

Research on Factors of Quality Culture Affecting Internal Education Quality Assurance of Universities in Vietnam

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Abstract: - This research aimed to identify and evaluate the factors of quality culture affecting the formation, operation, and effectiveness of internal education quality assurance in Vietnamese universities. From that point of view, the authors proposed and recommended specific solutions to establish and develop education quality culture in Vietnamese universities. This research used both qualitative and quantitative research methods. To be more specific, the Exploratory Factor Analysis (EFA) and regression model were used to determine the level of impact of each factor on internal education quality assurance in universities. At the same time, the researchers administered a survey of over 30 universities representing different types of universities in Vietnam. The findings revealed that the factors of quality culture which have impacts on internal quality assurance include those in the field of academics, social sciences, humanities, culture, and environment.

Key words: - Quality culture, Internal education quality assurance, universities, quality of organisation, organisational structure, Strategic Management in Higher Education.

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1 Introduction

In the general development trend of education in the region and around the world at present, Vietnamese education has been changing gradually and has had certain achievements. The development trend of higher education in Vietnam cannot be separated from that in the world as this is an inevitable phenomenon requiring universities to

make various changes, including the one in the quality assurance system, [1]. Quality assurance refers to the inspection of the quality of procedures or results, depending on how quality is defined, [2]. Quality is not a unique and absolute concept in higher education, which therefore leads to different definitions of quality over time. Quality is a multidimensional concept with many meanings and

interrelations that can be distinguished but not completely separated, [2], [3], [4], [5].

According to Cardoso and his colleagues, [6], approaches to quality and quality assurance can be classified based on three different perspectives on quality in higher education: culture, compliance, and consistency. These perspectives can be said to exist side by side as proxies for quality, [6]. The quality of higher education is becoming a key area of concern for governments and all other stakeholders in education. Higher education stakeholders call for the enhancement of quality assurance in the higher education system to fulfill their expectations for quality, [7]. In [8] the authors pointed out that the concept of quality assurance in the higher education system was first practiced by HEIs in developed countries, and gradually gained support and favour in African universities.

[9], argued that the greater autonomy granted to universities and the market as a moderator of change are prerequisite for driving institutions' development and allowing them to compete in the education market. The emergence of the quality improvement trend where the responsibility for assuring quality is transferred to organisations has also promoted the development of an internal education quality assurance system, while external vigilance has been increasingly limited for quality assessment, [10]. Conceptually, internal quality assurance is a system of policies and mechanisms to operate a university model or an educational program to fully meet the objectives and standards being applied by organisations.

Education quality assurance includes internal quality assurance and internal and external quality assurance, which plays an important role in the management, supervision, evaluation, and improvement of education quality. In [11] the authors consider internal quality assurance as a process with the view to preparing an organisation or a program for external audit (i.e. preparing a self-assessment process) or supervising assigned tasks. Therefore, the internal quality assurance process is considered the one that prepares an organisation or a program for an external audit, in which the supervising task is assigned to a special quality unit. This means that internal quality assurance has a close relationship with external quality assurance, [12]. The external quality assurance system can only work effectively if it is related to the internal quality assurance one, [13].

Internal quality assurance (IQA) has been established and implemented in Vietnamese higher education for nearly 20 years, [14]. According to statistics from the Ministry of Education and Training, more than 90% of universities have established a unit or department dedicated to quality assurance, making an important contribution to the establishment and development of the quality assurance system of Vietnamese universities. According to [15], [16] establishing or developing a "quality culture" is important for organisations where attention to quality across all aspects is a top priority to successfully implement quality assurance. To clarify the relationship and interaction between quality culture and internal quality assurance of universities, the research was conducted to identify factors of quality culture affecting internal education quality assurance of universities in Vietnam. The authors assumed this to be of great scientific importance and practicality. This provides insights into the internal quality assurance of the international higher education system and its implementation in Vietnam, thereby helping universities to establish and develop a quality culture towards comprehensive quality management, and to build society's trust in education quality.

