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The Correlation between Internal Quality Assurance and the Formation of Quality Culture in Vietnam Higher Education: A Case Study in Ho Chi Minh City

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Abstract: Implementing internal quality assurance activities is an indispensable condition to form a quality culture in higher education institutions in Vietnam which contributes to a fundamental and comprehensive renovation of Vietnamese higher education. The purpose of this research was to assess the correlation of internal quality assurance on the formation of quality culture throughout the types of higher education institutions in Vietnam. A group of 222 teachers from 8 higher education institutions (4 public higher education institutions and 4 private higher education institutions) in Ho Chi Minh city participated in a survey. The questionnaire included three groups which are internal quality assurance activities, awareness of individuals, and organizational culture. The results showed that the correlation between internal quality assurance and the formation of quality culture is different between the two types of higher education institutions. With the autonomy mechanism in higher education institution administration, the level of application of guaranteed the internal quality assurance activities is associated with quality culture developing in private higher education institutions higher than public higher education institutions.

Keywords: *Internal quality assurance, quality culture, multivariate analysis of covariance (MANCOVA).*

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Introduction

Some authors have commented on the correlation between quality assurance (QA) and quality culture (QC): QA was a matter of awareness and commitment that calls for QC (Vlasceanu et al., 2007), QC is an important factor in QA of higher education (Farcas & Moica, 2009), QC was the development and conformity with the internal QA processes (Harvey, 2009b), the QA processes were required to develop QC to enhance the quality of activities in educational institutions (Batool & Qureshi, 2010), QA is a component of QC (Loukkola & Zhang, 2010), investment in QC could reduce costs for QA activities (Wagenaar, 2011), the QA activities and planning to build QC was very important, which is associated with accountabilities clearly at all levels (Sursock, 2002), and QC as a practice reflects the application of QA frameworks to educational institutions (Vettori, 2012). Ehlers (2009) distinguish the two concepts; QA process is something tangible and could be managed by the decision of the institution, while QC is to share values, beliefs, expectations and commitments - very difficult to change.

Internal quality assurance

Internal quality assurance is considered as a quality self-assessment activity for all activities in an educational institution. Self-assessment is the backbone activity and is the foundation in the internal QA (IQA) system because it provides comprehensive information about all activities in the educational institution (Batool & Quershi, 2004), a fairly comprehensive assessment of the activities in the educational institutions through self-assessment activity. According to this view, the IQA system requires transparency and accountability (Mohamedbhai, 2006), with appropriate strategies (Arsovski, 2007), determining the scope of capacity of related people (Karkoszka, 2009) to ensure QA for all activities within the institution.

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> The internal quality assurance of higher education in this study is a collective process and systematic verification procedures through a system, policies and internal mechanisms to ensure the improvement of the quality of the educational process in accordance with the objectives and public accountability (Rifa'i, Permana et al., 2018, p. 275).

Based on the concepts above, IQA activities include mechanisms and measures to supervise, inspect, evaluate, maintain, ensure and improve the quality and accountability of specific procedures and processes of all activities that it is operating in higher education institution (HEI).

Quality culture

QC is referred to as a tool to improve and standardize the organization in quality, is a cultural element that promotes the development of the organization on quality in all activities and have closely and systematically relationships with other cultural elements in the organization.

According to Crosby (1986), QC is that everyone in an educational institution is responsible for quality. The European University Association (2006) believes that QC is based on two components: (1) A set of shared values, beliefs, expectations and commitments towards quality (referring to understanding, perceptions, participation, expectations and emotions). (2) Structure and management factors with a defined process to improve the quality and efforts of coordination of implementation (referring to the duties and responsibilities of individuals and collectives). QC is a system of organizational values to create an environment conducive to establishing and continually improving quality (Ahmed, 2008).

The QC opinions towards action are closely related to organizational culture with the aim of continuously enhancing and improving quality (Ahmed, 2008; Gvaramadze, 2008), school culture / QC as a public instrument to reflect (Vettori, 2012).

The QC opinions towards awareness focuses on the fact that people have quality work habits, QC as a contextual topic (nature, life style, way of thinking and understanding, is something that cannot be expressed in writing) instead of a set of procedures (Harvey, 2009a). In addition, Lanares (2009) emphasizes individual and collective awareness in QC (Lanares, 2009).

In short, QC is a subculture in organizational culture or in other words, QC adds some quality value to organizational culture to empower and support organizational culture complete the organization's mission and goals. For this study, the formation of a QC is the formation / awakening of awareness, consciousness and responsibility of all people in HEI for quality in accordance with the overall strategy and goals when do any activities, especially QA activities.

