

A Student Satisfaction Framework for Evaluating Quality and Priority Service in Management of Open and Distance Education in Indonesia

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ABSTRACT

Service quality plays an important role in customer perception as it contains information about satisfaction. With the Covid-19 epidemic, satisfaction has become relevant for students participating in Open and Distance Education (ODE) practice. This study aimed to evaluate the quality and the priority service in the management of ODE during normal and pandemic period in Indonesia. 719 students and experts from Universitas Terbuka (UT) were surveyed as part of the qualitative and quantitative methodology. Service Quality was measured by five dimensions and student satisfaction. The Gap Analysis and Importance-Performance Analysis Matrix were employed in this study. The findings showed that the performance of UT services needs to be improved. The normal and pandemic periods did not differ in any significant manner. The IPA matrix showed the priority service improvement in the management of changes made is to focus on the capability of the lecturer. During the pandemic, the students were satisfied with the implementation of online exams - Take-Home Exam. The results of this study indicate that UT's management must make changes and improvements that are oriented towards student satisfaction.

Keywords: “Distance Education”, “Evaluation”, “Satisfaction”, “Service Quality”

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INTRODUCTION

Nearly all educational systems tried to combat the event and find solutions to keep learning throughout the pandemic. The coronavirus had also presented several difficulties for institutional governance, teaching, and learning in higher education. According to Chamorro-Atalaya et al. (2022), Peru's higher education was conducted online during the pandemic (2020–2021). However, the community's pupils and teachers were dissatisfied due to the poor quality of infrastructure services (tangibles) in internet connection issues. The Indian community had also been affected by Covid-19, which saw a significant shift in how higher education is taught, including a move to a virtual learning ecosystem (Chui et al., 2016). In several circumstances, this pandemic has become a problem for pupils. However, there is also a benefit, notably the creation of opportunities for those involved in higher education.

Whether the pandemic impacts distance learning that has incorporated online learning emerges in the context of Open and Distance Education (ODE). This study justifies that online education is the sole option for continuing our education during the Covid-19. The education deliverable has to do with student satisfaction and service excellence. As the only public university using ODE, Universitas Terbuka (UT) is concerned with service quality and student satisfaction. Moreover, service quality is a Key Performance indicator (KPI) measured in Indonesian State Universities. Student satisfaction and service quality have become important throughout ODE, particularly at universities. 34 regional offices of UT are administering 346,584 students in Indonesia through the year 2022. From 2017 through 2021, more students at UT were enrolled. Although the population was anticipated to decline as the pandemic progressed, it grew (Figure 1.)



Figure 1: Universitas Terbuka's Students

Source: Annual Rector's Report, 2021

During the pandemic, UT issued rules related to tutorials, exams and learning facilities. The tutorials were fully online. Face-to-Face Tutorials in the normal period were replaced with Webinar Tutorials which were equipped with virtual classes that were accessed by students and tutors on the <https://lms.ut.ac.id> page. The exam was conducted online and take home exams with a choice of one alternative that was most appropriate to the conditions in each region. Other facilities offered were internet quota of 50GB for active students for four months (September 2020 to December 2020). UT provides free internet via Wifi-id in public places with the Wifi-id logo on it. The evaluation of service quality was required in consideration of this phenomenon in order to ensure student satisfaction with learning activities. As a result, the primary goal of this study was to evaluate the service quality characteristics of UT that implemented ODE by scoring the discrepancies between the expected and actual quality of students. The literature examined demonstrated that SERVQUAL is one of the common models for evaluating service quality. Based on the variance between actual and expected service, it is used to gauge perceived service quality. Thus, this model was used to evaluate the service quality of distance education (Chui et al., 2016; Dursun et al., 2013; Sembiring & Rahayu, 2020; Widaryanti et al., 2016; Yousapronpaiboon, 2014).

Efforts were made in developing a strategy to improve service quality by using the Importance-Performance Analysis (IPA) Matrix to gain a competitive advantage in higher education. In addition, the evaluation of service quality in universities is very important, especially from the perspective of student satisfaction, which is interesting and can maintain the performance of universities (Irawati & Jonatan, 2020; Sembiring et al., 2021; Sembiring & Rahayu, 2020).

The objectives of this study were related to the following questions, namely (1) What are the expectations and perceptions of students by assessing the gap analysis on the services quality provided by UT as an Open and Distance Education in the normal and pandemic periods? (2) What service attributes influence student satisfaction and become a priority for improvement using the importance-performance analysis matrix in the normal and pandemic periods?

LITERATURE REVIEW

The Covid-19 epidemic has impacted the educational sector, and during the time, most universities in Indonesia implemented online and blended learning. Also impacted was UT, an ODE that had used online learning ever since it began. Student dissatisfaction with universities' subpar services is one of their most significant and unresolved problems. The epidemic had presented institutions with the most challenging time in keeping service standards high for student satisfaction. Moreover, dissatisfaction might harm the relationship between the university and the students (Gocek & Beceren, 2012; Widaryanti et al., 2016).

Quality is a dynamic condition that affects products, services, people, processes, and the environment that meet or exceed expectations (Kotler & Armstrong, 2018). Furthermore, service quality can be known by comparing the perceptions of consumers or the services they receive with those they expect/want in the service attributes of a company. Service quality is perceived as good and satisfactory when the service received is as expected.

