

Analysis of student satisfaction with the quality of education services

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Abstract

The purpose of this research was to determine students' satisfaction with the quality of education services in universities in West Kalimantan. The method used in this study is the quantitative research method. The results known after conducting this study is, first, the students' satisfaction to the quality of service of information technology and computer education study programme is considered satisfactory with a score of 77.09%. Then, the second satisfaction of the students to the services of the ICT study programme is seen from the tangible aspect of satisfaction, with a satisfaction score of 77.09%. Students' satisfaction with the ICT study programme services seen from the aspect of trust (reliability) was satisfactory, with a satisfaction score of 76.84%. Students' satisfaction with the ICT study programme services seen from the responsive aspect (responsive) was satisfactory, with a satisfaction score of 77.24%. Students' satisfaction with the ICT study programme services was seen from the aspect of satisfactory assurance, with a satisfaction score of 76.54%. Finally, students' satisfaction with the ICT study programme services seen from the aspect of empathy was satisfactory, with a satisfaction score of 77.81%.

Keywords: student satisfaction, education services, Information Communication,Technology

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1. Introduction

Education is the spearhead of a nation's progress. The life of a nation begins with education. Therefore, the government continues to prioritise development in the field of education, especially the quality of education to produce excellent and productive human resources (Education: The Most Powerful Investment in Our Future – UNICEF Connect). Educational institutions play a major role in producing graduates, not only in large numbers but also high quality and discipline, who are able to be dynamic, innovators, motivators and drivers of development, as well as produce a smart workforce for various types and levels of expertise (Bei & Chiao, 2001; Levent & Pehlivan, 2017; Marin-Liebana et al., 2021; Yusof et al., 2012) In this case, service to the community, namely to students, must be improved in terms of both quality and quantity (Ali and Raza, 2017).

Educational institutions, which are public organisations providing quality services, need to change their resources by improving their service equipment and maximising the role of existing servants. Educational services in schools are activities of the education system that provide something that is needed by the community (Dinh et al., 2021; Draganchuk, 2020; Paulava et al., 2020; Theron & Theron, 2014). In the field of education, services are provided in the form of facilities and infrastructure. The steps that educational institutions need to take to improve such services are to optimise their human resource capabilities and improve the facilities and infrastructure that support the smooth running of educational services (Pasaribu et al., 2020; Rohmah et al., 2020; Santika et al., 2021; Siswanto & Hidayati, 2020).

1.1. Conceptual framework

1.1.1 Satisfaction and understanding

The word satisfaction comes from the Latin 'satis' (meaning good enough or adequate) and 'facio' (means doing or making) (*Satisfaction Definition & Meaning / Dictionary.Com*, n.d.). Simply put, satisfaction can be interpreted as an effort to fulfil something or make something adequate. The concept of customer satisfaction is still abstract, but customer satisfaction is a central concept in marketing theory and practice, and is one of the essential goals for business activities (Hamzah & Shamsudin, 2020). Achieving satisfaction can be both simple and complex processes. In this case, the role of each individual in service encounter is very important and affects the satisfaction formed. In accordance with the opinion above, the term satisfaction when viewed from consumer behaviour is something complex. Consumers, when giving an assessment of something, will usually be more disappointed with the service than the goods. The reason is because they are also involved in the process of creating services.

Satisfaction is the level of feeling of a person after making a comparison between the reality he feels and his expectations (Yussoff & Nayan, 2020). This consumer thinking is also stated by Kotler and Armstrong (2018), which defines satisfaction as a person's feeling of pleasure or disappointment experienced after comparing the perception of performance or results of a product with its expectations. If performance is below expectation, then the service user is not satisfied. However, if the performance meets expectation, then service users are satisfied. Vo (2021) also revealed that the dimensions of satisfaction include what is desired, get what is desired and complete satisfaction.

Based on some of the above opinions, it can be said that satisfaction is the conformity of expectations or things felt by customers (students) with the treatment they receive when requesting services from an institution. This means that customer satisfaction (students) is influenced by the performance of

employees in providing services. This certainly affects the existence of the institution in the eyes of its customers.