Correlation between internal quality assurance and quality culture

In 1997, Berry mentioned the perceived advantages of Total Quality Management in school education like as the base to form QC. The author showed the Total Quality Management process could be compatible in school education include theoretical compatibility, educational compatibility, equity principles, ethically comparable, compatible with existing organizational, and long-term commitment to improvement. These perceived advantages support leadership and enhance the role of quality management in developing quality for their school.

Tungkunanan et al. (2008) analyzed the factor of QC affecting on the strategic plan for developing QC at Eastern School of The Office of Vocational Education Commission, Thailand. The study identified the factors of QC (9 factors) include strategic plan, working team, manager leadership, continuous self-development, continuous improvement, management by fact, customer care, organizational commitment, and decentralization. The research was divided into three stages; the first stage was a study about the QC at Eastern School of The Office of Vocational Education Commission in Thailand. It surveyed 435 respondents (108 executives and 327 teachers) and showed 9 factors analysis on QC could describe the variances at 72.413%. The second stage: Improving the strategic plan in order to have a QC development at Eastern School of The Office of Vocational Education Commission in Thailand surveyed 37 directors indicated that activities related to improving of strategic plans brought the positive changes in quality composed of vision, 5 missions, 8 goals, and 4 categories of 31 strategies; and the third stage of the study was the assessment of the strategic plan for developing the QC of Schools under The Office of Vocational Education Commission, Eastern part of Thailand. This stage surveyed 63 directors and vice directors of planning department towards the strategic plan for development the QC showed the opinion of them was at the high utility, high feasibility, high propriety and high accuracy (mean value = 4.03).

Milisiunaite et al. (2009) present how approach to enhance QC by means of quality management in Vilnius University. The authors mentioned that learning oriented QC aims "transform society into a learning society,…a commitment to life-long learning, critical thinking and continuous flow of change are the main characteristics of transformation"; importance of information system for effective quality management; the efforts within national systems to assure quality in higher education emphasized "the harmonization of international, national external and internal QA levels is quite a challenge for the higher education system"; National and international quality awards is like a quality

measurement in higher education environment; application of ISO series standards in higher education; and QC embedment in Lithuanian HEI: Vilnius University Approach to quality management as a tool for QC embedment within the main objectives of quality management included "to initiate and coordinate the implementation and development of QA and improvement forms, methods and procedures of all University activities; to initiate the development of effective self-evaluation system and assure its implementation for QC embedment; to initiate the development of the monitoring system which would enable to obtain objective data on QA in studies, research and service areas and coordinate its functioning; and to initiate, develop and promote quality improvement model at the institutional level, taking consideration to European higher education development trends, competitive higher education environments worldwide and the best practice of world class universities" was implemented with the monitoring mechanism QA and improvement activities.

Research by Strydom et al. (2004) on the impact of the development the QA system to QC and the changes inside HEI showed there is disagreement between quality, culture and change. The research results showed that the success of organizational culture was important for the development of quality management systems and when QC was established leading to practical activities and procedures and focus on improving quality instead of operating in a compliant manner. In particular, we should pay attention to individuals and collectives that go against change. Moreover et al. (2007) argued that the role and function of external QA is important for QC development in HEIs. The study of Kristensen (2010) argued that QC will form in HEIs from external quality impacts, thus the balance between IQA and external QA are important in quality performance.

In the Examining quality culture project of European University Association, Sursock (2011) emphasizes on QA, especially QC, which is closely related to questions related to consciousness, thinking and power. Vettori (2012) continues to recognize the importance of QA and QC within HEIs through three match pairs "Strategies and Policies", "Instruments and Practices" and "Principles and Underlying Assumptions" and build QC based on shared values and practical and consensus from HEIs.

In Vietnam, the studies are based on knowledge, experience, theoretically or philosophically in the process of working. Few or no theoretical studies and practical surveys to build a theoretical basis for correlation between IQA and QC. In particular, the comparison between the two types of HEI: the public HEIs (PBHEI) and the private HEIs (PVHEI). In Vietnam, IQA activities have been implemented for more than 10 years but studying the correlation of IQA activities on the formation of QC is still very limited. Meanwhile, it is necessary to clarify the correlation between IQA activities and the formation of QC to identify cognitive values (quality culture) formed from a number of IQA activities and vice versa. QC affect any QA activities and thus, comparing and evaluating the similarities and differences in their correlations within the different types of HEIs in the country is essential.

Therefore, the objective of this research was conducted to assess the correlation of IQA activities on the formation of QC in the different types of HEIs in Vietnam. Then assessing the differences of the correlation between IQA and the formation of QC in HEI between PBHEI and PVHEI in Ho Chi Minh city.