Also, it is considered very good and of high quality when the service received exceeds consumer expectations. On the other hand, it is considered poor when the service received is lower than expected (Mariana et al., 2020). Student perceptions are a major factor in improving service quality (Katiliūtė & Kazlauskienė, 2010). The original SERVQUAL scale comprised ten dimensions, which were subsequently reduced to five after further testing. (Parasuraman et al., 1985). The five key dimensions of SERVQUAL, namely reliability, responsiveness, assurance, empathy, and tangibles, are the most widely used models to evaluate customer expectations and perceptions of service quality (Chui et al., 2016; Hanaysha et al., 2011; Hazilah Abd Manaf et al., 2013; Naveed Jabbar et al., 2020; Parasuraman et al., 1985). This study evaluated the five dimensions of SERVQUAL tangibles, empathy, assurance, responsiveness, and reliability in the context of Open and Distance Education in Indonesia, a case study of the UT. Several previous studies that discussed service quality and student satisfaction have been proven in Distance Education (Ahmed & Mehedi Masud, 2014; Chamorro-Atalaya et al., 2022; Chui et al., 2016; Mageto et al., 2020; Sembiring, 2018; Shaari, 2014; Weerasinghe & Fernando, 2018; Yousapronpaiboon, 2014). The main dimensions of SERVQUAL used were Chui et al. (2016) and Parasuraman et al. (1985):

1. Tangibles, the visible or tangible things in service, such as physical facilities, equipment, employees, and means of communication should correctly project the quality of the service to be provided (Mariana et al., 2020)
2. Reliability, is the ability to fulfil promises that have been delivered in the form of service performance immediately, accurately, and satisfactorily (Mariana et al., 2020; Yousapronpaiboon, 2014).
3. Responsiveness is the responsiveness of lecturers and employees to serve students well and satisfactorily (Chui et al., 2016; Mariana et al., 2020).
4. Assurance conveys customer trust and confidence through the services provided (Chui et al., 2016).
5. Empathy gives consumers more personal or intimate attention (Mariana et al., 2020; Yousapronpaiboon, 2014), including lecturers and employees who are easy to contact, establish good communication, and can give personal attention.

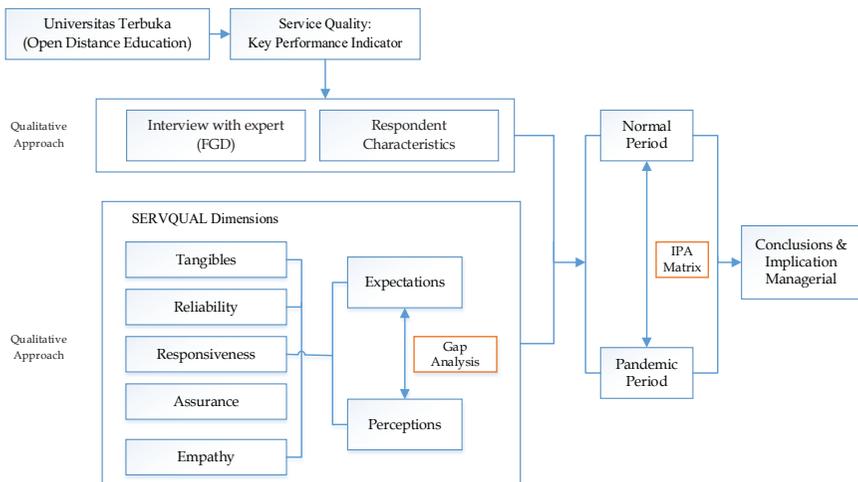


Figure 2: The Conceptual Framework of Research

Source: Author's data processing results, 2022

METHODOLOGY

This exploratory research design used a qualitative and quantitative approach. The qualitative approach, three experts and three students were chosen. They participated in two sessions, interviews, and focus group discussions who were experts in distance learning, the public sector, and survey methodology. In the first session, the three experts were asked about several aspects or measures of service excellence and student satisfaction in the ODE delivery style. The services attributes covered from the institutional and student perspectives were another topic for discussion with the experts and students. In the quantitative approach, the analytical method used was the SERVQUAL method or Gap Analysis. For this study, a random selection strategy was utilized. 719 undergraduate students from the 2021.1 academic year responded to a customized online questionnaire used as a data collection tool. The data was automated and entered into the SPSS 22.0 and Microsoft Excel applications. The SERVQUAL method's based on gap analysis specialized computations and statistical analysis were performed using the SPSS system. The priority service improvement is done through the IPA Matrix (Borishade et al., 2021; Chui et al., 2016; Osman & Saputra, 2019; Sembiring, 2018; Widaryanti et al., 2016).

