



## ANALYSIS OF FACTORS INFLUENCING INTERNATIONAL STUDENTS' SATISFACTION IN HIGHER EDUCATION

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### ABSTRACTS

This research aims to analyze whether there is a significant relationship between the variables of Teacher Expertise, Courses Offered, Learning Environment, and Facilities toward the satisfaction of international students in the Non-Degree and Full Degree programs at University X. The research methodology used was the Partial Least Square (PLS) statistical technique, which includes two stages: Outer Model Analysis and Inner Model Analysis. The research findings indicate that the key factors significantly influencing the satisfaction of Non-Degree program students are the expertise of the teachers and the courses offered, with the latter being the most influential factor. Conversely, for Full-Degree program students, the only factor that significantly affects their satisfaction is the variable of the learning environment. The research highlights the need to strengthen teaching quality and enhance campus facilities for both Full Degree and Non-Degree programs. It is expected that these improvements will increase the enrollment of international students in the future.

**Keyword:** Teacher Expertise, Courses Offered, Learning Environment, Facilities, Education.

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## 1. INTRODUCTION

Higher Education Institutions (HEIs) in Indonesia are competing to improve the quality of their services, which is expected to enhance the reputation of the institutions. Since the 1990s, HEIs have become a big business with many students seeking education abroad, leading to internationalization in higher education (Collins et al., 2022). One of the purposes of internationalization is to improve the reputation of the institutions internationally, as well as to generate university income. With a significant impact on reputation and finances, the international education sector has evolved into the world's largest export service industry, prompting HEIs worldwide to adopt goals and strategies to attract international students by providing high-quality education and services, making international students satisfied customers (Collins et al., 2022). Therefore, HEIs need to understand that the education services provided will have a significant impact on student satisfaction (Collins et al., 2022).

Considering the evolving needs of consumers, customer satisfaction is the perception or experience of consumers concerning the products or services they receive, which is related to their feelings of pleasure or dissatisfaction (Arviana and Syah, 2022). Satisfied consumers are more likely to repeat purchases or use services again. This means that customer satisfaction is an important factor in repeat purchases, significantly influencing sales (Arviana and Syah, 2022). In addition to customer satisfaction, customer experience also affects customer loyalty, providing feedback and insights for future improvements or evaluations for the company (Febrian et al., 2021). When this principle is applied to the evaluation of service quality in higher education institutions, which act as providers of educational services, a comparison is made between students' expectations and their perceptions of the institution's performance. With this approach, student satisfaction, especially international students, can be identified (Cahyani, 2015).

This study, a sample will be taken from a Public University in Surabaya (University X) that has initiated an internationalization program and has been accepting international students since 2007. The number of international students from 2009 to 2023 is 5,453, with an average of 500 students per year. This data was obtained from the International Affairs Office of University X in 2023. International students come from various levels of education and participate in various international programs. With the increasing internationalization activities and the number of international students, there is a need to improve the quality of education through inputs and experiences as international students studying at University X.

In the era of globalization, internal and external customer satisfaction has become important, which is recognized by service providers. In pure service companies, there is often no physical exchange of goods (Paul and Pradhan, 2019). Higher education or universities are considered service industries because their main focus is serving students to provide excellent education and train them to become competent professionals (Paul and Pradhan, 2019). The quality of higher education is also influenced by external factors, both at the national and international levels (Lapina et al., 2016).

Currently, the higher education sector is facing significant impacts from the rapid flow of globalization. This situation has driven higher education institutions to increase competition intensity by implementing market-focused strategies, to differentiate themselves from their competitors and attract as many students as possible who meet their needs and expectations (Weerasinghe et al., 2017).

Research on student satisfaction has become an increasingly interesting topic to study recently. Some reasons include the importance of student satisfaction not only for the institutions but also for higher education in measuring the quality of services provided. Student satisfaction is also crucial in developing an excellent learning framework (Bell, 2022). Students as consumers will demand better services from their universities because they feel they have paid a certain amount in exchange for the best services. Furthermore, it is revealed that students study at universities not only to gain practical knowledge but also to seek social experiences and the quality of university services (Khan and Hemsley-Brown, 2021).

Just as profit-focused companies, students as consumers of higher education institutions are also worthy of studying their satisfaction levels. Satisfied students will have a positive attitude towards the institution, and complete their studies without a desire to switch to another institution. With higher levels of satisfaction, students will choose the same institution for further degrees, similar to repeat purchasing behavior in the commercial business sector (Khan and Hemsley-Brown, 2021).

