**Student Satisfaction as Mediation Relationship Between Total Quality Management Practices and Performance of Management Study Program**

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**ABSTRACT**: Indonesian students who learn in Malaysia and Singapore were more than the number of Malaysian students who learn Indonesia (Marhum, 2013). This happens because assumption that higher education quality in Indonesia has decreased due to lower college performance. Therefore, this study aimed to describe a theoretical relationship of satisfaction as mediation between the practices of Total Quality Management (TQM) and performance of management study program. It can be described that (1) Higher TQM practices will increase management study program performance. (2) Student satisfaction does not mediate relationship between TQM practices on performance. (3) Control of process and priority development or precedence was carried in implementation of TQM practices. (4) Indicators of learning process needs to become a priority or precedence to improve student satisfaction in management study program. (5) On time graduation was most important indicator in measuring performance variables of management courses. (6) TQM practice can be implemented in management study program.

**KEYWORDS**: TQM, college, Performance, Satisfaction

### I. INTRODUCTION

Education world has been growing rapidly in countries such as United States, European Union, Canada, Japan, South Korea, Singapore, Malaysia, Australia and New Zealand. This reality was indicated by many results of scientific research in field of science and technology that have been published in various media, websites, internet and reputed scientific journals and accredited internationally. Indonesia has become a benchmark for students from neighbor countries such as Malaysia and Singapore who pursue higher education in Indonesia. Many students from neighbor country study in several major universities in Indonesia. Unfortunately, these the opposite was happened today. Indonesian students who learn in Malaysia and Singapore were more than the number of Malaysian students who learn Indonesia (Marhum, 2013). This happens because a presumption that higher education quality in Indonesia has decreased due to lower college performance. Quality concept was now widely used in development of quality to improve performance, including Total Quality Improvement (TQI) or continuous Measurable Improvement (CMI) or Total Quality Management (TQM). During 1980s and 1990s, TQM began to affect business systems in many countries and referred as "revolution" in management. TQM was often referred to as a "social movement" (Hackman and Wageman, 1995 in Terziowski and Samson, 2000). Total Quality Management (TQM) was a way to continuously improve performance at every level of operation or process of each functional area in organization using resources and capital available (Gaspersz, 2011).

Krajewski et al. (2010) stated that TQM was a philosophy that emphasizes on three principles to achieve high level of quality and performance. These principles were related to customer satisfaction, employee involvement, and continuous improvement in performance. TQM requires monitoring and control over the process continuously, performance and quality, customer placement as a major concern, as well as a sense of awareness, commitment and involvement of management, all employees, customers and suppliers (Waks and Moti, 1999). TQM was a management process that was implemented by organization through long-term planning, with consistent long-term plan to bring organization to achieve its vision. TQM in higher education implies an increase in quality of learning, learning process, resource management process, and linkage services to college students with world of work (Tulsi, 2001). TQM was a management system to use quality as a business strategy that involving all members of organization to achieve the organization's educational performance.
TQM definitions above were fundamental discourse for further research. Total Quality Management (TQM) in higher education was created in interaction between faculty and students in classroom, or in compliance with accreditation standards or other performance improvement assessment. Structured system can create a learning organization. It was time for higher education organizations to apply TQM principles to improve performance of higher education. Therefore, this study aimed to describe a theoretical relationship of satisfaction as mediation between the practices of Total Quality Management (TQM) with performance of management study program.

II. THEORETICAL STUDY

Concept of Quality: Edward Deming considers that management quality was needed in area of organizational activity. It was not technical tasks of leadership or quality assurance group. Deming identified quality as a management responsibility, observing that leader must create systems and processes to produce quality. High quality products combine good planning with effective production methods to satisfy the conditions of organization to ensure quality. Deming (1986) emphasizes that top management has a higher responsibility to improve quality than senior or middle management level. Deming advocated using the never-ending cycle, product design, manufacturing, testing, and sales followed by market survey and then redesign and so on. Deming (1986) says that better quality can lead to higher productivity, which in turn can build a long-term competitive strength. Deming refer it as the Chain Reaction Theory. This theory says that quality improvements can reduce costs because it may decrease repeated job, mistake, delay, and better quality. Lower price Makes Company can reach a larger market, dividing field of business, and providing more and more employment opportunities.