1.1.2. Quality of education services

According to Tjiptono and Tjiptono (2012), the term service in Indonesian has at least three words, namely service, service and service. As a service, services generally reflect intangible products or specific industry sectors such as education, health, telecommunications, transportation, insurance, banking, hospitality and so on. In essence, services as services are intangible, which is the fulfilment of needs and should not be tied to the sale of other products or services. A service can be interpreted as everything that a particular party (individual or group) does to another party (individual or group). One example is customer service, which includes the activity of answering customer questions, handling complaints, processing orders, installing products and repairing damages.

Service is defined as an economic activity that creates and benefits customers at a particular time and place, as a result and action of realising the desired change in the person or on behalf of the recipient of the service (Wirtz, Jochen, 2021). According to Kotler and Armstrong (2018), any action or activity that is offered by one party to another party is essentially intangible and does not result in any ownership. Service is an activity or sequence of activities that occurs in direct interaction between a person and another person or machine physically and provides customer satisfaction.

Based on some of the above opinions, it can be concluded that service is an activity that aims to meet needs or provide satisfaction to customers through service offerings (intangible) or products by service providers. Further developments according to Gilmore in services can be distinguished into service as an activity and service as a concept (Tjiptono & Tjiptono, 2012).

Service activities include customer satisfaction, but in this case service is seen as an additional function that complements both physical and non-physical products. Services are used as competitive advantages, such as the friendliness and readiness of employees paid to customers. As a concept, services can be organisational, including organisational structures (businesses and non-profits in the field of services), core products (product expansion or any additional activities designed to facilitate the delivery of core products), product support (any customer-oriented activity that takes place after the core product is delivered to the customer) and the act of assisting and advising the customer. Thus, in essence, every business is a business of services/services.

1.1.3. Prima services of educational institutions

Universities in carrying out education aim to produce valuable academic people. Quality is measured in terms of the mastery of science and technology, as well as attitude and ethics, active, creative and innovative. This goal becomes difficult to achieve because it is constrained by various factors, both student factors and outside factors, related to the student services provided (Mahmud, 2012). One of the obstacles in achieving these goals is the dissatisfaction of students with the services provided. This can be caused by students themselves who do not know and are reluctant to know the institution as a whole so they do not know their rights and obligations to get good service. The opposite can be caused by employees, lecturers and other personnel. This condition shows that to realise its goals, universities need a service that is able to facilitate students and also lecturers, administrative personnel and other supporting parties. This service is commonly referred to as excellent education service.

Excellent service is the best service offered in accordance with the applicable standards or owned by agencies that provide services so as to satisfy those served (Windasuri, 2017). Prima service is

caring for customers by providing the best service to facilitate ease of fulfilment of needs and realise their satisfaction, so that they are always loyal to the organisation / company (Tjitono, 2017). According to Tim Kalbe Farma (Mahmud, 2012), excellent service is to give customers more than what is expected when they need it in the way they want.

Based on the above opinion, it can be said that excellent service is a service provided to customers that is carried out in accordance with or exceeding the standards that have been set or the best service provided in accordance with the needs of the customer. In universities, whose majority of the customers are excellent service students, it is aimed to provide services that can meet and satisfy students in accordance with their needs in order to empower students as the main customers of educational services and build and regrow public trust in the institution through students.

1.2. Related research

Based on the literature reviewed, there are several studies that have been carried out as described below.

- Research conducted by Napitupulu et al. (2018) with the title of 'Student satisfaction analysis of quality and service facilities'. The results of the study showed that the gap between respondents' perceptions and expectations had a negative value for each item.
- Research conducted by Ningsih et al. (2020) with the title of 'Student satisfaction analysis of the quality of education services'. The study results determined an index of student satisfaction with the quality of educational services at the University of Warmadewa. Based on the dimensions of service quality, namely physical evidence, reliability, empathy, responsiveness and assurance, students felt 'satisfied'. The overall survey results showed that students rated the quality of educational services at a 'satisfactory' level.
- Research conducted by Ekonomi and Klabat (2020) with the title 'Analysis of student satisfaction levels on quality of service in higher Education: case study of private university in North Minahasa'. The study results showed that overall the quality of satisfaction was good but there were still improvements in the aspect of tangibility and responsiveness.
- Research conducted by Hidayatullah and Suardika (2020) with the title of 'Student satisfaction analysis of the quality of education services'. In the study, the results showed that there is still a lack of quality of service in the quality of education due to the state of learning facilities that still have many shortcomings.

