

TQM, Human Oriented Elements and Organizational Performance: A Business Excellence Model for Higher Education Institutes of Thailand

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The prime objective of this study is to investigate the link between TQM, human oriented elements and the organizational performance. The satisfaction, commitment, and loyalty are considered as human oriented elements. The TQM is accessed as a determinate of the organizational performance. In addition to that, the current study has examined the mediating role of human oriented elements in the relationship between TQM and organizational performance, in the higher education institutes of Thailand. The Structural equation model is employed to analyse the structural model and structural relation among measured and latent variables. It analyzes the direct and indirect association among variables. The SEM-AMOS is used, and the results of the study have provided a great deal of agreement with the hypothesized results. It is evident that the youth and graduates from Thailand tertiary institutions are not prepared with the skills with which to exploit and judicially utilized the endowed natural resources in the country. These and other reasons have rendered the attainment of self-reliance and entrepreneurship education among the teaming graduates difficult to maintain. This study has focused on the subjective measures of organizational performance including



information gathering in problem solving/communication, faculty intellectual pursuits, achievement and development among staff and students, achieving academic excellence through quality adherence and feedback among others. This study, which is among pioneering studies, will be helpful for policymakers, educationist and researchers and student in understanding the issues in the higher education sector of Thailand.

Key words: *TQM*, higher education, organization performance, Thailand.

Introduction

University education serves as a means for producing individuals that possess academic and mental capability which will in turn help in the production of greater manpower to man the various sectors of the economy (Granovetter 2018). Subair and Talabi (2015) asserted that the intellectual and professional life of a country depends on the sound higher education, especially university education, which provides quality products of international standards. Research has shown that quality education could be determined by the following factors; entrepreneurship training, academic qualification, financial, morals and many more. The problem of accessing higher education is due to the expected rise in demand for it and the subsequent need for implementing UNESCO's goal of Education for all. Presently, Granovetter (2018) reported that there is a continuous fall in the enrolment rate in Sub-Saharan Africa, which is found to be less than five percent. The literature on the relationship between quality management practices (QMPs) and the organizational performance offers a general consensus (Jiménez-Jiménez et al., 2015). Many prior research concluded a positive and significant relationship between QMPs and the organizational performance (Calabrese & Corbò, 2015; Riaz & Riaz 2018; Haseeb et al., 2019). However, many researchers have shown a disagreement.

In particular, the National Policy on Education (NPE), (2004) highlighted the aims of university education which includes the following: contribution to national development through high-level relevant manpower training. Self-reliance philosophy has not been incorporated in the Thailand tertiary education curriculum such that can allow for the creation of a new culture towards a good and enabling a productive environment that will encourage a sense of pride and self- discipline, the motivation of people to take an active part and decisions affecting their general welfare, promoting new sets of behaviours and culture for the accomplishment of future challenges (Calabrese & Corbò, 2015).



The youth and graduates from Thailand tertiary institutions are not prepared with the skills with which to exploit and judicially utilized the endowed natural resources in the country. These and other reasons have rendered the attainment of self-reliance and entrepreneurship education, among the teaming graduates, difficult to maintain. In their own contributions, Sternglass (2017) observed the alarming rate of repeats, carry overs and drop outs among the university graduates; showing their level of unpreparedness in learning and skills acquisition. Arogundade and Arogundade (2015) acknowledged that a lack of adequate total quality management initiatives, poor alliance orientation and also Thailand's economic and political environment were unhealthy for a sound entrepreneurship development. The Asean environment is equally characterized with high rates of many business enterprises winding up prematurely consequent upon the employable and unemployable youths.

It is against this background that this research is set to look into the association between alliance orientation, total quality management and performance of Nigerian public Universities with the moderating variable of corporate entrepreneurship. Sahney (2016) explained that for TQM to be achieved at enhancing the competitiveness and performance excellence in higher education institutes, businesses and manufacturing companies, five areas of TQM, which are leadership, strategic planning, process management, resources management and results, must be focused. The concept of TQM has been adopted since 1980 together with a strategic approach to quality with the aim of focusing on all the resources in achieving excellence (Benavides-Chicón & Ortega, 2014).

