



The effectiveness of the administration of educational quality assurance system for performance excellence in Mahidol University

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Abstract

The objectives of this study were: 1. to study the effectiveness of the administration of educational quality assurance system (EQAS) for performance excellence in Mahidol University, and 2. to find some guidelines of the administration of EQAS for performance excellence in Mahidol University by using mixed method research. The quantitative data survey from 131 employees consisting of Mahidol executives, lecturers and QA staff were analyzed by mean, standard deviation and priority needs index. The qualitative data, a focus group discussion with 12 representatives of executives from faculties and departments, were analyzed by content analysis. Research findings revealed that the effectiveness of the administration of EQAS for performance excellence in Mahidol University was “moderate”. The top three situations which needed to be improved were as follows; 1. Knowledge management and information technology. 2. Listening to customers to improve results. 3.1. Strategic management and implementation and 3.2. Human resources management. In conclusion, some guidelines for administration of EQAS for performance excellence in Mahidol University were in priorities as follows; 1) Surveying the need for information technology development and identifying the best practices for exchanging learning and implementation across the organization. 2) Needs analysis of all stakeholders linked to market demand and policy networks. 3.1) “Working as a mobile” by a quality assurance unit. 3.2) Management team of each faculty and department should communicate clearly with all personnel for what needs to be done in the same direction.

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Introduction

In the past two decades, there have been rapid changes in university education and various other fields in most societies due to the higher level of education. All those interested in higher education issues agree that a clear mechanism must be found for the process of reforming higher education institutions (Obeidallah, 2017). Accreditation and quality assurance create evidence of the effectiveness of Higher education

administration in educational reform and influence public policy making (Klemencic, 2017). Most importantly, under the new public management paradigm, comparison of educational outcomes, rankings, and a higher degree of university autonomy and accountability have become an integral part of university administrators’ day-to-day work (Broucker & Witt, 2015). Academics wanted to maintain autonomy and viewed the university’s relationship with quality assurance agency (QAA), as distant from their own work. They did not feel “ownership of and responsibility for” the quality audit process (Cheng, 2010). In order to achieve the excellence in competitive performance, organizations should strive to increase the efficiency and effectiveness indicators evenly (Bartuševičienė & Šakalytė, 2013).

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The effective ways to assess the impact of quality management on medium- and long-term performance in terms of sustainable development, in response to today's business needs is to encourage the adoption of quality management systems in business models, to facilitate the improvement of organization performance, especially to meet the increasing needs of all stakeholders (Stanciu, Constandache, & Condrea, 2014). There is a need for a common framework for a quality assurance model; however, there is no agreement as to a QA definition or a QA model (Ryan, 2015). The Baldrige criteria are too vague and do not address the requirement from an academic standpoint (Asif & Raouf, 2012). However, the Baldrige model of education in universities, where its application is considered as an indicator of performance excellence, can be adopted for organization administration (Obeidallah, 2017). For a program level, ASEAN University Network Quality Assurance (AUNQA) implementation reports are satisfactory with the development progress (ASEAN University network [AUN], 2015).

The standard concepts and guidelines for internal and external quality assurance systems of higher education are divided into 3 parts: 1. Internal quality assurance 2. External quality assurance and 3. Quality assurance institutions (European Quality Assurance Register for Higher Education [EQAR], 2015). It is dangerous to focus on excellence from external quality assurance, rather than internal quality assurance (Shah & Lucy, 2013). Research on the impact of quality assurance (QA) and quality management (QM) in higher education and particularly on the quality managers' perceptions of QA and QM effectiveness, in HEIs, is still rather rare (Seyfried & Pohlenz, 2018).

As a member of Mahidol University staff, the researcher is interested in studying the effectiveness of administration of EQAS for performance excellence in Mahidol University with some guidelines to be more effective According to Mahidol University self-assessment report in 2017 both performance process and results showed that the university has a systematic and effective approach to meet the basic requirements of the criteria. It has many important results that fulfill the mission by using real and comprehensive information in many missions but in the initial stage called "Early Result", because the university still has the scope that needs to be developed in both the process and the results. There is no clear evidence that there is an analysis of the effectiveness of various processes (Mahidol University, 2017). The university was ranked according to the vision of the Faculties of Medicine and Pharmacy, but there were still a number of disciplines that were not in university rankings from 2015–2017.

Literature Review

Effectiveness of Quality Assurance in Higher Education Institutions (HEIs)

Effectiveness usually determines the policy objectives of the organization or the degree to which an organization realizes its own goals (Zheng, Yang, & McLean, 2010). Certification in the United States is subject to the quality and effectiveness of accrediting organizations (Eaton, 2012). Quality is the utmost significant concern for accrediting bodies (Ryan, 2015). The development of quality assurance

systems is clearly recognized as a response to developments in Europe. Governance trends have been used to evaluate the effectiveness and nature of government-to-university relationships (Eklund, 2013). Moreover, quality managers' role as promoters of quality assurance exhibits significant correlations with perceived effectiveness (Seyfried & Pohlenz, 2018). Continuous improvement is really beneficial for service providers in a rich environment and delivers results, by having a shared goal and vision. Thus, it is important to enhance staff quality culture in institutions, engaging and educating them to inspire a sense of ownership (Shah & Lucy, 2013).