Objectives of Research

The primary objective of this study was to assess the differences of the correlation between IQA and the formation of QC in HEI between PBHEI and PVHEI in Ho Chi Minh city. To assess these differences. Firstly, the paper analyzes the values of a QC at PBHEI and PVHEI in Ho Chi Minh city. Secondly, finding out the correlation between the factors of internal quality assurance activities and the values of a QC at PBHEI and PVHEI in Ho Chi Minh city. Finally, assessing the differences of this correlation between PBHEI and PVHEI in Ho Chi Minh city.

Methodology

Research design

In this research, a combination of qualitative and quantitative research methods (mixed methods) were used. The purpose of combining two these methods was to provide sufficient evidence with high persuasion to detect problems arising from other correlations in the correlation between IQA and the formation of QC in PBHEI and PVHEI (Green, 2007; Kellie, 2008).

The research designed and organized research in the form of surveys, collects information from survey subjects, analyzes documents, research works as a basis for analyzing and synthesizing issues related to correlation between IQA and QC in HEIs. Thereby, this research assessed the differences of this correlation between PBHEI and PVHEI in Ho Chi Minh city, Vietnam.

Questionnaires

Questionnaire was designed with reference to the QA and QC of Loukkola and Zhang (2010). The questionnaire was designed with 8 questions with 86 items were divided into 4 main groups:

- IQA activities: the QA activities in HEI, measures to ensure the mechanisms to QA, the objects involved in the QA activities, the sources of information about the QA activities (3 questions).
- Awareness of individuals: knowledge and experience of IQA and QC, some information related to individuals, acknowledged by each individual after implementing IQA activities (3 questions).
- Organizational culture: personal behavior in work in the unit, management style, implementation of assessment, cooperation, sharing in difficult situations (1 question).
- The values of a QC: consist of awareness; responsibility; cooperation, sharing; consensus; belief; commitment; equality; creation, innovation; pioneer; competence and action (1 question).

The interview outline was developed based on the research objectives and questionnaires to collect information and verify the collected information as well as the basis for revising the survey and information outline during the construction process and complete the questionnaire.

The purpose of interview was to find out what the QA activities have done, its mechanism and people's views on QC. Through interviewing the participants, the needed information was selected and deepened essential for the content of the research on the relationship between IQA activities and the formation of QC in HEIs and the issues needed to be verified with the content collected from the questionnaires.

After the questionnaire was built, it was sent to 20 lecturers for comments on the items of the questionnaire. The author collected the comments and adjusted the items to best suit. The next, the author conducted a pilot survey with 50 lecturers; the result of the Cronbach's Alpha reliability coefficient was 0.802. The questionnaire ensured reliability for information collection in research.

Participants

The stratified random sampling used to select 8 HEIs in Ho Chi Minh City, including 4 PBHEIs and 4 PVHEIs (over 30% of the total number of PVHEIs in Ho Chi Minh City). In particular, the number of lecturer participating in the questionnaire was selected meeting the research objectives. 222 questionnaires were returned from 250 respondents with 118 respondents for PBHEI and 104 responders for PVHEI. The results of Cronbach's Alpha calculation for the items get Cronbach's Alpha reliability coefficient from 0.769 to 0.958. Table 1 shows the number of lecturer of each HEI.

Table 1. Number of lecturers participating in the survey

	1st HEI		2nd HEI		3rd HEI		4th HEI		Sum	
	Male	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
PBHEIs	**20**	**11**	**14**	**14**	**18**	**12**	**17**	**12**	**69**	**49**
Master's degree	13	7	9	8	11	8	11	7	44	30
Doctor's degree	7	4	5	6	7	4	6	5	25	19
PVHEIs	**14**	**11**	**16**	**12**	**14**	**10**	**16**	**11**	**60**	**44**
Master's degree	8	7	9	7	9	7	10	8	36	29
Doctor's degree	6	4	7	5	5	3	6	3	24	15

In addition, the participants were chosen to interview: 4 PBHEIs and 4 PVHEIs, including 3 leaders of the universities, 8 leaders of the education quality assurance departments, 10 leaders of the other departments and 20 lecturers. Interview time is from 15 to 45 minutes. In some cases where direct interviews were not possible, the author exchanged information via telephone.

