



Servqual Agility On PTN-BH Performance with Environmental Dynamics as a Moderation

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Abstract. Performance is a crucial component for higher education institutions as it reflects the efficiency and effectiveness of utilizing resources such as time, labour, funds, and human capital in achieving organizational goals. Modern universities face a multitude of challenges, including intense competition for students and the need to meet various accreditation standards. This study aims to explore an alternative performance measurement system that is relevant and effective, supported by robust management strategies, particularly in optimizing service quality implementation. The goal is to ensure the sustainable performance of state-owned universities PTN-BH with autonomous financial management in the face of these challenges. This study's findings are expected to make a significant contribution to enhancing the performance of PTN-BH universities, supported by the optimization of Servqual implementation and environmental dynamism as a moderator. The role of effective service quality (Servqual) optimization leads to improved performance of education personnel if the support of environmental dynamism increasingly provides positive values or benefits for PTN-BH universities. Furthermore, the study suggests that these findings can serve as a stimulus for education personnel to continuously create and innovate in implementing service quality

Keywords: Service Quality Agility, Environmental Dynamism, Performance, PTN-BH

1 Introduction

Human resource quality is a key determinant of a nation's progress (1). On the other hand, to enhance their competitiveness in the education market, Higher Education Institutions (HEIs) must confront an increasingly dynamic and uncertain environment. Oliver & Parrett's (2018) study highlights environmental dynamism as a driver of global economic change. Consequently, organizational managers must reinvent creative and holistic competitive strategies to address emerging challenges(2). One such strategy to navigate dynamism is optimizing service quality (Serqual) implementation, which entails identifying potential volatility, uncertainty, complexity, and ambiguity that influence performance excellence. The primary threats identified in the higher education sector include dynamic trends in regulation, technology, economy, and politics, necessitating competent human resources and governance for HEIs to develop adaptability and confront these dynamics. Two crucial elements spearhead HEIs as educational service providers to deliver exceptional service quality (3). The first element is educators (lecturers), and the second element is administrative staff (employees). Enhancing the quality of both elements is fundamental for HEIs to compete, as it can strengthen their competitive advantage, particularly in the competition for highly educated human capital.

Based on the results of surveys and direct observations of education personnel at Universitas Negeri Semarang (Unnes) regarding their performance revealed discrepancies between expectations and actual service delivery, particularly in terms of timely completion of tasks and the application of new work methods. The need to remind employees of their responsibilities towards their work remains evident. While the overall work capabilities of education personnel are adequate, there are still shortcomings in achieving certain performance targets. Improved coordination among employees in decision-making is necessary. Occasional service delivery errors and work overload that hinder performance achievement have also been observed. Therefore, a study on service quality implementation is warranted, utilizing service quality indicators based on five dimensions: tangibility, reliability, responsiveness, assurance, and empathy (4). The application of the Serqual concept and environmental dynamism is expected to address the challenges of enhancing service quality among education personnel at UNNES. Optimizing Serqual implementation, supported by a positive response to environmental dynamism factors such as regulatory changes, policies, social dynamics, technology, and information, is anticipated to lead to improved performance.

The approach that will be used in this research is to conduct a literature review to develop a research model using the concepts of environmental dynamism and service quality agility to improve employee performance. This research aims to examine the moderating role of environmental dynamism on the relationship between service quality (SERVQUAL) agility and education personnel performance. It is hypothesized that SERVQUAL can play a significant role in human resource development to enhance soft skills, thereby impacting performance. While SERVQUAL has been extensively employed in marketing research, there is a paucity of studies investigating its role in understanding service quality and its association with employee performance in higher education institutions.

2 Literature Review

2.1 Environmental Dynamism

Yingfei et al. (2022) and Wang (2016) define environmental dynamism as rapid, unpredictable changes that alter the development pattern of the business environment (5). Environmental dynamism compels organizations to enhance their adaptive capabilities to address changes caused by government regulations and policies, technological advances, or competitors' products and strategies. According to Permana and Ellitan (2020) and Okeyo (2014), there are several indicators of the level of environmental change associated with environmental dynamism. One dimension of environmental dynamism is changes in government regulations, where government policies serve as a guide for educational institutions in their competitive efforts (6).