Based on previous research studies, there is a relationship between the quality of service and student learning facilities. Thus, the purpose of this study is to find out the magnitude of the relationship between service quality and student satisfaction, as well as the influence of quality of service on student satisfaction, especially in IKIP PGRI Pontianak, West Kalimantan.

1.3. Research objectives

Based on the above problems, the purpose of this study is to find out 'students' satisfaction with the quality of student service', which includes five aspects, namely tangible aspects, reliability, responsiveness, assurance and empathy, at the largest campus in West Kalimantan, IKIP PGRI Pontianak.

2. Method

2.1. General research background

The research method used in this study is descriptive research. The quantitative approach is used because in this study the data collected is in the form of numbers described through research instruments and then analysed according to the criteria so that the results of the research are realised. The results are expected to describe the level of satisfaction that students feel with each problem that has been identified. The results of the study are in the form of percentage figures on the five dimensions of service satisfaction. Descriptively, any evidence and indicators contained in the research instrument in the form of numbers will be explained in more detail. The description of the instrument proof item is based on a reference to the percentage of numbers in each dimension studied. Thus, each satisfaction dimension measurement indicator can describe each identified problem.

2.2. Sample of the research

The population used is all students of semesters 2 and 4 at the Faculty of Mathematics and Natural Sciences and Technology, IKIP PGRI Pontianak. The total number of students sampled was 288. The data analysis techniques used was descriptive analysis techniques, which are descriptive descriptions to explain the answers given by respondents on a large scale. The data obtained through observations and interviews are used as supporting data. Data processing was carried out with SPSS software, with reference to the Likert scale to explain the criteria and make it easier to determine the conclusions of the research results.

2.3. Instruments and procedures

In this study, the data collection instrument used was a questionnaire given directly to the respondents in order to document the studies. A questionnaire with closed questions was chosen because it has alternative answers available, one of which should be chosen as the most appropriate answer (correct). It is hoped that with this questionnaire the researchers can extract a lot of information from the subjects directly related to the research problems that are the focus of this study. The scale used in this questionnaire is the Likert scale. There are two forms of questions that use the Likert scale, namely the form of positive questions or questions to measure positive attitudes and the form of negative questions or questions to measure negative attitudes. Therefore, for the purpose of quantitative analysis, we used a modified Likert scale in which the answers are printed.

The procedure followed in this study was pre-observation at the IKIP-PGRI Pontianak campus in the Faculty of Science and Technology Education. We prepared research instruments in the form of questionnaire grids and compiled questions about the quality of educational services. We conducted the validity of content on the existing research instrument and questionnaire trials at the Faculty of Education in Science and Technology. We carried out empirical validity on the research test instruments and revised the instrument based on the results of the test instrument validation analysis. At the stage of implementation, researchers distributed the questionnaires to respondents, and examined whether the questionnaires were filled out by the respondents. We also distributed interview sheets. In the final stage, the researchers processed research data with precise statistical tests to answer research problems and hypotheses. Finally, conclusions were drawn.

2.4. Data analysis

The data analysis techniques used were descriptive analysis techniques, i.e., descriptive descriptions to explain the answers given by respondents on a large scale. Data obtained through

observations and interviews were used as supporting data. Data processing was carried out using SPSS software, with reference to the Likert scale to explain the criteria to make it easier to determine the conclusions of the research results. More clearly, the analysis of research data was conducted with the following analysis units:

1. Tendency Test

A. Calculate the ideal average and standard deviation:

$$Mi = 1/2 (ST + SR) \quad SDi = 1/6 (ST - SR)$$

where:

Mi = SIn the ideal mean and ideal standard deviation;

ST = highest score;

SR = lowest score.

b. Determine the scale of raw score by categorisation of satisfaction based on average score and ideal standard deviation with the above formula and details presented in Table 1.

Table 1. Students' Satisfaction Categorisation according to frequency and percentage interpreting the trend data for each research subject in general.

