Dinamika Pendidikan 19 (2) (2024) 220-233

Dinamika Pendidikan

http://journal.unnes.ac.id/nju/index.php/dp

# Analysis of Priorities for Improving the Quality of Higher Education Services to Increase Student Satisfaction in the Economics Education Study Program, Universitas Negeri Semarang

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**DOI: 10.15294/dp.v19i2.20424**

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## History Article

Received October 22, 2024
Approved February 08, 2025
Published February 11, 2025

## Keywords

Customer Satisfaction Index (CSI); Importance-Performance Analysis (IPA); HESQUAL; Potential Gain in Customer Value (PGCV); Student; Satisfaction

## Abstract

This study aims to determine the suitability of the application of the HESQUAL dimensions, determine the level of student satisfaction with service quality and determine priorities for improving service quality in the Economic Education Study Program at Semarang State University. The sample that has been determined is 110 respondents. The sampling technique is using Proportional Random Sampling. Data collection methods using questionnaires. The data analysis techniques used are: (1) Confirmatory Factor Analysis (CFA) using SmartPLS version 4; (2) Customer Satisfaction Index (CSI); (3) ImportancePerformance Analysis (IPA); (4) Potential Gain in Customer Value (PGCV) using the SPSS application. The results showed that the HESQUAL model is a fit model for measuring service quality in higher education, student satisfaction is in the Satisfied category with a satisfaction value of 73% and the priority for improving service quality is the attention of lecturers to students who have difficulty understanding the material, lecturers need to determine effective learning methods, provide quality services that can increase student confidence, administrative staff help students who have difficulties, and information on the flow of academic administration carried out online.

## How to Cite

Susanti, E., & Jannah, S.N.(2024).Analysis of Priorities for Improving the Quality of Higher Education Services to Increase Student Satisfaction in the Economics Education Study Program, Universitas Negeri Semarang.*Dinamika Pendidikan*, 19 (2), 220-233.



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p-ISSN 1907-3720
e-ISSN 2502-5074

## INTRODUCTION

The intense competition among higher education institutions necessitates continuous improvement in quality. According to (Tjiptono & Chandra, 2016), service quality is the fulfillment of customer needs and wants, as well as the accuracy in delivering and balancing customer expectations. With good service quality, student satisfaction is expected to influence prospective students' decision in choosing a university.

As a higher education service organization, universities must be able to satisfy their students. According to (Kotler & Keller, 2009), customer satisfaction is a measure of how a product or service's perceived performance matches a buyer's expectations. In the context of higher education, student satisfaction is an assessment of the services provided by the university against the expectations of students through the performance or results perceived by students. Having good quality services is a capital for universities to manage the perceptions of their stakeholders. By providing good quality services, universities can retain existing students and attract new ones. Therefore, to ensure the provision of excellent services, it is necessary to understand the quality of service needed by students as both users and primary stakeholders.

Based on the results of the fourth quarter service survey conducted in 2023 at the Faculty of Economics and Business, the average perception of service quality was 3.61%. This result indicates that the existing quality needs to be improved. Specifically, in the Economics Education Study Program at Universitas Negeri Semarang, this is in line with the trend of declining numbers of graduates over the past seven years, although there has been an increase in the number of students in the Economics Education Study Program at Universitas Negeri Semarang. Based on these data, it indicates the need for an evaluation and improvement of service quality to enhance service quality and student satisfaction.

Measurement of service quality on user satisfaction by students is needed to measure the extent of service quality provided by universities. Measuring service quality is an evaluation or comparison of the performance of a service against a set of standards that have been set (Latan & Ghozali, 2017). There are several models and approaches in measuring service quality in organizations. The measurement of service quality in the Economics Education Study Program is mostly carried out using the SERVQUAL model. However, there is still debate about the use of the SERVQUAL measurement model to measure the quality of services in the field of Education. According to (Manunggal & Afriadi, 2023), the SERVQUAL method to measure the quality of higher education services, this is because higher education institutions are different from businesses, and students cannot be treated as customers. Some researchers consider that quality in educational services is very complex, but there are also those who think that educational services are not too complex (Wahyuni et al., 2020).

In measuring the quality of service in higher education, there is a model for measuring High Educational Service Quality (HESQUAL) proposed by (Teeroovengadum et al., 2016). HESQUAL has a multi-level measurement scale that includes functional aspects (processes), technical aspects (outputs) and transformative quality aspects. The HESQUAL measurement model is designed to be applied in the context of higher education institutions. According to (Abbas & Sagsan, 2021), the HESQUAL model is a complex model compared to the previous model, but this model is considered inconsistent and needs to be developed in technical, operational and cultural aspects. Meanwhile, in a study conducted by (Teeroovengadum et al., 2016), showed that the four fungisonal dimensions have an effect on student satisfaction but the influence is not significant, besides that transformative quality also has a significant influence on student satisfaction. Therefore,

Confirmatory Factor Analysis (CFA) is needed to test how well the data can be used as a service quality measurement model.