2 Theory Basis

2.1 Research on Quality Culture

The concept of "quality culture" dates back to the early 20th century in some universities in the United States; however, so far it has been difficult to find a unified definition of the concept, [17]. According to [18] "quality culture is a type of organisational culture in which quality improvement is considered as a regular activity consisting of two separate factors, which are, cultural/mental factors (set of values, beliefs, expectations) and administrative/structural factors (quality assurance process, collaborative effort)."

Approaching from the value aspect, quality culture is an expression and a part of organisational culture, "a system of values of an organisation that creates an environment that encourages the establishment and continuous improvement of quality", [19]. This implies that, in order to be able to establish and develop a quality culture according to this approach, universities need to focus on the

following issues: operational philosophy, management methods, problem-solving methods, relationship-building methods, and quality improvement methods. Universities need to have orientations, strategies and plans to create quality transformation as a premise to establish a quality culture within themselves. Therefore, it is necessary to have consistent leadership and directions from top to bottom, consensus, and commitment to change the ways of thinking, habits, and behaviours of all members of the organisations.

In addition, there are other definitions of a quality culture that are introduced and used quite commonly. According to [20] quality culture of a higher education institution is the organisational culture with quality criteria built from the internal and external quality assurance system and agreed on and implemented in order to continuously improve activities assuring the quality of that higher education institution. In [21] the author's quality culture is understood as a special type of organisational culture containing beliefs, values, expectations, and commitments of actualization based on the efforts of each individual in an organisation. Quality culture is also a component of the quality management system with tools and criteria for quality measurement and assurance.

Thus, it can be simply understood that quality culture is a system of values, standards, and habits established based on the consensus of all members of an organisation towards quality. Quality culture cannot be formed rapidly, instead, it is likely a prolonged and sustainable process. More importantly, it must have originated from the inside or the core of an organisation or a university and its members. Quality culture, as well as internal quality assurance, can be compared to an endless cycle with a starting point but no end.

2.2 Theory of Research Model

Quality culture and internal quality assurance systems have an organic relationship and interdependence. In other words, an internal quality assurance structure will hardly create sustainable quality without a quality culture, [22]. Quality culture is one of the key elements of the quality assurance system inside an organisation, and it determines the sustainability of quality assurance activities, [23].

The quality culture of an organisation is a multi-storey building consisting of a set of artifacts,

values, and assumptions that arise from the interactions among members of the organisation. Organisational culture is also formed with beliefs, behaviours, norms, dominant values, rules, and environment in the organisation, [24]. In [25] the authors have pointed out four aspects and features of quality culture to internal education quality assurance of an organisation: 1) Be open to criticism, free from suspicion among its members, and willing to make judgments or criticism from each other, 2) Evaluate for development, take personal self-reflection and take initiatives to develop, evaluate and assess the research processes based on existing quality standards, and use informative feedback to review quality policies consistent with the organisation's vision and mission, 3) Have support, fully-led infrastructure, and organisational environment, operate a robust system with high values and standards of performance, and be recognized by academics and managers for the necessity of quality monitoring systems to ensure accountability and facilitate quality improvement.

According to [6] the faculty and staff's consensus on the processes to improve quality culture is also critical to the internal education quality assurance system. In this view, quality assurance is the responsibility of all members of an organisation, which means everyone must make efforts to ensure that the right things are done in the right ways. Furthermore, quality is based on an organisation's ability to meet, first and foremost, the requirements of the academic environment, [5]. Based on the model of quality culture in universities proposed by EUA, [19], quality culture includes 1) structure (representing the university's quality system), 2) competence (representing individuals and collectives integrating quality mechanisms into culture), 3) quality culture (representing expressions, appearances and behaviours of organisation), and 4) linking elements (linking elements through participation, communication, and trust) and shapes some of quality culture values in the context of the organisational culture.