The interview method was mainly used for preliminary research and rechecking the information with the collected information. Randomly interview related subjects or participate in QA activities at universities. The method was conducted directly by talking with 3 leaders of the universities includes 2 at 1st PBHEIs and 1 at 1st PVHEIs to better understand the QA mechanism and get the consent of them, we contacted and exchanged directly with 5 leaders of the QA departments includes 1 at 1st PBHEIs, 1 at 2nd PBHEIs, 1 at 3rd PBHEIs, 1 at 1st PVHEIs and 1 at 3rd PVHEIs; 5 leaders of the other departments includes 1 at 1st PBHEIs, 1 at 2nd PBHEIs, 1 at 3rd PBHEIs, 1 at 1st PVHEIs and 1 at 3rd PVHEIs; 11 lecturers includes 3 at 1st PBHEIs, 2 at 2nd PBHEIs, 1 at 3rd PBHEIs, 2 at 1st PVHEIs, 2 at 2nd PVHEIs and 1 4th PVHEIs. The number of remaining participants, it was conducted exchange via phone. Interview conditions selected are most suitable and convenient for the interviewees.

Statistical Analysis

Statistical analyses were performed using the Statistical Package for the Social Sciences (SPSS statistics V22.0). Descriptive analysis was used to analyze the data collected. A multivariate analysis of covariance (MANCOVA) was performed to find out the correlation between the factors of IQA and the formation of quality culture. This analysis results were also the similarities and differences in that correlation between PBHEIs and the PVHEIs. That is, the variables (items) in the factors that are considered affect how to the dependent variables on the types of HEI, and this affects that show that the difference between a PBHEIs and a PVHEIs. The data analysis of the factors internal quality assurance activities was analyzed by the Exploratory Factor Analysis (EFA) to find out which appropriate factors made input data for MANCOVA test.

Findings

Descriptive Analysis

The values of a QC surveyed to get to know how about the individual and collective awareness after the IQA activities deployed in HEIs is described by mean scores in Table 2 with Likert scale: 1 – No effect, 2 – Minor affect, 3 – Neutral, 4 – Moderate affect, and 5 – Major-affect.

Table 2. The IQA activities affected on the individual and collective awareness

	PBHEIs		PVHEIs	
The values of a QC	**Individual**	**Collective**	**Individual**	**Collective**
Awareness				
Mean	3.76	3.51	4.04	4.06
Standard Deviation	.940	.976	.965	.984
Responsibility				
Mean	3.69	3.58	4.10	4.17
Standard Deviation	1.107	1.057	.919	.980
Cooperation, sharing				
Mean	3.61	3.31	3.41	3.42
Standard Deviation	.996	1.019	.648	.910
Consensus				
Mean	3.76	3.58	3.57	3.64
Standard Deviation	.884	.871	.856	.994
Belief				
Mean	3.44	3.33	3.54	3.59
Standard Deviation	1.000	.943	.749	1.058
Commitment				
Mean	3.53	3.30	3.89	3.88
Standard Deviation	.984	1.032	1.105	1.068
Equality				
Mean	3.48	3.40	4.06	3.95
Standard Deviation	.949	.926	1.032	1.037
Creation, Innovation				
Mean	3.63	3.50	3.71	3.62
Standard Deviation	.985	1.060	.733	.917
Pioneer				
Mean	3.36	3.31	3.75	3.52
Standard Deviation	.967	.976	.890	1,005
Competence				
Mean	3.53	3.37	4.05	4.01
Standard Deviation	.967	.950	.939	.940
Action				
Mean	3.53	3.45	3.92	4.02
Standard Deviation	1.027	.975	1.103	1.033

Table 2 shows that individual and collective awareness at PVHEIs was higher than that of PBHEIs, specifically about responsibility, commitment, equality, competence and action. The survey results indicated individuals and collective awareness on the values of a QC had positive signs through the IQA activities.

The research results of Tungkunanan et al. (2008) showed organizational commitment according to Decotis et al. (1987) "the organizational commitment can express the unify and the participation in different activities which make

the members having a difficulty to go away. The commitment is the core of organization in terms of making understanding between the organization and the members. The members who have the organizational commitment can achieve the organizational aims and the organizational value", on working team according to Quick (1992) "Due to the organizational members give the assistant to each other, sharing their knowledge and have a freedom in communication, they can make use of the resources together effectively. With the cooperation in making decision as well as solving the problems, the members will have a strong commitment in team, and they cannot accept the failure in operation. Consequently, they will work with quality. That's why the team work is important to the members and their organization", on management by fact indicated the fact is measuring tool to measure a good management, on customer care showed that the learner-centered teaching method focuses on the learners' benefits and on decentralization according to Unesco (1985) "The organizational management based on the decentralization which is the base of democracy can encourage the staff to participate in making decision. Therefore, the organization will have a flexibility in work which relates to the economic, the society and the culture. It can also enhance the staff's capacity-building to rely on oneself and have a self-development in permanence".

Besides that, Berry (1997) suggest that '…equity, excellence, democracy and justice provide the dimensions for a theory of quality for schools, which suggests that quality schools need to communicate civilization, meet the personal needs of students and ensure that students are responsive to the needs of society…'.