Global rankings have become a new type of "super" quality assessment at HEIs. Ranked globally, they have a significant impact on the marketing of HEIs and strategic direction. This influences student choice, especially for international students, and with new influences on stakeholders' concerns about education standards (Harman, 2011). The effective way to assess the impact of quality management on medium- and long-term performance, in terms of sustainable development in response to today's business needs, is to encourage the adoption of quality management systems, in business models. This will facilitate the improvement of company performance, especially to meet the increasing needs of all stakeholders (Stanciu et al., 2014).

In order to achieve excellence in competitive performance, organizations should strive to increase the efficiency and effectiveness indicators evenly (Bartuševičienė & Šakalytė, 2013). The Baldrige criteria for performance excellence are too vague and do not address the requirement from an academic standpoint (Asif & Raouf, 2012). Baldrige's positive impact on many global economies is that the country also links the corporate performance excellence model with the government in terms of recognition, funding, education and quality assurance. For example, Singapore, Thailand, and New Zealand (Baldrige Performance Excellence Program, 2013). Adopting the Baldrige model of education in universities is considered as an indicator of performance excellence (Obeidallah, 2017). The effectiveness of the operational management process and the improvement of the quality management system are in line with the requirements of international standards, to gain the confidence of clients and increase competitiveness, especially increasing the effectiveness of the process. The implementation of electronic document management, enhances the ability to manage a university's quality management system (Amirov, Baimuldin, & Shakirova, 2014).

In summary, quality assurance management in higher education is a current goal for many countries. The effectiveness of quality assurance application in many HEIs, is satisfactory with the development progress. This is recognized in universities as significant in influencing student choice, especially for international students and with new influences on stakeholders' concerns about education standards. Increasing the effectiveness of quality assurance by improving quality assurance indicators which responds to all stakeholders' needs, will increase competitiveness, especially the effectiveness of the process. They become very beneficial for service providers in a rich environment and deliver better results. The university needs to have a shared goal and vision, enhance staff quality culture in institutions, engage and educate, to inspire a sense of ownership, including accrediting organizations.

Models of Educational Quality Assurance for Performance Excellence

National Quality Awards of various countries, in particular developed countries, have models to serve as global quality management templates. Each of these variations has a different focus. Many countries in Asia have used AUNQA, which is the only system of quality assurance in education in Asia. This was established in 1998. Its criteria have been developed from version one in 2000 to Version three in 2015, which is for a program level with 11 criteria as shown in Figure 1.

The results of the AUNQA implementation report are satisfactory with the development progress (AUN, 2015).

Baldrige Excellence Framework for measuring and improving organizational performance has been used to evaluate the performance of organizations, by identifying strengths, opportunities for improvement and what makes organizations fail to achieve their goals by evaluating three areas as follows; 1. Organizational profile 2. the process and 3. results on the criteria called; “Integrated management framework” as a tool in the organization’s operational management system” (Baldrige Performance Excellence Program, 2013), as shown in Figure 2.

Many countries use “The Baldrige Performance Excellence Framework” to adopt a policy of improving the quality of their products and services, including education. This has affected the economic and social development of the country in Europe (EQA) and Asia, such as Singapore, Japan and Thailand (SQA, JQA, TQA, etc.) (Baldrige Performance Excellence Program, 2013).

With the Mahidol University quality policy from 2014–2017, the objective is to make the overall operation of the university geared towards the goal of developing quality efficiently and effectively. Starting in 2014 from Mahidol

University quality development, it has been upgraded to the Education Criteria for Performance Excellence (EdPEX) 2015–2016, which uses the same standard framework as the Baldrige Performance Excellence Framework 2013–2014, as shown in Figure 3.

The results of Mahidol University internal quality assurance assessment in 2017 were still in the “Early Stages”. In terms of process, the university has a systematic and effective approach to meet the basic requirements of the criteria. In terms of results, the university has many important results, that fulfill many missions by using real and comprehensive information. However, it still needs to be developed, because there is no clear evidence of the effectiveness of various processes such as the analysis of strategic challenges, listening process, satisfaction evaluation, student dissatisfaction, customers and stakeholders, both at present and in the future. The university still does not have segmentation of personnel, learners and other customers, including self-assessment at the university level by using information from other faculties. There are no results that reflect the excellence of the organization, such as the satisfaction of most students throughout the course and customer engagement results in each mission, completely (Mahidol University, 2017).

Research Conceptual Framework

To find the effectiveness of the administration of EQAS for performance excellence in Mahidol University with some guidelines, to be more effective, a research conceptual framework was done by integrating the essence of the definition of the criteria for performance excellence 2015–2016 and AUNQA program level version three 2015 to “Integration management topics”, as shown in Figure 4.