![Figure 1. Chain Reaction Model](Source: Gomes, 2011)

Higher competition in globalization era will open company awareness to improve its performance with quality improvement priorities. Generally, quality was determined by brand and price, where price becomes the main consideration the factors that determine product purchase. Absolute notions of ‘high quality’ were only a little overlap with TQM concept. Absolute meaning only in TQM discussion. Therefore, when quality was directed to technical nature of things, TQM still feel the aura of luxury and status. Quality has class. Language usage that smooth and sub minimal can beneficial for public relations purposes, and can it help an educational institution to promote about quality. It also suggests that efforts to achieve high quality were to show highest standards. Quality can also be used as a relative concept. This was used in TQM. Relative definition about quality does not look as an attribute of a product or service, but something that related to product or service. Quality can exist when an existing service meets specifications. Quality was a way to determine whether the final product was suitable with standard or not. High products or services were not relatively expensive and exclusive. Products or services can be beautiful, but not necessarily always the case. Product or service was not to be special, but it must be original, natural and familiar. Portable projector, ballpoint pens, and school catering services can have high quality if it meets the standards. Therefore, quality was about to do what he should do, and do what customer wants. In other words, it should suitable with purpose.
TQM learning has relevance with education. TQM should give emphasis on quality of learning. It was not happened if TQM does not provide a substantial contribution to education quality. Educational institutions were required to make better learning process, as it was important to focus on main activities of learning process. Educational institutions use integrated quality procedures to capture serious issues about the learning style needs to create individualization and differentiation strategies in learning. Students were the main customers in educational process. If the model does not meet the learning needs of students, then the institution cannot claim that he has achieved total quality.

Educational institutions have an obligation to make a student aware of variety of learning methods were given to them. Educational institutions should give students opportunity to follow the learning example with different model variations. Institutions should understand that some students also like the combination of multiple learning styles and institutions should try to become flexible enough to provide the option. Miller et al. (1989) stated that in their book, Improving Quality in Further Education. Their argument was applicable to various forms of education institutions. It confirmed that institution should provide some models of teaching and learning to students to choose opportunity to achieve maximum success.

Many things must be done to apply TQM principles in classroom. Some elements can also involve active pattern. An initial step can be started with cooperation of students and teachers to set their mission. Negotiations can be done by both parties to achieve the mission, learning and teaching styles as well as resources required. Each student can discuss their action plan to get the motivation and direction. Negotiation process may require the establishment of a forum and an opportunity to give feedback to students so that they can manage their own learning. Parents or sponsors can become a good representation for the forum. Detailed monitoring should be done by teachers, and students to ensure that everything was running well.

Creating continue feedback circuit was an important element in any quality assurance process. Evaluation should also become an ongoing process and should not be left behind until the end of study program. Evaluation process results should be discussed with students, with goal to complete the evaluation results. Attitudes involve all elements will be very helpful in building analytical skills of students. Educational institutions also need to use the outcome to establish validity of formal monitoring programs. Educational institutions must prepare to undertake remedial measures on student’s performance that have not been in line with expectations and desires. It was not an easy thing. This could become an emotional experience and can bring unexpected changes. It should be emphasized that improvement measures was aimed to provide motivation and practical experience to students about the TQM usage that can adapt to any situation. TQM was a philosophy of continuous improvement, which can provide a set of practical tools for any educational institution to meet the needs, desires, and expectations of its customers, now and in future (Sallis, 2010).

Measurement concept of TQM practices was still diverse and there was no consensus of measurement concepts. Dilber, et al. (2005) conducted a study on health industry in Turkey using TQM that measured by 4 indicators: Role of Top Management, Process Management, Data Reporting, and Employee Relations. Bayraktar, et al. (2008) conducted a study on higher education in Turkey uses 10 indicators to measure TQM namely Leadership, Measurement and Evaluation, Process control and improvement, program design, Quality system improvement, Employee involvement, recognition and reward, Education and Training, Student Focus, Other stakeholders’ focus. Sayeda, et al. (2010) conducted a study in technical education institutes in India using TQM measurement by 5 indicators: Factors related to top management, Factors related to infrastructure, Quality management system, Factors related to stakeholders, Factors Related to Processes. Khan (2011) conducted a study on 250 managers who work in service industry in Pakistan using six indicators to measure TQM namely Leadership, Customer Focus, Process Management, Supplier Relationship, Human resources Management, Continuous improvement.