2.2 Service Quality Agility (Servqual Agility)

SERVQUAL is an empirical method that can be used by service companies to enhance the quality of their services. It is built on a comparison of two main factors: customer perceptions of the services they receive (perceived service) and the services they expect or desire (expected service). The ability of employees, specifically educational staff, to provide services to clients quickly and effectively in response to their needs and circumstances is known as service quality agility. Several studies have found that agility in service quality influences employee performance (5,7,8). Fitzsimmons et al. (2017) explained five dimensions of service quality measurement: reliability, tangibility, responsiveness, assurance, and empathy (4).

2.3 Educational Staff Performance

According to Mathis (2018), performance is defined as what employees do or do not do. The performance of an individual or a group of individuals is the result of the work they have completed within an organization, whether formal or informal, governmental or private, and several elements significantly influence it (Mathis, 2018). There are six elements of performance: quantity of work, quality of work, compatibility with others, presence at work, length of service, and flexibility. Employee performance defines as the successful fulfillment of responsibilities by individuals or employees, as determined and measured by supervisors or the organization based on acceptable standards, efficiently and effectively utilizing available resources in a constantly changing organizational environment. Meanwhile, performance success according to Desteghe et al. (2017) is achieved through several indicators: task performance, contextual performance, and counterproductive performance (10). The following is a picture of the model for this research.

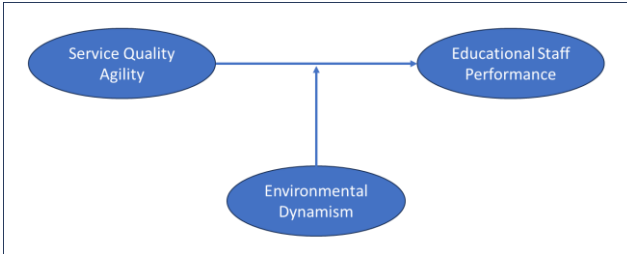


Figure 1. Research Model

3 Hypothesis Development

Based on the established research model, some hypothesis can be developed that needs to be proven true, which states that service quality agility has a direct and indirect effect on the performance of education personnel, moderated by environmental dynamism.

H1 : Service Quality Agility has significant positive effect on Education Staff Performance

H2 : Environmental Dynamism has significant positive effect on Educational Staff Performance

H3 : Environmental Dynamism significantly increases the effect of Service Quality Agility on Performance of Education Personnel

4 Method

4.1 Sample and Population

The population of this study consists of all educational staff employees, both ASN and non-ASN, totaling 677 individuals. Educational staff were chosen as the focus because they are at the forefront, directly implementing and experiencing the quality of service in their work output, contributing to both the institution and its internal and external consumers. A sample represents elements of the population that possess the characteristics of the population (11). The sampling technique employed is proportional random sampling. This technique is used to ensure proportional representation from each work unit within the Unnes environment. This research uses a survey that collects data from educational staff of Universitas Negeri Semarang. The survey was carried out using a purposive random sampling method by online survey and 31 questionnaires were returned or filled out.

4.2 Research and Measurement Variables

This research employs three variables: Service Quality Agility as the independent variable, educational staff performance as the dependent variable, and environmental dynamism as the moderating variable. Each variable will be analyzed and measured using specific indicators. Smart SEM PLS will be utilized for statistical data analysis. The variables in this research include Service Quality Agility as independent variable and the educational staff performance as the dependent variable. Hence, there is Environmental Dynamism as moderating variable. These three variables will be analyzed and measured using indicators. Statistical data analysis for this research will use Smart SEM PLS. The types of data used are qualitative data and quantitative data. Data collection techniques include observation, questionnaires, literature studies and documentation. Descriptive method is used to obtain a complete and precise picture of the research objectives. In this case, a 5 Likert scale is used. Partial Least Square SEM data analysis used to develop or predict an existing theory. This research uses PLS structural model analysis with the help of software SmartPLS 3.0. This research uses high validity and reliability measurement scales for each construct based on previous research. The following table contains the formation of constructs for each variable.