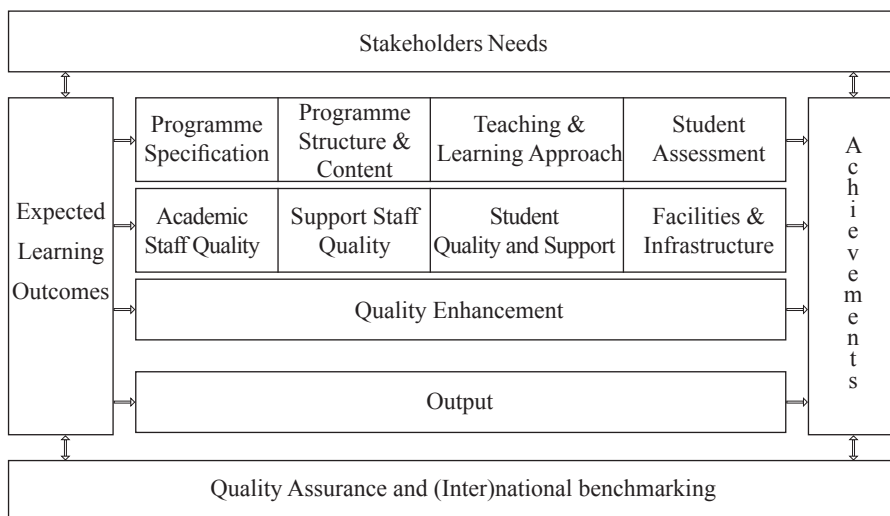


Figure 1 AUNQA Model for Program Level (3rd Version)
Source: AUN (2015)

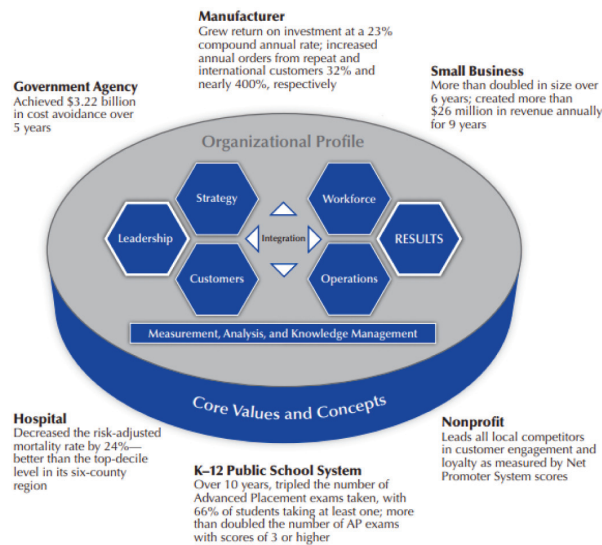


Figure 2 Baldrige Performance Excellence Framework
Source: Baldrige Performance Excellence Program (2013)



Figure 3 Education Criteria for Performance Excellence framework: A system perspective
Source: Baldrige Performance Excellence Program (2013)