From the perspective of total quality management (TQM), quality culture is also understood as all members of an organisation sharing the same beliefs, values, and behaviours. It unites the members and creates internal motivation that helps everyone to develop. As a result, it can

be seen that quality culture has six core values including 1) unity among stakeholders, 2) respect for equality, 3) open communication, honesty upholding, 4) universal access to information, 5) emphasis on process, and 6) no success or failure, only experiences worth learning, [26].

Numerous studies have pioneered to build and establish a quality culture associated with the development of the internal quality assurance system. However, for higher education in Vietnam, the authors share a relatively similar approach. In [27] the authors proposed a structural model of university quality culture including five quality environmental components corresponding to 5 standards, which are used as the basis to build 19 criteria. The model has the connotation of expressing an organisation's quality culture and internal quality assurance activities, which should be implemented and serves as the basis for clearly evaluating the quality culture level in an educational institution. Specifically, the proposed model includes five factors: academic environment,

social environment, humanistic environment, cultural and natural environment.

In general, there are different factors of quality culture affecting internal education quality depending on the characteristics of each country and each region. However, in this research, the author selected and, from practical experiences, adjusted and supplemented the experimental research model in accordance with the purpose of the topic in Vietnam.

3 Research Methods

3.1 Research Hypotheses

Based on a theoretical basis previously developed and completed by various authors in the world and Vietnam, along with the characteristics of universities in Vietnam, the authors proposed five research hypotheses corresponding to the five factors of quality culture (*Figure 1*) affecting internal education quality assurance of universities in Vietnam (Table 1).

Table 1. Proposed hypotheses in the research based on a theoretical basis

Hypotheses	Hypothetical content	References
A1	Teaching activities, research, educational perspectives and methods, cutting-edge research, and respect for professional ethics affecting the internal quality assurance of the university.	[5], [6], [25], [27], [29]
A2	Social relationships including organisational framework and guidelines, policies, and regulations that contribute to the development of internal quality assurance of universities.	[6], [18], [26], [27], [29]
A3	Rights and obligations of university members and stakeholders which are established and complied with contribute to the improvement of internal quality assurance.	[18], [26], [27], [29]
A4	Establishing a system of standards, values, beliefs, and codes of conduct which are widely accepted and voluntarily implemented, affecting the internal quality assurance of universities.	[24], [25], [26], [27], [29]
A5	Landscape, environment, and facilities that ensure and improve the quality of activities of higher education institutions.	[25], [27], [29]