Gap Analysis - SERVQUAL Method

The relevant factors were assessed using a scale previously validated in the literature and customized for this study. The SERVQUAL scale initially had ten dimensions but has since been pared down to just five. These five main dimensions were tangibles, reliability, responsiveness, assurance, and empathy (Parasuraman et al., 1985). One of the most popular methodologies for assessing client expectations and perceptions of service quality is the SERVQUAL. The variables were measured using a 5-point Likert scale, and the agreement levels were created as follows: 1-Strongly disagree, 2-Disagree, 3-Neutral, 4-Agree, and 5-Strongly Agree. The disparity between a service's performance and its recipient's expectations determined service quality. (Parasuraman et al., 1985) developed a model that used "Perceived service quality" instead of service quality. Customer expectations before getting service (anticipated service) and the customer's experience were compared to determine perceived service. Customers' expectations and preferences about the services offered were included

in desired expectations. The calculation below was used to explain the connection between expected and perceived service quality:

When the perceived service > expected service, the quality provided exceeds the expected service quality, resulting in a high level of satisfaction.

When the perceived service = expected service, there will be satisfaction with the fulfillment of these expectations.

When the perceived service < expected service, the perceived quality is far from satisfactory and indicates the creation of an inappropriate quality level.

The gap value for each pair of questions used the formula Zeithaml et al. (Tjiptono, 2019).

Gap Score = Average score of Perception – Average score of Expectation

Importance Performance Analysis (IPA) Matrix

According to (De Jesus Henriques Silva & Fernandes, 2011), IPA Matrix was first put forward by Martial and James in 1977. In this method, the respondents assessed the level of interest and performance of the institution, while the average value of importance and performance was analyzed using the IPA Matrix. The Matrix consists of the X and Y axes representing importance and performance respectively. The results of the IPA Matrix are in the form of four quadrants, each quadrant is a combination of the importance and performance provided by respondents for each service with different values.

The four IPA quadrants have the following characteristics (Silva & Fernandes, 2010) as described that Quadrant A (Concentrate here) has high importance and low performance which require immediate attention for improvement and are major weaknesses. Quadrant B (Keep up with the good work) has high importance and performance, indicates opportunities for achieving or maintaining competitive advantage, and is a major strength. Quadrant C (Low priority) has low importance and performance with minor

weaknesses and does not require additional effort. In addition, quadrant D (Possible overkill) has low importance and high performance which indicate that business resources committed to these attributes would be overkill and should be deployed elsewhere.”

RESULTS AND DISCUSSION

A state university that uses the ODE system is UT. The UT aims to make high-quality higher education accessible to all societal levels by implementing various distance learning programs. In order to support its implementation in Indonesia, it wants to strengthen the distance education system and produce highly competitive graduates.

At the first session, the Forum Group Discussion (FGD), comprising experts in survey methodologies, distance education, and the public sector, produced service qualities in line with UT’s ODE characteristics and SERVQUAL’s five dimensions. Then, at the following session, three students were interviewed. Following that, three students were interviewed in the second session on the services they received during the epidemic and the usual period. The findings defined service qualities as 35 services during the normal period and 18 services during the pandemic.

Demographic Respondents

As shown in Table 1 67% of the gender distribution was female and 33% was male. Based on age group distribution, the highest age group was between 18-22 (45%), while the lowest was between 33-37 (4%).

Table 1: Demographic

| Demographic | | Number | % |
|-------------|---------|--------|-----|
| Gender | Male | 235 | 33% |
| | Female | 484 | 67% |
| Age | 18 – 22 | 323 | 45% |
| | 23 – 27 | 248 | 34% |
| | 28 – 32 | 75 | 10% |
| | 33 – 37 | 30 | 4% |
| | >38 | 43 | 6% |

| Demographic | | Number | % |
|-------------------|--|--------|-----|
| Year of Education | First Year | 342 | 48% |
| | Second Year | 112 | 16% |
| | Third Year | 147 | 20% |
| | Fourth Year | 107 | 15% |
| | >Fourth Year | 11 | 2% |
| Faculty | Faculty of Economics | 629 | 87% |
| | Faculty of Law, Social Sciences, and Political Science | 52 | 7% |
| | Faculty of Teaching and Education | 32 | 4% |
| | Faculty of Science and Technology | 6 | 1% |

Note: The sources are from author's data processing results, 2022

Most of the respondents came from the economics faculty with 629 respondents (87%), while the smallest was from the science and technology faculty with 6 respondents or 1% of the total population. The distribution of respondents by region was spread across 38 regional offices of UT throughout Indonesia.

Table 2: Regional Demographic

| No | Regional Office | Number | % | No | Regional Office | Number | % |
|--------|-----------------|--------|-------|----|-----------------|--------|------|
| 1 | Jakarta | 84 | 11,68 | 20 | Bengkulu | 10 | 1,39 |
| 2 | Malang | 61 | 8,48 | 21 | Kupang | 10 | 1,39 |
| 3 | Purwokerto | 55 | 7,65 | 22 | pontianak | 10 | 1,39 |
| 4 | Surabaya | 54 | 7,51 | 23 | Banjarmasin | 9 | 1,25 |
| 5 | Bandung | 48 | 6,68 | 24 | Padang | 9 | 1,25 |
| 6 | Yogyakarta | 39 | 5,42 | 25 | Jayapura | 7 | 0,97 |
| 7 | Denpasar | 33 | 4,59 | 26 | Mataram | 7 | 0,97 |
| 8 | Semarang | 30 | 4,17 | 27 | palangkaraya | 7 | 0,97 |
| 9 | Jember | 28 | 3,89 | 28 | Tarakan | 7 | 0,97 |
| 10 | Serang | 26 | 3,62 | 29 | Manado | 6 | 0,83 |
| 11 | Samarinda | 21 | 2,92 | 30 | Ambon | 5 | 0,70 |
| 12 | Bogor | 20 | 2,78 | 31 | Jambi | 5 | 0,70 |
| 13 | Surakarta | 18 | 2,50 | 32 | Makasar | 4 | 0,56 |
| 14 | Palembang | 17 | 2,36 | 33 | Palu | 4 | 0,56 |
| 15 | Bandar Lampung | 16 | 2,23 | 34 | Majene | 3 | 0,42 |
| 16 | Batam | 16 | 2,23 | 35 | Banda Aceh | 2 | 0,28 |
| 17 | Pangkalpinang | 14 | 1,95 | 36 | Gorontalo | 2 | 0,28 |
| 18 | Medan | 12 | 1,67 | 37 | Ternate | 2 | 0,28 |
| 19 | Pekanbaru | 12 | 1,67 | 38 | Kendari | 1 | 0,14 |
| Jumlah | | | | | | 719 | 100 |