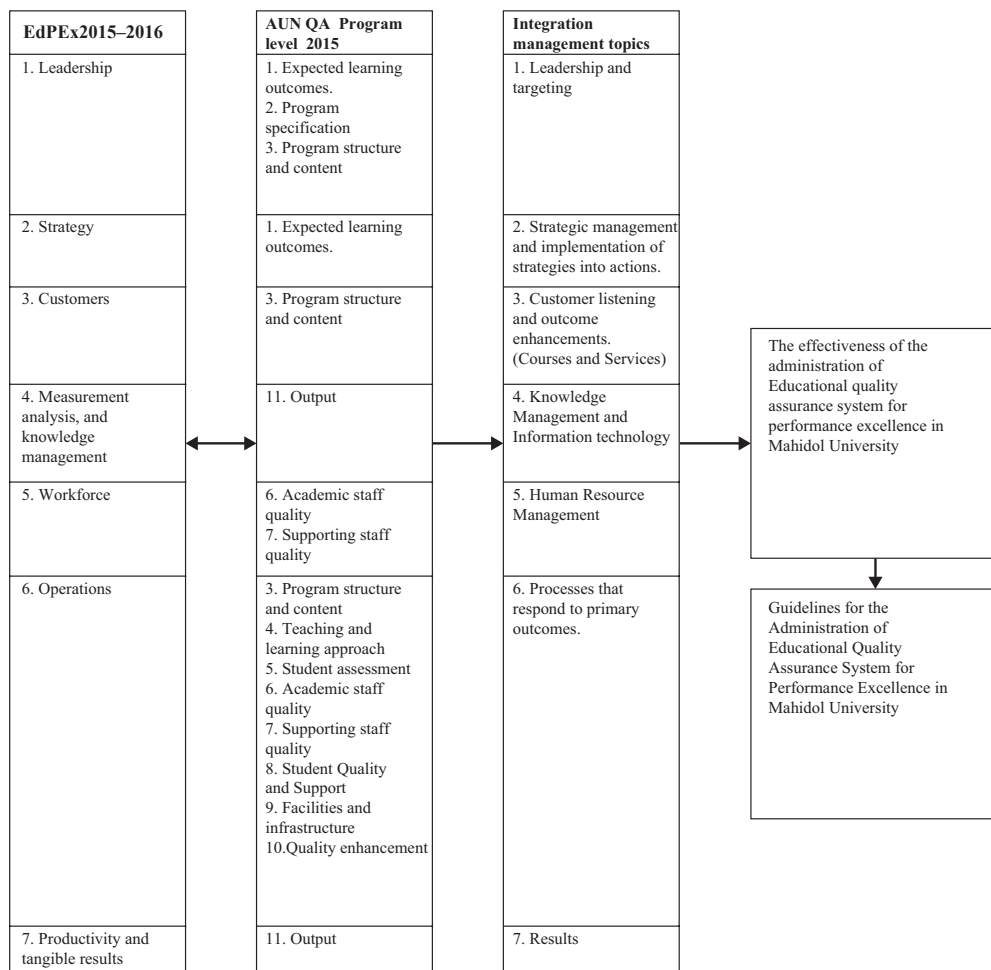


Figure 4 Research conceptual framework

Methodology

This study was a sequential mixed method by using a quantitative data survey and qualitative data by a focus group discussion, which mainly answered questions in order;

1. To what extent is the effectiveness of the administration of EQAS for performance excellence in Mahidol University?

2. What are some guidelines for the effectiveness of the administration of EQAS for performance excellence in Mahidol University?

Participants

For quantitative survey

To select data at the university level, the researcher used the purposive sample from faculties and departments of Mahidol University for 131 participants, such as executives, lecturers or course chairman and quality assurance officer, with 5 years of quality assurance working experience.

For qualitative data by a focus group discussion

To invite executive representatives that cover 3 main disciplines; Pure Science, Science and Technology, Social Science and Humanities; including representatives from departments in the Office of The President of Mahidol University. The researcher also used the purposive sample for 12 executives' representatives, who are executives with 5 years of quality assurance administration experience.

Questionnaire Survey Design

The questionnaire of the effectiveness of the administration of EQAS for performance excellence in Mahidol University was done by integrating the essence of the definition of the criteria for performance excellence 2015–2016 and AUNQA program level version three 2015. Three experts were assessors from TQA, AUNQA and the office of National Education Standards and Quality Assessment (Public organization). They were invited to consider the consistency of the questionnaire with the research objectives and Item Objective Congruence (IOC) Index. The questionnaire was then tried out on 30 participants. The coefficients were calculated by means of the alpha coefficient (Cronbach's alpha) by SPSS program.

Data Collection

Document review

Reviewing the effectiveness of quality assurance system in HEIs, quality assurance models and reports related.

The questionnaire survey

The 131 participants were asked to sign two participants' informed consent forms to indicate consent in this study and then to return the completed questionnaires and signed consent forms to the researcher. These procedures were done during July–August 2017.

Focus group discussion

Participants gave voluntary consent to their participation in this study. A digital voice recorder was used for recording focus group discussion lasting three hours. The six executives were able to come for a focus group discussion. They were

asked about guidelines for top three situations and sub situations of priorities needed for improving of the effectiveness of administration of EQAS for performance excellence in Mahidol University. These information-rich cases gave the findings of the research objective.

Data Analysis

The questionnaire survey

There were 85 respondents. The analysis of quantitative data was mean, standard deviation. The criteria for data analysis were as follows; $\bar{X} = 4.51$ – 5.00 was "most effective"; $\bar{X} = 3.51$ – 4.50 was "very effective"; $\bar{X} = 2.5$ – 3.50 was "moderate"; $\bar{X} = 1.51$ – 2.50 was "little"; and $\bar{X} = 1.00$ – 1.50 was "least effective". Then the researcher analyzed the Priority Needs Index (PNI) using the formula of PNI as follows;

$$\begin{aligned} NI_{\text{modified}} &= (I-D)/D \\ PNI_{\text{modified}} &= \text{The priorities needed to be improved} \\ I &= \text{Desirable action level.} \\ D &= \text{present action level} \end{aligned}$$

Focus group discussion

All recordings were transcribed and analyzed by using content analysis resulting in common story lines relevant to the main topic of the top three situations and sub situations on priority need for improvement based on the research objectives, by relying on global quality assurance to carefully evaluate the summaries and recommendations or guidelines regarding the effectiveness of administration of EQAS of performance excellence in Mahidol University.

Results and Discussions

The questionnaire survey of the effectiveness of the administration of EQAS for performance excellence in Mahidol University, was done by integrating the essence of the definition of the criteria for performance excellence 2015–2016 and AUNQA program level version three 2015 to "Integration management topics". The results showed that the questions were consistent with the objectives (IOC = 1.00) and the reliability coefficient was 0.97 as "Integration management topics", as shown in Table 1.