Not.	Category	Various
1	Very satisfied	$> Mi + (1.5 \times SDi)$
2	Satisfied	$Mi - Mi + (1.5 \times SDi)$
3	Dissatisfied	$Mi - (1.5 \times SDi)$ to Mi
4	Very dissatisfied	$< Mi - (1.5 \times SDi)$

1. Percentage Calculation

Percentage is used to find an overview of students' satisfaction with the quality of ICT education study programme services. Percentages are obtained by paying attention to the distribution of scores on the distribution of frequency that occurs and the satisfaction scale measured by the number of percentages measured. According to (Sudjana, 2007), to be able to interpret the data obtained, it is necessary to print research data with the following formula:

$$P = \frac{f}{n} \times 100\%$$

Where:

n = Ideal total score;

f = total score, earned;

With the criteria presented in Table 2.

Table 2. Interpretation criteria for service satisfaction score

Not.	Criterion	Percentage
1	Very low	00.00%–25,00%

2	Low	26,00%–50,00%
3	Tall	51,00% –75,00%
4	Very high	76,00%–100,00%

Source: Subana and Sudrajat (2009, p. 135).

3. Results

Satisfaction assessment is based on the scope of the main task and function of the study programme as an academic service unit in IKIP-PGRI Pontianak that is directly related to students. More clearly, they are described as follows:

- A. Set the schedule of lectures, information technology and computer education pre-education and test implementation. In this task, the computer information technology and education study programme is responsible for coordinating classroom services and for the implementation of lectures, inventory of lecture equipment, preparing lecture halls and making reports on lecture hall services.
- B. Manage the need for educational facilities, lectures, pre-education of information and computer technology and conduct exams with planning based on the results of inventory of programmes and academic activities that have been implemented.
- c. Carry out academic information system management activities. This activity includes data recording, grades, schedules, educational guidelines, thesis final project (TFP) guidelines, information technology and computer education statistics of students, study plan cards, study results list, academic achievements, data updates and data checking or academic study programmes provided every semester.
- d. Check, sign and issue free letters of theory, exam certificates, research recommendations and carry out and prepare TAS exams.
- E. Conduct correspondence activities (creation, request signatures and file-related observation and research permits and other academic administrative information needs.

3.1. Data presentation

Here we determine the students' satisfaction with the quality of education services in information technology and computer education study programme in IKIP-PGRI Pontianak. The conversion of scale scores based on the average and standard deviation shows that 14 students were very satisfied, 79 students were satisfied, 65 students were dissatisfied and 7 students were very dissatisfied (Figure 1). The percentage results obtained that 20% were very satisfied, 69% were satisfied, 10% were dissatisfied and 1% was very dissatisfied. So, overall, the percentage of student satisfaction with educational services in information and computer education courses is 77.09%, which falls into the very high or very satisfactory category.

Table 3. Students' satisfaction questionnaire score against information technology and computer education study programme services

Scale	Point	Score	%
Very satisfied	4	922	20%
satisfied	3	3207	69%
Dissatisfied	2	447	10%

Very dissatisfied	1	44	1%
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3.2 Tangible aspects

The conversion of scale values, flat and standard deviation scores, shows that 26 students were very satisfied with the tangible aspects, 91 students were satisfied, 43 students were dissatisfied and 5 students were very dissatisfied (Figure 2). Based on the percentage of results obtained, 22% were very satisfied, 64% satisfied, 13% dissatisfied and 1% very dissatisfied. So, overall, the percentage of student satisfaction with educational services in the course on the tangible aspect is 77.09%, which falls into the category of very high or very satisfactory.

3.3. Reliability aspects

The conversion of scale values, the average and standard deviation of results, obtained satisfaction results in the reliability aspect, which showed that 44 students are very satisfied, 83 students are satisfied, 32 students are dissatisfied and 6 students are very dissatisfied (Figure 3).

Based on the percentage of results obtained, 18% were very satisfied, 72% satisfied, 9% dissatisfied and 1% very dissatisfied. So, overall, the percentage of student satisfaction with the education services of information technology and computer courses in the reliability aspect is 76.84%, which falls into the category of very high or very satisfactory.

3.4. Responsive aspects

The scale value conversion, the average and standard deviation results, obtained satisfaction results in responsive aspects, which showed that 47 students were very satisfied, 92 students satisfied, 22 students not satisfied and 4 students very dissatisfied (Figure 4). The percentage results obtained showed that 21% were very satisfied, 69% satisfied, 9% dissatisfied and 1% very dissatisfied. So, overall, the percentage of student satisfaction with the services of information technology and computer education courses in the response aspect is 77.24%, which falls into the category of very high or very satisfactory.

