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CONTRIBUTION OF LEADERSHIP, ORGANIZATIONAL COMMITMENT AND ORGANIZATIONAL CULTURE TO IMPROVE THE QUALITY OF HIGHER EDUCATION

by Andry Simatauw

CONTRIBUTION OF LEADERSHIP, ORGANIZATIONAL COMMITMENT AND ORGANIZATIONAL CULTURE TO IMPROVE THE QUALITY OF HIGHER EDUCATION

CONTRIBUIÇÃO DE LIDERANÇA, COMPROMISSO ORGANIZACIONAL E CULTURA ORGANIZACIONAL PARA MELHORAR A QUALIDADE DO ENSINO SUPERIOR

CONTRIBUCIÓN DE LIDERAZGO, COMPROMISO ORGANIZATIVO Y CULTURA ORGANIZACIONAL PARA MEJORAR LA CALIDAD DE LA EDUCACIÓN SUPERIOR

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Abstract

Objective of the study: The low quality of higher education in Indonesia has been a concern as well as a shared responsibility to fix it from an early age. Lack of maximum leadership, low organizational commitment, and organizational culture have had an impact on the implementation of an internal quality assurance system. This study intends to examine whether there is a direct or indirect effect of leadership and organizational commitment on the implementation of an internal quality assurance system mediated by organizational culture in state universities.

Methodology/Approach: This research uses quantitative methods with a path analysis design. Each value of the effect of exogenous and endogenous variables is tested and analyzed descriptively and path analysis to show the contribution made by each variable studied. Data were collected through a questionnaire with a sample of 221 from a population of 340 populations spread across three state universities in Ambon city, Maluku province, Indonesia.

Originality/Relevance: Organizational culture plays an important role to mediate and contribute to the leadership and organizational commitment to create situations and encourage the participation of all elements in the application of the internal quality assurance system in higher education.

Main results: The quality of higher education is determined by many factors, but by increasing the role, performance, competence, and leadership style and supported by organizational commitment in an affective, normative, and sustainable manner, the organizational culture becomes one of the frameworks for every university to improve quality and competitiveness in a planned manner. and continuous.

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Theoretical/methodological contributions: Universities need leadership that is able to encourage and increase collective organizational commitment and culture to achieve sustainable higher education quality.

Social/management contributions: The results of this research can be a new breakthrough for each faculty, department, and the department to prepare prospective professional leaders, build solidarity and display a dynamic, creative, and innovative academic culture.

Keywords: Leadership. Organizational commitment. Organizational culture. Internal quality assurance system.

Resumo

Objetivo do estudo: A baixa qualidade do ensino superior na Indonésia tem sido uma preocupação, bem como uma responsabilidade compartilhada para consertá-lo desde tenra idade. A falta de liderança máxima, o baixo comprometimento organizacional e a cultura organizacional têm impactado a implementação do sistema interno de garantia da qualidade. Este estudo pretende verificar se existe um efeito direto ou indireto da liderança e do comprometimento organizacional na implantação de um sistema interno de garantia da qualidade mediado pela cultura organizacional nas universidades estaduais.

Metodologia / abordagem: Esta pesquisa usa métodos quantitativos com design de análise de caminho. Cada valor do efeito das variáveis exógenas e endógenas é testado e analisado de forma descritiva e análise de caminho para mostrar a contribuição de cada variável estudada. Os dados foram coletados por meio de um questionário com uma amostra de 221 de uma população de 340 populações espalhadas por três universidades estaduais na cidade de Ambon, província de Maluku, Indonésia.

Originalidade / relevância: A cultura organizacional desempenha um papel importante para mediar e contribuir para a liderança e compromisso organizacional para a implementação do sistema interno de garantia da qualidade no ensino superior.

Principais resultados: A qualidade do ensino superior é determinada por muitos fatores, mas ao aumentar o papel, desempenho, competência e estilo de liderança e apoiada pelo compromisso organizacional de forma afetiva, normativa e sustentável, a cultura organizacional torna-se um dos marcos para cada universidade melhorar qualidade e competitividade de forma planejada e contínua.

Contribuições teórico-metodológicas: A cultura organizacional desempenha um papel importante na mediação e contribuição para a liderança e o compromisso organizacional para criar situações e incentivar a participação de todos os elementos na aplicação do sistema interno de garantia da qualidade no ensino superior.

Contribuições sociais / gerenciais: Os resultados desta pesquisa podem ser um novo avanço para cada corpo docente, departamento e departamento para preparar líderes profissionais em potencial, construir solidariedade e exibir uma cultura acadêmica dinâmica, criativa e inovadora.

Palavras-chave: Liderança. Compromisso organizacional. Cultura organizacional. Sistema interno de garantia de qualidade.

Resumen

Objetivo del estudio: La baja calidad de la educación superior en Indonesia ha sido una preocupación y una responsabilidad compartida para solucionarlo desde una edad temprana. La falta de máximo liderazgo, el bajo compromiso organizacional y la cultura organizacional han tenido un impacto en la implementación del sistema interno de garantía de calidad. Este estudio pretende examinar si existe un efecto directo o indirecto del liderazgo y compromiso organizacional en la implementación de un sistema de aseguramiento de la calidad interno mediado por la cultura organizacional en las universidades estatales.