This study offers a new collaboration model to analyze service quality on student satisfaction using the 5 dimensions of HESQUAL. This dimension is made specifically to be applied in the context of higher education institutions or universities, measurements with HESQUAL dimensions can also provide a multi-level measurement scale that includes technical aspects (outputs), transformative quality and functional aspects with five dimensions, namely 1) Administrative quality; 2) Support facilities quality; 3) Core educational quality; 4) Transformative quality; and 5) Physical environment quality. These dimensions will be used to determine the extent of service quality to student satisfaction provided by the UNNES Economics Education Study Program.

Based on the results of research conducted by (Hassan et al., 2023), it is stated that research on measuring service quality was carried out without measuring the student satisfaction index and the priority of service quality improvement. Therefore, in this study, to measure the level of student satisfaction with the quality of service is carried out using the Customer Satisfaction Index (CSI) method, the CSI analysis is used to determine the level of student satisfaction with the quality of service in the Economics Education Study Program, the results of which can be used as recommendations in decision-making regarding the quality of service in the Economics Education Study Program.

To find out the attributes that need improvement, it is carried out by using the Importance Performance Analysis (IPA) method which is a method used to compare the expectations desired by students with the performance of the UNNES Economics Education Study Program. The use of the IPA method is used to find out the attributes that must be maintained and the attributes that do not work optimally. The next stage is to use the Potential Gain in Customer Value (PGCV) method which can measure customer or consumer satisfaction which is carried out by a customer satisfaction survey in a quantitative way. The Potential Gain in Customer Value (PGCV) method is used to refine or complete the analysis results of the Importance Performance Analysis (IPA) method which is carried out by determining the priority order of service improvements that must be carried out. With the improvement of service quality, it is hoped that this can have an impact on student satisfaction with the quality of service in the UNNES Economics Education Study Program.

Based on the explanation of the background, the researcher is interested in conducting more in-depth research on the existing phenomenon. Therefore, the author is interested in conducting research with the title "Analysis of Priorities for Improving the Quality of Higher Education Services in Increasing Student Satisfaction in the Economics Education Study Program, State University of Semarang".

## METHODS

This study uses a descriptive quantitative method because the variables stand alone without looking for relationships between variables and to describe the level of student satisfaction using the attributes of service quality. The type of descriptive quantitative research in this study is a descriptive survey.

According to Creswell (2014), survey research involves the systematic collection of data from a representative sample to describe the population. Quantitative data collection was carried out using a questionnaire and then analyzed to gain a deep understanding of the population.

The population in this study is students of the Economics Education Study Program, Faculty of Economics and Business, Semarang State University who are still active and are intended for students in the class of 2020-2022 which totals 1208 people. This study uses a proportional random sampling technique with a sample of 110 respondents. The data

collection method uses a questionnaire. The tools used for data processing use SmartPLS Version 4 and IBM SPSS Statistics 26. The data validity techniques used were validity tests and reliability tests while the series of data analysis used was Confirmatory Factor Analysis (CFA) analysis using SmartPLS version 4.1.0.4. as well as Customer Satisfaction Index (CSI), Importance-Performance Analysis (IPA), and Potential Gain in Customer Value (PGCV) analysis using the SPSS version 26 application. By using several sets of data analysis techniques, it is hoped that they can get a deeper understanding as well as concrete and appropriate decisions.

## RESULT AND DISCUSSION

Confirmatory Factor Analysis is carried out to confirm whether the factors formed from the HESQUAL dimension meet the validity and reliability requirements and check the goodness of fit criteria. A model can be said to be fit if it meets the criteria of goodness of fit.