3.5. Aspects of warranty

The conversion of scale scores, the average and standard deviation results, obtained in the aspect of the guarantee showed that 33 students are very satisfied, 112 students are satisfied, 18 students are not satisfied and 2 students are very dissatisfied. Based on percentage results, it was found that 18% were very satisfied, 72% satisfied, 9% dissatisfied and 1% very dissatisfied (Figure 5). So, overall, the percentage of student satisfaction with the services of information technology and computer education programmes in the aspect of guarantee is 76.54%, which belongs to the category of very high or very satisfactory.

3.6. Aspects of empathy

The conversion of scale values, the average and standard deviation of results, obtained satisfaction results in the aspect of empathy, which showed that 45 students are very satisfied, 102 students are satisfied, 16 students are dissatisfied and 2 students are very dissatisfied. Based on the percentage of results shown in Figure 6, it was found that 20% were very satisfied, 71% satisfied, 8% dissatisfied and 1% very dissatisfied. So, overall, the percentage of student satisfaction with the services of information technology and computer education courses in the aspect of empathy is 76.54%, which falls into the category of very high or very satisfactory.



Figure 1: Frequency of student's satisfaction with education services



Figure 2. Frequency of students' satisfaction with the information and computer technology service education study programme regarding the tangible aspect

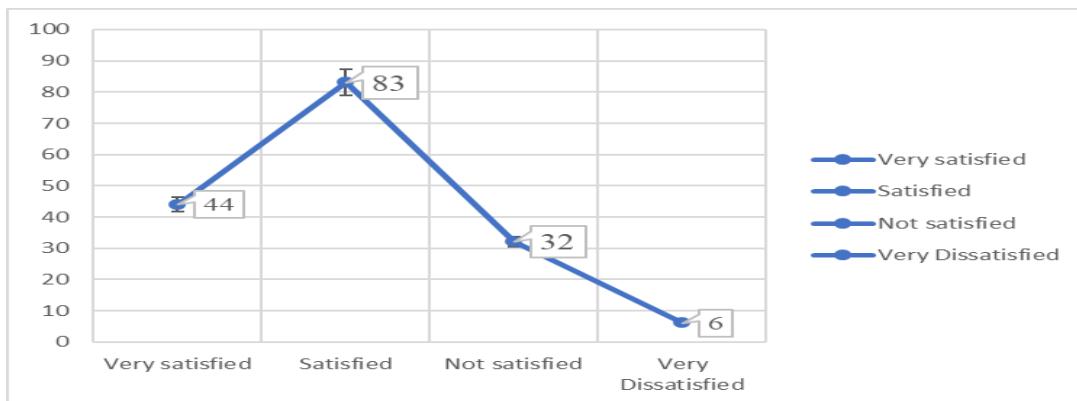


Figure 3. Frequency bar of students' satisfaction with educational services in the reliability aspect