Metodología / enfoque: Esta investigación utiliza métodos cuantitativos con diseño de análisis de ruta. Cada valor del efecto de las variables exógenas y endógenas se prueba y analiza de forma descriptiva y de ruta para mostrar el aporte de cada variable estudiada. Los datos se recopilaron a través de un cuestionario con una muestra de 221 de una población de 340 poblaciones distribuidas en tres universidades estatales en la ciudad de Ambon, provincia de Maluku, Indonesia.

Originalidad / relevancia: La cultura organizacional juega un papel importante para mediar y contribuir al liderazgo y compromiso organizacional con la implementación del sistema de aseguramiento interno de la calidad en la educación superior.

Principales resultados: La calidad de la educación superior está determinada por muchos factores, pero al incrementar el rol, desempeño, competencia y estilo de liderazgo y apoyado en el compromiso organizacional de manera afectiva, normativa y sustentable, la cultura organizacional se convierte en uno de los marcos para que toda universidad mejore, calidad y competitividad de forma planificada y continua.

Contribuciones teóricas / metodológicas: La cultura organizacional juega un papel importante al mediar y contribuir al liderazgo y el compromiso organizacional para crear situaciones y fomentar la participación de todos los elementos en la aplicación del sistema de aseguramiento interno de la calidad en la educación superior.

Contribuciones sociales / gerenciales: Los resultados de esta investigación pueden ser un nuevo avance para cada facultad, departamento y departamento para preparar posibles líderes profesionales, construir solidaridad y mostrar una cultura académica dinámica, creativa e innovadora.

Palabras-clave: Liderazgo. Compromiso organizacional. Cultura organizacional. Sistema de aseguramiento interno de la calidad.

1 Introduction

Today, the demand for quality and globally competitive higher education has become a necessity. Education is an instrument that measures the progress of a nation in the process of competition and the increasingly rapid progress of science and technology. Because the quality of a nation's human resources is determined by its education delivery system, the pressure and expectation of the community to improve the quality and competitiveness of higher education in Indonesia need to be considered carefully. Policies and strategies to improve the quality of higher education have become government priorities from year to year. Through the National Education System Law, Number 20 of 2003 and the Higher Education Law Number 12 of 2012, all tertiary institutions are obliged to hold higher education tri dharma according to the quality standards set. The three higher education quality standards are national education standards, national research standards, and national community service standards.

On a national scale, the government has set higher education standards and obliged all tertiary institutions to formulate their respective standards according to the national higher education standards, but in reality, there are still various problems and obstacles, both substantial and operational. In comparison, the quality ranking of Indonesian tertiary institutions at the world level shows that Indonesia is very far behind when compared to Singapore and Malaysia. The Higher Education Ranking data released by the QS World University Ranking 2020 places five Indonesian universities, namely the University of Indonesia (ranked 296), Gajah Mada University (ranked 320), Bandung Institute of Technology (ranked 331), Bogor Agricultural Institute (ranked 601-650) and Airlangga University (ranked

651-700). However, the position of the fifth rank of this university is far behind Singapore and Malaysia as fellow countries in Southeast Asia.

In addition to the conditions for the ranking of national universities described above, the Ministry of Education and Culture in the 2020-2024 Strategic Plan has outlined a gap between vocational college graduates and academic college graduates. This is indicated by the level of graduate absorption in the world of work which is not directly proportional to the abilities and competencies of each graduate. In other words, tertiary education graduates in Indonesia have not fully answered the needs of the labor market and the impact is on public trust and support for each higher education institution, but especially those with state status because they are financed by the government.

This reality is also found in areas outside Java. In the city of Ambon, Maluku province, for example, the quality of state universities is still lagging behind and even unable to compete with private universities on the island of Java. This comparison has been proven by the results of the assessment from the Ministry of Research, Technology and Higher Education which announced the 100 best universities in 2018, but no public or private universities in Maluku were included in the assessment category. This ideal condition may not be optimal for some universities because the process of building commitment, paradigm shift, and mental attitudes of all parties involved in higher education management takes time (Muhammad, 2014). This is because, in fact, various problems are still found because they have not touched other quality points (Ekroman, 2007). The improvement of the quality of education so far has not been as expected because it is caused by several factors, including the education development strategy which is more "input oriented" and "macro oriented" which tends to be regulated by the bureaucracy at the central level (Suti, 2011).

Referring to the reality presented, it should be presumed that the low quality of higher education, especially state status in Ambon city, Maluku province is influenced by several supporting factors. Of the many factors that also influence the quality of higher education, this research is limited to the factors of leadership, organizational commitment and organizational culture that receive less attention to be developed. Leadership is considered to contribute to the quality of higher education but does not show its role, performance, competence, style and focus on the quality standards set. Apart from that, from the perspective of organizational commitment, affective commitment, normative commitment and sustainable commitment, there is little development among all elements of higher education. This condition then has an

impact on the low organizational culture and academic culture because the aspects of communication, motivation and leadership do not develop as expected.

This study was designed to examine (1) the influence of leadership and organizational commitment to organizational culture; (2) the influence of organizational culture on the implementation of the internal quality assurance system in higher education, and (3) the influence of leadership and organizational commitment to the implementation of the internal quality assurance system in higher education, either directly or mediated by the organizational culture. Furthermore, the structure of the writing of this paper includes (1) an introduction, (2) concepts and literature review, (3) methods and hypotheses, (4 results and discussion, (5) conclusions and suggestions, and (6) limitations of the study.