Literature review

Customers of Higher Education Institutions

In a higher education institution context, the utmost challenge that needs to be resolved is identification of the customer (Sahney, 2016). Trivellas and Santouridis (2016) mentioned that the stakeholders of higher education are students, their parents and family, academics and administration staff, and society. The increasing global dynamics are bringing more pressure on the local institutes in Thailand, which in turn is attracting the local student to study in Thailand. This is evident from the figure 1, where the numbers of Thai students in the US have been decreasing over the last three years.

10000
9000
8000
7000
6000
5000
4000
2000
1000
0
2015
2016
2017

Figure 1. Number of Thai Student studying in US

Source: WENR

Furthermore, the majorities of the studies in higher education institution's service quality have focused on the student's view of satisfaction, while little is known on the perspective of internal customer (employee) satisfaction (Trivellas & Santouridis 2016). Thy continued and argued that, in most cases, the previous research just focused on the external customer, while generally neglecting the internal customer. Obviously, there is currently a lack of consensus in the literature in terms of which exactly the true customer in higher education is. This study has chosen only the internal customers (employees). As proposed by Trivellas and Santouridis (2016), the employee is classified as the primary internal customer, the student (as educational partner) is the secondary internal customer while in the system. Thus, this study only considered employees as the main subject instead of other stakeholders.

Table 1: Students om higher education sector of Thailand.

Year	Students
2005	44.5
2016	49.3

In this study, the internal customers refer to be any administrative authorized personnel that can represent the department; those who are "re-purchasing" the service of the institution. Repeat purchase means recruiting at the same institutions every year. This study also proposed to seek the data from academics and non-academics across the department. Although students do participate in the service delivery (i.e. classroom), they do not present



during quality process, procedure and training. The selections of administrative authorized personnel are based on their experience with quality initiatives and also their service was present when they evaluated the services in a higher education institution context.

Measuring Satisfaction in the Higher Education Institutions

Another issue that needs to be resolved in higher education is about the measurement of satisfaction, specifically in term of service quality. A comprehensive review of the service marketing literature provides that the service quality can be conceptualized into two groups: Nordic and American. The Nordic approach, led by (Torres, 2014;Wu, 2014), proposes that a customer's focus on the subject of service quality consists of two basic dimensions: technical and functional. The American group is headed by many authors and they proposed that that service quality consists of five elements namely, reliability, responsiveness, empathy, assurance, tangible, (also known as SERVQUAL). There is little doubt that among these two approaches, the SERVQUAL model, introduced by Ali and Raza (2017), has proven to be the most popular. In spite of large coverage in many sectors, a number of unfavourable judgements have been directed at the SERVQUAL.

Most of the scholars (Roslan et al., 2015) focus on the formation and operational views of the service quality variables. Even though many researchers asserted that the SERVQUAL dimensions can be applied to all service sector, several findings, found by other scholars, have demonstrated differently (Hafeez et al., 2018; Basheer et al., 2019). For example, Rezaei et al. (2018) has employed SERVQUAL in measuring the higher educational service and has suggested an alternative model that is more suitable for measuring service quality. Rosla et al. (2015), in their findings, did not support the five SERVQUAL dimensions. Thus, it seems that the SERVQUAL model is inadequate to apply in an educational context.

Overview of OMPS and Organizational Performance in the Higher Education Institutions

Prior to the issues of globalization, liberalization, and sustainability, studies on quality management practices (QMPs) in the higher education institutions have got attention due to the demand for excellence. In fact, the QMPs currently applied in higher education institutions originally came from manufacturing. For this reason, the consensus among the previous scholars on usefulness of QMPs in education is still not achieved (Ahmed et al. 2018, Rodriguez et al. 2018). Currently, the compatibility of QMPs in higher education is questionable and still remains an unresolved issue (Ahmed et al. 2018; Rodriguez et al., 2018).



