STUDENT SATISFACTION SURVEY REPORT

Undergraduate Biology Education Study Program

Faculty of Mathematics and Natural Sciences

State University of Surabaya (UNESA)

Year 2022

APPROVAL PAGE

This document certifies that the Student Satisfaction Survey Report of the State University of Surabaya has been prepared truthfully and in accordance with the actual conditions.

Surabaya, May 20, 2023

Acknowledged by:

Head of the Biology Education Study Program

Dr. Rinie Pratiwi Puspitawati, S.Pd., M.Si.

NIP 196601121991032001

Quality Assurance Unit (UPM)

Reni Ambarwati, S.Si., M.Sc.

NIP 197707222006042001

PREFACE

All praise and gratitude are due to Allah the Almighty for His blessings, which have enabled the completion of this Student Satisfaction Survey Report for the Undergraduate Biology Education Study Program, State University of Surabaya.

We express our sincere appreciation to all parties who have supported the implementation of this activity, making it possible to compile this report for the year 2022.

The preparation of this report would not have been possible without the contributions and valuable feedback of many individuals. Hence, we would like to extend our deepest gratitude to:

1. The Rector and all university leaders who have provided moral and material support to the Quality Assurance Agency (LPM) of the State University of Surabaya.
2. The Dean, Vice Dean, and Faculty Quality Assurance Group (GPM) of the Faculty of Mathematics and Natural Sciences (FMIPA).
3. The Head of the Biology Education Study Program.
4. The respondents — the students of the Biology Education Study Program — who kindly took the time to complete the satisfaction questionnaire and share their suggestions and feedback.

We are aware that this report may still contain shortcomings. Therefore, constructive input from all members of the academic community of the Biology Education Study Program is highly appreciated, as it will serve as feedback for continuous improvement in future evaluation and measurement cycles.

Surabaya, May 20, 2023

Quality Assurance Unit (UPM)

Biology Education Study Program

CHAPTER I – INTRODUCTION

1.1 Background

The Data and Survey Center under the Quality Assurance Agency (LPM) of the State University of Surabaya (UNESA) plays a key role in supporting the university's quality assurance process through the implementation of the Quality Planning, Implementation, Evaluation, Control, and Improvement Model (PPEPP).

One of its primary responsibilities is to conduct Customer Satisfaction Surveys, which are now essential components of both Study Program and Institutional Accreditation processes.

The survey aims to evaluate the quality of all operational activities within UNESA periodically. It is conducted online and implemented at the end of each regular semester (both odd and even semesters). The survey results are followed up through evaluation meetings, the outcomes of which are used to improve the quality of services in the following academic year.

Over time, the need for quality improvement at UNESA has continued to increase, influenced by both internal and external factors. Therefore, periodic satisfaction surveys among students, lecturers, and educational staff are essential for identifying variables that need enhancement or maintenance.

The survey instrument consists of several statements that measure respondents' expectations and perceptions of actual service performance. Respondents indicate their answers by selecting the level of agreement or satisfaction related to academic and non-academic services within UNESA during the 2022 academic year.

1.2. Legal Basis

The implementation of this Student Satisfaction Survey is grounded in the following legal and regulatory frameworks:

1. Law No. 20 of 2003 on the National Education System.
2. Law No. 12 of 2012 on Higher Education.
3. Government Regulation No. 4 of 2014 on the Administration and Management of Higher Education Institutions.

4. Minister of Education and Culture Regulation No. 50 on the Higher Education Quality Assurance System.
5. Minister of Education and Culture Regulation No. 87 of 2014 on the Accreditation of Study Programs and Higher Education Institutions.
6. Minister of Research, Technology, and Higher Education Regulation No. 13 of 2015 on the Strategic Plan of the Ministry of Research, Technology, and Higher Education for 2015–2019.
7. Minister of Research, Technology, and Higher Education Regulation No. 44 of 2015 on the National Standards for Higher Education.
8. Minister of National Education Regulation No. 7 of 2007 on the Organization and Operational Procedures of the Quality Assurance Agency for Education.

1.3. Problems

The following key research questions were formulated to guide this survey:

1. Are there statistically significant differences between students' expectations and perceptions of satisfaction in the 2022 UNESA Student Satisfaction Survey?
2. How do students' expectations and perceptions compare, based on gap analysis, in the 2022 UNESA Student Satisfaction Survey?
3. How does the Importance-Performance Analysis (IPA) illustrate the relationship between students' expectations and perceptions of satisfaction in the 2022 UNESA Student Satisfaction Survey?

1.4. Objectives

The objectives of this survey are as follows:

- To determine the level and quality of student satisfaction at UNESA in 2022 based on statistical tests, gap analysis, and Importance–Performance Analysis (IPA).
- To provide an evidence-based reference for future evaluations and quality improvement strategies in subsequent academic years.

