakness of middle education. This shows that there should be ground and continuous connection and congruity between the education process in middle schools and continuous processes in working world.

Based on the ideas and problems faced by the middle schools currently, it is considered important to examine the management of quality improvement for the graduates of middle schools based on information and communication technology, which are viewed from satisfaction level of the stakeholders and performance of the educators.

## THEORETICAL FRAMEWORK

### Literature Review

Many nations in the world believe that education plays enormous roles to develop their countries. As a planned effort, education institutions carry three functions, these are: (1) education functions to improve students' creativities; (2) education functions to inherit values to the students; and (3) education functions to improve productive working ability of the students (Muhadjir, 1987, pp. 20-25). Education involves teaching of specific skills and also something invisible but deeper, they are providing knowledge, consideration, and wisdom. Education is the cornerstone to establish, prepare, build, and develop the ability of human resources, which really determine the success of future development. Education is also the cornerstone for growing unity of the nation with highly civilized people.

The aims of National Education as stated on Law Number 20 of 2003 about National Education System, Article 3: "National Education functions to improve the ability and to establish characters and dignified national civilization in order to educate the national life; to develop the potential of students so they can be faithful, God-fearing, noble, healthy, skilled, creative, independent

According to Stoner, management is process of planning, organizing, observing, guiding, and monitoring the efforts of organization's members and deploying other organization's sources in order to achieve the set targets. Meanwhile, in school context, school management is actually the application of management science in schools. When we apply the term 'management' in government, it becomes government management; in education, it becomes the education management, and so on.

Mulyasa (2011), who cites the Department of National Education, states that quality can be defined as an entire picture and characteristic of goods and services which show its ability to satisfy the expected or implied needs. In the context of education, the definition of quality includes input, process, and output of education. In the world of education, quality does not happen spontaneously.

The desired quality should be systematically planned before. Quality is a prime part in an institution's strategy and to achieve it, it is compulsory to apply the systematic approach by using well-established planning. Strategy planning is one of parts to improve quality.

Vincent Gasperz (2005) explains about Deming cycle to associate the product results and consumers' needs, and to focus on the resources of all departments (research, design, production, and marketing) in working together to meet the needs. The usage of technology in education is something common. It helps to provide computers and network that connect students' houses with classrooms, teachers, and school administrators. All of them are connected to internet, and the teachers are trained to use their personal computer.

The usage of Information and Communication Technology in education is the technology used to process the data. This includes acquiring, compiling, saving, and manipulating data in various ways to produce qualified information. Qualified information is relevant, accurate, and punctual information that is used for education and government purposes. Thus they can be strategic information in decision-making.

## METHODOLOGY

This research applied qualitative approach. The research method focused on general principles of ground embodiment of every phenomenon. These phenomena were found in activities of increasing learning quality at schools. This research was adhered to descriptive analysis on problems faced when the research was conducted. Then, the research results were processed and analyzed in order to draw conclusions. Descriptive analysis was applied for this research because researcher wanted to deeply understand the policies issued by government in education sector in order to manifest the aims of national education and the mandate stated on Law no. 20 of 2003 about National Education System.

This research applied case study. The studied objects were three high schools, which consists of two senior high schools and one vocational high school. The case study researched here was the implementation of information and technology communication in learning quality management at SMAN 5 Tangerang Regency, SMKN 10 Tangerang Regency, and SMAN 11 Tangerang Regency.

Qualitative method was applied by using phenomenology approach. In this approach, observations over the participants were conducted to find out phenomenon happening when the participants executed the learning. The observations were conducted by collecting data on information and communication technology in planning, executing, and evaluating the learning. Then, the results of observation were processed to find out the meaning of what the participants have expressed. Besides phenomenology, ethnography approach was also applied. Ethnography approach studies social or cultural group at schools more deeply. It obliges the researcher to directly contact and to daily join the researched objects.

## FINDINGS

### SMAN 5 Kosambi – Tangerang Regency

Principal and Vice Principal in Curriculum created a schedule to execute and to observe the learning process. The observed aspects included learning administration, learning execution, and assessment. The results of the observation showed that the teachers at SMAN 5 fulfilled the learning

administration, and become competent in delivering the subject material. The results of observation were followed up by improving the teacher professionalism through MGMP activities an in house-training (IHT)

Planning, execution, and evaluation of learning have used or applied information and communication technology. This can be seen from the learning devices, taught materials, and assessment on learning results. All of them were well-saved in the computer.

**SMKN 10 Teluknaga – Tangerang Regency**

Principals and teachers prepared the learning devices. They included assessment administration on teachers, learning administration, devices to conduct the learning, and instruments for assessing students' learning outputs. The principal observed the processes from how the teachers prepared materials, delivered material, managed the class, to assess the learning outputs. The principal built a good relationship with the teachers, so the teachers did not feel overwhelmed to prepare all the learning devices.