Table 1. Measurement Variable

| No | Constructs | Indicator | |
|----|-------------------------|-----------|--|
| 1 | Service Quality Agility | SQA1 | Wearing neat clothes |
| | | SQA2 | Responsive to complaints from students/lecturers |
| | | SQA3 | Offering solutions for students/lectures problems |
| | | SQA4 | Able to complete every job according to target |
| | | SQA5 | Provide helpful services and make students/lecturers feel comfortable |
| | | SQA6 | Willing to help, direct, or inform to students/lecturers and them not afraid or embarrassed |
| 2 | Environmental Dynamism | ED1 | Non-academic people who come to this campus hope to be served quickly |
| | | ED2 | Non-academic people who come to this campus hope to get more complete and accurate information |
| | | ED3 | People who come to this campus are expected to be served by professional people |
| | | ED4 | Providing services better than other institutions |
| | | ED5 | Trying to adapt new technology to help finishing the task |
| | | ED6 | Willing to ask questions or take part in short training about using new technology for supporting work |

| | | | |
|---|-------------------------------|-------|--|
| 3 | Educational Staff Performance | ESP1 | Maintaining high work standards. |
| | | ESP2 | Able to complete tasks without having to be supervised |
| | | ESP3 | Passionate about the current job. |
| | | ESP4 | Able to handle tasks that align with organizational goals |
| | | ESP5 | Have coworkers believes as a high performer |
| | | ESP6 | Able to work as best as possible to support effective teamwork. |
| | | ESP7 | Able to manage any job changes with any situation |
| | | ESP8 | Dealing well with changes in organizational management |
| | | ESP9 | Provide assistance to colleagues when asked or needed. |
| | | ESP10 | Convey empathy to colleagues when they are in trouble. |
| | | ESP11 | Participate actively in group discussions and work meetings. |
| | | ESP12 | Maintaining good coordination between fellow workers |
| | | ESP13 | Effectively communicate with colleagues to solve problems and make decisions |
| | | ESP14 | Sharing knowledge and ideas among my team members. |
| | | ESP15 | Able to handle the extra responsibility. |

Table 1 shows the measurement sources used in this study. Data analysis was collected using online. The questionnaire includes 28 questions that capture construct data in the research model. All items were recorded using a five-point Likert-type scale. The indicators used to operationalize the variables in this research model were adapted from previous research as listed in Table 1.

5 Result and Analysis

5.1 Reliability Test and Validity Test

The reliability of the instrument was tested using Cronbach's α analysis tool. If Cronbach's α coefficient is above 0.70, it indicates a reliable instrument. On the other hand, if the Cronbach's α coefficient is below 0.70, it means that the instrument is not as recommended by Nunnally (1978) (12). The data in Table 2 shows that the reliability of all variables is >0.7 .

Table 2. Validity and Reliability of Construct

| Construct | Indicator | Outer Loading | Cronbach's Alpha | Rho A | Composite Reliability | Variance Extracted |
|--|-----------|---------------|------------------|-------|-----------------------|--------------------|
| Service Quality Agility | SQA1 | 0.788 | 0.907 | 0.910 | 0.928 | 0.684 |
| | SQA2 | 0.864 | | | | |
| | SQA3 | 0.828 | | | | |
| | SQA4 | 0.759 | | | | |
| | SQA5 | 0.814 | | | | |
| | SQA6 | 0.900 | | | | |
| Environmental Dynamism | ED1 | 0.844 | 0.922 | 0.924 | 0.939 | 0.720 |
| | ED2 | 0.818 | | | | |
| | ED3 | 0.886 | | | | |
| | ED4 | 0.814 | | | | |
| | ED5 | 0.840 | | | | |
| | ED6 | 0.889 | | | | |
| Service Quality Agility * Environmental Dynamism | | | 1.000 | 1.000 | 1.000 | 1.000 |
| Educational Staff Performance | ESP1 | 0.880 | 0.980 | 0.983 | 0.982 | 0.783 |
| | ESP2 | 0.909 | | | | |
| | ESP3 | 0.909 | | | | |
| | ESP4 | 0.864 | | | | |
| | ESP5 | 0.782 | | | | |
| | ESP6 | 0.963 | | | | |
| | ESP7 | 0.923 | | | | |
| | ESP8 | 0.907 | | | | |
| | ESP9 | 0.912 | | | | |
| | ESP10 | 0.876 | | | | |
| | ESP11 | 0.832 | | | | |
| | ESP12 | 0.932 | | | | |
| | ESP13 | 0.916 | | | | |
| | ESP14 | 0.915 | | | | |
| | ESP15 | 0.724 | | | | |