**Table 1.** Standardized Outer Loading Awal HESQUAL

| | Outer loading (standardized) |
|---|---|
| IP <- Physical Environment Quality | 0.849 |
| IRP <- Physical Environment Quality | 0.940 |
| IU <- Physical Environment Quality | 1.002 |
| KO <- Core Quality | 0.938 |
| KP <- Core Quality | 0.943 |
| PA <- Administrative Quality | 0.904 |
| PE <- Core Quality | 0.869 |
| S36 <- Support Facilities Quality | 0.812 |
| S37 <- Support Facilities Quality | 0.689 |
| S38 <- Support Facilities Quality | 0.762 |
| S39 <- Support Facilities Quality | 0.786 |
| SDP <- Core Quality | 0.868 |
| SP <- Administrative Quality | 0.880 |
| T43 <- Transformative Quality | 0.775 |
| T44 <- Transformative Quality | 0.772 |
| T45 <- Transformative Quality | 0.815 |
| T46 <- Transformative Quality | 0.798 |
| T47 <- Transformative Quality | 0.764 |
| T48 <- Transformative Quality | 0.763 |

Source: Processed primary data (2024)

Based on Table 1, it can be seen that there are still items that have a standardized outer loading value below 0.7. Precisely in the S37 item with a loading value of 0.689, therefore modifications were made by deleting the item, so that the standardized outer loading value was obtained in Table 2.

**Table 2.** Standardized Outer Loading Akhir HESQUAL

| | Outer loading (standardized) |
|---|---|
| IP <- Physical Environment Quality | 0.849 |
| IRP <- Physical Environment Quality | 0.940 |
| IU <- Physical Environment Quality | 1.002 |
| KO <- Core Quality | 0.938 |
| KP <- Core Quality | 0.943 |

| | Outer loading (standardized) |
|---|---|
| PA <- Administrative Quality | 0.909 |
| PE <- Core Quality | 0.869 |
| S36 <- Support Facilities Quality | 0.788 |
| S38 <- Support Facilities Quality | 0.766 |
| S39 <- Support Facilities Quality | 0.791 |
| SDP <- Core Quality | 0.868 |
| SP <- Administrative Quality | 0.874 |
| T43 <- Transformative Quality | 0.775 |
| T44 <- Transformative Quality | 0.772 |
| T45 <- Transformative Quality | 0.815 |
| T46 <- Transformative Quality | 0.798 |
| T47 <- Transformative Quality | 0.764 |
| T48 <- Transformative Quality | 0.763 |

Source: Processed primary data (2024)

After making modifications by deleting question items and obtaining standardized outer loading values as shown in the table above, to meet the requirements of the validity test, the next validity test is carried out by calculating the Average Variance Expected (AVE) value which can be seen in Table 3.

Based on the Table 3, it is known that all AVE values show values above 0.5. This proves that the HESQUAL dimensional construct has met the convergent validity test, because the AVE value of each construct has a value above 0.5 (Latan & Ghozali, 2017).

Furthermore, reliability tests are carried out, reliability tests are carried out on question items to produce consistent and reliable measurements. The reliability test was carried out

**Table 3.** Average Variance Expected (AVE) Value. Composite Reliability (CR) and Cronbach's Alpha (CA) Model HESQUAL

| | Cronbach's alpha (standardized) | Composite reliability (rho_c) | Average variance extracted (AVE) |
|---|---|---|---|
| Administrative Quality | 0.886 | 0.885 | 0.795 |
| Core Quality | 0.947 | 0.946 | 0.820 |
| Physical Environment Quality | 0.946 | 0.950 | 0.870 |
| Support Facilities Quality | 0.826 | 0.826 | 0.612 |
| Transformative Quality | 0.903 | 0.904 | 0.611 |

Source: Processed primary data (2024)

based on Cronbach's Alpha (CA) and Composite Reliability (CR) values. Measurement items are said to be reliable if the values of Cronbach's Alpha (CA) and Composite Reliability (CR) are greater than 0.6 to 0.7 (Latan & Ghozali, 2017).

The results of the reliability test on the construct can be seen in the table above which shows that all constructs have a > value of 0.7. This shows that based on the reliability test, the construct is declared reliable.

Furthermore, to determine the validity of discrimination from this construct, a validity test of discrimination was carried out using the Heterotrait-Monotrait Ratio (HTMT) approach, according to (Hair et al., 2021), the recommended HTMT value to be used is less than 0.90. The results of the calculation of the HTMT value of the HESQUAL model are shown in Table 4.

Based on Table 4, it can be seen if the value of the Heterotrait-Monotrait Ratio

(HTMT) is less than 0.90. So, it can be concluded that the HESQUAL model is declared to meet the requirements for the validity of discrimination. Figure 1 is the final structural image of the full HESQUAL model.

The next stage is to conduct an analysis of the overall fit of the model by assessing the goodness of fit (GOF), Table 5 is a table of the calculation results from the GoF.