2 Concepts & literature review

2.1 Internal quality assurance system

In the view of Sulaiman et al., (2016), education quality assurance in tertiary institutions is the process of determining and fulfilling the quality standards of higher education management consistently and continuously, so that stakeholders (students, lecturers, education personnel, parents, government, a world of work, and other interested parties) obtain satisfaction. One of the strategies to ensure the achievement of higher education standards is through an internal quality assurance system (Sila, 2017). The implementation of quality assurance internally by universities is carried out systemically through an internal quality assurance system (Wicaksono & Al-Rizki, 2018). This is important because the quality of higher education is the level of conformity between the implementation of higher education and higher education standards (Gunawan, 2017).

In an interconnected world, the higher education system, the institutions that make it up, education policymakers, quality assurance institutions are all expected to interact simultaneously in a global, national, and local context, or glonakal (Hou et al. 2014). Higher education ultimately plays a role in increasing the nation's competitiveness in facing globalization in all fields. Therefore, higher education is needed that can develop science and technology and produce intellectuals, scientists, and/or professionals who are cultured and creative, tolerant, democratic, strong character and dare to defend the truth for the benefit of the nation (Sulaiman et al., 2016).

Efforts to achieve quality standards set by universities require a quality assurance system. The focus of current reforms should be on developing internal quality practices and

encouraging the participation of all stakeholders (Bugday & Gounko, 2014). The objectives and functions of the Higher Education Quality Assurance System are; (1) ensuring the fulfillment of Higher Education Standards in a systemic and sustainable manner so that a quality culture grows and develops; (2) controlling the implementation of education by tertiary institutions to realize quality higher education (Kemenristek-Dikti, 2016).

Higher education institutions have the obligation to carry out quality assurance activities autonomously, as part of efforts to improve and control the implementation of quality higher education (Wicaksono & Al-Rizki, 2018). An important function of quality assurance is to provide legitimacy through procedures' (Enders & Westerheijden, 2014). According to Harvey & Newton (2007) cited by Jarvis (2014) that quality assurance ensures not only accountability but can be used to encourage the level of compliance with policy requirements or to control the developing private sector. In other words, support is needed by higher management from higher education institutions, and collaboration with other educational institutions is a relevant prerequisite for a perceived level of effectiveness of quality assurance (Seyfried & Pohlenz, 2018).

2.2 College leadership

Leadership, in essence, is not just an individual quality that is enhanced, but a way of being and acting in a positive way to connect with others, allowing for cooperation, assistance and other growth within him (Romero & Martínez, 2011). Leadership is a concept that is always associated with the existence of a group of people being led, and structurally-functionally having ties, recognition and acceptance of basic ideas that become common references to achieve goals (Amtu, 2015). In understanding the aspect of leadership, the affirmation of Amtu et al. (2019) needs to be considered because leadership is basically not only an enhanced individual quality, but a way to be and act positively connecting them with others, making it possible to build cooperation, assistance and growth. others in themselves.

The importance of leadership contributions in educational organizations is emphasized by Riggio (2016) because in recent years, there has been an increasing interest in leadership development in organizations and education. The external and internal changes affecting higher education require the institution, and the system as a whole, to redefine its mission, goals and practices. However, to achieve such a significant change requires leadership at many levels (Middlehurst, 1997). This is because academic credibility and university life experience are very important for effective leadership in higher education (Spendlove, 2007).

Leadership and management are concepts that are used regularly in the organizational change and reform literature (Normore & Brooks, 2014). Leaders in education face a variety of challenges in an increasingly competitive and changing environment (Kairys, 2018). Leadership experience and the value of leadership education are significantly, positively related to psychological empowerment of leadership development (Solansky, 2014). Distributed leadership is very influential through its rhetorical values where leadership can be used to form perceptions of identity, participation, and influence (Bolden, Petrov & Gosling, 2009). Studies on leadership are always interesting when connected with the context of higher education management. Apart from several factors that determine the progress of higher education, leadership is actually a very dominant factor because it contributes greatly to improving the quality of education. As emphasized by Muhammad (2014) that the essence of institutional leadership is the extent to which it is serious about convincing, directing, empowering, generating self-confidence, and providing support to all parties involved in the management of higher education so that they can work optimally to achieve the vision and mission of higher education set.

In this connection, Serafimovska & Ristova (2011) emphasized that the success of an organization to achieve quality control depends on the ability and attitude of top management. Likewise, Suci's sharp criticism (2017) considers that the performance of quality assurance in higher education has not been felt to be effective and tends to be caused by the politics of campus organizations that involve leadership policies. According to Tampi (2014), a person's leadership style affects their subordinates in order to maximize the performance of their subordinates so that organizational performance and organizational goals can be maximized. In other words, leadership and managerial contributions become important for quality and innovation in organizations (Lasrado, 2015).

2.3 Organizational commitment

Organizational commitment is defined in terms of the level of identification and involvement of individuals in the work organization. Analysis shows that intrinsic work values are more closely related to organizational commitment than do either global measures of work values or extrinsic work values (Putti et al. 1989). The level of organizational commitment as well as the level of loyalty and attachment to the organization is positively influenced by factors that emphasize flexibility and adaptation, but also the level of emphasis on hierarchy and specialization of roles in both the public and private sectors (Zeffane, 1994). Meyer & Allen's

(1991) Strategy to explore organizational commitment is to develop a schema of attitude perspective and behavioral perspective. Attitude commitment focuses on the process by which people then think about their relationship with the organization, and their own goals are aligned with organizational values. Behavioral commitment, on the other hand, is concerned with the process by which individuals become locked into a particular organization and how they deal with these problems.