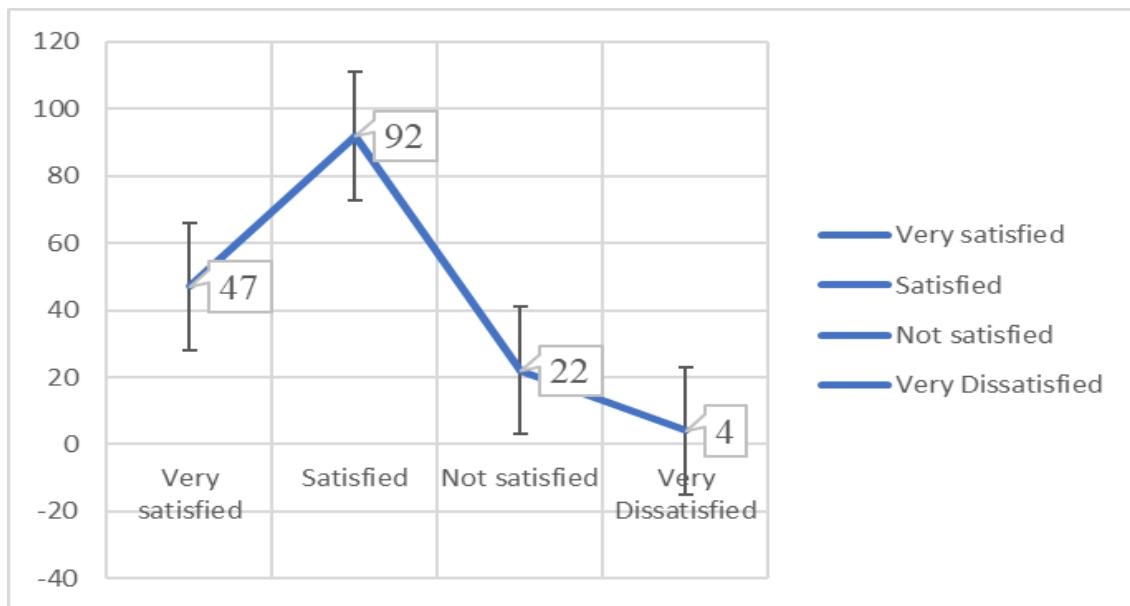


Figure 4. Students' satisfaction bar chart with the information technology service and computer education study programme in the responsive aspect

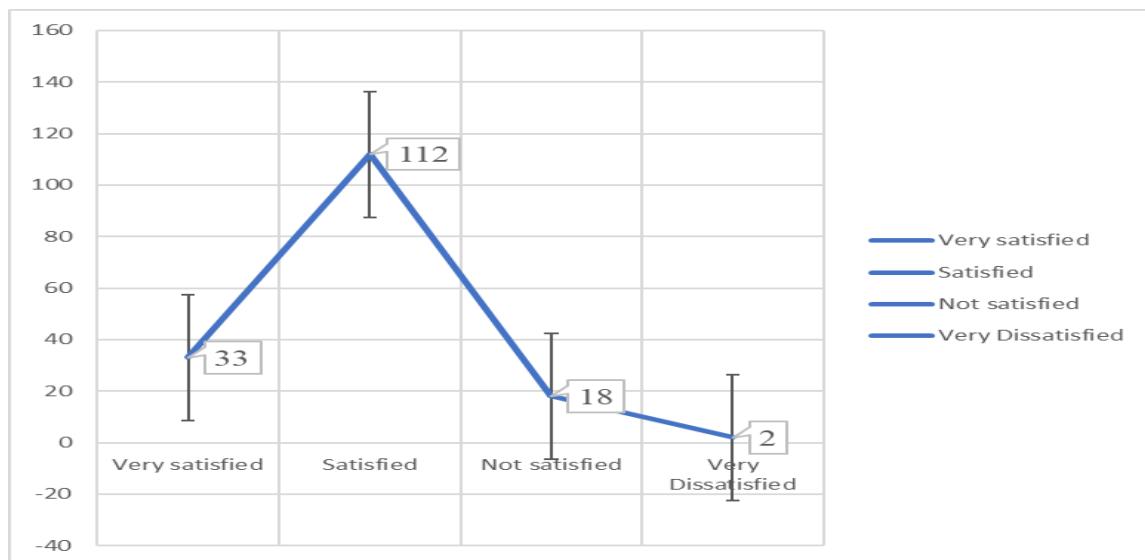


Figure 5. Students' satisfaction frequency bar diagram with the information computer technology and education study programme services in the warranty aspect



Figure 6. Students' satisfaction frequency bar chart for the information technology and computer education study programme services in the aspect of empathy

4. Discussion

In this section, we discuss about the students' satisfaction with the education services at IKIP PGRI Pontianak. Satisfaction measurement is carried out for students of the information and technology education study programme in semesters 3 and 5. 28 statement items were rated on a scale of 1–4. The aspects measured include tangible, responsiveness, reliability, empathy and assurance.

The results of data tabulation showed that students' satisfaction is generally considered satisfactory, with a score of 77.09%. It can be assumed that there is still a dissatisfaction score of 22.91%. These drawbacks, when viewed per aspect, are explained below.