The implementation of planning, organizing, learning execution, and evaluation of learning outputs were based on information technology. Computer could run well without many constraints. In the classrooms, the researchers could see the sky-like decoration since this is a vocational flight school. The school was dominated by male students in air force-like-uniforms, with spry standing position, ready to salute up. The military atmosphere can be strongly felt in the classroom. A female student commanded out loud welcoming us. The projector had been on. This meant that the device had been ready to use before that class.

Class-Based Assessment is a process of collecting, reporting, and using information of students' learning results by implementing the continuous, authentic, accurate, and consistent assessment principles under the authority of teachers in the classroom. Class-Based Assessment identifies the competence achievement and learning results brought up by clear statement about the achieved standards using the progress maps of both student learning and the reports.

**SMAN 11 Sepatan – Tangerang Regency**

The principal focused to increase the learning routinely assessed the teachers' competences, especially the ones related to the management of ICT-based learning.

Annual Program is a general program for each course in every class. It consists of the outlines to be achieved in a year and to be developed by the related teachers. This program is necessary to be prepared and to be developed by the teachers before the academic year started. This is because this program is the guideline from the development of the next programs, which are semester, weekly, and daily programs; syllabus-making; and assessment system.

The students responsively and quickly took out their book, which they had brought from home for that day's learning. The students, who did not have laptops, joined the others in the same group to find out and to analyze the materials delivered by the teacher of Civic Education. The teacher of Civic Education looked assertive but exciting when teaching because the students were happy with his way of teaching. This was the type of teaching the students wanted, so the materials given did not sound boring.

Based on the Law Number 20 of 2003, National Education System regulates and provides full authority for every school to autonomize the school. Article 51 Paragraph 1 states "The management of education units of early child education, elementary education, and middle education were conducted based on the minimum service standards under the principals of school-based management" and Paragraph 2 "The management of higher education unit is conducted based on the principles of autonomy, accountability, quality warranty, and transparent evaluation". Autonomous education basically can be understood as handing some of authorities, rights, and policies to the schools, so they are able to improve the education quality, which is in line with the respective regional characteristics. In autonomous education, the authorities holding education are the responsibilities of regional government.

According to Denzim (in Moleong, 2004) there are some types of data triangulations. They are by utilizing the usage of source, method, investigator, and theory. Of the four triangulation techniques above, the researchers applied source (data) triangulation technique and method triangulation method to validate the data related to the problems studied by the researchers.

## DISCUSSION

The application of Information and Communication Technology has shifted the views about learning at school. The implementation of Information and Communication Technology in learning enables more interactive, simulative, and interesting learning activities. Thus, the teachers are demanded to master and to apply Information and Communication Technology in learning. The change from conventional learning paradigm to ICT-based learning can speed up the quality education. Collaboration between teachers and lecturers is essential to improve the quality of curriculum of Information and Communication Technology.

The use of information and communication technology as the base of learning improvement in the classroom; both setting the class with technology devices (practices) and the class set with technology devices which enable students to lear what they want to learn within the assistance of the technology devices. Learners and teachers must have access into digital technology and internet in the classrooms, schools, and educational institutions. This means the school should possess adequate infrastructures and facilities related to information and communication technology such as computer/laptop, computer network, internet, computer lab, and multimedia devices such as CD, DVD, Webcam, etc. Qualified and meaningful material and cultural support for the learners should be provided. These materials can be interactive learning material within computer-use such as CD, DVD of Interactive learning. Teachers should possess knowledge and skill in utilizing the devices and digital sources to help the learners, so the academic standard can be achieved.

### Planning the ICT-Based Learning Program

According Charles E. Silberman, education is not same with learning because the learning only points out the efforts to develop human intellectuality. On the other hand, education tries to develop all aspects of human's personality and ability, either from cognitive, affective, or psychomotor aspect. Education has much broader meaning than learning, but learning is a powerful instrument to hold education. Planning is thought before executing a duty. So, planning the learning means applying general learning principles in executing learning assignment in a teacher-student interaction, both inside the classroom and outside the classroom. Thanks for planning, a teacher can deliver the course well since she or he can assertively, steadily, and flexibly face the class situations.

Creating the good planning enables teachers to grow well. Someone can be a good teacher because she or he continuously grows and learns, even though the aspect of talent also affects it (Sagala, 2005, p. 5). On the other hand, Ross (1995) states that quality is appropriate and reliable value, thus quality can be depicted as chain actions. If the quality improves, the cost will decrease and productivity improves, thus it stimulates more and more orders, the bigger market's needs, and it stays for a long time. Meanwhile Crosby (in Ross, 1995) states that quality is: 1) conformance to requirements, not as 'goodness' or 'elegance; 2) The system for causing quality is prevention, not appraisal; 3) The performance standard must be Zero Defects, not "that's close enough"; 4) he measurement of quality is the Price of Nonconformance, not indices. In Indonesia's National Education System, the quality of education is the compatibility with the contents of National Education Standards (Gintings, 2009).