Customer satisfaction: Focus of quality was customer satisfaction. It necessary to understand components of customer satisfaction. Basically, customer satisfaction can be defined as a condition in which the customer's needs can be met through the products and services consumed. Therefore, if customer satisfaction was expressed in a ratio, then the customer satisfaction equation can be formulated as follows: \( Z = \frac{X}{Y} \); where \( Z \) was customer satisfaction, \( X \) was quality perceived by customer, and \( Y \) was the customer's needs. If customers feel that quality of products and services exceeds demand, then customer satisfaction will be worth at least a high or greater than one (\( Z > 1 \)). While on other hand, if customers feel that quality of products and services was lower or smaller than their needs, then customer satisfaction will be lower or worth less than 1 (\( Z < 1 \)) (Gaspersz, 2011).
Gaspersz (2011) explained that experts of marketing and Total Quality Management (TQM) states that the main objective was to maximize total satisfaction of customer that based on customer value. Business managers and industry need to give value to customer, customer either actual as well as potential customers, who were consumers of goods and services that have been sold to them. Conceptually, customer value depending on quality of goods and services, quality of service, good relations between producers and consumers, and image of product. Based on customer value perspective, company needs to pay attention to Customer Delivered Value, with following equation:

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\text{Customer Delivered Value} = \text{Total Customer Value} - \text{Total Customer Cost}
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Where Total Customer Value was depend on value of product, service, personal, and Image. Total Customer Cost was depend on monetary costs (money that must be paid to obtain product), time costs, energy costs, psychological costs, and opportunity costs. Manager of company should understand that products sold was considered valuable by consumers if they have accumulated the values of products sold, services provided, buyer's consideration, and image to purchase product. Accumulation of these values must greater than consideration accumulated costs that incurred by customer. Student satisfaction was the students' perceptions about implementation of activities or academic programs with high quality in study program (BAN PT 2008). Study program implementation was a reflection of management system to input, process, output, impact, feedback, and feedback to ensure quality of academic administration to produce high-quality graduates, and has competence in accordance with needs and demands of stakeholders. Tulsi (2001) describes TQM in higher education by implying an increase in quality of learning, learning process inputs, process resource management and structure, student support services and linkages with world of work organization and other. Lagrosen Further, et al. (2004) describes that educational emphasis on student satisfaction and continuous improvement. Venkatraman (2007) describes TQM in higher education that interpreted as an approach to focus on core activities of university, while improving overall quality of process to achieve sustainable results of institutional and stakeholder satisfaction.

**Performance**: Performance was a person's work appearance both in terms of quantity and quality in an organization. Performances can individual or group work. Work appearance was not limited to personnel and structural functional positions, but also whole range of personnel within organization. Performance description involves three essential components, namely the purpose, size, and assessment. Determination of each organizational unit purpose was a strategy to improve performance. This objective will provide direction and influence work behavior that expected from any organization personnel. This provision alone was not enough, because it takes a measure on whether personnel have achieved the expected performance. Size of quantitative and qualitative performance standards for each task and office personnel play an important role. The third aspect of work definition was the assessment/measurement. Regular performance measurement was associated with achievement of performance goals of each person. This action will make the personnel always oriented towards goals and work accordingly and behave consistent with objectives. Therefore, notion of performance was consistent with a description of purpose, operational measures, and regular measurement has an important role in maintaining and increasing motivation of personnel.

A company's performance measurement system was a system with aims to help managers to assess the achievement of a strategy through financial or non-financial measurement tools. Performance measurement system can be used as a tool for performance measurement because performance measurement can be strengthened by establishing a system of reward and punishment. Performance measurement was intended to fulfill three things. First, measurement of performance was intended to help to improve the performance of companies. These performance measures will be used to help companies to focus on goals and objectives of program unit. This in turn can improve the efficiency and effectiveness of a company so that work program goals can be achieved. Secondly, company’s performance size was used for resource allocation and decision-making. Third, company performance measurement was intended to bring accountability to superiors and improve institutional communication. Generally, purpose of performance measurement is:

- Establishing targets that can be accepted by those whose performance will be measured, and carried out in an atmosphere that was characterized by open communication between superiors and subordinates and seek unity in action.
- Using reliable achievement measurement, transparent and objective, comparing actual accomplishments with plan, and provide feedback to person being assessed.
- Achievement was less than optimal after going through the previous steps, need arises to specify and agree with personal development plan that can be assessed based on assessment of training needs and personal development.
• Making provisions for the allocation of both extrinsic rewards (e.g. an opportunity to enhance one's skills) that follows the assessment process.
• Promising the results desired in form of employee fulfillment, full utilization of individuals capacity, corporate culture change, and achievement of organizational objectives in conditions where there was harmony between the individual and organizational objectives.
• Recognizing that achievement of management was at heart of general management process.