In this regard, (Tight, 2018; Rosli & Siong 2018) conducted a study that looked at QMPs in the United States of America's higher education institutions. In their model, the basic parameters of QMPs can be grouped into three areas namely quality of design (QOD), quality of conformance (QOC) and quality of performance (QOP). These three parameters are interconnected and were chosen because they are frequently used in quality practices (Tight, 2018). Basically, their model was rooted in two well-known QMPs models; Juran Trilogy (quality planning, quality control, quality improvement), and plando-check-act (PDCA) by Deming. The quality planning refers to QOD, quality control is correspondents to QOC, and quality improvement is QOP.

In this investigation, Ahmed et al. (2018) reviewed nine articles from QMPs literature and found that quality of design (QOD) and quality of conformance are largely covered, whilst quality of performance (QOP) was obviously overlooked. In other words, little work reports on QOP in the higher education institutions arena. They insisted that two main possible reasons for the lack of QOP may also be explained by the lack of quality models and performance measure in higher education institutions. In the absences of quality model and organizational performance measure, higher education institutions may not be ensuring continuous efforts to distinguish their targeted performance when designing any QMPs program. For that fact, this allows an area of study to focus the quality management practices (QMPs) and organizational performance in the higher education institutions.

The Relationship between OMPs and Organizational Performance

A number of definitions were put forward by different scholars as to what performance is all about. Performance is considered to be the outcome of an organization's activity measured along with its input. The understanding of performance measurement will allow an organizations to focus on units that need enhancement by evaluating the level of work progress in terms of cost, quality and time with other useful variables and maintenance in areas with higher productivity(Para-González et al., 2018). Assessing the performance of an organization to achieve a short- and long-term goals require a critical look at globalization and competition. The determining factors in measuring organizational performance may include; productivity, productivity, liquidity, market share, innovation level, productivity, goods and service quality, human resource management (Mehralian et al., 2017).

According to Mehralian et al. (2017), performance is from an objective perspective, that is more about the financial assessment of organizational performance on issues relating to return on equity, return on assets and sales growth. In contrast, Al-Dhaafri et al., (2016) views performance from two perspectives; the financial and the non-financial.



Prior researches have some preference in using financial performance measures as a measure of the overall organizational success. However, other studies prefer the non-financial (subjective) measures in measuring performance. Thus, this study will focus on the subjective measure of organizational performance including information gathering in problem solving/communication, faculty intellectual pursuits, achievement and development among staff and students, achieving academic excellence through quality adherence and feedback among others. However, other studies prefer the non-financial (subjective) measures in measuring performance. Thus, this study will focus on the subjective measure of organizational performance including information gathering in problem solving/communication, faculty intellectual pursuits, achievement and development among staff and students, achieving academic excellence through quality adherence and feedback among others.

In spite of the numerous works conducted in the literature regarding the total quality management practices, there has been a lack of agreement or consensus on what TQM is. The TQM definition can only be seen differently in accordance with the method taken towards quality. However, in the prior studies conducted and the literature consulted on TQM, there are a variety of definitions offered and put forward by different scholars in different situations. Al-Dhaafri et al. (2016) viewed quality from the customer–centric basis to the product performance that satisfies customer needs and meets their specifications toward quality provision.

Therefore, the product quality, according to Mehralian et al. (2017), encompasses the following dimensions: Performance that refers to the operating characteristics of the product; Features that refers to the additional features that supplement the product's basic function; reliability that refers to what extent to which a product will serve the customer effectively and efficiently; conformance that refers to the extent to which a product meets the set standards; durability refers to the rate of product use before it deteriorates. serviceability refers to the speed, courtesy, and ease of repair; aesthetics refers to the product appearance and impression, perceived quality refers to the reputation of the provider.

The critical success factors can be seen as the critical areas that organization must target to achieve its mission, by examining their impacts. However, they are considered as those things that need to be present for a successful TQM activity implementation. Many studies identified the following as critical factors for TQM which includes; customer-based approach; process management; commitment and leadership; quality planning; management based on facts; continuous improvement; human resources management; work team communication; cooperation with suppliers; organizational social and environmental issues



and related awareness. Nazari et al., (2017) pointed out that QMPs have a positive relationship on organizational performance. In brief, QMPs implementation is believed to lead to organizational performance (Al-Dhaafri et al., 2016). Past literature (Dubey et al., 2018) consistently indicates that there is a relationship between QMPs and organizational performance. Thus, this study identified that there is a positive relationship between the implementation of QMPs and organizational performance.