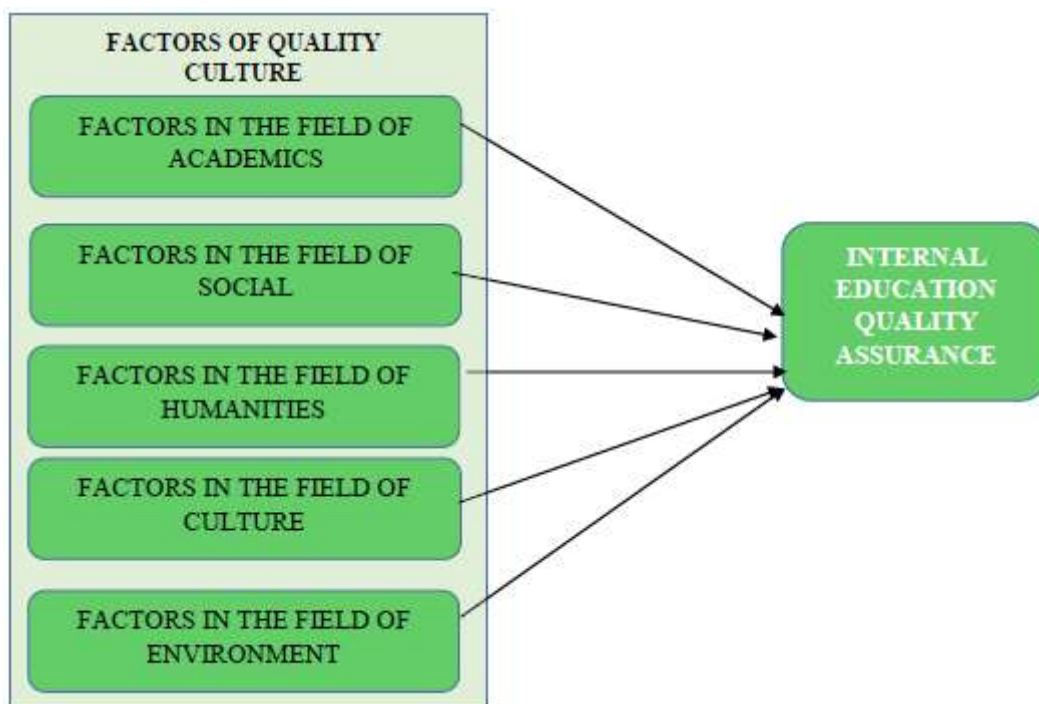


Fig. 1: Model of factors affecting decision to choose university
Source: Authors' compilation

3.2 Research Model and Scale

Based on theoretical models and experimental research hypotheses, the authors proposed a model to explore the factors of quality culture affecting the internal quality assurance of universities in Vietnam as follows:

(HT) Factors in the field of academics (four observed variables):

- (HT1) Scientific research and products published to ensure academic ethics
- (HT2) Appreciation for the implementation of academic transmission in higher education institutions
- (HT3) Continuous encouragement of active cooperation, connection, and sharing in teaching and research
- (HT4) Delight in creativity, research development, and teaching activities

(XH) Social factors (four observed variables):

- (XH1) School always upholds autonomy and social responsibility
- (XH2) School has a mechanism to evaluate the work quality of individuals and organisations
- (XH3) All information and activities in financial management are public and transparent

- (XH4) School focuses on cultural exchange and community integration activities domestically and abroad

(NV) Humanity factors (three observed variables):

- (NV1) Schools' activities show democracy in management and administration
- (NV2) Schools always ensure the benefits based on the policy regime for officials, lecturers, employees, and learners.
- (NV3) Responsibility of officials, lecturers, staff, and learners towards school and society is emphasised.

(VH) Cultural factors (five observed variables):

- (VH1) School has established vision, mission, and core values
- (VH2) Values established in an organisation are actively maintained by everyone
- (VH3) Everyone in a unit always complies with the codes of conduct, cooperation, and respects and creates a cultured lifestyle
- (VH4) Everyone in a unit always honours the good tradition of the school, as well as a national cultural identity.

- (VH5) Spirit of solidarity and reciprocity in the organisation, stakeholders, and society is always upheld.

(MT) Environmental factors (four observed variables):

- (MT1) Modern and clean school landscape and architecture
- (MT2) Facilities for teaching and research activities
- (MT3) Pedagogical culture which is guaranteed and promoted
- (MT4) Landscape and facilities are taken care of, maintained, and upgraded regularly.

(CC) The degree of responsiveness of quality culture to internal quality assurance at an establishment (three observed variables):

- (CC1) I realise that quality culture has become a key element of the school's quality assurance
- (CC2) I realise that quality culture is contributing to maintaining, consolidating, and developing the school's quality assurance
- (CC3) I am satisfied with the quality culture and quality assurance system at the university where I work.



Fig. 2: Distribution of surveyed subjects

3.3 Data Collection

The research team conducted a survey to collect data from May to August 2022. An online random and convenient interview method was used. A total of 300 officials and lecturers from over 30 universities representing different types of universities in Vietnam participated in the interview (Figure 2). To be more specific, there

were 13 universities from the North of Vietnam, 6 from the Central, and 1,113 from the South. The number of universities in this research was proportioned to the number of universities across Vietnam in reality, which indicated the appropriateness and reliability of the sampling method. In the survey questionnaire, there are a total of 23 questions classified into 6 groups related to the (1) factors in the field of academics, (2) factors in the field of social sciences, (3) factors in the field of humanities, (4) factors in the field of culture, (5) factors in the field of environment, (6) level of responsiveness, and (7) personal information. Groups from 1 to 5 used a Likert scale with a range of values from 1 to 5 to measure the perceived level of the surveyed subjects by level: strongly disagree, disagree, neutral, agree, and strongly agree.