That indicated that responsibility, commitment, equality, competence and action are very important to the formation of quality culture in higher education.

Inferential Analysis

The survey items on Likert scale: 1 – Strongly disagree, 2 – Disagree, 3 – Neither agree or disagree, 4 – Agree, 5 – Strongly agree. The factor analysis conducted on the collected data in 7 questions (the values of a QC are excepted from factor analysis). The results were 12 factors. The names of the factors were named as follows: Factor 1: lecturers are responsible for the school; Factor 2: the competence and behavior of lecturer; Factor 3: Activities support students ; Factor 4: the teaching conditions; Factor 5: the organizational culture ; Factor 6: the lecturer's awareness and responsibility for getting feedback; Factor 7: the feedback activities; Factor 8: the lecturer's awareness and responsibility about the question banks; Factor 9: the objective factors in using question banks ; Factor 10: the behaviors of everyone in the office; Factor 11: self-recognition of individual after IQA activities deployed and Factor 12: lecturer's opinion on IQA activities. The result of factor analysis was KMO = 0.869, Sig = 0.000.

On the factor analysis, the author conducted multivariate analysis of covariance (MANCOVA) to find out the correlation between IQA activities and the formation of QC and similarities and differences in this correlation between PBHEIs and PVHEIs. That is, the variables in the factors that are considered affect how the variables depend on the types of HEI and the effects that show the difference between PBHEIs and PVHEIs.

MANCOVA performs on 12 factors including the parameters: the dependent variables including QC values, fixed factor is the types of HEI and the covariates including the items in the corresponding factor analysis. The results of the MANCOVA analysis are presented in the following order.

The dependent variables are checked homogeneity with Box's M = 1,406. 610, F (253; 142,779.114) = 4.979 and p = .000 shows that the correlation between the dependent variables is significant different between the two types of HEI (according to the results in Table 2).

The results of multivariate tests show the types of HEI is significant affected on the QC values ($p < 0.001$ of 12 factors). For the items in each of the factors affecting significantly ($p < 0.05$) to the QC values consists of 11 factors, the 7th factor has no effect on the QC values:

–Factor 1 (10 items) include: Always have a progressive spirit (p = .005); Self-learning, improving professional level (p = .000); Willing to devote to the development of the unit (p = .000); Teaching is the one person you progress in your career (p = .001); Working with the motto of quality over quantity (p = .001); Support creative thinking, innovation (p = .016); Always know your behavioral control (p = .003). IQA activities promote teaching activities (p = .030); Informing on QA activities to everyone (p = .000) and dare to think, dare to do and dare to take responsibility (p = .039).

–Factor 2 (7 items) include: Self-evaluation of their teaching competence (p = .000); Self-evaluation of faculty's teaching competence (p = .000); Self-evaluation is the collective's teaching competence (p = .004); Teaching requires knowledge of IQA (p = .000); Results of teaching meet learning outcomes (p = .000); IQA activities promote teaching activities (p = 0.007) and dare to think, dare to do and dare to take responsibility (p = .050).

–Factor 3 (3 items) include: Supporting to assess students with multiple tests (p = .004); Feedback activity in Vietnam higher education (p = .000), supporting students (p = .021).

–Factor 4 (3 items) include: Teaching in good conditions and environment (p = .003); Feedback activity in Vietnam higher education (p = .000) and Lecturer is stable incomed (p = .010).

–Factor 5 (5 items) include: Leader managed by direction or encouragement (p = .000); Organizational culture is traditional or modern (p = .003); Taking interest is quantity or quality (p = .019); First male / female or equal (p = .027) and evaluated according to the process or outcome (p = .010).

–Factor 6 (5 items) include: General reflect the true situation (p = .005); Build self-regulatory plan (p = .000); Strengthening the responsibility of lecturers (p = .020); Raising awareness of the quality of teaching and learning (p = .003) and Innovate on goals, methods, teaching content (p = .002).

–Factor 8 (5 items) include: Strengthening the responsibility of lectures (p = .009); Avoid learning is not enough (p = .000); Developing the capacity for self-learning students (p = .016); Assess the capacity of students (p = .040) and Quality assurance according to the development and innovation of higher education (p = .026).

–Factor 9 (2 items) include: Influence on teaching (p = .002) and Motivating to develop teaching quality (p = .010).

–Factor 10 (6 items) include: Sharing the difficulties, challenges together (p = .001); Trust, sharing, ready to help each other (p = .000); Put full faith in the work for development (p = 0.000); Support, help new colleagues (p = .000); Struggling with the wrongdoing with the law (p = .014) and Leaders always encourage, facilitate (p = .035).