Note: The sources are from author's data processing results, 2022

Reliability Analysis

A reliability test is a tool used to measure the consistency of the questionnaire which is an indicator of a variable or construct. A questionnaire is said to be reliable when a person’s response to a question is consistent or stable over time. The decision-making for reliability testing, namely a construct or variable, is said to be reliable when it gives a Cronbach’s Alpha value of > 0.70 (Ghozali, 2018).

Table 3: Reliability Test

| | Perception | Expectation |
|----------------|-------------------|-------------|
| | Cronbach α | |
| Tangible | 0.964 | 0.969 |
| Reliability | 0.980 | 0.984 |
| Responsiveness | 0.972 | 0.981 |
| Assurance | 0.985 | 0.988 |
| Empathy | 0.980 | 0.985 |

Note: The sources are from author's data processing results, 2022

Reliability analysis is used to measure the degree of closeness between statements when the calculation is carried out by adding up the answers to a certain number of questions. This is also called internal consistency. The most preferred method for reliability analysis is the Cronbach Alpha model, which is used for calculating the alpha coefficient. The coefficient is obtained by comparing the overall variation of the statement with the general variation on a scale. Alpha is the mean of standard change and varies with values between 0 and 1. In social research, an alpha value of 0.70 is accepted as the minimum reliability threshold. The results of the reliability test as shown in Table 3 above indicated that the alpha value was greater than 0.7, therefore, it was concluded that the instrument used in this study was reliable. Moreover, an alpha value of 0.9 indicated that the reliability was perfect.

SERVQUAL Method

The SERVQUAL is a method used for measuring service quality based on Gap Analysis which describes differences in customer perceptions and expectations of service (Irawati & Jonatan, 2020). As a state university that implements the ODE scheme, UT should be able to maintain the quality

of service during the normal and the pandemic period. Additionally, it prioritizes service quality as one of the main targets of the Key Performance Indicator (KPI) of a public service agency. Table 4 shows the results of Gap Analysis with perception, expectation, and Gap Average Score in Normal Period.

Table 4: Perception, Expectation, and Gap Average Score Normal Period

| Service Attributes | | Average Score | | |
|------------------------------|--|---------------|-------------|-------|
| | | Perception | Expectation | Gap |
| Average per dimension | | 3.89 | 4.02 | -0.13 |
| Tangible | 1. Availability of tutorial facilities | 3.90 | 4.05 | -0.15 |
| | 2. Availability of a clean face-to-face tutorial classroom | 3.65 | 3.82 | -0.16 |
| | 3. Availability of projector facilities in the face-to-face tutorial classroom | 3.63 | 3.79 | -0.16 |
| | 4. Interactive tools for online learning | 3.62 | 3.78 | -0.16 |
| | 5. Availability of representative practice/practicum equipment | 4.16 | 4.27 | -0.11 |
| | 6. Availability of learning resources on the website | 4.14 | 4.21 | -0.07 |
| | 7. Ease of students to access Online Tutorials | 4.14 | 4.23 | -0.08 |
| Average per dimension | | 4.03 | 4.15 | -0.13 |
| Reliability | 8. Lecturers have the competence and master the material well | 4.08 | 4.19 | -0.11 |
| | 9. Lecturers can communicate teaching materials well | 4.01 | 4.17 | -0.16 |
| | 10. Lecturers are consistent in the assessment | 3.94 | 4.13 | -0.19 |
| | 11. The curriculum follows the vision & mission of the study program | 4.13 | 4.18 | -0.06 |
| | 12. The relevance of courses to competency in the world of work | 4.06 | 4.17 | -0.11 |
| | 13. The ability of academic & administrative staff to answer questions | 3.94 | 4.11 | -0.17 |
| | 14. The ability of academic & administrative staff to convey tuition | 4.02 | 4.13 | -0.11 |
| Average per dimension | | 3.96 | 4.10 | -0.14 |
| Responsiveness | 15. Lecturers are easy to contact | 3.79 | 4.02 | -0.23 |
| | 16. Lecturers answer questions clearly | 3.88 | 4.06 | -0.17 |
| | 17. Academic & administrative staff is responsive | 3.92 | 4.11 | -0.19 |
| | 18. Academic & administrative staff follows up on suggestion & Criticism | 3.89 | 4.06 | -0.18 |
| | 19. Ease of getting information on tuition | 4.05 | 4.14 | -0.08 |
| | 20. Availability of various courses | 4.07 | 4.14 | -0.07 |
| | 21. Ease of paying Tuition | 4.12 | 4.20 | -0.08 |