Similar to the concept of commitment stated above, the definition of Porter et. al (1974) as quoted by Armstrong, (2006) emphasized that commitment refers to attachment and loyalty. This is the relative strength of identifying individuals with their involvement in a particular organization. Organizational commitment consists of three factors, namely: (1) a strong desire to remain a member of the organization, (2) a strong belief and acceptance of the organization's values and goals; and (3) readiness to mobilize considerable effort on behalf of the organization. Structural equation modeling analysis reveals that the relationship between employees' evaluations of HRM practices and their affective and normative commitments is largely mediated by perceptions of organizational support and procedural fairness (Meyer & Smith, 2000).

Some research results that show a relationship between rewards and increased organizational commitment are stated by Mottaz (1988) that intrinsic rewards are significantly stronger in determining commitment than extrinsic rewards. Besides, work balance and stability as stated by Galais & Moser, (2009) is due to the beneficial and dysfunctional effects of organizational commitment on welfare, which indicates a reconsideration of the role of organizational commitment for individuals in unstable work settings. There is also a relationship between levels of stress due to intrinsic factors and work, and mental health (Leong et al. 1996). It should be noted that organizational commitment is more strongly associated than job satisfaction with turnover intentions for tellers, but not for professionals (Shore & Martin, 1989). Because, as the size of the organization increases, commitment decreases; as structures become more employee-focused, commitment increases; and the more positive the perception of organizational climate, the greater the commitment (Sommer et al. 1996).

2.4 Organizational culture

Apart from the aspects of leadership and organizational commitment, there are also dominant factors in the process of improving higher education quality, namely organizational culture. As stated by Gibson (2012) that organizational culture is what employees feel and how

these perceptions create patterns of trust, values, and expectations. Foskett, (2003) states that organizational culture is expressed in the form: conceptually, through the assessment of certain ideas, which can be expressed into whatever explicit goals the organization has; orally, through the adoption of specific discourses and use of terminology; behaviorally, through rituals, ceremonies, and social interactions; and visually, through the designs and styles adopted by the organization, for example in dress or uniform.

The organizational culture framework proposed by Tierney (1988: 9), namely; environment, mission, socialization, information, strategy, and leadership. Organizational virtue is a useful construct for the analysis of continuing education organizations and is also related to organizational culture (Vallett, 2010). Organizations that have a culture with the necessary attributes can obtain superior financial performance that is sustainable from their culture (Berney, 1986). The visible characteristics of organizational culture according to Robbins (2003) are (1) communication, (2) motivation, and (3) leadership. This idea is supported by an opinion that emphasizes that culture in turn always focuses on the values, beliefs and norms of individuals in the organization and how these individual perceptions coalesce into shared meanings (Bush & Middlewood, 2005) and (Koesmono, 2006).

2.5 Related researches

Several studies related to the influence of leadership, organizational commitment and organizational culture on the implementation of the internal quality assurance system in higher education are summarized as follows:

- Sila, (2017): This study explores both academic and non-academic service systems using internal quality assurance standards as a framework for higher education to improve the quality of education. The Internal Quality Assurance System is a form of modern approach to ensure the continuous improvement of the quality of higher education services. Quality services are very dependent on various aspects, namely how the pattern of implementation (management), human resource support, and institutions as well as the existence of a clear concept that raises customer comfort.
- Bugday & Gounko, (2014): This study seeks to explore concrete efforts to achieve quality standards set by universities. The quality standard in question requires a quality assurance system that is carried out in a planned and sustainable manner. This requires

the participation of all parties involved and at the same time encourages the involvement of other stakeholders.

- Lee & Schaltegger, (2014): This study was directed to examine the effect of leadership on change in higher education institutions. The results show that leaders greatly influence the process of changing mindsets, practices, and curricula to incorporate sustainability into higher business education institutions. While bottom-up leadership initiatives are essential, leadership support from top management is seen as essential to enable bigger and more radical steps of transformation.

- Oyewobi et al. (2019): This study tries to find a positive relationship between work-life balance and organizational commitment, and that organizational commitment mediates the effect of work-life balance on organizational performance. The results prove that organizational commitment is a variable that contributes to organizational performance through work and life balance for each employee and management.

- Bennet, (2004): This study explores organizational culture as a culture that arises from a multidimensional set of influences that include the external environment, workforce, managers and leaders, structure, technology, organizational history, and perceptions of the future. Culture in turn determines many aspects related to humans, the organization as a unit, the systems, and resources that the organization has to promote sustainable progress.

3 Research methods

This study uses four variables, namely Leadership, Organizational Commitment, Organizational Culture, and Internal Quality Assurance System (IQAS). The Leadership variable measures the extent to which leaders in state universities have contributed to the achievement of higher education quality through the implementation of an internal quality assurance system. Leadership variable assessment indicators are measured on the aspects of role, competence, performance, style, and focus on quality, as suggested by Ginting & Haryati (2012); Bolden & Gosling (2006); McNair et al. (2011); Mathis & Jackson (2010); Lleras (2005); Sadikoglu & Olcay (2014). The Organizational Commitment variable is directed to measure affective commitment, normative commitment, and ongoing commitment from all elements of higher education administrators, as suggested by Robbins & Judge (2007). The indicator of the Organizational Culture variable is directed at measuring how the

communication model, the form of motivation, and the influence of leadership at every level of higher education organization, as suggested by Robbins (2003).