Findings from Table 2 showed the total average of the effectiveness of the administration of EQAS for performance excellence in Mahidol University was "moderate" ($\bar{X} = 3.06$, $S.D. = 1.09$) and $PNI_{\text{Modified}} = 0.44$. There were top three situations in priority, which needed to be improved as follows; 1. Knowledge management and information ($\bar{X} = 2.70$, $S.D. = 1.03$) and $PNI_{\text{Modified}} = 0.64$. 2. Customer listening and outcome enhancement ($\bar{X} = 2.87$, $S.D. = 1.19$) and $PNI_{\text{Modified}} = 0.49$. 3. There were two situations as follows; 3.1 Strategic management and implementation of strategies into actions ($\bar{X} = 3.01$, $S.D. = 1.04$) and $PNI_{\text{Modified}} = 0.45$. 3.2 Human resource management ($\bar{X} = 3.03$, $S.D. = 1.09$) and $PNI_{\text{Modified}} = 0.45$. The results were consistent with the trends of quality management research in HEIs as follows; 1. Personnel management 2. Process management 3. Information and analysis. The results focused on understanding the needs of stakeholders and the reflection of the perceptions of institutional performance (Tari & Dick, 2016). The top three situations also have top three sub situations which needed to be improved, as shown in Table 3–6.

Table 1 Integration management topics “Topics and sub situations”

Topics	Sub situations
1. Leadership and targeting	1) Executives convey vision and values to the people, formal cooperation, partners and key deliverers including students, other customers and stakeholders. 2) Executives demonstrate their commitment to promoting legitimate and ethical behavior as well as creating the environment within which the organization operates. 3) Executives have got things done successfully in today and in the future. 4) Executives have a way of focusing on actions that fulfill the mission of the university. 5) Executives communicate and build relationships with personnel, students and other important customers. 6) Performance appraisal by executives were done in a systematic operation. 7) Executives define key processes and indicators to promote ethical behavior under regulatory structures and throughout the institution including interaction with other students, stakeholders, official deliverers and partners. Making sure there is a way to supervise and take action in case of unethical actions. 8) The organization supports and strengthens the community.
2. Strategic management and implementation of strategies into action	9) The organization has strategic planning, strategic objectives managing to improve curricula and services that improve outcomes. 10) The content of each course represents the appropriate proportion between general knowledge and skills and specific knowledge and skills. There is an integration between the course content and explicit participation in achieving the expected learning outcomes. 11) Research activities emphasized the importance of formal partnership. 12) Providing courses and services that meet the needs of students and other customers. 13) Vision, mission and values were conveyed to the staff, key deliverers and important counterparts both formal and informal. 14) Planning, financial resources and other resources are available to support the action plan to succeed and achieve current goals. 15) The process of personnel development planning is in line with the university policy including the analysis of the necessary needs of the performance of personnel. 16) The lecturers or department has a clear teaching strategy according to the students' interests that enhances academic knowledge and also encourages learning by practicing.
3. Customer listening and outcome enhancement	17) Listening to and finding feedback, interaction and observing students and other potential customers about the quality of curriculum and services that can be used. 18) The curriculum is designed to achieve learning outcomes according to the Mahidol University policy and the assessment methodology demonstrates that the achievement is clearly aligned with the vision and mission of the university. 19) Data collection and analysis were performed on the satisfaction and dissatisfaction assessment including the engagement of students and other clients by surveying formal and informal feedback. 20) Comparison of satisfaction scores with other competing institutions with similar courses and services. Includes comparative data that includes information about why students and other customers choose to attend a competing institution.
4. Knowledge management and information technology.	21) Responding to complaints from students and other clients in a timely and effective manner that reassures students, including satisfaction, engagement and avoiding similar complaints in the future. 22) Continuously review performance to prioritize development, and create innovation opportunities. 23) Information was used, gathered, adjusted, aligned and integrated information to monitor the progress achieved toward the strategic objectives of the action plan. 24) Selection and use of critical data and information effectively supported the decision-making of the operational level. 25) Finding the best practices for exchanging learning and implementation across the organization. 26) The results of performance review and competitive data are used to predict future performance, such as passing rates and dropouts, duration of graduation rate of graduates and number of researches of teachers and learners. 27) To verify and ensure that the information and in the Institute is accurate, complete, reliable and up-to-date. 28) Disaster preparedness and emergency disruptions of operating systems such as overall cost control and the main storage system of the organization.
5. Human resource management	29) Recruiting, hiring, positioning, and retaining new personnel, both academic and support lines, and promotion are in accordance with ability. 30) Effective management that clearly defines roles and functional relationship among employees. 31) The assignment is suitable for knowledge, ability, experience, expertise and motivation that supports quality of teaching and working. 32) The number of professors and researchers is sufficient to work on the activities set out in the curriculum. 33) The number of student services personnel are capable and sufficient to provide satisfactory service. 34) Preparation of personnel capability requirement for the change. 35) The workplace is healthy, safe and has ease of access for employee. 36) There are service designing, significant benefits and policy tailored to the needs of diverse people and groups. 37) There are job learning development and progress for personnel, being a coach, consulting and learning experience from working.
6. Processes that respond to primary outcomes	38) A curriculum design and service system consistent with learning outcomes, expectations of students and other customers. 39) There is a system for assessing the quality of students according to the curriculum objectives. 40) EdPEx and AUN quality system improve process execution and reduce variance. 41) There is a system for assessing and supporting the quality of services and facilities that facilitate learning such as library, laboratory. Technology systems and student service. 42) The environment is conducive to education, research and quality of life in the physical, social, emotional, and psychological aspects of students. 43) The organization has a safe working environment, disaster preparedness and emergency.
7. Productivity and tangible results	44) There is an overall cost control system. 45) Reported learning outcomes and customer service that meet the needs and expectations of students and other clients. 46) Current results and trends in student satisfaction and dissatisfaction are reported including benchmarking. 47) Current results and trends in customer satisfaction and engagement are reported. 48) Reporting of performance comparative data, and competitive data is used to forecast future performance, such as job performance. Graduation number of researches by teachers and students. 49) Reporting the success of key indicators in achieving organizational / department strategies and plans. 50) Financial liquidity results. The amount of money available. Efficient use of percentage of total operating costs when compared against the budget, and budget management guidelines are reported.