H1: There is a positive relationship between Quality Management Practices and Organizational Performance.

The Relationship between QMPs on Human-oriented Elements (Satisfaction, Commitment, Loyalty)

As ordinarily described in the QMPs area, one of the main focuses of QMPs is to meet the employee's satisfaction (internal customer) (Arunachalam & Palanichamy 2017; Dubey et al., 2018). Significantly, QMPs help companies in a consistent manner, their employee satisfaction. In agreement with QMPs, which have a significant link on satisfaction, this study hypothesizes that:

H2: There is a positive relationship between Quality Management Practices and Human-Oriented Element (Satisfaction)

Service Quality on the other hand; has been mentioned earlier, although TQM strategy originated in manufacturing, it has been gaining a growing attention to be applied in service organizations as well. Service quality literature revealed that there are two schools of thought. The first school focuses on the content of services by differentiating technical from the functional. This school is led by Oliveira et al. (2017). The second school focuses on the service delivery from the customer's perspective. This school, however, is led by Oliveira et al. (2017). While technical dimension refers to the effective production of the core service, the functional dimension refers to the delivery of the service produced (Arunachalam & Palanichamy, 2017).

Regarding the other perspective, Arunachalam and Palanichamy (2017) identified five behavioural dimensions; tangibility, reliability, responsiveness, assurance, and empathy. Initially, Oliveira et al. (2017) produced a list of ten dimensions that were reduced to the current five dimensions model after several stages. However, based on continuous work, a measure of 22-item instruments called SERVQUAL was produced and it is one of the most widely known tools in measuring the service quality in various contexts. Furthermore,



Arunachalam and Palanichamy (2017) observed that adoption of QMPs enhance commitment at all levels of the organization. Oliveira et al. (2017) found that the levels of commitment and involvement shown by management (both senior and middle management) had an effect on the success of the process. Further, the success of QMPs initiative relies on several components such as the size of an organization, employee readiness, leadership and approach to transform.

Furthermore, one of the primary prerequisites for a successful QMPs effort is maintaining a loyal employee. Several scholars (Turkyilmaz, Akman, Ozkan and Pastuszak, 2011) also cite employee loyalty as a necessary prerequisite for effective implementation of any quality initiative. In the other words, QMPs refer specifically to the need for loyalty from all employees. In sum, the majority of articles (Turkyilmaz, Akman, Ozkan & Pastuszak, 2011) asserted that the QMPs will improve loyalty. Therfore, the following hypothesis is suggested.

H2: There is a positive relationship between Quality Management Practices and Human-Oriented Element (Satisfaction)

H3: There is a positive relationship between Quality Management Practices and Human-Oriented Element (Commitment)

H4: There is a positive relationship between Quality Management Practices and Human-Oriented Element (Loyalty)

The Relationship between Human-oriented Elements (Satisfaction, Commitment, Loyalty) on Organizational Performance

The quality management literature has shown that the human-oriented elements are positively related to organizational performance. In examining satisfaction, many organizations that adopt QMPs have experienced an improvement in satisfaction (Obeidat et al., 2018; Geldres-Weiss et al., 2018). There are two types of customers in an organization; internal and external. The satisfaction of the internal customer (employees) would always be a prerequisite to the satisfaction of the external customer (Obeidat et al., 2018; Hussain, Ali, Thaker, & Ali, 2019)), which in turn impacts the performance of an organization. Because QMPs aim to produce a surrounding that elicits the most benefit from internal and external customers, it is expect that satisfaction will lead to increased organizational performance. It is strongly believed that loyalty is a key driver of organizational performance and contributes to economic outcomes in service organizations (Fenyves, Bács, Karnai, Nagy, & Tarnoczi, 2018). Therefore, the following hypothesis is suggested:



H5: There is a positive relationship between Human-Oriented Element (Satisfaction) and Organizational performance.