3.4 Methods of Collecting, Processing and Analysing Data

SPSS 25 software was used to characterise the surveyed sample, factor discovery analysis, and regression analysis. The purpose of factor discovery analysis was to identify the important and reliable variables to determine a group of factors for the regression analysis.

Step 1: Evaluation of the scale quality by Cronbach's Alpha coefficient

Cronbach's Alpha coefficient is a statistical test of the closeness of variables in a scale that is correlated with each other. This method allows analysts to eliminate inappropriate variables and limit junk variables in the research process and evaluate the reliability of the scale. Variables with Item-total correlation < 0.3 were excluded. The Cronbach alpha coefficient of 0.6 or more could be used in case the concept was newly researched. Normally, the Cronbach alpha coefficient of 0.7 - 0.8 could be used. Many researchers believe that when the scale has a reliability of 0.8 or more which is close to 1, it is a good scale, [28].

Step 2: EFA exploratory factor analysis

Exploratory factor analysis is a technique used to limit and summarise data (grouping all variables into a number of factors). This method is very useful for determining a set of variables needed for the research issues and used to find the relationship among the variables.

In exploratory factor analysis, the KMO (Kaiser-Meyer-Olkin) value is an index used to consider the appropriateness of factor analysis. The KMO value must be between 0.5 and 1 for the analysis to be appropriate; and if it is less than 0.5, the factor analysis is likely to be inappropriate for the data.

The Eigenvalue represents the amount of variation that is explained by a factor greater than 1 to be retained in the model and Variance explained criteria that the total variance explained criteria must be greater than 50%. This research uses the method of factor extraction as the Principal component with Varimax rotation and removes variables with factor loading less than 0.5.

Step 3: Regression analysis and hypothesis testing

In [30] the authors show that the general regression model adjusted after factor discovery analysis has the following form:

$$CC = f(X1, X2, X3, X4, X5)$$

The empirical model (linear regression) of the factors with the overall influence has the following form:

$$CC = \beta_0 + \beta_1X1 + \beta_2X2 + \beta_3X3 + \beta_4X4 + \beta_5X5$$

To be more specific, variables in the linear regression model were explained in Table 3. There were 05 scales of independent factors (20 observed variables) and one scale of dependent factors (three observed variables).

3.5 Measurement Scale System Adjustment

After removing five unsuitable observed variables, the research team carried out a factor discovery analysis with 15 observed variables. The details of the variable names and codes were presented in Table 2.

Table 2. Questionnaire system after testing

Explanation of factors (independent variable)		Code
Factor 1	Factors in the field of academic	X1
	Scientific research and products published to ensure academic ethics	HT1
	Appreciate the implementation of academic transmission in higher education institutions	HT2
	Always encouraged to actively cooperate, connect and share in teaching and research	HT3
	Delight in creativity, research development, and teaching activities	HT4
Factor 2	Factors in the field of social	X2
	School has a mechanism to evaluate the work quality of individuals and organisations	XH2
	All information and activities in financial management are public and transparent	XH3
	School has a clearly established vision, mission, and core values	VH1
Factor 3	Factors in the field of humanities	X3
	School's activities show democracy in management and administration	NV1
	School always ensures the benefits according to policy regime for officials, lecturers, employees, and learners.	NV2
	Spirit of solidarity and reciprocity in the organisation, stakeholders, and society is always upheld.	VH5
Factor 4	Factors in the field of culture	X4
	Everyone in the unit always complies with the rules of conduct, cooperation, and respects and creates a cultured lifestyle	VH3
	Everyone in the unit always honours the good tradition of school combined with national cultural identity	VH4
	School focuses on cultural exchange and community integration activities domestically and abroad	XH4
Factor 5	Factors in the field of environment	X5
	Modern and clean school landscape and architecture	MT1
	Landscapes and facilities are taken care of, maintained, and upgraded regularly.	MT4