–Factor 11 (2 items) include: Consistent with the objectives of the HEI (p = .011) and Raising awareness of individual's quality (p = .032).

–Factor 12 (3 items) include: Supporting IQA activities (p = .000); IQA indispensable in a HEI (p = .000) and QA is the way to self-improvement (p = .029).

The main results from the MANCOVA analysis showed that the items in the factors and the type of HEIs affected on the values of a QC (Tests of Between-Subjects Effects). This results also showed the items in the factor directly affected on the values of a QC (p <.05) in Table 3.

Table 3. The items in the factors affected on the values of a QC

The values of a QC		**The items in the factors affected on the values of a QC**												**Sum of the factors**	**Sum of the items**
		1	2	3	4	5	6	7	8	9	10	11	12		
Individual	Awareness	2		1	1	1	2		2	1			1	8	**11**
	Responsibility	1	1	1	1	2	3		2	1			1	9	**13**
	Cooperation, sharing	2	1				5	1	4	2			1	7	**16**
	Consensus	2	2	1		4	1		4				1	7	**15**
	Belief	2	3	1	1	2	4		1	1		1		9	**16**
	Commitment	3			1	2		2	2	1		1	1	8	**13**
	Equality	3	1	1	1	2	2		2	1		1		9	**14**
	Creative, innovation	1	1			1	2		2	2				6	**9**
	Pioneer	1	1	1			3	2	3	1	1	1		9	**14**
	Competence	2		1		2	2	1	2	2	2		1	9	**15**
	Action	2		1		1	2	1	2	2	1		1	9	**13**
Number of quality cultural values		21	10	8	5	17	26	7	26	14	4	4	7		
Collective	Awareness	2	3	2	1	2	2		1	1	1			9	**15**
	Responsibility	1	4				1		3	1			1	6	**11**
	Cooperation, sharing	2	4		1	1		1	1	1		1		8	**12**
	Consensus	1	2	1	2	2		1	2	1				8	**12**
	Belief	1	2	1	1	1			2	1				7	**9**
	Commitment	3	4	2	2	2	1	1	2	1	1	1		11	**20**
	Equality	3	1	2	2	2	1	1	2	1	1	1	1	12	**18**
	Creative, innovation	2	1	2	2	2	1		3	1		2		9	**16**
	Pioneer	1	3	1	2		3	1	2	1	2		1	10	**17**
	Competence	3	3	2	2		3		1	1				7	**15**
	Action	1	2	2	2		2		2	1				7	**12**
Sum of the quality cultural values		20	29	15	17	12	14	5	21	11	5	5	3		
Total on the values a QC		41	39	23	22	29	40	12	47	25	9	9	10		

The analytical data has shown the influence of the items in each specific factor on the values of a QC, in which, in terms of individuals, the values of a QC as creative, innovation with a number of meaningful factors and the number of meaningful items are lower impact on the remaining values of a QC, similar to the collective, the values of a QC are the responsibility and belief.

Besides that, the results also showed the types of HEIs affected on the values of a QC ($p < 0.05$) as Table 4.

Table 4. The type of HEIs affected on the values of QC

The values of a QC		Affecting on the values of a QC from the factors in types of HEI											
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Individual	Awareness	0.006	0.036	0.025									0.047
	Responsibility	0.000	0.007	0.003	0.015		0.008	0.042			0.023	0.014	0.006
	Cooperation, sharing					0.030	0.043	0.018	0.050				
	Consensus					0.006	0.031	0.029		0.010	0.013		
	Commitment	0.001	0.001	0.010	0.046								0.050
	Equality	0.000	0.000	0.000	0.000	0.014	0.002	0.004	0.033	0.002	0.009	0.000	0.000
	Pioneer	0.001	0.001	0.003	0.003	0.038	0.023		0.038	0.009	0.023	0.008	0.035
	Capacity	0.000	0.001	0.000	0.001	0.016	0.003	0.011		0.004	0.007	0.002	0.002
	Action	0.000	0.001	0.003	0.015					0.048			0.028
Collective	Awareness	0.000	0.000	0.000	0.000	0.013	0.001	0.003			0.004	0.010	0.000
	Responsibility	0.000	0.000	0.000	0.000	0.001	0.000	0.001			0.003	0.002	0.000
	Belief	0.011											
	Commitment	0.000	0.000	0.000	0.000	0.002	0.004	0.011			0.005	0.001	0.001
	Equality	0.000	0.001	0.000	0.000	0.007	0.013	0.021		0.033	0.007	0.005	0.000
	Pioneer	0.009	0.009									0.008	
	Competence	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.003	0.001	0.001	0.000
	Action	0.000	0.000	0.000	0.002	0.001	0.005	0.005			0.002	0.016	0.001

Table 4 illustrates the different in the influence of the types of HEL on the values of a QC in PBHEIs and PVHEIs. Including responsibility and competence of collective mean significant influence ($p < 0.01$). The remaining values of a QC mean significant influence from the types of HEI through a number of factors.