Daud et al. (2019) stated that overall student satisfaction will increase if students have experiences that exceed their expectations or perceptions. Loyal students are the highest reward for student satisfaction; they will have a closer relationship with alumni and their activities, which will also benefit the institution as a source of funding and provide job opportunities for graduating students (Paul and Pradhan, 2019; Senior et al., 2017). For students, the highest satisfaction is when the learning outcomes designed by the institution can be achieved by students (Wong and Chapman, 2022). Several researchers have conducted studies on the level of student satisfaction in higher education institutions and the factors that influence it. This study adopts the previous research conducted by Aldemir and Gulcan (2004) and Wong and Chapman (2022), which categorized several factors that contribute to student satisfaction, including academic factors (program, teaching quality), institutional factors (institutional reputation, campus facilities, student support), and university life factors (student self-learning, campus life experiences, and student life in general).

Another study conducted by Weerasinghe et al. (2017) indicated that student satisfaction in higher education institutions is influenced by various factors, including the learning environment, learning experiences, evaluations given by instructors, instructor-student relationships, interaction with fellow students, offered courses, learning materials, learning facilities, and access to library facilities. Additionally, the teaching abilities of lecturers, curriculum flexibility, institutional reputation and image, personal development of students, attention given by lecturers to students' needs, campus environment, and social factors also contribute significantly to the level of student satisfaction in higher education institutions (Weerasinghe et al., 2017).

Gargoum and Ain (2019) stated that good quality education leads to student satisfaction, which is a cause-and-effect relationship. In another study conducted by Gargoum and Ain (2019), research in Finnish universities showed that academic quality is generally more important than infrastructure such as buildings. In this context, academic quality and teaching methods, along with research-supporting facilities such as laboratories, have a significant impact on student satisfaction, greater than the influence of infrastructure facilities or other support facilities (Gargoum and Ain, 2019).

The comprehensive student satisfaction instrument was developed by Weerasinghe et al. (2017), which includes 11 dimensions and 116 indicators to measure student satisfaction

in higher education. These dimensions include the effectiveness of faculty guidance, campus environment, campus life, support facilities services, individual attention given to students, the effectiveness of instructional teaching, recruitment of new students and financial aid/scholarship assistance to students, effectiveness of registration system, campus security, and student-oriented good service.

### Indicator of Student Satisfaction Level

This study will focus on exploring the factors that influence the level of satisfaction among international students. The researchers will utilize four main indicators, adopting research methods previously used by Butt and Rehman (2010), Daud et al. (2019), and Kanduri and Radha (2023) to measure the satisfaction of international students in the respective higher education institutions. The research indicators used in the research are (a) Teacher Expertise, (b) Courses Offered, (c) Learning Environment, and (d) Facilities, which is shown in Figure 1 below.

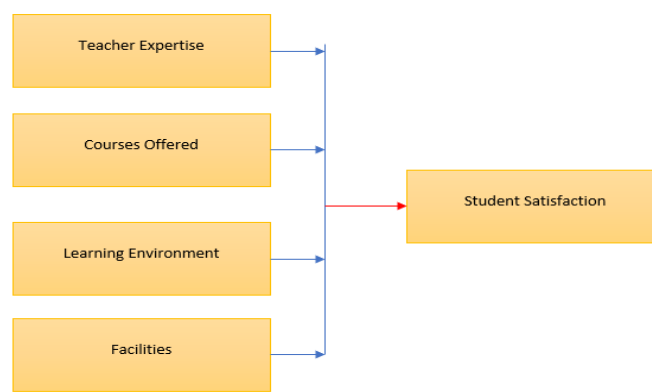


Figure 1. Student Satisfaction Indicators (Butt and Rehman, 2010; Daud et al., 2019; Kanduri and Radha, 2023)

Daud et al. (2019) stated in their research that in addition to the four factors mentioned above, there are additional factors such as perception, cost, and institutional reputation that influence student satisfaction. Meanwhile, according to Kanduri and Radha (2023), teaching expertise, courses offered, facilities, and academic counseling services are the variables that have the most significant impact on student satisfaction compared to other variables.

The recognition of student satisfaction as a multidimensional construct is evidence that multiple factors or dimensions contribute to the satisfaction of students in a higher education institution (Wong and Chapman, 2022). The use of various variables such as gender, age, nationality, educational level, duration, student level, and others make this research on student satisfaction open to further development.

## 2. RESEARCH METHODOLOGY

The research object, namely University X, has approximately 27,000 students in its Undergraduate, Postgraduate, and Vocational programs. The campus facilities available include laboratories, a library, a medical center, a cafeteria/canteen, a sports center, a mini market, student dormitories, and co-working spaces.