The internal quality assurance system (IQAS) variable indicator is directed to measure the achievement of each quality standard that has been set and implemented in the education, research, and community service fields, as stated in Permenristekdikti Number 62 of 2016 concerning the Higher Education Quality Assurance System. These indicators are then used to design the Likert questionnaire on a five-point scale.

According to its type, the population in this study is a limited population and according to its nature is a homogeneous population (Brahmasari & Suprayetno, 2009). The population of this study includes 340 lecturers at three state universities in Ambon city, Maluku province. The technique of determining the sample uses purposive sampling as suggested by Sarwono (2006) because it is a technique of determining the sample with special considerations so that it is worthy of being sampled. This technique prioritizes research objectives over the nature of the population in determining the research sample (Bungin, 2005). Referring to the Slovin sample determination guidelines (Amirin, 2011), with a population of 340 a sample of 221 respondents was assigned with an error rate of 5%. The number of population and research sample is described in the following table.

Table 1 – Population and sample

No	Name of College	Departement	Population	Sample	%
1	Universitas Pattimura Ambon	70	280	182	82,35
2	Institut Agama Kristen Negeri Ambon	15	45	29	13,12
3	Politeknik Negeri Ambon	5	15	10	4,52
	Amount	**90**	**340**	**221**	**100**

**Population and sample:** Slovin formula with an error rate of 5%.

Based on the literature review and the variables to be studied, this study developed a questionnaire and tested it on 33 respondents outside the specified sample. Leadership variables consist of 46 statements, Organizational Commitment variables 45 statements, Organizational Commitment variables 42 statements, and IQAS 45 statements variables. The questionnaire uses a Likert scale with a score range of 5-1 answer choices and each respondent is asked to indicate a response or attitude.

Corrected-item-total correlation and Cronbach's alpha analysis were used to test validity and reliability (de Vaus, 2002). After testing the validation and reliability using SPSS version 20, the variable leadership; 45 statements are valid, 1 item is rejected with a Cronbach alpha coefficient of 0.751 > 0.60. Organizational commitment variable; 45 valid statements with a

Cronbach alpha coefficient of 0.792 > 0.60. Organizational culture variables; 42 valid with Cronbach's alpha coefficient 0.756 > 0.60. Furthermore, the IQAS variable; 41 statements are valid, 4 items are rejected with a Cronbach alpha coefficient of 0.745 > 0.60. Whereas for the path model testing process and research hypothesis testing, path diagrams were used in the AMOS 21 program. Multivariate normality analysis showed point c.r-0.454, which means that the coefficient value obtained is normal because it is smaller than the maximum threshold of 2.58 (Ghozali, 2017). From the results of confirmatory factor analysis on exogenous variables (leadership and organizational commitment) and endogenous variables (organizational culture and implementation of IQAS), it is found that the test value on each of the factors forming a construct shows that all indicators have a standardized regression weight value > 0.5, and a significance value < 0.05. Likewise, the multivariate coefficient of kurtosis which shows the point of kurtosis -0.424 means that it does not exceed the maximum value limit of 2.58 (Ghozali, 2017), so it can be concluded that the research data is normally distributed.

This research was designed with reference to the phenomenon of low-quality public universities that occurred on a national and regional scale, then strengthened by some evidentiary research and supporting theories proposed above, the theoretical model is described in the following figure.

Figure 1 – Theoretical model
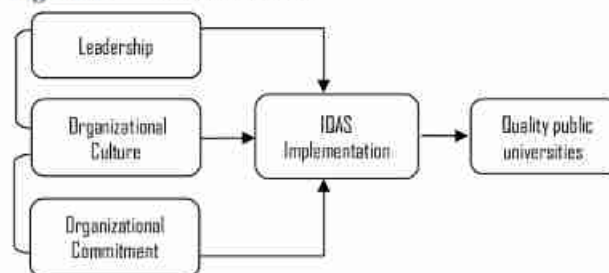
Source: From various sources for the development of the theoretical model used.

Referring to this theoretical model, the proposed research hypotheses are H_1: leadership affects the implementation of the internal quality assurance system in tertiary institutions; H_2: leadership affects organizational culture; H_3: organizational commitment affects organizational culture; H_4: organizational culture affects the implementation of the internal quality assurance system in higher education; H_5: leadership affects the implementation of the internal quality assurance system in higher education through organizational culture; and H_6: organizational

commitment affects the implementation of the internal quality assurance system in higher education through organizational culture.

The process of testing the proposed hypothesis uses path analysis. The model was also tested using the goodness of fit test (Lleras, 2005), (Albright & Park, 2009), (Ghozali, 2017), (Yanto et al. 2017). To test the goodness of fit, this study uses six indices, namely Chi-Squared, Goodness of Fit Index (GFI), Goodness of Fit Index (AGFI), Root Mean Square of Approximation (RMSEA), Normed Fit Index (NFI), and Comparative Fit. Index (CFI), and CMIN / df as suggested by Ghozali (2017), and Yanto et al. (2017). The thresholds for this index are as follows: Chi-square must have an insignificant p-value or (p> 0.05); the fit value of GFI, AGFI, NFI, CFI must be above 0.90; The RMSEA value must be below 0.08; and the CMIN / d.f value. must be below 3.0 (Lleras, 2005), (Albright & Park, 2009), (Ghozali, 2017), (Yanto et al. 2017).