From Table 3 and Table 4, the study further examines the effect of the items in each factor and the types of HEI on the values of a QC (or the items of each factor affected on the values of a QC through the types of HEI) as Table 5.

Table 5. The items in the factors and type of HEIs affected on the values of a QC

The values of a QC		The number of items in the factors and type of HEIs affected on the values of a QC												Sum of the factors	Sum of the items
		1	2	3	4	5	6	7	8	9	10	11	12		
Individual	Awareness	2		1									1	3	4
	Responsibility	1	1	1	1		2						1	6	7
	Cooperation, sharing						5	1	4					3	10
	Consensus					4	1							2	5
	Commitment	3			1								1	3	5
	Equality	3	1	1	1	2	2		2	1		1		9	14
	Pioneer	1	1	1			3		3	1	1	1		8	12
	Competence	2		1		2	2	1		2	2		1	8	13
	Action	2		1						2			1	4	6
Sum of the values of a QC		14	3	6	3	8	16	2	9	6	3	2	5		
Collective	Awareness	2	3	2	1	3	2				1			7	14
	Responsibility	1	4				1						1	4	7
	Belief	1												1	1
	Commitment	3	4	2	2	2	1	1			1	1		9	17
	Equality	3	1	2	2	2	1	1		1	1	1	1	11	16
	Pioneer	1	3											2	4
	Competence	3	3	2	2		3			1				6	14
	Action	1	2	2	2		2					1		6	10
Sum of the values of a QC		15	20	10	9	7	10	2		2	3	3	2		
Total on the values of a QC		29	23	16	12	15	25	4	9	8	6	5	7		

Besides, the data indicate that the items relates to the lecturer (factors 1, 2, 3 and 4), organizational culture (factor 5), the expression of everyone in the faculty (factor 10), recognizing teachers after implementing IQA activities (factor 11)

and lecturer's opinions on IQA (factor 12) affected on the values of a QC. Moreover, comments and / or actions of the lecturers about getting feedback (factors 6 and 7) have a positive impact to the values of a QC than the using items banking (factors 8 and 9).

The information is presented in Table 6 include factors along with the types of HEI significantly affect the values of a QC ($p < 0.05$) and significant differences in the effects between PBHEIs and PVHEIs. The aggregated data shows the values of QC in the PVHEIs is higher than the PBHEIs, in which, the highest unequal of the means is 0.828 (competence of collective). Analysis results are consistent with information from Table 2.

Results of comparing the means of the values of a QC between PBHEIs and PVHEIs are shown in Table 6.

Table 6. Comparison of quality cultural values between PBHEIs and PVHEIs

The values of a QC	Individual		Collective	
	Sum of the items	The different means between PBHEIs and PVHEIs	Sum of the items	The different means between PBHEIs and PVHEIs
Awareness	4	PBHEIs < PVHEIs: 0.255 => 0.350	14	PBHEIs < PVHEIs: 0.362 => 0.735
Responsibility	6	PBHEIs < PVHEIs: 0.351 => 0.487	7	PBHEIs < PVHEIs: 0.493 => 0.762
Cooperation, sharing	10	PBHEIs > PVHEIs: 0.229 => 0.284		
Consensus	5	PBHEIs > PVHEIs: 0.262 => 0.384		
Belief			1	PBHEIs < PVHEIs: 0.340
Commitment	5	PBHEIs < PVHEIs: 0.279 => 0.483	15	PBHEIs < PVHEIs: 0.372 => 0.626
Equality	12	PBHEIs < PVHEIs: 0.364 => 0.660	15	PBHEIs < PVHEIs: 0.306 => 0.605
Pioneer	11	PBHEIs < PVHEIs: 0.282 => 0.449	4	PBHEIs < PVHEIs: 0.338 => 0.342
Competence	12	PBHEIs < PVHEIs: 0.329 => 0.648	13	PBHEIs < PVHEIs: 0.460 => 0.828
Action	6	PBHEIs < PVHEIs: 0.315 => 0.547	9	PBHEIs < PVHEIs: 0.359 => 0.672

Table 6 shows the items significant influences on the values of a QC between PBHEIs and PVHEIs is different. The items of some comments relating to lecturers include getting feedback according to Vietnam higher education, the teaching results meet outcomes; facilitate, support students, lecturer is responsible for participating in IQA activities, teaching is a progressive friend in the career; On organizational culture includes encouragement / direction; On getting feedback to improve quality awareness in teaching and learning; On the building of the test bank, it includes the motivation to develop the quality of teaching, which has a significant impact on the values of a QC higher than the remaining items. All of the activities were mentioned shows the role of leadership in their management. Berry (1997) said that '…Leadership is considered to be a concept which describes actions which yield social change and improvement and is associated with the development of community involvement and participation on decision making…'.