Performance was a multidimensional construct that very complex, with many differences meaning. It depend on who was evaluating, how were evaluated, and what aspects were evaluated (Sturman, 2001). Jones (2004) states that a company must change to develop its effectiveness. Changes were intended to find or develop a way to use existing resources and capabilities to enhance the ability to create value and improve performance. Performance here was not a performance in narrow sense that confined to Financial profits alone, because if the orientation of company only emphasizes on profit, company will behave myopic (night blindness) and always looked at things only in immediate short-term calculations (Supratikno et al., 2006). Performance was work ability that shown by work result. In English it was called performance, which means performance or achievements. Performance assessment can be done by selecting from a variety of assessment methods that have been used widely. Performance assessment method most widely used was to use financial metrics. This means that management aims to meet the wishes of shareholders only, and do not pay attention to broader performance measures or measures of performance that takes into account the interests of stakeholders.

Performance was one of dependent variables were most often used in organization research. Performance was a Multi-factor concept that can only be confirmed by organization itself that working with various levels of system within. When organization performance indicators has standardized, it will more difficult to determine indicators of organizational performance variables, especially on indicators of system performance and the organization's human resources performance (Dewhurst, 2003). Measurement of total quality management on performance according should consider various aspects contained within business process (Dewhurst, 2003). Various studies have been carried out to measure the relationship between total quality management and performance by considering aspects of business processes. Government policy to improve quality of educational institutions was done in various ways, namely by improving quality of academic staff continuously, arrangement of courses, increase in proportion of students in science and engineering, development of a flexible curriculum and controlled, improving quality of research and community service, facilities/infrastructure and support facilities, increased cooperation with local governments, businesses, industry and institutions at home and abroad. In connection with quality improvement efforts, performance has set has a set indicators which include the courses according to needs of national development, improving quality of lecturer, perfect curriculum according to needs of development, quality improvement research, and increase the research results usage for public and businesses. Quality improvement was also done through optimization of learning process and development of educational methodology done by strengthening principle of integrated management.

This includes Academic Accreditation Program (AA) and TQM in learning process. Improving quality of teachers and academic support was done through expanding continuing education opportunities, workshops, and so forth. Quality improvement and research professionals and community service through upgrading and selection. Increasing amount and quality of research, and community service was done through a competitive tiered system, monitoring, seminars, and publications. Efforts were focused on continuous quality improvement programs such as teacher qualification, evaluation and accreditation arrangements. Improving quality of planning and budgeting, in addition to standard improvements such as self-evaluation, also includes the evaluation of learning outcomes, as well as to disseminate the importance of self-evaluation in order to improve quality of performance of educational institutions (Rival and Pure, 2010). In attempt to improve quality improvement, program evaluation carried out has included an evaluation of educational institutions goals. Development of self-evaluation and planning documents at every educational institution will indicate that budget allocation was done through a mechanism that block grant quality become reference. It was not been able to conclude how the achievement of quality of an educational institution or system of quality educational institutions as a whole. This was presumably partly because of practices to improve quality of performance of educational institutions that exist today have not been developed to optimum. Other main reason of non optimal of performance quality improvement was educational institutions did not developed principles of performance quality improvement of other educational institutions, namely the assessment of achievement of quality was not performed. System and specific criteria has not developed to perform the evaluation.
Until today there has been no report pertaining to quality evaluation reports except from National Accreditation Board (BAN) regarding results of accreditation. Although it has been made target and indicators of success, but it was still not adequate to be used in quality evaluation. Performance indicators still need to be developed that can be used as a guide for any educational institution in conducting a self-evaluation or write an annual report. Furthermore, annual report made by university. Although already demonstrated its commitment to highest quality in all things, but does not elaborate or explaining procedure (practice) that has been taken by university to conduct an evaluation or assessment of quality. Annual report contains only the achievement of target.

**Study Program Performance:** Performance measurement of study program was performance assessment based on fulfillment of accreditation standard demand. Accreditation standards were benchmarks that must be met by institution of undergraduate study program. An accreditation standard consists of several parameters (value elements) that can be used as a basis to measure and establishing quality and feasibility of undergraduate study program to conduct its programs. Undergraduate study program accreditation documents that can be processed must met the initial requirements (eligibility) that characterized by presence of an operating license for campus from the competent authority. Campus accreditation standard include a commitment to provide excellent service. Education effectiveness consist of seven standards of National Accreditation Board (2008), namely: (1) Vision, Mission, Goals and Objectives, Strategies and Achievement; (2) Officials management, Leadership, Management Systems, and quality assurance; (3) Students and Graduates; (4) human resources; (5) Curriculum, Learning, and Academic Atmosphere; (6) Financing, Facilities and Infrastructure, and Information Systems; (7) Research, Service/Community Service, and Cooperation.