Source: Authors' compilation

Table 3. Explanation of variables in the model

Names of factors	Code	Observed variables of factors	Expectation sign
Internal quality assurance	CC	CC1, CC2, CC3	
Factors in the field of academic	X1	HT1, HT2, HT3, HT4	+
Factors in the field of social	X2	XH2, XH3, VH1	+
Factors in the field of humanities	X3	NV1, NV2, VH5	+
Factors in the field of culture	X4	VH3, VH4, XH4	+
Factors in the field of environment	X5	MT1, MT4	+

4 Research findings

4.1 Survey Sample Characteristics

The authors conducted a survey in 30 universities in Vietnam. The survey results showed that 40.3% of survey participants were male and 59.7% were female. The percentage of lecturers currently working at universities accounted for the majority with a rate of 48.0%. In terms of seniority, teachers with teaching experience of more than 10 years accounted for 31.7% (n=95) and only 17.7% of the participating teachers had less than 2 years of working experience (n=25). The respondents with doctoral degrees accounted for the largest ratio of 62.3%; whereas those with master degrees only made up 27.7%. Besides, the respondents who were professors and associate professors respectively accounted for 14% and 22.3%. The details of each feature were shown in Table 4.

Table 4. Characteristics of subjects in the interview sample

Type	Northern		Central		Southern		Total	
	Qty	Ratio (%)	Qty	Ratio (%)	Qty	Ratio (%)	Qty	Ratio (%)
1. Gender								
Male	42	35.0	24	36.9	55	47.8	121	40.3
Female	78	65.0	41	63.1	60	52.2	179	59.7
2. Current job position								
Managers	30	25.0	13	20.0	25	21.7	68	22.7
Lecturers	56	46.7	28	43.1	60	52.2	144	48.0
Staffs	34	28.3	24	36.9	30	26.1	88	29.3
3. Working years								
Less than 2 years	19	15.8	8	12.3	26	22.6	53	17.7
From 2 to 5 years	21	17.5	17	26.2	32	27.8	70	23.3
From 5 to 10 years	37	30.8	22	33.8	23	20.0	82	27.3
Over 10 years	43	35.8	18	27.7	34	29.6	95	31.7
4. Academic rank, academic degree								
Professor	20	16.7	9	13.8	13	11.3	42	14.0
Associate Professor, Ph.D.	32	26.7	15	23.1	20	17.4	67	22.3
Ph.D.	41	34.2	28	43.1	39	33.9	108	36.0
Master	27	22.5	13	20.0	43	37.4	83	27.7
Total	120	100	65	100	115	100	300	100

Source: Author's compilation

Results of the EFA test for the scales are shown in Table 5. Results of the EFA test showed that: the KMO coefficient was 0.964 ($0.5 < KMO < 1$); Bartlett's test was less than 0.05; Factor Loading is greater than 0.5 and Eigenvalues of all 5 factors are greater than 1, showing the convergence of factors. Thus, factor analysis was accepted with the research data set. The total variance extracted was

60.785%, greater than 50%, showing that the factor analysis model was appropriate. This result showed that the above five factors explain 60.785% of the variability of the data. Analysing the results of the Cronbach's Alpha test, the components of all scales were satisfactory with the Cronbach's Alpha within the range of 0.6 to 0.839, which indicated that the scale was of a good level.

Table 5. Results off Exploratory factor analysis (EFA) of components

Observed variables	Factors (components)				
	1	2	3	4	5
HT1	0.700				
HT2	0.834				
HT3	0.776				
HT4	0.770				
XH2		0.651			
XH3		0.800			
VH1		0.709			
NV1			0.739		
NV2			0.773		
VH5			0.637		
VH3				0.689	
VH4				0.773	
XH4				0.637	
MT1					0.619
MT4					0.737
Variable					
	Variable	Eigen value	Extracted Variance	Cronbach's Alpha	
X1	4	5.507	27.536	0.839	
X2	3	2.740	13.698	0.727	
X3	3	1.592	7.958	0.717	
X4	3	1.285	6.427	0.716	
X5	2	1.033	5.166	0.6	
Total	15		60.785		
KMO coefficient					
		0.964			
Bartlett's test					
	Chi-Square	8164.519			
	Df	741			
	Sig.	.000			