From these two opinions, it can be said that quality is the compatible values of products between what is required by the management and what is needed by the society. It is expected that the products can satisfy and fulfill the customer' desire: no defects, long lasting, and precious. Learning can be said as program because qualified learning needs good planning. Besides, learning involves many components such as teachers, students, facilities and infrastructures. All of them are related between one learning with other learnings, and finally, in an organization or institution, they are aimed to increase the competence of the graduates (Nuraini, 2012). Of all findings on planning the ICT-based learning program, it can be said that learning planning is a learning scenario that can be made as a reference, a pattern of implementation for learning program for the teachers, and systematic and effective learning experience for the students.

**Organizing ICT-Based Learning Program**

Organizing is the entire grouping people, tools, assignments, authorities, and responsibilities in such way so it will create an organization driven as a set of activities (Siagian, 1983). Organizing the learning has important role in learning activities, especially in compiling the schemes of learning steps (processes of learning activities). Developing organization through vision and mission is not limited by establishing strategies, but by how we combine a skill to manage the strategies for organizing the integrated learning. Strategy to organize the learning is called structural strategy by Reigeluth, Bunderson, and Merill (1977). This refers to the ways of ordering (sequencing) and synthesizing the related facts, concepts, procedures, or principles. Sequencing refers to make the order in presenting the content of the course. And synthesizing refers to the efforts to show the inter-relationship between the courses to the students.

Organizing the learning, specifically, is a crucial phase in learning designs. Synthesizing will make the topics of a course more meaningful for the students (Ausubel, 1968). This is done by showing how the topics are related to entire course content. Sequencing or arranging the order is really required for synthesis making. Strategies of macro organizing are meant to arrange the entire content of the course, while strategies of micro organizing are meant to arrange the presentation of a concept, principle, or procedure. Organizing the learning is an educational aspect made as main focus by the teacher candidates, new teachers, and even the experience teachers who want the students can learn optimally. This means that teachers are able to deliver the course and the students can understand it well.

## Executing ICT-Based Learning Program

In National Education Standard (SNP) Article 28, it is stated that educator as the learning agent should possess academic and competence qualification, be physically and mentally healthy, and possess the ability to manifest the purposes of national education. In these days, teaching in not only understood as the activities conducted by teachers in front of the class, but it is also understood as the activities done after teaching process, such as evaluating. Thus, teaching is a process started with preparation, then followed by execution, and ended by evaluation. Besides, definition of teaching is not just embodied by process of teaching activities, but it also embodied by the learning activities.

Learning can be said qualified if the coordination and integration of school inputs (teachers, students, curriculum, funds, devices, etc.) is conducted harmoniously. Thus learning can create fun (enjoyable) learning, encourage motivations and interest to learn, and truly empower the learners. The word 'empower' contains the meaning that students do not only master the lessons taught by the teachers, but the lessons also contain the students' conscience to live up and to practice the lessons in their daily lives. And most importantly, the students are able to learn on how to learn (able to develop themselves).

## Evaluating the Results of ICT-based Learning

Basically, evaluating is the systematic and continuous process to determine the quality or value of something based on certain considerations and criteria in order to make decisions. In this research, evaluating is understood as a process to determine how far the aims of education in learning are achieved. Evaluating the learning is a continuous assessment over the running learning program set before. Meanwhile, evaluating program is in line with what Sukardi (2014) states 'evaluation is closely related to education activities, including curriculum and human resources. Without evaluating the learning program, we cannot find out how successful the learning program affects the qualified learning and how the learning program brings better changes.

Thus, generally the evaluating program aimed to find out how successful the learning program affects the quality of education. Discussing the evaluation means studying the process of how quality of something is considered. From the above description, it can be said the evaluating program is a planned process, which systematically can be used to find out the purpose of data or information that can be used as consideration for the decision makers in determining the alternative policies.

# CONCLUSION

The implementation of planning, organizing, executing the learning, and evaluating the results of ICT-based learning at SMAN 5, SMKN 10, and SMKN 11 in Tangerang Regency went well dan they could improve the quality of learning management.

Program to increase learning quality had been continuously conducted through programs in improving the teachers' competence based on information and communication technology (ICT). Teachers, as the educators, generally possessed ideas and innovations in attractively teaching and implementing ICT to compile, to execute the learning, and to assess the learning results. ICT-based learning seemed more dynamic, more interactive, more flexible, and more interesting for the students. The educators searched for the strategies in teaching and learning process by applying inspiring techniques for the students. The students interested with the learning material can

interact with the educators intensively, not just at the time of learning. The management of ICT-based education quality is meaningful learning for the educators and educational administration staff because they could gain knowledge and understanding on planning, organizing, directing, and controlling the educational resources in order to achieve effective, efficient, autonomous education and to produce quality we could be proud of.

It is really recommended for schools to try empowering teachers, so they can master the ICT to deal with problems faced in implementing ICT-based learning. Thus, they can develop ICT-based learning optimally. For the students, it is really suggested to have their own laptop or PC at home. Still, socialization of ICT roles in the school management for the whole school people is necessary. Then, the roles of ICT in school management can be effectively implemented at all activities of services for the school people.

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