| Service Attributes | | Average Score | | |
|------------------------------|--|---------------|-------------|-------|
| | | Perception | Expectation | Gap |
| Average per dimension | | 4.09 | 4.19 | -0.10 |
| Assurance | 22. Lecturers update their knowledge | 4.11 | 4.20 | -0.09 |
| | 23. Lecturers are fair in the assessment | 4.09 | 4.18 | -0.10 |
| | 24. Academic & administrative staff have good competence | 4.04 | 4.13 | -0.09 |
| | 25. Curriculum adapts to changing environments | 4.07 | 4.19 | -0.11 |
| | 26. The course structure is up-to-date for the current environment | 4.06 | 4.18 | -0.12 |
| | 27. The campus has a good Brand Image | 4.17 | 4.24 | -0.07 |
| | 28. Professional lecturers | 4.11 | 4.18 | -0.08 |
| | 29. A Superior Accreditation Score | 4.17 | 4.25 | -0.08 |
| | Average per dimension | | 3.99 | 4.13 |
| Empathy | 30. Professionalism of Lecturers | 4.06 | 4.19 | -0.13 |
| | 31. Lecturers understand student needs | 3.91 | 4.10 | -0.19 |
| | 32. Lecturers have creativity in delivering teaching materials | 3.94 | 4.09 | -0.15 |
| | 33. Academic & administrative staff have a sensitive attitude | 4.04 | 4.14 | -0.10 |
| | 34. Friendly academic & administrative staff | 3.99 | 4.11 | -0.12 |
| | 35. Academic & administrative staff serve with respect | 4.03 | 4.13 | -0.11 |
| Average of all items | | 3.99 | 4.12 | -0.13 |

Note: The sources are from author's data processing results, 2022

Based on the results of the SERVQUAL gap analysis, it was found that UT student's expectations were higher than their perceptions. It can be seen from the average score of the gap analysis in Table 4 that all components of service quality showed a negative value. This showed that the average score of perception was smaller than that of the student's expectations. This result is similar to Chui et al. (2016); Irawati and Jonatan (2020); Mariana et al. (2020); Widaryanti et al. (2016) and Yousapronpaiboon (2014). In addition, the gap score indicated that the quality of these service attributes was a weakness. This meant that the perceived quality was far from satisfactory and indicated the creation of an inappropriate quality level. Similar studies on ODE schemes with negative gap score for all dimensions were in line with (Chui et al., 2016; Dursun et al., 2013; Sembiring & Rahayu, 2020).

The Responsiveness Dimension (-0.14) had the largest gap score, and this indicated that student expectations were very much higher than the perceived value of service quality (Chui et al., 2016; Yousapronpaiboon, 2014). The student's dissatisfaction with the quality of service attributes was shown in terms of "lecturers are easy to contact" (-0,23) and "Academic &

administrative staff is responsive” (-0,19). This needs to be improved and given special attention. This indicated that the response from them was still unsatisfactory for students. Lecturers were not easily contacted during the learning process of online tutorials. Moreover, they did not use the tutorial services as optimally as possible. In the normal period, the learning process was through face-to-face tutorials and online tutorials. Most UT students took advantage of online tutorials due to time flexibility. Interactions in online tutorials were asynchronous and lecturers were not fully consistent in answering student questions in the LMS (Learning Management System). Therefore, UT as an educational institution needs to train the lecturers or tutors on how to improve the tutorials, make good communicate with students, and be more interactive in online learning. The online class should include a variety of learning activities to help students achieve learning outcomes and meet their individual needs (Bismala & Manurung, 2021).

The smallest gap score was the Assurance Dimension (-0.10), and this result was in accordance with Widaryanti et al. (2016). During the normal period, the students were satisfied with *“The curriculum is following the vision & mission of the study program”* (- 0.06), *“Availability of learning resources on the website”* (-0.07), *“Availability of various courses”* (-0.07), and *“Campus good Brand Image”* (- 0.07).

Table 5: Perception, Expectation, and Gap Average Score during Pandemic Period

| Service Attributes | | Average Score | | |
|------------------------------|--|---------------|-------------|--------------|
| | | Perception | Expectation | Gap |
| Average per dimension | | 3.90 | 4.00 | -0.11 |
| Tangible | Availability of internet quota or WIFI facilities | 3.60 | 3.85 | -0.24 |
| | Availability of Take-Home Exams scheme | 4.24 | 4.27 | -0.04 |
| | Availability of Webinar Tutorial | 3.85 | 3.92 | -0.06 |
| | Availability of Covid-19 Equipment | 3.89 | 4.00 | -0.11 |
| | Average per dimension | 3.97 | 4.11 | -0.14 |
| Reliability | Lecturers are reliable in managing classes | 3.90 | 4.06 | -0.15 |
| | The study program provides a Take-Home Exams scheme | 4.26 | 4.30 | -0.04 |
| | The ability of academic & administrative staff to convey information | 3.99 | 4.12 | -0.13 |
| | The ability of the academic & administrative staff in the helpdesk facility | 3.85 | 4.06 | -0.21 |
| | The ability of the academic & administrative staff to convey tuition waivers | 3.86 | 4.03 | -0.18 |