Table 3. Discriminant Validity

| No | Construct | SQA | ED | SQA*ED | ESP |
|----|-------------------------|-------|-------|--------|-----|
| 1 | Service Quality Agility | 0.827 | | | |
| 2 | Environment Dynamism | 0.813 | 0.849 | | |

| | | | | | |
|---|---|--------|--------|--------|-------|
| 3 | Performance Service Quality Agility * Environment Dynamism | -0.280 | -0.406 | 1.000 | |
| 4 | Educational Staff Performance | 0.911 | 0.826 | -0.224 | 0.885 |

Source : Data Analysis 2024

This means that the measuring instrument used in this research is reliable. Thus, the questionnaire is suitable to be distributed to respondents in this study. Meanwhile, to test the validity of the instrument, based on suggestions from Fornell and Larcker (1981), using the composite reliability (CR) value which describes the joint divergence of the observed variables to define the main construct (13). Table 2 shows that CR reaches an adequate level of reliability for each construct above $> 0,7$. Likewise, the Cronbach's alpha value of each construct achieved a level of reliability that could be higher than 0.70 as recommended by Nunnally (1978) (12). The average variance extracted (AVE) value is above $>0,5$ which AVE of each latent factor must be greater than the squared correlation of that factor with other latent factors. The average variance extracted must be higher than the minimum threshold of 0.5.

5.2 Outer model Testing

The aim of testing the outer model is to find out the validity and reliability of a model. This test analysis will be seen from the influence of Loading factors, Average Variance Extracted (AVE), and Discriminant Validity, as well as composite reliability

5.3 Loading Factor

Factor loading is the initial stage in testing the validity of a model, the condition for factor loading is that it must be $> 0,6$, so that the indicator is said to be valid. If it is not valid then it must be removed from the model. To find out the outer model analysis for this research, you can see Figure 2 below:

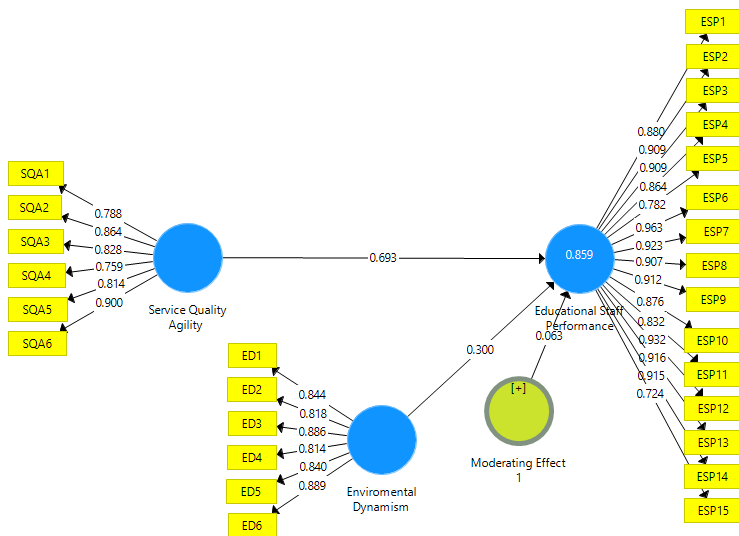


Figure 2. Outer Model

5.4 Average variance extracted (Ave)

Average Variance Extracted (AVE) is the value of convergent validity testing and the value is obtained from the results of convergent validity. In this research, the expected AVE value is > 0.5, and so if we look at the latent variable constructs, all constructs have values above 0.5 (or greater than 0.5). For more details, the AVE results can be seen in Table 2.

5.5 Discriminant Validity

Discriminant validity can be tested from cross loading table. This output is used to test discriminant validity at the indicator level with the condition that the correlation between the indicator and the late variable is > compared to the correlation between the indicator and other latent variables (outside the block). For more clarity, see the table 4 below:

Table 4. Cross Loading

| Indicator | Service Quality Agility | Environment Dynamism | Service Quality Agility * Environment Dynamism | Educational Staff Performance | Validity |
|-----------|-------------------------|----------------------|--|-------------------------------|----------|
| SQA1 | 0.788 | 0.610 | -0.338 | 0.665 | Valid |