Table 2 The results of the effectiveness and PNI_{Modified} of the administration of EQAS for performance excellence in Mahidol University.

Topics of situations	Effectiveness		
	$\bar{X}$	S.D.	PNI _{Modified}
1. Knowledge management and information	2.70	1.03	0.64
2. Customer listening and outcome enhancement	2.87	1.19	0.49
3. Strategic management and implementation of strategies	3.01	1.04	0.45
4. Human resource management	3.03	1.09	0.45
5. Leadership and targeting and problems	3.34	1.05	0.37
6. Processes that respond to primary outcomes	3.28	1.04	0.36
7. Productivity and tangible results	3.19	1.20	0.36
Total average	3.06	1.09	0.44

Table 3 The results of the effectiveness and PNI_{Modified} of the administration of EQAS for performance excellence in Mahidol University in terms of Knowledge management and information technology

Topics and sub situations	Effectiveness		
	$\bar{X}$	S.D.	PNI _{Modified}
Knowledge management and information technology.	2.70	1.03	0.64
1) Finding the best practices for exchanging learning and implementation across the organization.	2.47	1.08	0.79
2) The results of performance review and competitive data are used to predict future performance, such as passing rates and dropouts, the number of years needed to graduate, graduation rate of graduates and number of researches of teachers and learners.	2.58	1.24	0.74
3) Selection and use of critical data and information effectively supported the decision-making of the operational level.	2.74	1.02	0.63

Table 4 The results of the effectiveness and PNI_{Modified} of the administration of EQAS for performance excellence in Mahidol University in terms of Customer listening and outcome enhancement.

Topics and sub situations	Effectiveness		
	$\bar{X}$	S.D.	PNI _{Modified}
Customer listening and outcome enhancement	2.87	1.19	0.49
1) Finding feedback from students and other stakeholders about the quality of curriculum and services can be used.	2.65	1.21	0.61
2) Comparison of satisfaction scores with other competing institutions with similar courses and services. Includes comparative data that includes information about why students and other customers choose to attend a competing institution.	2.78	1.20	0.53
3) The curriculum is designed to achieve learning outcomes according to Mahidol University policy and the assessment methodology demonstrates that the achievement is clearly aligned with the vision and mission of the university.	2.78	1.31	0.51

Table 5 The results of the effectiveness and PNI_{Modified} of the administration of EQAS for performance excellence in Mahidol University in terms of Strategic management and implementation of strategies into actions.

Topics and sub situations	Effectiveness		
	$\bar{X}$	S.D.	PNI _{Modified}
Strategic management and implementation of strategies into action.	3.01	1.04	0.45
1) The process of personnel development planning is in line with the university policy including the analysis of the necessary needs of the performance of personnel.	2.81	1.11	0.53
2) Planning, financial resources and other resources are available to support the action plan to succeed and achieve current goals.	2.92	0.99	0.51
3) The lecturers or department has a clear teaching strategy according to the students' interests that enhances academic knowledge and ability and also encourages learning from practice.	3.04	1.10	0.47

Table 6 The results of the effectiveness and PNI_{Modified} of the administration of EQAS for performance excellence in Mahidol University in terms of Human resource management.

Topics and sub situations	Effectiveness		
	$\bar{X}$	S.D.	PNI _{Modified}
Human resource management	3.03	1.09	0.45
1) Effective management that clearly defines roles and functional relationship among employees.	2.80	1.16	0.56
2) Recruiting, hiring, positioning, and retaining new personnel, both academic and support lines, and promotion are in accordance with ability.	2.89	1.18	0.55
3) Personnel capability requirement are well prepared for the change.	2.9	1.25	0.52