| Service Attributes | | Average Score | | |
|--------------------|--|---------------|-------------|-------|
| | | Perception | Expectation | Gap |
| Responsiveness | Average per dimension | 4.02 | 4.15 | -0.13 |
| | Responsive study program in implementing the Take-Home Exam scheme during the Covid-19 | 4.24 | 4.27 | -0.03 |
| | Study Programs provide good e-Learning | 4.19 | 4.25 | -0.06 |
| | Academic & administrative staff are responsive to solving problems | 3.83 | 4.04 | -0.21 |
| | Academic & administrative staff are easy to contact | 3.82 | 4.03 | -0.21 |
| Assurance | Average per dimension | 4.03 | 4.14 | -0.11 |
| | Lecturers are fair in online exam assessment | 4.13 | 4.19 | -0.07 |
| | Students get certainty in providing solutions to problems | 3.99 | 4.12 | -0.13 |
| | Students get certainty on the length of service time | 3.98 | 4.10 | -0.12 |
| Empathy | Average per dimension | 3.95 | 4.07 | -0.12 |
| | Lecturers have creativity in delivering material | 3.91 | 4.03 | -0.12 |
| | Academic & administrative staff accommodate student needs | 3.99 | 4.11 | -0.12 |
| | Average of all items | 3.97 | 4.09 | -0.12 |

Note: The sources are from author's data processing results, 2022

Table 5 shows the service quality during a pandemic, and all the dimensions of service quality had negative values. The average score of perception was smaller compared to that of expectations. This indicated that the perceived quality was far from satisfactory. Similarly, a negative value was obtained for the average score of the gap analysis carried out on each of the service attributes during the pandemic period. This result is in line with Chui et al. (2016) and Dursun et al. (2013).

The highest gap scores of the five dimensions were reliability (gap score -0.14), where students were not satisfied with the service on the reliability dimension. The highest gap score showed a large gap analysis, and the service attribute with the highest gap score during the pandemic period was “Availability of internet quota or WIFI facilities” (- 0.23), “The ability of the academic & administrative staff to answer student questions through the Helpdesk facility” (- 0.21), “The academic & administrative staff are responsive to solve problems” (- 0.21), and “The academic & administrative staff are easy to contact” (- 0.21). This implied that the students were not satisfied with the service attributes in terms of academic and administration staff during the pandemic. The bigger score indicated that the quality of the service attribute was weak and needs to be improved.

The smallest gap score was the Assurance (-0.11) and Tangibles dimensions (-0.11). This indicated that overall students felt good service quality in line with the expectations they wanted. The students were satisfied with the service attributes during the Covid-19 in terms of “*Responsive study program in implementing the Take-Home Exam scheme*” (-0.03), “*Availability of Take-Home Exams scheme*” (-0.04), and “*The study program provides Take-Home Exams scheme*” (-0.04).

Table 6: Service Quality at Normal Period versus Pandemic Period

| | Normal | | | Pandemic | | |
|----------------|------------|-------------|--------------|------------|-------------|--------------|
| | Perception | Expectation | Gap | Perception | Expectation | Gap |
| Tangible | 3.89 | 4.02 | -0.13 | 3.90 | 4.00 | -0.11 |
| Reliability | 4.03 | 4.15 | -0.13 | 3.97 | 4.11 | -0.14 |
| Responsiveness | 3.96 | 4.10 | -0.14 | 4.02 | 4.15 | -0.13 |
| Assurance | 4.09 | 4.19 | -0.10 | 4.03 | 4.14 | -0.11 |
| Empathy | 3.99 | 4.13 | -0.13 | 3.95 | 4.07 | -0.12 |
| Total | 3.99 | 4.12 | -0.13 | 3.97 | 4.09 | -0.12 |

Note: The sources are from author's data processing results, 2022

Table 6 shows the gap score of each quality dimension for the normal and the pandemic period. The highest gap score in the normal period was the Responsiveness Dimension (-0.14), while the lowest was the Assurance (-0.10). This result is in line with (Chui et al., 2016; Dursun et al., 2013; Sembiring & Rahayu, 2020; Yousapronpaiboon, 2014). The highest gap score during the pandemic period was the Reliability Dimension (-0.14). This means that the expectations were greater than the student’s perception of the organization’s ability to provide services that are consistent with what has been promised. This result is in line with (Dursun et al., 2013; Elly Sukmanasa, 2022). There was no significant difference when the normal and pandemic period were compared.