| | | | | | |
|--------|--------|--------|--------|--------|-------|
| SQA2 | 0.864 | 0.659 | -0.311 | 0.785 | Valid |
| SQA3 | 0.828 | 0.697 | -0.196 | 0.728 | Valid |
| SQA4 | 0.759 | 0.689 | -0.160 | 0.774 | Valid |
| SQA5 | 0.814 | 0.634 | -0.201 | 0.726 | Valid |
| SQA6 | 0.900 | 0.737 | -0.197 | 0.826 | Valid |
| ED1 | 0.762 | 0.844 | -0.334 | 0.716 | Valid |
| ED2 | 0.690 | 0.818 | -0.366 | 0.625 | Valid |
| ED3 | 0.695 | 0.886 | -0.389 | 0.732 | Valid |
| ED4 | 0.576 | 0.814 | -0.284 | 0.709 | Valid |
| ED5 | 0.670 | 0.840 | -0.346 | 0.666 | Valid |
| ED6 | 0.748 | 0.889 | -0.350 | 0.749 | Valid |
| ESP1 | 0.792 | 0.824 | -0.199 | 0.880 | Valid |
| ESP2 | 0.900 | 0.806 | -0.211 | 0.909 | Valid |
| ESP3 | 0.788 | 0.638 | -0.205 | 0.909 | Valid |
| ESP4 | 0.821 | 0.712 | -0.178 | 0.864 | Valid |
| ESP5 | 0.678 | 0.598 | -0.029 | 0.782 | Valid |
| ESP6 | 0.887 | 0.792 | -0.218 | 0.963 | Valid |
| ESP7 | 0.840 | 0.737 | -0.170 | 0.923 | Valid |
| ESP8 | 0.779 | 0.673 | -0.161 | 0.907 | Valid |
| ESP9 | 0.834 | 0.799 | -0.285 | 0.912 | Valid |
| ESP10 | 0.890 | 0.808 | -0.227 | 0.876 | Valid |
| ESP11 | 0.754 | 0.649 | -0.118 | 0.832 | Valid |
| ESP12 | 0.841 | 0.773 | -0.201 | 0.932 | Valid |
| ESP13 | 0.819 | 0.746 | -0.265 | 0.916 | Valid |
| ESP14 | 0.819 | 0.806 | -0.243 | 0.915 | Valid |
| ESP15 | 0.577 | 0.524 | -0.246 | 0.724 | Valid |
| SAQ*ED | -0.280 | -0.406 | 1.000 | -0.224 | Valid |

Source : Data Analysis 2024

5.6 Composite reliability

To ensure that there are no problems related to measurement, the final step in evaluating the outer model is to test the unidimensional of the model. This unidimensional test was carried out using composite reliability and Cronbach's alpha. For both indicators, the cut off value is 0.7. Table 2 shows that all constructs have composite reliability values above 0.7. Therefore, there was no problem of unidimensional in the influence of service quality agility on educational staff performance.

5.7 Inner Model Testing

Coefficient of Determination (R-Square) value is used to measure the level of variation in changes in the independent variable towards the dependent variable. An R-Square value of 0.75 means strong, while a value of 0.50 means moderate and 0.25 means weak. In this study, the R-Square value was 0.853, which means that the level of variation in changes in the independent variable in the dependent variable is quite strong.

Table 5. R-Square Model

| Construct | R Square | R Square Adjusted |
|-------------------------------|----------|-------------------|
| Educational Staff Performance | 0.859 | 0.853 |

Source : Data Analysis 2024

The goodness of fitting in PLS can be determined by the Q2 value. The Q2 value has the same meaning as the coefficient of determination (R-Square) in regression analysis. Based on the R Square table, Q2 is 0.859 = 85.9%, which means that the Service Quality Agility variable and the Environmental Dynamism variable have a contribution to explain the Educational Staff Performance variable of 85.9% and the rest is influenced by other factors.