Source: Author's compilation

4.3 Factors of Quality Culture Affecting to Internal Quality Assurance of Universities in Vietnam

Least squares estimation linear regression model analysis was used to identify the impact of the factors of quality culture on the internal quality assurance of universities in Vietnam. In addition, the normalisation coefficient in the regression model was used to determine the contribution ratio of each factor to the satisfaction of the university's internal quality assurance activities. The detailed results of the regression model analysis and calculation of the importance of each factor were

shown in Tables 6 and 7 respectively.

Table 6 showed that in the full model, the P-values of the variables in the model were all less than 0.05 except for the variable X1. This result showed that in the model the variable from X2 to X5 was statistically significant at the 95% to 99% confidence level. The variable X1 was excluded in the reduced model, so the results were similar to four variables X2, X3, X4, and X5 which were statistically significant at the 95% to 99% confidence level.

Table 6. Model analysis results

Variables	Full model	Lean model
Constant	2.826E-16	1.669E-16
X1	0.080 (0.55)	-
X2	0.365*** (0.55)	0.365*** (0.55)
X3	0.126** (0.55)	0.126** (0.55)
X4	0.402*** (0.55)	0.402*** (0.55)
X5	0.333*** (0.55)	0.333*** (0.55)
Sample	300	300
R-squared	0.421	0.415
P-value	<0.001	<0.001

*** p<0.01, ** p<0.05, * p<0.1

Source: Author's estimate using SPSS software 25.00

The normalised regression coefficient showed the impact of the independent variables as a percentage. Table 7 showed that variable X4 had the strongest impact (31.0%). Accordingly, X2 (27.45%), X5 (25.6%), X3 (9.71%), and X1 (6.17%). As expected of the research hypothesis, the groups of factors affecting the internal quality assurance of universities according to the levels from strong to weak were the most important factors. Table 7 also identified variable X1 as the one with the least influence among the five investigated factors (the influence index was only 6.17), followed by X5, X3, and X2.

Table 7. Important position of factors affecting internal quality assurance

Independent variables	Full model			Lean model		
	Absolute value	Ratio (%)	Rating	Absolute value	Ratio (%)	Rating
X1	0.080	6.17	5	-	-	-
X2	0.356	27.45	2	0.356	29.26	2
X3	0.126	9.71	4	0.126	10.35	4
X4	0.402	31.0	1	0.402	33.03	1
X5	0.333	25.67	3	0.333	27.36	3
Total	1.297	100		1.217	100	

Source: Author's estimate using SPSS software 25.00

4.4 Level of Impact on Internal Education Quality Assurance

Questionnaires were used to explore the extent to which each factor of the quality culture affects the quality assurance of internal education at an institution. The results of this assessment were presented in Table 8. Table 8 showed that 23.4% of the respondents felt that the quality culture had a great impact on ensuring the quality of education inside an institution, while 45.3% and 27.3% of them respectively rated its impact as of a large and great extent. On average, only 3.2% thought that the quality culture hardly had any impact on internal quality assurance, and 0.8% saw no impacts at all. The average assessment of the levels of impact was quite large 3.9/5.0 points. In other words, most people were satisfied with their choice of university.