1.5. Systematic Structure of the Report

This Student Satisfaction Survey Report of the State University of Surabaya (UNESA) consists of four main chapters, organized as follows:

Chapter I: Introduction

Contains the background, legal basis, problem formulation, research objectives, and report structure.

Chapter II: Survey Methodology

Describes the type and design of the survey, operational definitions, survey instruments, methodological approach, and data analysis techniques, including Gap Analysis, Suitability Index (Tki), Normality Test, Wilcoxon Test, and Cartesian Diagram.

Chapter III: Results and Discussion

Presents the findings and discussion derived from statistical analysis, gap and suitability analysis, and quadrant analysis using the Importance–Performance Analysis (IPA) method.

Chapter IV: Conclusions and Recommendations

Provides the overall conclusions of the student satisfaction survey and constructive recommendations for the next cycle of measurement and evaluation.

CHAPTER II – SURVEY METHODOLOGY

2.1. Type and Design of the Survey

This study employed a quantitative descriptive research design using the survey method. The survey method was selected because it enables a quantitative description of trends, attitudes, and opinions of a population by studying a representative sample (Creswell & Creswell, 2018; Johnson & Christensen, 2014).

A cross-sectional design was used to examine the relationship between independent and dependent variables at a single point in time (point-time approach). Each participant was observed once, and data were collected through a questionnaire instrument.

2.2. Operational Definitions

The operational definitions used in this survey are as follows:

1. Consumer: All students who used UNESA services in 2022.
2. Consumer Expectations: Students' perceived level of importance or expectation regarding the services provided by UNESA.
3. Consumer Satisfaction: Students' recognition and evaluation of the actual services received from UNESA.
4. Service Quality Dimensions: The perceived and expected quality of services across five key dimensions - reliability, responsiveness, assurance, empathy, and tangibility - adapted from the SERVQUAL model (Parasuraman et al., 1985).

2.3. Survey Instrument

The primary instrument used in this survey was a structured questionnaire. It consisted of written statements assessing students' expectations and perceptions regarding UNESA's service quality.

The questionnaire items were categorized under the five SERVQUAL dimensions:

- Reliability: Consistency and accuracy in delivering promised services.
- Responsiveness: Willingness to help students and provide prompt service.

- Assurance: Competence, courtesy, and credibility of staff in ensuring trust.
- Empathy: Personal attention and understanding of students' needs.
- Tangibility: Physical facilities, equipment, and appearance of personnel.

2.4. Method

The study adopted the SERVQUAL (Service Quality) method proposed by *Parasuraman et al. (1985)*, which measures service quality across five key dimensions:

1. Tangibles - Physical facilities, equipment, personnel appearance, and communication materials.
2. Reliability - The ability to deliver promised services promptly, accurately, and satisfactorily.
3. Responsiveness – The willingness and readiness of staff to help customers and provide timely service.
4. Assurance – Staff competence, courtesy, and credibility, which foster confidence and trust among customers.
5. Empathy – Personalized attention, good communication, and an understanding of individual customer needs.

To further evaluate satisfaction, the Importance–Performance Analysis (IPA) method (Martilla & James, 1977) was applied to measure the relationship between customer perception and service quality improvement priorities. This technique, also known as Quadrant Analysis, identifies which aspects of service quality need to be improved, maintained, or reconsidered.

2.5. Data Processing

a. Gap Analysis and Suitability Level (Tki)

The degree of student satisfaction was determined using Gap Analysis, comparing the mean scores of expectation and perception across the five service dimensions (reliability, responsiveness, assurance, empathy, and tangibility).

$$\text{Gap} = \text{Perception} - \text{Expectation}$$

A positive gap indicates that perceived service quality exceeds expectations, while a negative gap shows that the service has not met expectations.
The Suitability Index (Tki) was computed as follows:

$$Tki = (\frac{\text{Perception}}{\text{Expectation}}) \times 100\%$$

Interpretation of Tki (Wahyuni, 2014):

- Tki > 100%: Service performance exceeds expectations — *very satisfactory*.
- Tki = 100%: Service performance meets expectations — *satisfactory*.
- Tki < 100%: Service performance falls below expectations — *unsatisfactory*.

b. Normality Test

The normality test was conducted to assess whether the dataset followed a normal distribution, based on the average perception and expectation scores for each questionnaire item.

- If the significance value (p-value) > 0.05, the data are normally distributed (parametric), and analysis can proceed using a Paired t-test.
- If the p-value < 0.05, the data are not normally distributed (non-parametric), and analysis proceeds using the Wilcoxon Signed-Rank Test.

The Kolmogorov–Smirnov test was used for large samples (N > 50), while the Shapiro–Wilk test was applied for small samples (N < 50).

c. Wilcoxon Signed-Rank Test

The Wilcoxon test was used as a non-parametric alternative to the paired t-test to determine whether there were statistically significant differences between students' expectations and perceptions.