The analysis used is descriptive analysis and path analysis. Path analysis wants to test regression equations that involve several exogenous and endogenous variables at once to allow testing of the mediating/intervening variables or intermediate variables (Ghozali, 2017). Based on the literature review, this research model has two exogenous variables (Organizational Culture and Internal Quality Assurance System implementation) and two endogenous variables (Leadership and Organizational Commitment).

4 Results and discussion

Descriptive analysis shows that the minimum score for the leadership variable is 150 and the maximum score is 199 with a mean of 178.13. This means that leadership has played a role in improving the internal quality assurance system. Organizational commitment with a minimum score of 150 and a maximum of 198 with a mean of 173.95. It means that organizational commitment has contributed positively. Organizational culture with a minimum score increased slightly by 152 and a maximum of 195 with a mean of 175.08. In other words, the creation of an academic culture of higher education organizations supports the realization of a good internal quality assurance system. Finally, the internal quality assurance system with a minimum score of 151 and a maximum of 198 with a mean of 175.68. This means that higher education quality can be carried out properly through the implementation of quality standards through education, research, and community service activities.

The results of the analysis using AMOS 21 show that leadership and organizational commitment affect organizational culture and the implementation of the internal quality

assurance system. Organizational commitment affects the implementation of an internal quality assurance system through organizational culture. Furthermore, organizational culture affects the implementation of the internal quality assurance system with a significance level of 0.001 ($p = ***$). In other words, all the proposed hypotheses are proven and accepted.

The value of the coefficient of determination is shown by the squared multiple correlations 0.632 ($R2$). This means that the organizational culture variable can be explained by the leadership and organizational commitment variables of 63.2% while the remaining 36.8% is another variable that is not researched. Furthermore, the value of squared multiple correlations of 0.487 ($R2$) indicates that the variable implementation of the internal quality assurance system (IQAS) can be explained by the variables of leadership, organizational commitment, and organizational culture by 48.7% while the remaining 51.3% is other variables not examined.

The results of hypothesis testing regarding the value of the direct influence between exogenous and endogenous variables with organizational culture as an intervening variable indicate that the direct effect of leadership on the implementation of the internal quality assurance system (IQAS) is 0.357 or 35.7%. These results indicate that the hypothesis (H_1) is proven. The direct influence of leadership on organizational culture 0.492 or 49.2%. These results indicate that the hypothesis (H_2) is proven and accepted. The direct effect of organizational commitment on organizational culture is 0.403 or 40.3%. These results indicate that the hypothesis (H_3) is proven. Furthermore, the direct influence of organizational culture on the implementation of the internal quality assurance system (IQAS) is 0.394 or 39.4%. These results indicate that the hypothesis (H_4) is proven. The results of the direct effect test for each variable are presented in the following table.

Table 2 – Standardized direct effects

	ORG_COMMITMENT	LEADERSHIP	ORG_CULTURE
ORG_CULTURE	,403	,492	,000
IQAS	,000	,357	,394

Source: From the results of the research data analysis.

The results of hypothesis testing regarding the magnitude of the value of the indirect effect between exogenous and endogenous variables with organizational culture as an intervening variable indicate that the indirect effect of leadership on organizational culture is then to the implementation of the internal quality assurance system (IQAS) = (0.492) (0.394) = 0.194. So, the total effect: direct + indirect = 0.357+ 0.194 = 0.551. That is, the influence of

leadership on the implementation of the internal quality assurance system (IQAS) through organizational culture is 55.1%. These results indicate that the hypothesis (H$_5$) is proven. The indirect effect of organizational commitment to organizational culture is then to the implementation of the internal quality assurance system (IQAS) = (0.403) (0.394) = 0.159. So, the total effect: direct + indirect = 0.403 + 0.159 = 0.159. That is, the effect of organizational commitment on the implementation of the internal quality assurance system (IQAS) through organizational culture is 15.9%. These results indicate that the hypothesis (H$_6$) is proven. Further presented in the following table.

Table 3 – Standardized indirect effects

	ORG_COMMITMENT	LEADERSHIP	ORG_CULTURE
ORG_CULTURE	,000	,000	,000
IQAS	,159	,194	,000

Source: From the results of the research data analysis.

This study uses a path diagram with the help of the AMOS 21 program to test how much direct and indirect influence the six proposed hypotheses are; H$_1$, H$_2$, H$_3$, H$_4$, H$_5$, and H$_6$, concerning the previous literature review. After testing, the results show that all hypotheses are accepted because they meet the criteria and benchmark standards set. The following figure presents the antecedents of increasing the implementation of higher education internal quality assurance systems using organizational culture as an intervening variable.

After the goodness of fit test was carried out, the path diagram model developed gave a Chi-Square of 7,247 (p> 0.05), it was concluded that the developed model was supported by empirical data. An RMSEA value of 0.169 is considered suitable, as it is close to the predetermined threshold, i.e. below the 0.08 threshold. Meanwhile, the values in the CMIN / df, GFI, AGFI, NFI, and CFI categories showed results that were very in line with the specified threshold. Thus, it is concluded that the model has met most of the requirements in the Goodness of Fit Test.