H6: There is a positive relationship between Human-Oriented Element (Commitment) and Organizational Performance

H7: There is a positive relationship between Human-Oriented Element (Loyalty) and Organizational Performance

The Mediating Effects of Human-Oriented Elements (Satisfaction, Commitment, Loyalty)

Prior studies also found that satisfaction has a positive significant effect with QMPs, organizational performance, loyalty, and commitment (Turkyilmaz et al. 2011). By following the main principles as suggested by Turkyilmaz et al. (2011), the following hypotheses are described:

H8: Human-Oriented Element (Satisfaction) will fully mediate the relationship between Quality Management Practices and organizational Performance.

Moreover, in QMPs literature, employee commitment is identified as an important element of a successful QMPs initiative. Previous scholars found that commitment has a positive relationship with QMPs, organizational performance, and loyalty. Thus, this study hypothesized that:

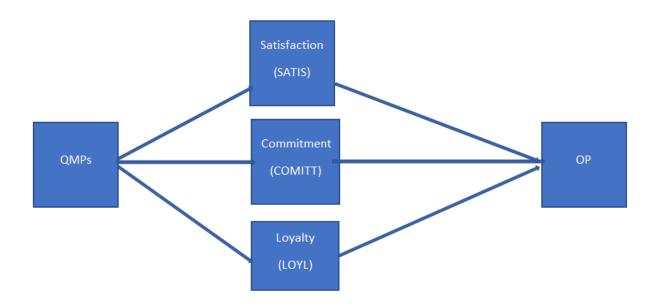
H9: Human-Oriented Element (Commitment) will fully mediate the relationship between Quality Management Practices and Organizational Performance.

Past researchers found that loyalty has a positive relationship with QMPs, organizational performance. Therefore, this study hypothesized that:

H10: Human-Oriented Element (Loyalty) will fully mediate the relationship between Quality Management Practices and Organizational Performance.

Figure 2. Conceptual framework





Methodology

A survey method is employed to address the research questions of the study. Primary research method is used to collect data through questionnaires. The Structural equation model is employed to analyse the structural model and structural relation among measured and latent variables. It analyzes the direct and indirect association among variables. A main aspect in SEM is the determination of appropriate sample size. The present study has previously chosen 310 samples based on the benchmarked table for determining sample size. However, the sample size was increased to 600 to overcome the response bias. The response rate was 62.5 percent, as 435 questionnaires were answered properly. In view of the research objectives and competencies, AMOS is used to examine the objectives of the research.

Research Analysis and Discussion

To address the research objectives, SPSS v19 was used for data processing and modelling. Primarily the responses from the questionnaires were coded into SPSS and went through statistical analysis using AMOS v21. In business research, structural equation modelling is an advanced and widely used multivariate analysis. It is basically a multivariate data analysis which examines the indirect and causal relation among variables, through simultaneous determination of interdependent, separate and multiple regression equations. The distinguishing feature between SEM and multiple regression is that SEM examines the relation simultaneously, while multiple regression independently determines the relation among variables.

SEM data analysis aims to assess the degree to which the sample data supports the estimation of the structural model. SEM particularly examines the structure of co-variance that exists between the observed variables. Whereas, observed variables help to define and make inferences about the constructs or latent variables. The latent variables are referred to as the unobserved variables which need more and more constructs to explain them. Afterwards, the maximum likelihood method, a widely used estimation method for further evaluation of SEM data analysis, is employed.

Reliability of data is also checked through SPSS, indicating that all measures are reliable. It is suggested that coefficient values, i.e. 0.60, 0.70, and 0.80 are considered as poor, acceptable and good, respectively. Another rule of thumb suggests that alpha values that lies above 0.50 are said to be adequate and less than 0.50 indicates unacceptability in explaining the reliability of constructs. A suitable range for reliability is 0.50-0.60. Following previous research studies, the present study has set Cronbach alpha value to 0.60 as a threshold value. Reliability test shows that all constructs are reliable.

The model fit values are CFI=0.94, RMSEA=0.05, PNFT=-.933, & TLI=0.938, all values range within the threshold level indicating that model has fit the data well. Inner model was also assessed through SEM-AMOS, including the estimation of factor loadings, discriminant validity, and composite reliability.