Discussion

It should note that the formation of QC was a change of "steady state" according to internal requirements and external demands for quality to change and develop some cultural aspects in the system in accordance with the above requirements and needs. In order to be aware of the quality, each individual and collective must go through the cognitive process through the process of implementing IQA activities, policy mechanisms inside and outside the HEI to observe, consider the QC values that are perceived as essential or formalistic and come to a decision whether or not to accept such QC values.

Table 5 illustrates the difference between PBHEIs and PVHEIs in terms of the items and the types of HEI influence on the values of a QC. The values of a QC in the individuals including equality, pioneer, competence and the values of a QC in the collectives including awareness, commitment, equality, competence and action differ significantly. This result proved the correlation between the IQA activities and the formation of QC in PBHEIs and PVHEIs is different. Example, the items in each of the factors affected on the values of QC in the PBHEIs differ to PVHEIs.

With the result in Table 5, again confirming the feedback activity from students about teaching activities make their sense and responsibility in the process of teaching "monitoring" of the students and then the "evaluation" of the faculty leaders, the HEI leaders. From the implementation of IQA activities has led to changing the way of thinking, way of work, way to adapt to the environment, with what is happening in the HEI. These changes have affected the activities in the HEI to create a cycle formation of QC and to promote continuous IQA activities.

From the difference between PBHEIs and PVHEIs in the correlation between the IQA activities and the formation of QC, we compare this difference in Table 5, the results estimate mean of the values of a QC from the factors (Estimated Marginal Means) and compare the means of the values of a QC between the PBHEIs and PVHEIs (pairwise Comparisons).

The result of estimating the means (in Table 6) shows that the most of the means the values of a QC is estimated from the factors of PVHEIs higher than PBHEIs, specifically, for individuals, the PVHEIs accounted for 76.92%, PBHEIs 23.08%, for the collective, the PVHEIs accounted for 88.81%, PBHEIs 11.19%.

The difference in HEI management model has made a difference in the correlation between the IQA activities and the formation of QC in PBHEIs and PVHEIs. With the autonomy mechanism and organization in HEI administration, the level of application of the IQA activities is linked to the development of QC in PVHEIs higher than PBHEIs.

Moreover, the interview information from the participants showed that the opinion of the leaders and lecturers at PVHEI showed a positive attitude for quality was higher at PBHEI because they thought that the quality in the activities in HEI corresponded to brand of HEI and their income, where they invested capital and contributed effort to the development of HEI.

In addition, during the survey by the questionnaire as well as the interview has supported lecturer better understand on QA and QC to they can ready to provide and exchange information positively. IQA activities have existed in the HEI for a long time, such as giving employer feedback, giving alumni feedback, QA for staff, teachers, and students support in the learning process… and now they just known the above activities are IQA activities.

Conclusion

The results of descriptive analysis showed the values of quality culture include responsibility, commitment, equality, competence and action have a important signification in the formation of quality culture in higher education. The research has proved that the QC is formed from the IQA activities, whereas QC has positive effects / impacts to IQA activities in HEIS and the correlation between the IQA activities and the formation of QC in PBHEIs and PVHEIs with differences in the administration mechanisms and forms of the HEI led to the characteristics of the quality values and features of different quality on property. The results of this study are hopefully the necessary information for Vietnam higher education in the period of transition to HEI autonomy, the IQA activities are a vital element of a HEI and a foundation to form a QC. The results of this research showed that the difference from the research papers have mentioned is the difference and similarity in the correlation between IQA and the formation of QC between PBHEI and PVHEI.

Recommendations and Policy Implications

From the research results, in the process of building an IQA system, it was necessary to develop a parallel QC in order to build a significant IQA system and form QC systematically. Therefore, to build an effective and practical QC necessary to enhance quality capacity, build quality resources, autonomy mechanisms, and remove barriers, differences in management and administration mechanisms between types of HEI. In addition, to develop a QC, the Vietnamese Ministry of Education and Training should be to force HEIs have to publish the self-assessment report on HEI's website every year so that society can monitor and evaluate quality of HEI.

From this research, the next researches can expand to survey the HEIs in different regions, areas and countries to analyze and compare among regions, areas and countries. Applying to research the correlation between IQA and the formation of QC in other educational institutions such as colleges, high schools, secondary school and primary school.

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