Table 4 – Goodness of fit test

Index	Cut-off Value	Empirical Test	Remark
Chi Squared	$\alpha \geq 5\%$	7.247 (*p*=0.007)	Fit
RMSEA	≤ 0.08	0.169	Fit
CMIN / d.f.	≤ 3.0	1.0	Fit
GFI	≥ 0.9	0.984	Fit
AGFI	≥ 0.9	0.841	Fit
NFI	≤ 0.9	0.984	Fit
CFI	≥ 0.9	0.986	Fit

Source: From the results of the research data analysis.

The results of the path analysis show that there is a direct influence of leadership on the implementation of the internal quality assurance system (IQAS) of 35.7%. The significance of the value obtained is juxtaposed with the value in the correlation matrix between variables proving that leadership is the dominant factor in improving the quality of higher education. This finding is confirmed by Durie's (2016) research that only 39% of academic leaders have high interests and high performance. Leadership with the roles they have (Trivellas & Dargenidou, 2009), Garwe (2014), competencies that are prerequisites (Spendlove, 2007), and the style is shown (Alharbi & Yusoff, 2012), Alemu (2016), Barbosa et al. (2017) are the leadership factors that directly determine the higher education quality assurance system.

Leaders contribute to mobilizing all organizational resources to ensure the achievement of all quality standards established through a series of academic activities. In every tertiary institution, apart from the chancellor and dean, the heads of departments or study programs are the implementing elements at the forefront of improving the quality of higher education. The involvement and coordination between leaders at each level of the higher education organization to implement an internal quality assurance system will be seen through their roles, performance, competencies, styles and always focus on efforts to achieve quality standards at each level. The framework of thought regarding the implementation of the internal quality assurance system refers to the quality policy that is determined both nationally and which is established by each university. This finding is in line with the results of previous research which concluded that there was a significant influence of leadership on improving the quality of education in higher education (Tampubolon & Harati, 2019), (Surnyaman, 2018), Lyytinen et al. 2017), (Davies et al. 2001).

The findings of this study indicate that there is a direct influence of leadership on organizational culture by 49.2%. No matter how good the role, performance, competence, and style a leader has, they need support from the organizational environment and various elements that interact, create, and collaborate together to form a truly dynamic and innovative organizational culture. The higher education organizational culture forms an academic culture that is managed professionally. If seen from the significant value of the influence of leadership on the implementation of the internal quality assurance system, the value of the influence of leadership on organizational culture is more dominant and stronger. This means that organizational culture can mediate each leader to contribute to higher education quality assurance (Taylor & Hill, 1992), (Hati, 2013). Higher education is the main pillar that supports

improving the quality of a nation's human resources. Therefore, there is a demand to improve the quality and competitiveness of higher education should be seen as a necessity.

In addition to the leadership contribution factor, organizational commitment is a factor that can have a positive impact on efforts to drive the improvement of higher education quality. This study offers a strategy to improve the implementation of the internal quality assurance system in higher education through organizational culture. Through organizational culture, leadership can play a role in encouraging all interested parties to collaborate to create a dynamic, creative, and innovative academic climate and culture (Sumardjoko, 2010a). With the increase in organizational culture, the role of leadership will be realized and organizational commitment will be built synergistically and simultaneously to increase the achievement of quality standards set by each university.

Analysis of the direct influence of organizational commitment on organizational culture shows a significance value of 40.3%. These results indicate that an increase in organizational culture is also determined by an increase in organizational commitment. In the aspect of building commitment, affective commitment is needed, as evidenced by emotional attachment and involvement in the organization; normative commitment is evidenced by the desire to survive and fight for the organization; and sustainable commitment is evidenced by the responsibility and belief of all elements (lecturers, staff, students, and other stakeholders) regarding the future of higher education, Robbins & Judge, (2007) cited Santa Mira & Margaretha, (2014); and the opinion of Porter et al. (1974) quoted by Armstrong, (2006). That is, increasing organizational culture requires organizational commitment as a supporting variable that moves all elements of higher education to create climate, atmosphere, norms, behavior, communication, and academic interactions that shape the organizational culture of a university that can develop dynamically, creatively, and innovatively.

Seeing the significant value of the direct influence of organizational culture on the implementation of the internal quality assurance system (IQAS) which contributed 39.4%, it is imperative that every university should consider striving for the creation of an organizational culture periodically and continuously. Nationally, the achievement of quality standards internally refers to the Internal *Quality Assurance System Guidelines by the Ministry of Research, Technology and Higher Education* (2018), so the implementation of IQAS begins with planning, implementation, evaluation and control, and development. In terms of implementation, organizational culture is seen as a driving variable that can become a common

framework by involving various parties to achieve the quality standards set (Davies et al. 2001), (Al-Sada et al. 2017), (Kartolo & Kwantes, 2018).

If you read the results of the analysis between variables, the influence of leadership on the implementation of the internal quality assurance system (IQAS) in higher education through organizational culture has a high enough significance value because it contributes to a value of 55.1%. This shows that leadership plays an important role in improving the quality of higher education, but it needs to be mediated through a good organizational culture (Tampubolon & Harati, 2019). Competition between universities to create quality and competitiveness, in turn requires constant attention and efforts to build an organizational culture. A healthy organization has a leadership pattern that is able to drive a professional academic culture so as to encourage the improvement of the quality of higher education. Through organizational culture, leadership can contribute to implementing an internal quality assurance system in a planned and sustainable manner (Lyytinen et al. 2017), (Lomas, 2004).