Findings from Table 3 showed the total average of the effectiveness of the administration of EQAS for performance excellence in Mahidol University was “moderate” in terms of Knowledge management and information ($\bar{x} = 2.70$, $S.D. = 1.03$) and $PNI_{Modified} = 0.64$. Prioritizing the top three sub situations needing to be improved were as follows; 1) Finding the best practices for exchanging learning and implementation across the organization ($\bar{x} = 2.47$, $S.D. = 1.08$) and $PNI_{Modified} = 0.79$. 2) The results of performance review and competitive data are used to predict future performance, such as passing rates and dropouts, the number of years needed to graduate, graduation rate of graduates and number of researches of teachers and learners ($\bar{x} = 2.58$, $S.D. = 1.24$) and $PNI_{Modified} = 0.74$. 3) Selection and use of critical data and information, effectively supported the decision-making of the operational level ($\bar{x} = 2.74$, $S.D. = 1.02$) and $PNI_{Modified} = 0.63$. The results were consent with some studies as follow; One of the effective ways is the implementation of electronic document management, enhancing the ability to manage a university’s quality management system. The effectiveness of management processes, implementation and improvement of the quality management system in accordance with the requirements of international standards. The information technology environment, which supports the quality management system is considered (Amirov et al., 2014).

Findings from Table 4 showed the effectiveness of the administration of EQAS for performance excellence in Mahidol University was “moderate” in terms of Customer listening and outcome enhancement ($\bar{x} = 2.87$, $S.D. = 1.19$) and $PNI_{Modified} = 0.49$. Prioritizing the top three situations needing to be improved were as follows; 1) Finding feedback from students and other stakeholders about the quality of curriculum and services, can be used ($\bar{x} = 2.65$, $S.D. = 1.21$) and $PNI_{Modified} = 0.61$. 2) Comparison of satisfactory scores with other competing institutions, with similar courses and services. Including comparative data why students and other customers choose to attend a competing institution ($\bar{x} = 2.78$, $S.D. = 1.20$) and $PNI_{Modified} = 0.53$. 3). The curriculum is designed to achieve learning outcomes according to Mahidol University policy. The assessment methodology demonstrates that the achievement is clearly aligned with the vision and mission of the university ($\bar{x} = 2.78$, $S.D. = 1.31$) and $PNI_{Modified} = 0.51$. These situations can be improved by having mutual understanding about international quality assurance of teaching, learning. All stakeholders play an important role both in the past and in the future that is consistent with the excellence framework for organization management. that uses the fundamental principles of excellence to succeed, initiative, and innovate continuously with the improvement and innovation to all stakeholders (EQAR, 2015). The effective ways to assess the impact of quality management on medium- and long-term performance, in terms of sustainable development, in response to today’s business needs. This encourages the adoption of quality management systems in business models to facilitate the improvement of company performance, especially to meet the increasing needs of all stakeholders (Stanciu et al., 2014).

Findings from Table 5 showed the effectiveness of the administration of EQAS for performance excellence in Mahidol University was “moderate” in terms of strategic management and implementation of strategies into action ($\bar{x} = 3.01$, $S.D. = 1.04$) and $PNI_{Modified} = 0.45$. Prioritizing the top three situations needing to be improved were as follows; 1) The process of personnel development planning is in line with the university policy including the analysis of the necessary needs of the personnel ($\bar{x} = 2.81$, $S.D. = 1.11$) and $PNI_{Modified} = 0.53$. 2) Planning, financial resources and other resources, are available to support the action plan, to succeed and achieve current goals ($\bar{x} = 2.92$, $S.D. = 0.99$) and $PNI_{Modified} = 0.51$. 3) The lecturers or department has a clear teaching strategy according to the students’ interests that enhances academic knowledge and ability and also encourage learning by practice ($\bar{x} = 3.04$, $S.D. = 1.10$) and $PNI_{Modified} = 0.47$. The top three sub situations really need to be improved because quality of teaching and learning has become a major strategic issue in tertiary education systems across the globe, over the past decades. Moreover, quality managers’ role as promoters of quality assurance exhibits significant correlations with perceived effectiveness (Seyfried & Pohlenz, 2018). HEIs strategic planning should consider the ability to mobilize resources and knowledge needed to implement strategic plans including the ability of the institution to implement a backup plan in the event of a forced change, a new plan or modification being required (Baldrige Performance Excellence Program, 2013). The effectiveness of the operational management process and the improvement of the quality management system should be in line with the requirements of international standards to gain the confidence of clients and increase competitiveness, especially increasing the effectiveness of the process (Amirov et al., 2014).

Findings from Table 6 showed the effectiveness of the administration of EQAS for performance excellence in Mahidol University was “moderate” in terms of Human resource management ($\bar{x} = 3.03$, $S.D. = 1.16$) and $PNI_{Modified} = 0.45$. Prioritizing the top 3 situations needed to be improved were as follows; 1) Effective management that clearly defines roles and functional relationship among employees ($\bar{x} = 2.80$, $S.D. = 1.16$) and $PNI_{Modified} = 0.56$. 2) Recruiting, hiring, positioning, and retaining new personnel, both academic and support lines, and promotion are in accordance with ability ($\bar{x} = 2.89$, $S.D. = 1.18$) and $PNI_{Modified} = 0.55$. 3) Personnel capability requirement are well prepared for the change ($\bar{x} = 2.9$, $S.D. = 1.25$) and $PNI_{Modified} = 0.52$. The top three sub situations can be developed by using some best practices, such as; Improving organizational effectiveness management should strive for better communication, interaction, leadership, direction, adaptability and a positive environment (Heilman & Philips, 2011). Superior performance is possible by transforming staff attitudes towards organization from lower to a higher level of maturity, therefore human capital management should be closely bound with the concepts of the effectiveness (Shiva & Suar, 2010). Continuous improvement is very beneficial for service providers in a rich environment. Delivering results by having a shared goal and vision, enhancing staff quality culture in institutions, engaging them and educating, to inspire a sense of ownership (Shah & Lucy, 2013).