Based on the goodness of fit output results shown in Table 5, it shows that the HESQUAL model that has a No Fit value is a Chi Square value of 272.303, a P-Value of 0.000, and an RMSEA of 0.103. There are two criteria that indicate marginal fit or close to fit, namely GFI of 0.780 and AGFI of 0.701. In addition, there are four categories that show the fit category, namely CMIN/DF of 2.161, SRMR of 0.053, TLI of 0.909, and CFI of 0.925. Therefore, based on the goodness of fit value, according to (Solimun et al., 2017), if there are one or two criteria that meet the fit value, then the model can be accepted as a whole.

To get a better model, model modification is required. According to (Suharyono & Astuti, 2020), model modifications can be done using modification indices based on Arbuckle's theory (1997). Modification indices are carried out by providing correlation recommendations or lines between error variables to reduce the chi-square and improve

**Table 4.** Validity of Discrimination in HESQUAL Model

| | Administrative Quality | Core Quality | Physical Environment Quality | Support Facilities Quality | Transformative Quality |
|---|---|---|---|---|---|
| Administrative Quality | | | | | |
| Core Quality | 0.758 | | | | |
| Physical Environment Quality | 0.725 | 0.822 | | | |
| Support Facilities Quality | 0.815 | 0.773 | 0.858 | | |
| Transformative Quality | 0.692 | 0.877 | 0.754 | 0.736 | |

Source: Processed primary data (2024)

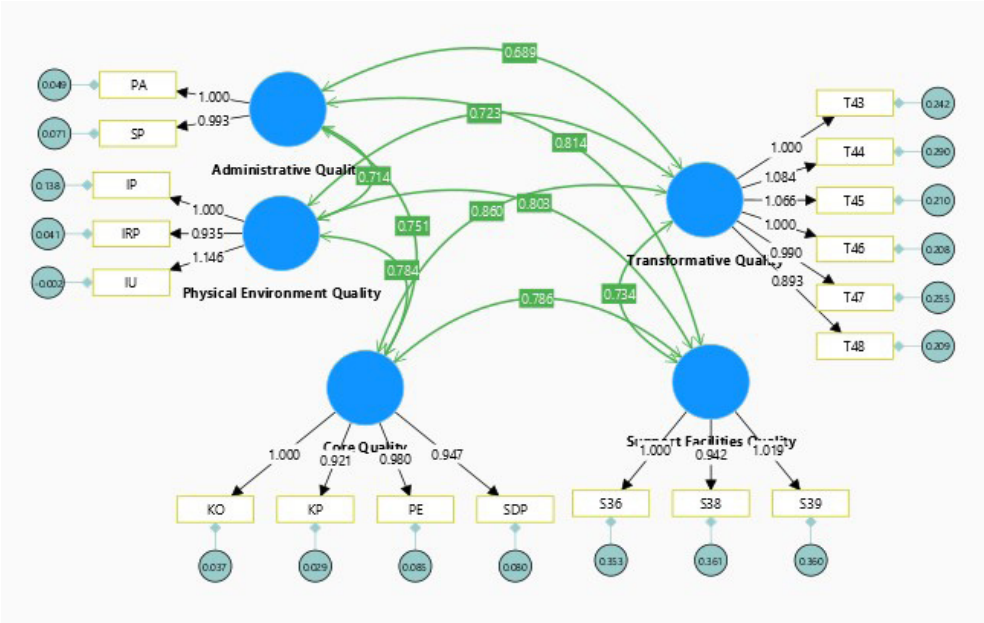


**Figure 1.** Final Model of CFA High Education Service Quality (HESQUAL)

the fit of the model. However, in the CB-SEM software, modification indices cannot be done because SmartPLS 4 still does not provide the program. Overall, based on the results of the goodness of fit test, it shows that the HES-QUAL model is good and worthy of use as further analysis.

**Table 5.** Result of Goodness of Fit Model HESQUAL Test

| Goodness of Fit Index | Cut-off Value | Estimat-ed Model | Conclusion |
|---|---|---|---|
| Chi-square | Expected small | 272.303 | Not Fit |
| P value | ≥ 0.05 | 0.000 | Not Fit |
| CMIN/DF | ≤ 3.0 | 2.161 | Fit |
| RMSEA | ≤ 0.08 | 0.103 | Not Fit |
| SRMR | ≤ 0.05 | 0.053 | Fit |
| GFI | ≥ 0.90 | 0.780 | Marginal Fi |
| AGFI | ≥ 0.90 | 0.701 | Marginal Fi |
| TLI | ≥ 0.90 | 0.909 | Fit |
| CFI | ≥ 0.90 | 0.925 | Fit |

Source: Processed primary data (2024)