Table 8. Level of impact on internal education quality assurance in universities

Area	Rate of assessment of the impact of factors on internal education quality assurance by level (%)					Average	Level of impact
	1	2	3	4	5		
Northern	1.5	4.0	16.0	42.5	36.0	4.08	Satisfactory
Central	0.16	2.24	31.7	56.1	9.8	3.73	
Southern	0.63	3.14	33.96	37.11	25.16	3.83	
Total	0.8	3.2	27.3	45.3	23.4	3.9	

Source: Authors' compilation

5 Conclusion

From investigating the factors of the quality culture that affect internal education quality assurance of universities in Vietnam, it is fair to say that the quality culture is of great importance and serves as the basis to help improve the quality of an organisation. This research aims to build and test a model showing the relationship between the factors of quality culture and internal education quality assurance of universities in Vietnam. After using the exploratory factor analysis model and identifying 5 factors including: (1) factors in the field of academics, (2) factors in the field of social sciences, (3) factors in the field of humanities, (4) factors in the field of culture, (5) factors in the field of environment. The analysis results have shown that the members of higher education institutions agreed that the quality culture at the institutions had a large impact on internal education quality assurance.

Building a quality culture and developing the quality assurance system inside the university are two activities that are closely related, support and interact with each other, and create the educational culture of higher education institutions. In the complicated context of COVID-19 which has caused many obstacles to quality assurance activities of educational institutions, this research is even more meaningful for universities to keep pace with the general recovery of society. Although Vietnamese universities are fully aware of quality assurance, there is still much confusion in implementing activities, especially in building and developing a quality culture. Currently, one of the biggest challenges for universities in Vietnam in quality culture is that conditions for quality assurance have not really lived up to the requirements and they are still formal, not to mention the fact that the accountability to improve quality has not been focused. To overcome those

shortcomings requires time, high effort, a consensus of all members of the school, and a stronger commitment to quality assurance activities.

The findings from this research could act as the foundation to establish and adjust the quality culture and internal quality assurance for the 30 universities participating in this research and other higher education institutions across the country. These also provide references for the Ministry of Education and Training in issuing macro policies related to education quality administration and accreditation. Last but not least, university students, post-graduate students, and master students could refer to this research for their study objectives and scientific research.

In detail, based on the research results, the authors would like to propose some recommendations for universities to improve their quality culture to enhance the internal quality assurance activities as follows:

Firstly, strengthening close connections between quality assurance activities and quality culture formation in school will be systematic, interacting with the internal environment (codes of conduct, cooperation, respect, and cultural lifestyle) and cultural exchange with integration will change capacity and perception of quality of individuals and groups in the university. Awareness and capacity of quality of individuals and groups will be strengthened and enhanced along with newly formed quality cultural values, which will not only positively affect quality assurance activities but also other activities.

Secondly, establishing and perfecting the internal education quality assurance system in unit, including a system of management and operating documents, strategies, policies, and quality assurance plans, internal education quality assurance system such as organisational structure, personnel, functions, tasks, organisational and training plans for staffs, database system on quality evaluation and comparison, simultaneously implementing, reviewing, evaluating, and improving quality assurance activities.

Thirdly, when implementing establishing a quality culture, the first activity that needs to be implemented is to propagate and widely

disseminate to stakeholders the regulations on quality assurance of education and quality culture in a unit such as discussion, organising conferences, seminars, and meetings to disseminate the work of quality assessment and quality survey to cadres, civil servants and students of the school. This propaganda and dissemination need to be carried out regularly, with effective evaluation after each implementation, to have practical significance.

Fourthly, focus on quality inspection of educational institutions and training programs towards quality improvement, gradually forming and building school quality culture. Accordingly, universities also need to pay attention to investment in upgrading landscape and physical facilities to build the best learning, working, and research environment and create an internal quality culture in school.

Lastly, the factors affecting the quality culture and internal quality assurance of universities in Vietnam should be taken into consideration within the context of the strong promotion of university autonomy in Vietnam. When universities are more autonomous, quality culture formation and internal quality assurance are the rights and responsibilities of the university council and Rector. More importantly, only when universities are granted greater autonomy can quality culture and internal quality assurance show their strengths, which leads to the improvement in the quality and effectiveness of training, scientific research, and social services.

In accordance with the theories and reality of university education, there are several factors affecting internal quality assurance. In the scope of this research, the authors have not been able to study the relations among the factors of quality cultures and other factors in influencing the internal quality assurance of universities and to make clear its formation and development. These are the approaches that the authors will follow in further studies in the future.

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