Findings from Mahidol University executive representatives' focus group discussion showed some guidelines for the top three situations as follows;

1. To find the best practices for exchanging learning and implementation across the organization. Mahidol university should survey the need for information technology development and identify the best practices for exchanging learning and implementation. This was in line with the annual result of internal quality assurance of Mahidol University 2017. Mahidol University was lacking of effective communication and culture that promoted open communication throughout the organization. It has not been shown clearly that it has analyzed and reviewed the effectiveness of the processes. In order to develop and implement university quality management system, the implementation of electronic document management enhances the ability to manage a university's quality management system as an agency (Amirov et al., 2014).

2. To find feedback from students and other stakeholders about the quality of curriculum and services, Mahidol should analyze the needs of all stakeholders that link to market demand and policy networks, including government policy, educational quality assurance and accreditation unit and use that data analyses to improve the curriculum that responds to those needs and society. This was line with Ryan (2015) who found that students are the center of higher education, the institutions should manage their time and budget to set up an institutional system to study students that leads to the improvement of quality assurance.

3. There were two situations;

- 3.1 To make the process of personnel development planning to be in line with the university policy including the analysis of personnel performance needs. An important indicator should be established to track the success and effectiveness of the plan. To develop it according to the needs of the individual, manager, and leader by focusing on core competencies and to achieve both short-and-long term action plans. This is in line with educational quality assurance criteria for performance excellence 2015-2018; (1) Strategic planning process, transformation and prioritization of projects; (2) Analysis and define strategies. A blind spot may occur in the strategic planning process and Strategic objectives; (3) Strategic objectives consider and balance the needs of the major stakeholders.

- 3.2 To enhance the effective management that clearly defines in roles and functional relationship among employees. The management team of each faculty and department should communicate with all personnel clearly in what needs to be done in the same direction, and be flexible, in defining duties and assignments focusing on accountability and transparency, such as organization profile, core competency, job description, staff development and motivation, in order to improve service and value. Students, other types of customers and stakeholders, need different models, methods and incentives, to promote the engagement of personnel. This may include personnel representatives and faculty members and collaboration between agencies that involves teams. The results were in line with some studies such as HEIs needed to focus on internal quality assurance by enhancing quality culture in institution,

engaging them, and educating to inspire a sense of ownership. Quality assurance is a holistic approach, covering all process in a higher education institution in order to serve the students and other stakeholders in expected quality standards (Shah & Lucy, 2013). The success of a quality assurance system depends on the support of the management. quality assurance system which should cover strategic management and process management (Kaheci, Uygun, Yurtsever, & Ilyas, 2012).

Conclusion and Recommendation

This study has presented clearer evidence of the effectiveness of the administration of EQAS for university levels. The results of the effectiveness of the administration of EQAS for performance excellence in Mahidol University was "moderate". Findings showed the top three priorities needs of improvement, as follows; 1. Knowledge management and information technology. 2. Listening to customers to improve results. 3.1. Strategic management and implementation and 3.2. Human resources management. In conclusion, the effectiveness of the administration of EQAS for performance excellence in Mahidol University is in line with the requirements of international standards. This gains the confidence of some stakeholders and increasing competitiveness especially the effectiveness of the process, but there are some areas that needed improvement.

Some guidelines, for more effectiveness for those top three priorities, are as follows; Firstly, surveying the need for information technology development and identifying the best practices for exchanging learning and implementation across the organization, such as; Managing automation in the work place, with a central database. Terminating "hard copy system" by having a responsible team for gathering important information systematically. Secondly, gathering information about the evaluation of satisfaction and dissatisfaction of all students and key stakeholders. This refers to the students who are studying and graduates. Thirdly, management team of each faculty and department should communicate with all personnel clearly for what needs to be done in the same direction. Finally, cultivating a culture of quality with internal quality assurance to improve the learning and development according to the needs of personnel who support the needs of the institutions

For recommendations focusing on university policy, the university should 1) have a policy to develop curriculum and services, such as; Meeting the needs of the labor market and encouraging the students to apply knowledge to carry out projects or activities that benefit the community. Including the system and mechanism for student development in the field of counseling and information. 2) focus their risk management policies on excellence, such as; Implementing risk management system for their departments and faculties, including finance, budgeting system and mechanism of educational quality assurance. For future research, the organization should have research on the impact of internal education quality assurance, on the desirable graduate characteristics and primary outcomes.

Conflict of Interest

There is no conflict of interest.

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