**III. DISCUSSION**

**The relationship between TQM practices, Student Satisfaction and Performance Studies Program Management:** Total Quality Management (TQM) was a new paradigm to run business in effort to maximize organizational performance through a focus on customer satisfaction, involvement of all employees, and continuous improvement of products quality, services, people, processes and organizational environment (Fandy and Diana, 2001). TQM success implementation in framework of continuous quality improvement will increase company profitability and in turn will ensure company sustainability. Hackman and Wageman (1995) recommend that if TQM was implemented correctly, it can enable the organization to cope with dynamically the changing environment and deliver continuous improvement. TQM put quality responsibilities to all employees, proactive, and use attached surveillance system, damage (if any) was discovered first, so that products meet customer expectations and free from defects. To achieve operating efficiencies, company needs to implement Total Quality Management; TQM has practiced with a positive impact on business performance (Samson and Terziowski, 1999).

TQM can contribute effectively to achieve organizational effectiveness. TQM can minimize the total cost of procurement through a single (sole sourcing, perhaps the question was to minimize the number of suppliers). If only concentrate on few suppliers and provide the necessary training and technology as well as to monitor their performance, variability of supplier's products can be reduced, product quality can be improved, costs incurred by delays and rework can be minimized (Deming 1986). TQM practices could be implemented to produce better performance. Furthermore, Deming (1986) stated that quality improvement could eliminate waste, costs reduction and improvement of financial performance. Procter and Gamble in Blucher et al. (2000) stated that core principles of TQM were (a) focuses on satisfying customer, (b) strive to make continuous improvements, and (c) involve the entire workforce or employees. Opinion above shows that there was harmony between the main principles of TQM to business performance. Continuous improvement on production process will improve quality. Efficiency improvements will have an impact on cost reduction; as well as shorten the process cycle time will ultimately accelerate the delivery of product. Customer focus will dynamite corporate activity to present the best efforts that were likely to satisfy its customers. Efforts to achieve better quality, more cost-efficient, shorter production processes cycles and increasingly satisfied customers was the responsibility of all workers or employees.

**Research Model Development:** Based on empirical studies, theories and phenomena that exist in Management Studies Program, this study describes the relationship between variables, namely the practice of TQM as exogenous and studies the performance of program as an endogenous variable. Student satisfaction as a mediating variable (intervening variable). Based on description of relationship between these variables, conceptual framework of research can be described as in Figure 2.
Figure 2. Research Framework Concept

Sources:
1. Choi dan Eboch (1998); Dilber et al. (2005); Maiga dan Jacobs (2005); Sila (2006); Lakhal et al. (2006); Nair (2006); Terziovski (2006); Han et al. (2007); Cai (2008); Projogo dan Hong (2008); Kumar et al. (2009); Sayeda et al. (2010); Khan (2011); Wang et al. (2011); Sajjad dan Amjad (2011)
2. Forza dan Filippini (1998); Choi dan Eboch (1998); Sila (2006); Han et al. (2007); Mehra dan Ranganathan (2008); Sit et al. (2009); Kumar et al. (2009)
3. Maiga dan Jacobs (2005); Han et al. (2007); Chi dan Gursoy (2009)

IV. CONCLUSIONS AND RECOMMENDATIONS

Conclusion
Based on discussion and research findings, conclusions of this study were follows:
[1] Higher TQM practices will increase management study program performance.
[3] Control of process and priority development or precedence was carried in implementation of TQM practices.
[4] Indicators of learning process needs to become a priority or precedence to improve student satisfaction in management study program.
[5] On time graduation was most important indicator in measuring performance variables of management courses.
[6] TQM practice can be implemented in management study program

Suggestions for Future Research
Researchers can further develop a research model by putting variable student satisfaction as an independent variable or the dependent variable, as well as adding other variables such as quality of organizational culture, organizational competitiveness, facility ownership, ownership of resources or develop the performance measurement models such as the courses are: amount of research and dedication, study program spending, roared lectures and laboratories, library services. In addition, scope of study and respondents can be seen more widely not only in course of management but other courses throughout Indonesia.

REFERENCES
Student Satisfaction as Mediation Relationship...
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