Importance Performance Analysis (IPA)

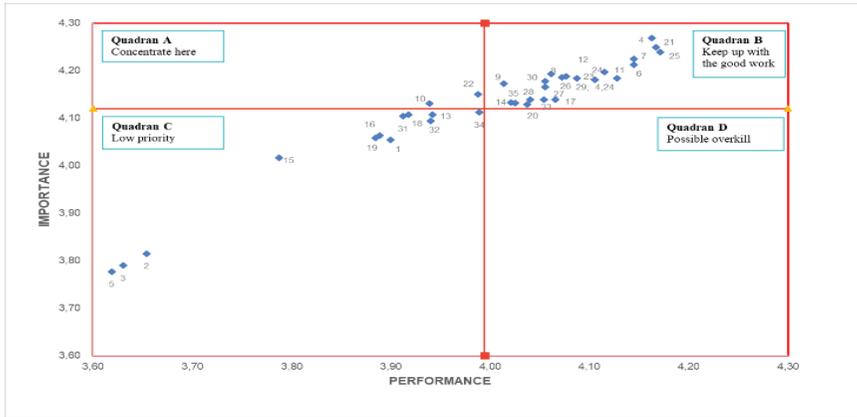


Figure 3: IPA Matrix – Normal Period

Source: Author's data processing results, 2022

In normal period, the IPA matrix as shown in quadrant A represents *Concentrate Here*. The quadrant describes high expectations or importance but low perception or performance. This implies that the university needs to take these service attributes into account seriously. The service attributes that were included in the quadrant were considered unsatisfactory students. Quadrant A was the focus of the university, and it had two service attributes, namely “*lecturers are consistent in carrying out the assessment system (10)*” and “*lecturers update related to the latest knowledge in their expertise (22)*”. These attributes represented the quality of lecturer performance. This result is similar to Widaryanti et al. (2016), and the result showed that transparency of assessment (quizzes/assignments/exams) and the capability of the lecturer to respond to and recognize complaints from students MPS-IPB needs to be prioritized by management. This indicated that UT is required to improve the competence of lecturers according to their field of knowledge while the universities are to implement an assessment system that can accommodate students spread throughout Indonesia. The university needs to pay attention to this evidence and put them as top priority to fulfill the expectations.

Most of the service attributes were in quadrant B (keep up with the good work), and it was considered very important by students and they felt very satisfied with the services provided. The service attributes in the quadrant consisted of (6), (7), (8), (9), (11), (12), (14), (17), (20), (21),

(23), (24), (25), (26), (27), (28), (29), (30), (33), and (35). The first three attributes were “Availability of learning resources on the website” (6), “Ease of students to access Online Tutorials” (7), and “Lecturers have the competence and master the material well” (8). This result is similar to that of (Sembiring, 2016; Sembiring & Rahayu, 2020), the service quality at ODE that was maintained (Keep up with the good work) includes counseling access, written materials, classroom evaluation, and face-to-face tutorials.

There were 12 service attributes in quadrant C, and attributes with low priority include (1), (2), (3), (5), (13), (15), (16), (18), (19), (31), (32), and (34). Attributes (1), (2), and (3) are related to physical facilities being a service attribute with low priority, namely “availability of tutorial facilities” (1), “availability of a clean face-to-face tutorial classroom” (2) and “availability of projector facilities in the face-to-face tutorial classroom” (3).

These results were consistent with the characteristics of UT as ODE, where physical facilities are not the main focus of learning. The UT learning system applies online by using online tutorials as learning facilities. There are no service attributes in quadrant D and it describes low expectations with high levels of satisfaction. This result is similar to Sembiring (2016) and Setiowati et al., (2022).

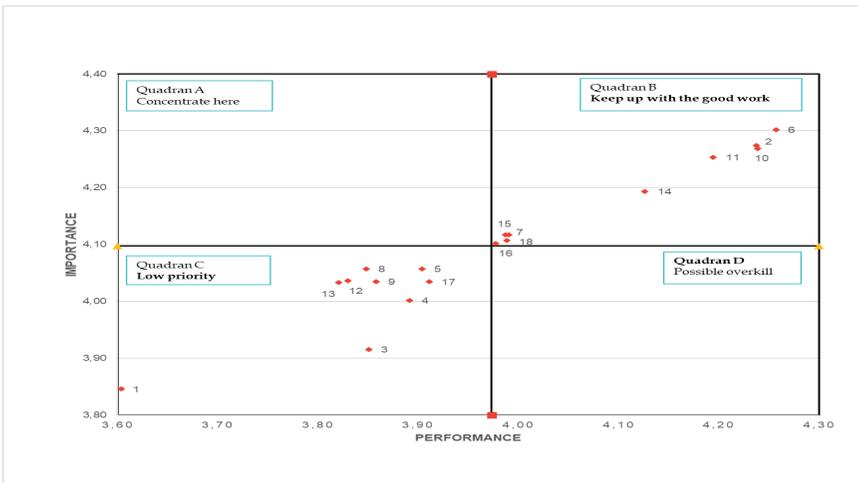


Figure 4: IPA Matrix – Pandemic Period

Source: Author's data processing results, 2022

As shown in Figure 4 the IPA Matrix during the pandemic period, it can be seen that the service attributes were evenly distributed in quadrant B (9 service attributes) and quadrant C (9 service attributes). Quadrant B describes the maintain performance quadrant, where the service attributes were (2), (6), (7), (10), (11), (14), (15), and (16). The first three attributes are “*Availability of Take-Home Exams scheme*”(2), “*The study program provides Take-Home Exams scheme*” (6), and “*Responsiveness of study program in implementing the Take-Home Exam scheme*” (7). These three service attributes were related to the implementation of online exams with Take-Home Exams (THE) scheme during Covid-19.