**Table 6.** Average Value of Importance-Performance

| No. Item | Importance | Performance | Shoes |
|---|---|---|---|
| A1 | 4.08 | 3.63 | 14.8 |
| A3 | 3.98 | 3.44 | 13.7 |
| A4 | 3.97 | 3.40 | 13.5 |
| A5 | 4.05 | 3.64 | 14.7 |
| A6 | 4.13 | 3.69 | 15.2 |
| A7 | 4.11 | 3.68 | 15.1 |
| P8 | 3.88 | 2.99 | 11.6 |
| P10 | 3.90 | 2.87 | 11.2 |
| P11 | 3.92 | 3.25 | 12.8 |
| P12 | 4.15 | 3.83 | 15.9 |
| P13 | 4.41 | 4.19 | 18.5 |
| P14 | 4.15 | 3.72 | 15.4 |
| P15 | 4.15 | 3.72 | 15.4 |
| P16 | 4.30 | 3.84 | 16.5 |
| C18 | 4.09 | 3.60 | 14.7 |
| C19 | 4.05 | 3.55 | 14.4 |
| C20 | 4.14 | 3.70 | 15.3 |
| C21 | 4.12 | 3.81 | 15.7 |
| C22 | 3.90 | 3.53 | 13.8 |
| C23 | 3.89 | 3.43 | 13.3 |
| C24 | 3.98 | 3.79 | 15.1 |
| C26 | 3.85 | 3.58 | 13.8 |
| C27 | 4.08 | 3.89 | 15.9 |
| C29 | 4.11 | 3.75 | 15.4 |
| C30 | 3.97 | 3.79 | 15.1 |
| C31 | 4.05 | 3.79 | 15.3 |
| C32 | 4.15 | 3.93 | 16.3 |
| C33 | 4.15 | 3.83 | 15.9 |
| C34 | 4.10 | 3.85 | 15.8 |
| S36 | 3.95 | 3.59 | 14.2 |
| S37 | 3.44 | 3.17 | 10.9 |
| S39 | 3.78 | 3.37 | 12.8 |
| T42 | 4.05 | 3.59 | 14.6 |
| T43 | 4.05 | 3.68 | 14.9 |
| T44 | 4.07 | 3.84 | 15.6 |
| T45 | 3.97 | 3.71 | 14.7 |
| T46 | 3.95 | 3.69 | 14.6 |
| T47 | 4.09 | 3.74 | 15.3 |
| T48 | 4.14 | 3.99 | 16.5 |
| Total | 157.3 | | 574.1 |

Source: Processed primary data (2024)

Satisfaction Index (CSI) value which is done using the following formula:

CSI = T/5Y x 100%

CSI = 574.1/ (5 x 157.3) x 100%

CSI = 574.1 / 786.5 x 100%

CSI = 0.7299 x 100%

CSI = 72.99 rounded to 73

From the results of the calculation above, a Customer Satisfaction Index (CSI) value of 73% was obtained. Based on Table 3.1. In the CSI value satisfaction category, the figure of 73% indicates the satisfaction category of "Satisfied" and shows the category of "Good" Service Quality.

Importance Performance Analysis (IPA) is carried out by mapping consumer perceptions of the importance of service aspects with student perceptions of service performance in the Economic Education Study Program, State University of Semarang, which is mapped in a quartet of cartesius diagrams. A Cartesian diagram is a figure divided into four parts bounded by two lines that intersect perpendicularly at points (X, Y). X is the average level of performance while Y is the average level of importance of all factors that affect customer satisfaction.

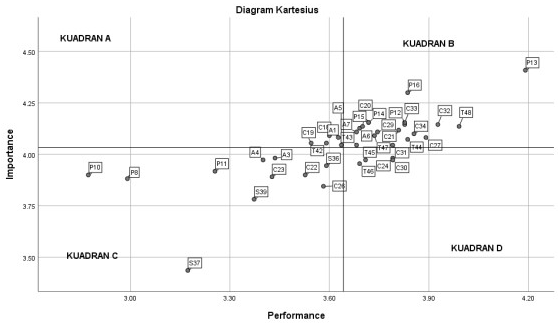


**Figure 2.** Cartesian Importance Performance Diagram

The attribute in the A quadrant is considered important by the user but the service is not satisfactory so it needs to be improved on this attribute. This quadrant shows that the facts contained in this quadrant are considered important by students of the Economics Education Study Program, UNNES, but the service is not satisfactory. The attributes that are part of quadrant A can be seen in Table 7.