- If $p < 0.05$, H_0 (no difference) is rejected — indicating a significant difference between expectation and perception.
- If $p > 0.05$, H_0 is accepted — indicating no significant difference.

d. Cartesian Diagram (Quadrant Analysis)

The Cartesian diagram was used to map each service variable into four quadrants, representing priority levels for improvement:

1. Quadrant I – "Concentrate Here"
   High importance but low performance; these factors are high-priority areas for improvement.
2. Quadrant II – "Keep Up the Good Work"
   High importance and high performance; these factors should be maintained.
3. Quadrant III – "Low Priority"
   Low importance and low performance; these factors require minimal attention.
4. Quadrant IV – "Possible Overkill"
   Low importance but high performance; resources may be reallocated elsewhere.

This visualization helped the program identify which service dimensions most strongly influenced overall student satisfaction and which required strategic enhancement.

CHAPTER III – RESULTS AND DISCUSSION

3.1 Statistical Analysis

The survey was conducted among students of the Undergraduate Biology Education Study Program, Faculty of Mathematics and Natural Sciences, State University of Surabaya (UNESA). Respondents were selected randomly through the Single Sign-On (SSO) system, yielding 467 valid responses, representing the entire active student population of the program.

Given the total sample size of 467, the dataset met the adequacy requirements for statistical analysis.

Prior to hypothesis testing, a normality test was conducted as a prerequisite for determining whether to apply parametric or non-parametric statistical procedures. The hypotheses for normality testing were as follows:

- H_0: The data follow a normal distribution.
- H_1: The data do not follow a normal distribution.

Based on the test results (Figure 3.1), the p-value < 0.05, indicating that the null hypothesis (H_0) was rejected. Hence, the dataset did not follow a normal distribution. Consequently, the Wilcoxon Signed-Rank Test, a non-parametric method, was employed as an alternative to the Paired t-test.

Wilcoxon Test Results

Parameter	N	Mean Rank	Sum of Ranks
Negative Ranks (Perception < Expectation)	130	105.76	13,749.00
Positive Ranks (Perception > Expectation)	61	75.20	4,587.00
Ties (Perception = Expectation)	276	–	–
Total	**467**	–	–

Test Statistics (Wilcoxon Signed-Rank Test)

$Z = -6.014$

Asymp. Sig. (2-tailed) = 0.000

With a significance level (p) < 0.05, the null hypothesis was rejected. Therefore, it can be concluded that there was a significant difference between students' expectations and perceptions of service quality.

3.2 Gap Analysis and Suitability Index (Tki)

The computed Gap Scores and Suitability Index (Tki) values for each service dimension are summarized below.

Dimension	Mean Perception	Mean Expectation	Mean Gap	Tki (%)
Tangibility	3.56	3.45	–0.11	97.05
Assurance	3.56	3.47	–0.09	97.36
Responsiveness	3.55	3.46	–0.09	97.52
Empathy	3.55	3.45	–0.10	97.13
Reliability	3.57	3.49	–0.08	97.76
Overall (Grand Mean)	**3.56**	**3.46**	**–0.10**	**97.30**

All five dimensions yielded negative gap values, indicating that students' expectations slightly exceeded their perceived experience. The largest negative gap (–0.15) was found in Indicator P1 (Tangibility) — referring to *the availability and accuracy of academic and administrative services, as well as academic and non-academic information both online and offline*.

Although the gaps were minor, they reveal that students still perceive a marginal shortfall in service delivery relative to their expectations. Nonetheless, the overall satisfaction rate (Tki = 97.30%) demonstrates that service quality was close to meeting expectations.

3.3 Importance–Performance (IPA) Quadrant Analysis

The Importance–Performance Analysis (IPA) technique was used to map each service attribute into four quadrants of the Cartesian diagram, allowing prioritization of improvement efforts.

Interpretation of Quadrants:

1. Quadrant I – Concentrate Here (High Importance, Low Performance): Attributes requiring immediate improvement.
2. Quadrant II – Keep Up the Good Work (High Importance, High Performance): Attributes that meet expectations and must be maintained.
3. Quadrant III – Low Priority (Low Importance, Low Performance): Attributes that have minimal impact on satisfaction.
4. Quadrant IV – Possible Overkill (Low Importance, High Performance): Attributes that may be overemphasized relative to their importance.

Quadrant I – High Priority for Improvement

Four indicators were identified as priority areas for improvement:

- P1 (Tangibility): Availability and accuracy of academic and administrative services (online/offline).
- P3 (Responsiveness): Staff ability and speed in providing services related to reasoning, interests, and talents.
- P12 (Empathy): Staff responsiveness to complaints concerning career guidance and entrepreneurship services.
- P18 (Tangibility): Availability and adequacy of academic facilities (libraries, laboratories, electrical/internet infrastructure, and information systems).