Confirmatory Factor analysis along with the measurement model assesses the evaluation of measures that are obtained through CFA. CFA is generally employed to check whether the measurement of constructs is consistent with the proposed constructs. Presence of discriminant validity is provided for present study.

Table 2: Validity and reliability

				Average Variance
	Cronbach's		Composite	Extracted
	Alpha	rho_A	Reliability	(AVE)
OP	0.982	0.982	0.984	0.821
QMPs	0.968	0.98	0.97	0.681
SATIS	0.982	0.98	0.982	0.751
LOYAL	0.932	0.96	0.971	0.721
COMITT	0.924	0.94	0.942	0.737

Discriminant validity measures the degree to which measures of constructs are visible and distinct. Discriminant validity for present research is obtained through comparing cross-loadings with item loadings, as given in Table 3.

Table 3: Discriminant Validity

	OE	OE		OP		TQMP		COMITT
OP	0.948							
QMPs	0.731	0.79	8					
SATIS	0.518	0.55	0	0.801				
LOYAL	0.623	0.67	2	0.701		0.981		
COMITT	0.623	0.67	2	0.701		0.701	0.98	1

The next step is the estimation of structural equation modelling through a path diagram. It is a useful technique as it determines the direct and indirect relation among the observed variables. For this reason, structural equation modelling is preferred for this study. This is done for hypotheses testing.

Since the aim is to assess the relation among latent constructs of the study, the hypothesized structural model was established under the first order construct. Path coefficients are used to determine the relationship between the constructs and to make decisions about the tested hypotheses. After assessing the structural relationship among variables of measurement model, goodness of fit was checked. The goodness of fit determines whether the model is suitable for testing of hypothesis. Subsequently, the measurement model was converted to structural model to examine the relation among exogenous and endogenous variables. The results for direct hypotheses are given in table, which revealed that all of the direct hypotheses are significantly accepted.

Table 4: Direct Effect

	(β)	SD	T-value	P-Values
H1	0.111	0.035	3.161	0.002
H2	0.207	0.043	4.81	0
Н3	0.321	0.051	3.161	0
H4	0.327	0.052	3.61	0
Н5	0.242	0.063	4.81	0

Н6	0.324	0.163	3.91	0
H7	0.274	0.023	4.718	0

Table 5 present the results of indirect hypothesis. It has been shown that all direct hypothesis have been accepted significantly.

Table 5: In-Direct Effect through Moderation

	(β)	SD	T-value	P-Values
H8	0.109	0.018	4.319	0.000
Н9	0.129	0.016	5.339	0.000
H10	0.112	0.021	6.331	0.000

The results of the current study have shown a great deal of agreement with the hypothesized results.

Conclusion

In spite of the numerous works conducted in the literature regarding the total quality management practices, there has been a lack of agreement or consensus on what TQM is. The TQM definition can only be seen differently in accordance with the method taken towards quality. However, in the prior studies conducted and the literature consulted on TQM, there are a variety of definitions offered and put forward by different scholars in different situations. The main objective of the current study is to investigate the link between TQM, human oriented elements and the organizational performance. The satisfaction, commitment, and loyalty are considered as human oriented elements. The TQM is accessed as a determinate of the organizational performance. In addition to that, the current study has examined the mediating role of human oriented elements in the relationship between TQM and organizational performance in the higher education institutes of Thailand.

Structural equation model is employed to analyse the structural model and structural relationship among measured and latent variables. It analyzes the direct and indirect association among variables. The SEM-AMOS is used, and the results of the study have provided a great deal of agreement with the hypothesized results. It is evident that the youth and graduates from Thailand's tertiary institutions are not prepared with the skills with which to exploit and judicially utilized the endowed natural resources in the country. These and



other reasons have rendered the attainment of self-reliance and entrepreneurship education among the teaming graduates difficult to maintain. This study has focused on the subjective measure of organizational performance including information gathering in problem solving/communication, faculty intellectual pursuits, achievement and development among staff and students, achieving academic excellence through quality adherence and feedback among others. The study will be helpful for policymakers, educationist and researchers and student in understanding the issues in the higher education sector of Thailand.

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