**Table 7.** Quadrant A Diagram Results

| Attribute | Statement |
|---|---|
| A1 | Administrative staff help students who are experiencing difficulties and are able to provide information that is easy to understand |
| A5 | Students can understand the flow of academic administration carried out online |
| C18 | Lecturers can determine effective learning methods according to students' abilities |
| C19 | Lecturers pay attention to students who have difficulty understanding the learning material |
| T42 | During my lectures on campus. I had confidence in doing various things |

The attributes in this B quadrant contain attributes that are considered important by service users and that these attributes are in accordance with what they feel. The attributes in this quadrant are attributes that are considered important by students and the services provided by the Economics Education Study Program of Semarang State University are satisfactory. The attributes that must be maintained in Quadrant B can be seen in Table 8.

**Table 8.** Quadrant B Diagram Results

| Attribute | Statement |
|---|---|
| A6 | There are clear and structured administrative procedures |
| A7 | Administrative services are carried out in a timely manner so that they are efficient |
| P12 | Lecture halls are comfortable and adequate |
| P13 | The lecture hall is equipped with adequate tools and equipment (e.g. Projectors. whiteboards and so on) |

| Attribute | Statement |
|---|---|
| P14 | The campus building infrastructure is well maintained |
| P15 | The condition of the campus environment is comfortable and avoids things that can distract students in carrying out the learning process (e.g. noise. dirty room and so on) |
| P16 | The area around the campus can make students feel safe and comfortable |
| C20 | Lecturers can guide and advise students during the learning process |
| C21 | Lecturers deliver lecture material well so that students can understand easily |
| C27 | There is relevance between the material studied and the student's future work |
| C29 | Student Involved to actively participate during the learning process |
| C31 | The assignments and exams given to students are well designed so as to improve skills and knowledge |
| C32 | Lecturers have qualifications. practical knowledge and theoretical knowledge in delivering material to students |
| C33 | Lecturers always build good communication with students during learning activities |
| C34 | Lecturers who are always up-to-date in their field of expertise |
| T43 | I feel developed and can think critically while participating in activities on campus |
| T44 | During my time at campus. I had self-awareness in doing my duties and responsibilities |
| T47 | I gained knowledge and skills that are appropriate to my major and future job prospects |
| T48 | During lecture activities I can improve my knowledge. skills and academic and non-academic abilities |

Attributes in the C quadrant are considered less important by users and the service is not satisfactory. The attributes that are part of this quadrant are considered less important by students and the services provided by the Economics Education Study Program of Semarang State University are considered unsatisfactory. The attributes that are part of the C Quadrant can be seen in Table 9.

**Table 9.** Results of Cartesian Quadrant C Diagram

| Attribute | Statement |
|---|---|
| A3 | The administrative staff is polite and friendly when serving students |
| A4 | The behavior of administrative staff can make students feel confident when interacting |
| P8 | Availability of adequate canteen infrastructure |
| P10 | There is a recreational infrastructure for students to unwind (e.g. gardens and gazebos) |
| P11 | Availability of sports infrastructure that can be used by students |
| C22 | Lecturers can instill confidence in students through learning activities on campus |
| C23 | Lecturers can see and understand students' interests |
| C26 | There are rules that are made according to the needs and circumstances of students |
| S36 | There are internet facilities around the campus that students can use |
| S37 | The availability of photocopying and printing facilities that can be used by students on campus |
| S39 | There are fitness and recreational facilities that can be used by students (for example: courts. studios. etc.) |

The attributes in the D quadrant are considered less important by students but the services provided by the Economics Education Study Program of Semarang State University are very good or satisfactory so they are considered excessive. The attributes in the D quadrant can be seen in Table 10.

**Table 10.** Results of Cartesian Quadrant D Diagram

| Attribute | Statement |
|---|---|
| C24 | The learning curriculum as well as the objectives and content of the course can be conveyed properly and clearly |
| C30 | There is *feedback* in the form of a good response or response to students in connection with academic activities |
| T45 | During lecture activities. I have *problem-solving* skills in overcoming problems |
| T46 | I was able to overcome the prejudice I had against the services provided during lecture activities |

The Potential Gain in Customer Value (PGCV) method is used to complete the results of the analysis of the Importance Performance Analysis (IPA) method by determining the priority order of service improvements that must be carried out. Potential Gain in Customer Value (PGCV) is carried out by determining the average value of importance and average performance, then determining the values of ACV, UDCV and PGCV. The following are the results of the calculation of the PGCV value in Quadrant A of the Importance Performance Analysis (IPA) cartesian diagram.