These indicators require strategic action plans to align performance with student expectations in subsequent academic years.

Quadrant II – Maintain Performance

Indicators within this quadrant were rated highly both in importance and performance, suggesting that students are satisfied. These include:

- P2 (Assurance): Clarity of information related to student talent and reasoning programs.
- P19 (Reliability): Competence of lecturers and staff in providing quality services.
- P20 (Responsiveness): Willingness of academic staff to assist students promptly.
- P21 (Assurance): Lecturer and staff ability to instill confidence that services comply with institutional standards.
- P22 (Empathy): Personal attention and care given by lecturers and staff to students.

Continuous reinforcement of these practices is essential to sustain student trust and institutional reputation.

Quadrant III – Low Priority

Attributes in this quadrant are less critical and generally perform adequately. They include twelve indicators such as:

- P4, P5, P6, P7, P8, P10, P11, P13, P14, P15, P16, and P17, covering areas like counseling services, health and scholarship management, and financial procedures.

These dimensions can remain at their current operational level without urgent intervention.

Quadrant IV – Possible Overkill

Two indicators were categorized here:

- P9 (Tangibility): Availability and quality of counseling, health, and scholarship facilities.
- P23 (Tangibility): Sufficiency and accessibility of overall facilities and infrastructure.

Although these services are well-executed, they are perceived as less crucial by students, suggesting that resources could be redistributed to higher-priority areas.

CHAPTER IV – CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

Based on the results of the statistical and descriptive analyses conducted in the 2022 Student Satisfaction Survey of the Biology Education Study Program, several key conclusions can be drawn:

1. There exists a statistically significant difference between students' *expectations* and *perceptions* of service quality, as indicated by the Wilcoxon Signed-Rank Test ($p < 0.05$), leading to the rejection of the null hypothesis (H_0).
2. The Gap Analysis revealed that all service dimensions—Tangibility, Reliability, Responsiveness, Assurance, and Empathy—exhibited negative gap values, indicating that the services provided have not yet fully met student expectations. The largest gap (–0.15) was observed for Indicator P1 (Tangibility), related to the *availability and accuracy of academic and administrative services, as well as academic and non-academic information delivered both online and offline*.
3. Despite these differences, the overall Suitability Index (Tki) reached 97.30%, suggesting that students generally perceived the quality of services as nearly meeting expectations, with only minor discrepancies.
4. Through Importance–Performance Analysis (IPA), four indicators were identified as *high-priority areas for improvement*, particularly:
    - P1 (Tangibility): Availability and accuracy of academic and administrative services (online/offline).
    - P3 (Responsiveness): Staff ability and speed in handling reasoning, talent, and interest-based services.
    - P12 (Empathy): Responsiveness of staff to complaints in career guidance and entrepreneurship services.
    - P18 (Tangibility): Adequacy of academic facilities such as libraries, laboratories, and digital infrastructure.

These variables are critical for future quality enhancement efforts.

4.2 Recommendations

Based on the conclusions above, the following recommendations are proposed for the Quality Assurance Unit (UPM) and the Program Management Team of the Biology Education Study Program:

1. Service Improvement:

   Strengthen the responsiveness and efficiency of academic and administrative services by ensuring the continuous availability and accuracy of online–offline systems and improving digital service reliability.
2. Infrastructure Enhancement:

   Upgrade academic infrastructure, including libraries, laboratories, internet connectivity, and learning spaces, to ensure alignment between students' expectations and their actual academic experience.
3. Capacity Building:

   Conduct periodic training and workshops for administrative staff and faculty members focusing on service ethics, communication, and empathy to enhance the human dimension of service quality.
4. Continuous Monitoring:

   Integrate this survey as a routine annual assessment under the PPEPP (Planning–Implementation–Evaluation–Control–Improvement) framework to ensure longitudinal tracking of student satisfaction trends.
5. Data-Driven Policy Making:

   Use survey outcomes as a foundation for evidence-based decision-making in both strategic planning and accreditation documentation to maintain and elevate UNESA's service excellence.

References

- Creswell, J. W., & Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. SAGE Publications.
- Johnson, R. B., & Christensen, R. (2014). *Educational Research: Quantitative, Qualitative, and Mixed Approaches*. SAGE Publications.

- Martilla, J. A., & James, J. C. (1977). *Importance–Performance Analysis*. *Journal of Marketing, 41*(1), 77–79.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). *A Conceptual Model of Service Quality and Its Implications for Future Research*. *Journal of Marketing, 49*(4), 41–50.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). *SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality*. *Journal of Retailing, 64*(1), 12–40.
- Supranto, J. (2001). *Measurement of Customer Satisfaction Levels to Increase Market Share*. Rineka Cipta.
- Wahyuni, N. (2014). *Gap Analysis*. BINUS University.