THE is a learning evaluation system service facility, where the final semester exam at UT was carried out offline or face-to-face during the normal period or before the occurrence of pandemic. However, during the pandemic, there was a shift in the implementation of the final semester exams to an online scheme. Therefore, it can be concluded that the UT students were satisfied with the implementation of the scheme during the pandemic and considered it a very important attribute. This result is similar to (Bismala & Manurung, 2021; Elly Sukmanasa, 2022). The availability of online exams, the suitability of the exam material, and the timely implementation of the final semester assessment were student satisfaction during the pandemic (Elly Sukmanasa, 2022). Furthermore, the flexibility (time tolerance) provided related to signals during the learning process and online exams during a pandemic is a service that satisfies students (Bismala & Manurung, 2021). The quadrant C describes low priority with 9 service attributes namely (1), (3), (4), (5), (8), (9), (12), (13), and (17). This result is similar to (Bismala & Manurung, 2021; Setiowati et al., 2022) which stated that during a pandemic, most of the service attributes were in Quadrants B and C.

The quality of UT services during the pandemic showed that the service attributes were grouped in quadrants B and C. This indicated that the services provided to students during the pandemic were quite good with the level of importance and performance at the same level. Service quality remained consistent and needs to be maintained. These results are in line with Irawati and Jonatan (2020) whose service attributes were “*lecturers are reliable in managing classes*” (5) and “*lecturers have the creativity to make variations in delivering material*” (17). Meanwhile, there were no groupings in quadrants A and D.

CONCLUSION

The SERVQUAL method based on the gap analysis in the normal and pandemic period that was carried out on all service quality dimensions showed a negative value. Furthermore, it can be concluded that the average score of perception was smaller than that of expectation. The responsiveness dimensions respectively had the highest gap score during the normal and pandemic period. This indicated that the quality of services that are responsive to solving problems is still weak. For the gap analysis score for each service attribute in a normal period, it can be concluded that the students were not satisfied with the quality of the 4 service attributes, namely (15), (8), (10), and (31). These service attributes represent the performance of the lecturer or academic and administrative staff that needs to be improved and given special attention, especially in their responsiveness. This indicates that the response from the UT's lecturers or academic and administrative staff is still unsatisfactory for students. Lecturers are not easily contacted during the learning process through online tutorials platform. UT needs to train lecturers or tutors on how to improve the tutorials, make good communication with students, and be more interactive in online learning. Therefore, it can be concluded that UT's services during normal period need to be improved, especially for the lecturer or academic & administration staff responsiveness.

During the pandemic period, there were four service attributes with quality that were far from satisfactory, namely (2), (8), (12), and (13). These attributes represent academic & administration staff performance. On the other hand, the students were satisfied with the service attributes in terms of the implementation of online exams with the Take-Home Exam (THE) scheme during the pandemic. Related to the Covid-19, UT had issued a circular letter regarding Education Service Policy Information for the Pandemic Situation. One of them is the development of THE as an effort to provide learning services. A very important report for universities, especially the UT, is that the transition of the learning evaluation system to the application of THE scheme is the right step and very useful for the students during the pandemic period.

Based on the IPA matrix, the quality of service provided by UT to normal-period students showed that there were two service attributes in

quadrant A, which were the top priority for immediate improvement by the university. The university management needs to provide clear motivation and training for lecturers or tutors to update their knowledge. The comparison between the IPA matrix in the normal and the pandemic period indicated striking and interesting differences. During the normal period, there were two service attributes that were priority improvements, namely item 10: Lecturers were consistent in the assessment system, and 22: Lecturers update knowledge. Meanwhile, during the pandemic period, suddenly there were no longer services that the students thought to be important, therefore, they were dissatisfied. This means that UT's service attributes are in a condition that provides satisfaction to students. Out of the 18 service attributes during the pandemic, 9 were important and students were satisfied (Quadrant B). Meanwhile, the other 9 became the low priority, indicating that, the students were satisfied even though they felt the service was not important.

Additionally, there were contradictory results in the IPA Matrix with the service attributes of "availability of internet quota or WIFI facilities" obtained in quadrant C (low priority). This showed that the students felt WIFI facilities were less important, performance was low, weaknesses were minor, and did not require additional effort. However, in reality, the dissatisfaction of the students with this service attribute had the highest gap score during the pandemic period. UT provided free internet during the pandemic through Wifi-id which could be accessed in public places with its logo. In addition, the students also got a 50GB internet quota for 4 months from the Ministry of Education and Culture after their mobile phone number was validated by UT. This result was very beneficial for UT because the WIFI service provided during the pandemic was needed by students.

Current reports are limited to the selected context, therefore, any suggestion based on gap analysis and the IPA matrix that the SERVQUAL is generally considered an appropriate method is premature. Nonetheless, this study provided some important insights into the dimensions of service quality when the normal and pandemic period were compared. There are opportunities for further studies, for example (1) the application of other methods and instruments in measuring service quality, such as the Higher Education PERFORMANCE (HEdPERF) method, and comparing it with ODE in other countries, (2) the application of other data analysis to determine strategies priority service attributes, such as Interpretive Structural Modelling (ISM).

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APPENDIX (OPTIONAL)

Appendix (or appendices) shall start in a new page after the references.