**The Accuracy of the Use of the HESQUAL Model as a Tool to Measure Service Quality in the Economics Education Study Program, State University of Semarang**

Based on the results of the goodness of fit model in table 4.27, it shows that the HESQUAL model is a fit model to measure the quality of service in higher education. This is supported by Muhammad et al. (2019), which shows that the HESQUAL model is a fit model even though there are several criteria that show the value of marginal fit. The HESQUAL model is to measure the quality of service in universities. HESQUAL or Higher Education Service Quality is a service quality measurement model developed by (Teeroovengadum et al., 2016), with a holistic and transformative perspective in describing service quality in higher education. Based on the results of this study, the HESQUAL model was declared fit through CFA analysis. This result is in line with research conducted by Fadhillah (2022), which shows that based on the results of the goodness of fit test, the HESQUAL model is declared fit as a measure of service quality in higher education.

**Table 11.** Results of the Potential Gain in Customer Value (PGCV) Quadrant A

| Number | Average Performance ($\bar{x}$) | Average Importance ($\bar{y}$) | Value ACV | Value UDCV | Index PGCV | Urutan Priority |
|---|---|---|---|---|---|---|
| A1 | 3.627 | 4.082 | 14.81 | 20.41 | 5.60 | 4 |
| A5 | 3.636 | 4.045 | 14.71 | 20.23 | 5.52 | 5 |
| C18 | 3.600 | 4.091 | 14.73 | 20.45 | 5.73 | 2 |
| C19 | 3.545 | 4.055 | 14.38 | 20.27 | 5.90 | 1 |
| T42 | 3.591 | 3.945 | 14.56 | 20.27 | 5.71 | 3 |

Source: Processed primary data (2024)

In the CFA analysis, validity convergence, validity discriminant and reliability tests were carried out on the 5 dimensions of HESQUAL, namely administrative quality, physical environment quality, core quality, support facilities quality and transformative quality. Based on the results of the CFA analysis, it shows that there are 11 indicators and 39 valid question items to be used as a tool to measure service quality in higher education. The measurement of service quality is carried out to measure student satisfaction, if it is associated with the theory of the expectancy disconfirmation to measure student satisfaction, then the expectation of the quality of service owned by students is measured using the HESQUAL model which is then compared with the performance provided by the Economics Education Study Program, State University of Semarang. The level of student satisfaction with the quality of service at the Economics Education Study Program, State University of Semarang.

**Level of Student Satisfaction with Service Quality in Economics Education Study Program, State University of Semarang**

Based on the results of measuring student satisfaction with the quality of service of the Economics Education Study Program of Semarang State University using the Customer Satisfaction Index (CSI), it shows a value of 73%. This means that the satisfaction given has not reached a score of 100%, indicating a very satisfied category.

Based on the student satisfaction index score, the score shows the level of the satisfied category. From this value, it can be seen if students feel that the performance of the Economics Education study program at Semarang State University is appropriate in meeting expectations for the quality of service owned by students. However, the Economics Education study program of Semarang State University can continue to improve its performance in increasing customer satisfaction in order to achieve the maximum level of satisfaction. User satisfaction is a measure of the extent to which a service performs in meeting user expectations (Kotler & Keller, 2009). When associated with The Expectancy Disconfirmation theory, the satisfaction of students of the Economics Education Study Program of Semarang State University shows positive disconfirmation results. The results of the students' CSI calculation of the quality of service by the Economics Education Study Program, State University of Semarang, show the level of conformity of each HESQUAL attribute of the performance of the Economics Education Study Program, State University of Semarang, has met student expectations so that students are satisfied with the quality of service of the Economics Education Study Program, State University of Semarang.

**Priority for Improving Service Quality in the Economics Education Study Program, State University of Semarang**

Efforts to improve service quality are needed to increase student satisfaction of the Economics Education Study Program, State University of Semarang. The priority of service improvement is carried out to find out the attributes that need to be repaired first. In the science analysis, quadrant A is a quadrant with a high level of importance but low interest rate so that it causes dissatisfaction, therefore, efforts to improve service quality can be made by paying attention to the priority scale in quadrant A through PGCV analysis which is used to increase student satisfaction of the Economics Education Study Program, State University of Semarang.

Based on the results of the IPA diagram in Fig.14, it can be seen that quadrant A is the main priority for improvement. This is because quadrant A has a high level of importance, but a low level of satisfaction. Judging from Table 4.29 of the A Quadrant Diagram Results, there are 5 attributes that are the main priority for improvement. If sorted by priority improvement using PGCV analysis in Table 4.33 Results of PGCV Quadrant A values, then the first priority order that must be improved is item number C19 with a PGCV in-

dex of 5.9, while the lowest satisfaction value in quadrant A is located in item number A5 with a PGCV index of 5.52. The HESQUAL attribute included in this quadrant is the administrative quality dimension which shows that administrative staff are less solutive in providing information that is easy for students to understand and students have difficulty understanding the administrative flow carried out online, in the core quality dimension shows that lecturers do not pay attention to students who have difficulties in understanding the lecture material explained and lecturers need to provide learning methods that are in accordance with Student needs, in the transformative quality dimension, students feel that they lack confidence while participating in lecture activities at the Economics Education Study Program, State University of Semarang.