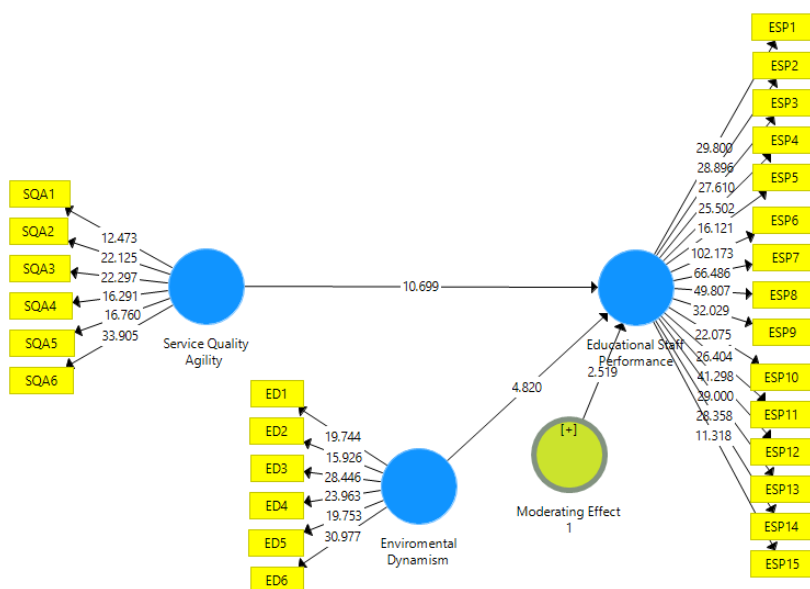


Figure 3. Inner Model

5.8 Hypothesis Testing

Hypothesis testing is carried out to test the influence of the independent variable on the dependent variable by using P value of the model. The hypothesis in this research will be accepted if the P value is <0.05 and the T-statistic value is > 1.96.

Table 5. Result of Hypothesis Testing

| Hypothesis | T-Statistic | P Values | Result |
|-------------------------|-------------|----------|-----------|
| Service Quality Agility | 10.699 | 0.000 | Supported |

| | | | |
|---------------------------------|-------|-------|-----------|
| → Educational Staff Performance | | | |
| Environmental Dynamism | 4.820 | 0.000 | Supported |
| → Educational Staff Performance | | | |
| SQA * ED (Moderating) | 2.519 | 0.012 | Supported |
| → Educational Staff Performance | | | |

From table 5 and figure 3 above, Service Quality Ability has a significantly positive effect on Educational Staff Performance, with a P value < 0.05 and a T-statistic value of 10.699 (> 1.96). Likewise, the Environmental Dynamism variable has a significant positive effect on Educational Staff Performance, with a P value of <0.05 and a T-statistic value of 4.820 (> 1.96). Similar result fund when Environmental Dynamism acted as a moderating variable to strengthen the influence of Service Quality Ability. As a moderating variable, Environmental Dynamism have a significant effect on Educational Staff Performance because it has a P value 0.012 (< 0.05) and a T-statistic 2.519 (> 1.96).

6 Conclusion

In previous studies, service quality agility is proven to have a positive performance. This research provides the same results. It can be concluded that one of the things that makes performance increase the ability of an organization to create a better service. As an empirical method that can be used by service companies to enhance the quality of their services, the agility of service quality is proven to improve performance. Several studies have found that agility in service quality influences employee performance (5,7,8). This research also prove that service quality agility has a positive effect to improve educational staff performance. The ability of employees, specifically educational staff, to provide services to clients quickly and effectively in response to their needs and circumstances is known as service quality agility. Environmental dynamism as rapid, unpredictable changes compel organizations to enhance their adaptive capabilities to address changes. In this research Environmental dynamism prove to has a positive effect on educational staff performance. Different results occur when the Environmental dynamism variable acts as a moderator variable that influences the strength of the relationship between the service quality agility variable and educational staff performance. This is thought to be because when an institution, including universities, succeeds in implementing service quality agility, the ability to adapt as part of environmental dynamism is also formed and will result in increased performance.

Theoretically, this research contributes to existing knowledge in the Higher Education environment by providing antecedents to the service quality agility and Environmental dynamism. The results of this research are expected to contribute to theories regarding service quality and dynamic environments in order to improve performance. This finding also contributes to and strengthens the findings in previous research regarding service quality agility which are proven by previous study improving perfor-

mance. In the end, this research strengthens the role dynamic based theory with its Environmental dynamism to improve the performance of educational staff in Higher Education Institution. As this research shows the service quality agility and Environmental dynamism have a positive influence on improving educational staff performance Higher Education Institution, therefore, it is important for Higher Education Institution to improve the quality of service and the agility to face dynamism of environment.

This research has several limitations. First, the respondents of this study only included educational industry specifically universities, so the findings cannot be generalized. Therefore, future research could use more varied respondents such whether in same educational industry such as elementary school, junior high school, and senior high school or research conducted in other industry. Second, respondents from universities can conduct from lecturers to provide services in dynamic learning process and meet industry needs. Second, one of research results that prove that the hypothesis is not proven not significant, it is could be taken for future research to use different indicators or different analytical approaches.

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