The result of the significance test of the effect of organizational commitment on the implementation of the internal quality assurance system (IQAS) through organizational culture is 15.9%. Indeed, this value is not comparable with the effect of the test results on the direct effect of organizational commitment on organizational culture. This does not mean that organizational culture does not require organizational commitment from all elements of higher education. This is because the implementation of the quality assurance system is a strategy to achieve quality standards through a series of actions that involve every college organizer. Organizational commitment has also been proven to contribute to developing a professional academic culture so that it can increase the achievement of the quality standard targets that have been set (Surnyaman, 2018). The academic culture of each university is an organizational culture framework that has the potential to encourage the improvement of the quality of education through the implementation of an internal quality assurance system in a professional and sustainable manner (Fathorrahman, 2015).

5 Conclusions and recommendations

The results of this study found that the successful implementation of the internal quality assurance system in tertiary institutions was influenced by leadership who understood roles, had competence, performance, developed a situational, democratic, and firm leadership style implementing a reward and punishment system and always focused on quality. Leadership also makes a significant contribution to the creation and development of organizational culture in

higher education. In other words, the better a leader has mastered his role, shows his competence and performance, develops a leadership style that supports the achievement of quality, the better the achievement of each quality standard will be.

In addition to leadership factors, the process of developing higher education organizational culture is also determined by the presence of organizational commitment in each individual at each university. It means that the organizational culture of each university is determined by increasing normative, affective, and sustainable commitment as a basic framework for strengthening organizational commitment. In other words, organizational culture also contributes to the achievement of the implementation of the internal quality assurance system in higher education. So, the higher the organizational culture of a university, the implementation of its internal quality assurance system will run well, even increase sustainably.

Thus, organizational culture mediates leadership so that it can prove its role, performance, competence, style, and orientation towards the implementation of the internal quality assurance system in higher education. That is, the success of a leader in the implementation of the internal quality assurance system (IQAS) is determined by the organizational culture at each university. The higher education organizational culture determines the specified quality achievements. Likewise, the influence of organizational commitment on the implementation of the internal quality assurance system in higher education through organizational culture. In other words, a high organizational commitment to implementing an internal quality assurance system (IQAS) requires an organizational culture that is formed in a professional, dynamic and innovative manner. Such an organizational culture will mediate the organizational commitment of all elements of higher education to pursue quality targets that are expected together.

It is time for tertiary institutions to pay attention to the main aspects of organizational culture as a framework for building a quality culture that is highly competitive. Organizational culture indicators such as motivation, communication, and leadership in every academic program at the department, faculty, and rectorate levels need to be encouraged at all times. Organizational culture becomes an important mediator in aligning roles, performance, competencies, leadership styles in formulating policies and implementing quality assurance documents. Likewise, organizational commitment requires an organizational culture to form solidarity and solidity for all elements of higher education within the framework of working together to create a professional and sustainable quality of education.

6 Research limitations

This research has several limitations so that future studies need to pay attention to the following points. The number of population and sample is still limited because it only covers three state universities. It is hoped that in order to measure the success of implementing the higher education quality assurance system, it is necessary to involve other universities, both public and private. It is necessary to further investigate the contribution of other variables such as; budget support, human resources, stakeholder involvement, business world participation, and monitoring and evaluation systems for the implementation of internal quality assurance.

Aknowledgments

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Appendix

A – Summary of questionnaire reliability estimation results

No	Variable	Koefisien Alpha (Cronbach's Alpha)	Comparison	Conclusion
1	Leadership	0,751	0,751 > 0.60	Reliabel
2	Organizational Commitment	0.792	0.792 > 0.60	Reliabel
3	Organizational culture	0,756	0,756 > 0.60	Reliabel
4	Internal Quality Assurance System	0,745	0,745 > 0.60	Reliabel

B – Recapitulation of questionnaire validity test results

No.	Variable	Number of Items		
		Before being tested	Valid	Invalid
1	Leadership	46	45	1
2	Organizational Commitment	45	45	-
3	Organizational culture	42	42	-
4	Internal Quality Assurance System	45	41	4
	Total	178	173	5

C – Assessment of normality

Variable	Min	Max	skew	c.r.	kurtosis	c.r.
ORG_COMMITMENT	150,000	198,000	-,087	-,529	-,824	-2,502
LEADERSHIP	150,000	199,000	-,208	-1,260	,104	,314
ORG_CULTURE	152,000	195,000	-,183	-1,110	-,898	-2,725
IQAS	151,000	198,000	-,044	-,268	-,234	-,709
Multivariate					-,424	-,454

D - Regression weights

			Estimate	S.E.	C.R.	P	Label
ORG_CULTURE	<---	LEADERSHIP	,521	,053	9,859	***	par_1
ORG_CULTURE	<---	ORG_COMMITMENT	,386	,048	8,071	***	par_2
IQAS	<---	ORG_CULTURE	,369	,066	5,630	***	par_3
IQAS	<---	LEADERSHIP	,354	,069	5,106	***	par_5

CONTRIBUTION OF LEADERSHIP, ORGANIZATIONAL COMMITMENT AND ORGANIZATIONAL CULTURE TO IMPROVE THE QUALITY OF HIGHER EDUCATION