Quadrant B is an attribute with a high level of importance and satisfaction so that it needs to be maintained by the Economics Education Study Program of Semarang State University, Judging from Table 4.30 The results of the B Quadrant Diagram there are 19 attributes that show that students are satisfied with the quality of service provided. Judging from Appendix 18. PGCV Index, the highest satisfaction value is found in item number P13 with a PGCV index of 3.57 while the lowest satisfaction value in quadrant B is located in A7 with a value of 5.42. The HESQUAL attributes included in this quadrant are the administrative quality dimension, which shows that the behavior of administrative staff is not polite and makes students feel unconfident, the physical environment quality dimension shows that students are not satisfied with infrastructure services in the form of comfortable lecture halls and adequate equipment, well-maintained building infrastructure, safe and comfortable learning environment conditions, In the core quality dimension, students feel satisfied with lecturers who can guide students, deliver material well and build communication and involve students to actively participate during lecture activities, in the transformative quality dimension, students feel that they can develop and improve their knowledge, skills and academic abilities and become individuals who are able to develop and think critically while studying at Economics Education Study Program, Semarang State University.

Quadrant C is an attribute with a low level of importance and satisfaction. Although it has a low priority, the attributes in this quadrant need to be continuously improved so that it can provide maximum service quality in increasing student satisfaction of the Economics Education Study Program, State University of Semarang. Judging from Table 4.31. The results of the C Quadrant Diagram have 11 attributes that show that students are not satisfied with the quality of services provided If sorted by priority improvement using PGCV analysis in Appendix 18 of the PGCV Index, then the first priority order that must be improved is item number P10 with a PGCV index of 8.3 while the last order of improvement in quadrant C is located at C26 with a PGCV index of 5.45. The HESQUAL attributes included in this quadrant are the administrative quality dimension, which shows that students are satisfied with clear administrative procedures and timely administrative services, the physical environment quality dimension shows that students are dissatisfied with adequate canteen infrastructure services, recreational infrastructure, and sports infrastructure, and the core quality dimension shows that students are dissatisfied because lecturers are unable to instilling confidence in students, lecturers cannot see student interest, and there are no rules made according to the needs and circumstances of students in the dimension of support facilies quality students are dissatisfied with internet facilities, photocopying facilities, and fitness and recreation facilities in the Economics Education Study Program of Semarang State University.

Quadrant D is an attribute with a low level of importance and high satisfaction so that it is considered excessive by students. Judging from Table 4.32 of the Results of the D Quadrant Diagram, there are 4 attributes that show that students are satisfied with the quality of

services provided. Judging from Appendix 18 of the PGCV Index, the highest satisfaction value is found in item number C30 with a PGCV index of 4.80 while the lowest satisfaction value in quadrant B is located in T46 with a PGCV index of 5.18. The HESQUAL attribute included in this quadrant is the core quality dimension which shows that students are satisfied because the lecturer provides good feedback to the students, besides that the curriculum, goals and course content are conveyed clearly and well to students. In the transformative quality dimension, students can overcome prejudice and have problem-solving skills in overcoming problems obtained while studying at the Economics Education Study Program, State University of Semarang.

## CONCLUSION

The conclusions obtained based on the analysis of the results of the research and discussion in this study are as follows: (1) Based on the Confirmatory Factor Analysis (CFA) analysis, the HESQUAL model is a suitable model to measure the quality of services in higher education, which consists of 5 dimensions of HESQUAL, namely administrative quality, support facilities quality, core quality, physical environmental quality, and transformative quality; (2) Based on the results of the calculation of the satisfaction index with the value of the Customer Satisfaction Index (CSI) in students of the Economics Education Study Program, State University of Semarang, it is 73%, so it can be concluded that the satisfaction of students of the Economics Education Study Program, State University of Semarang is in the satisfied category; (3) Based on the results of the analysis of Importance Performance Analysis (IPA) and Potential Gain in Customer Value (PGCV), the priority order of improving service quality in the Economics Education Study Program, State University of Semarang is the attention of lecturers to students who have difficulties in understanding the learning material (C19), lecturers need to determine effective learning methods according to students' abilities (C18), provide quality of service that can increase students' confidence (T42), administrative staff help students who are experiencing difficulties and are able to provide information that is easy to understand (A1) and information on the flow of academic administration carried out online (A5).

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