Regarding tangible aspects, the tangible indicators are considered satisfactory with a satisfaction score of 77.09%. This means that the services provided are quite good. This shows that tangible aspects are important to realise excellent service, and that tangible aspects are related to students' desire for evidence regarding punctuality, comfort, friendliness and interaction. Based on the satisfaction results, it was found that the unsatisfactory aspects had a score of 22.91%. To improve student satisfaction, improvement is needed. The most important indicators to be improved are the preparedness attitude of the service desk officers according to their respective duties and updates of the service flow and layout so that they are easy to identify. The real condition is that the officer is sometimes ready at the counter, and sometimes not. This shows that there has been no official effort to provide excellent service.

Regarding reliability aspects, the reliability indicators are rated as satisfactory with a satisfaction yield of 76.84%. This means that the services provided by the information technology and computer education study programme are good enough. This shows that the reliability aspect of staff service is important. The ability of officers to maintain customer information technology and computer education will create a sense of trust from customers with the existing officers and operational systems to solve their problems.

What needs to be improved is the speed of problem-solving by officers. According to students, this indicator still has a low value. It is necessary for officers to act spontaneously and to demonstrate a desire to solve students' problems. In that way, the problem will be solved quickly. Regarding information technology and computer education systems, any updates from institutions or officers should be made as an announcement. In fact, many students do not know that there is currently a new system for mail and licensing services. Based on this, students evaluated the clarity of service procedures. Both indicators contributed to a tendency to dissatisfaction with a score of 23.16%. Regarding responsive aspects, the responsive indicators were rated as satisfactory with a satisfaction score of 77.24% or good. This means that this aspect is considered important to improve students' satisfaction. The satisfaction results still showed a tendency of dissatisfaction towards the aspect with a score of 23.16%; thus, it is necessary to improve service satisfaction.

The main thing that must be improved is the attitude and welcome of the officer in serving with a smile. In fact, this indicator is very important to realise excellent service. Customers will always remember their greetings or first impressions and will form an image of the institution. If the first impression is unpleasant, so to ask for service later, then students will think about it again.

Regarding guarantee aspect, the guarantee indicator is considered satisfactory with a satisfaction score of 76.54%. This means that the services provided by the information technology and computer education study programme are good. This shows that the guarantee aspect is something important in realising excellent service and assurance information technology and computer education with the capabilities and credibility of frontline staff (service employees). Credibility and ability are manifested in real attitudes in the form of answerability and job competence. This is in accordance with the real conditions of the computer information technology and education study programme, indicating the fulfilment of services and the responsibility of officers to satisfactory service. Moreover, it is necessary to improve the ability of officers to build trust in customers, in keeping with the theory that loyalty starts from trust.

This condition is seen from the aspect which states no, with a score of 23.46%. The constraints in this study have been tried carefully and thoroughly, but have weaknesses and limitations, namely this students' satisfaction study only measures satisfaction with what students receive and feel without expressing or comparing further expectations. With regard to the questionnaire, only an overview of the servant's activities in information and computer education courses is revealed, not the details of the activities that occurred, so it does not fully correspond to the facts. Questionnaires only measure what happens, it does not assess; so it cannot be fully used as a reference for evaluation. The data collection techniques used in this study did not use interview methods, so researchers were unable to explore and examine more deeply the factors influencing the assessment students' satisfaction. The calculations used in this study refer to scoring so that the results obtained are not absolute in accordance with reality. Those who are very satisfied will score higher, while those who are very dissatisfied will score lesser, although if the frequency is calculated the result can be different.

5. Conclusion

Based on the processing of the data of the research results, in general, it can be concluded that students' satisfaction with the quality of services of the information technology and computer education study programme is considered satisfactory with a score of 77.09%; so it can be concluded that students' satisfaction with the services of the Information Technology Study Programme and Computer Education, judging from the aspect of manifestation (tangible), is satisfactory with a satisfaction score of 77.09%. Students' satisfaction with the services of the information technology

and computer education study programme seen from the aspect of trust (reliability) was satisfactory with a satisfaction score of 76.84%. Students' satisfaction with the services of the information technology and computer education study programme seen from the responsive aspect (responsive) was satisfactory with a satisfaction score of 77.24%. Students' satisfaction with the services of the information technology and computer education study programme was seen from the aspect of satisfactory guarantee (guarantee) with a satisfaction score of 76.54%. Students' satisfaction with the services of the information technology and computer education programme seen from the aspect of empathy (Empathy) was satisfactory with a satisfaction score of 77.81%.

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