The respondents of the research are students and alumni who have studied at the University, both those who have participated in the Full Degree programs such as Bachelor's, Master's, and Doctoral programs, and those who have participated in the Non-Degree

programs such as Student Exchange, Internship in Laboratories, and the Darmasiswa Program from the Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia. The students are requested to participate in an online survey conducted from August to October 2023, to assess their level of satisfaction with various learning experiences during their studies at the University X.

The research method used in this study is quantitative with data collection through questionnaires as the research instrument. The survey method was chosen because it is more cost-efficient and allows for faster responses from respondents. Out of a total of 400 questionnaires distributed online, 92 students filled out the questionnaire. From the research sample, it is divided into 2 categories, namely Full Degree and Non-Degree. For the Non-Degree category, the percentage of male respondents is 24 people (57%) and female respondents are 18 people (43%) in the age range of 19-30 years. Meanwhile, in the Full Degree category, the percentage of male respondents is 27 people in the age range of 19-30 years (54%); 12 people (24%) in the age range of 31-40 years; and 4 people (8%) in the age range of 41-50 years. The number of female respondents in the Full Degree category is 4 people (8%) in the age range of 19-30 years; 2 people (4%) in the age range of 31-40 years; and 1 person (2%) in the age range of 41-50 years.

The majority of respondents come from Cambodia (16.37%). They are followed by respondents from Malaysia (15.22%), Timor Leste (11.96%), France (8.7%), and Denmark and Tanzania, both at 4.35%. Respondents from Brunei Darussalam, Germany, and Myanmar make up 3.26% each. Respondents from Afghanistan, India, Libya, Russia, Sierra Leone, and Yemen each account for 2.17%. The smallest percentage of respondents, 1.09% each, come from China, Czechoslovakia, El Salvador, Finland, Gambia, Madagascar, the Netherlands, Pakistan, Panama, Rwanda, Solomon Islands, Sudan, Togo, and Zimbabwe. The majority of respondents are male (72.83%), while 27.17% are female.

The educational background of the respondents consists of undergraduate students (47.83%), master's students (50%), and doctoral students (2.17%). The majority of the respondents chose the Industrial and Systems Engineering program, which accounted for 15.22%. The next largest group of respondents studied in the Informatics Engineering program (13.04%), Mechanical Engineering (11.96%), Electrical Engineering (9.78%), and Environmental Engineering (7.61%). Respondents with a percentage of 4.35% studied in the Information Systems, Chemistry, and Civil Engineering programs. The percentage of respondents (3.26%) came from Business Management, Shipbuilding Engineering, Biology, Regional and Urban Planning, Computer Engineering, Marine Engineering, and Mathematics programs. The smallest percentage of respondents (1.09%) were students studying in Development Studies, Chemical Engineering, Mechanical and Industrial Engineering, Product Design, Geophysical Engineering, Biomedical Engineering, Architecture, and Geomatics Engineering programs.

The first session of the questionnaire consists of demographic characteristics of the respondents such as country of origin, age, level of education pursued at the University X, gender, and field of study. The second session contains information about the respondents as students, including whether they are enrolled in a Full Degree/Non-Degree program, duration of the study, and the academic year in which the respondents studied at University X. The questionnaire is created in English as the target audience for this questionnaire is international students. Respondents are requested to provide ratings and evaluations based on the quality of services provided by the University X.

To measure the level of satisfaction of respondents towards the overall quality of service, a Likert scale of 1-5 is used, with a rating of 5 = excellent; 4 = very good; 3 = good; 2 = average; 1 = poor. The research instrument in this questionnaire is adapted from previous studies conducted by Aldemir and Glucan (2004); Butt and Rehman (2010); Wong and Chapman (2022); and Kanwar and Sanjeeva (2022) with adjustments made to fit the local conditions of the University X.

This research analyzes the relationship between student satisfaction and educational services such as the expertise of lecturers, offered courses, learning environment, and campus facilities. The independent variables (X variables) in this study are teaching expertise (X<sub>1</sub>), offered courses (X<sub>2</sub>), learning environment (X<sub>3</sub>), and facilities (X<sub>4</sub>), which were adapted from some previous studies (Butt and Rehman, 2010; Daud et al., 2019; Kanduri and Radha, 2023). The dependent variable (Y variable) is student satisfaction, which is measured using an ordinal scale in the questionnaire, where respondents can choose the options Satisfied or Dissatisfied in the final session. The research data is analyzed using the statistical method PLS-SEM (Partial Least Square-Structural Equation Modeling) through two steps of data processing, namely Outer Model Analysis and Inner Model Analysis, which include validity testing, reliability testing, and hypothesis testing.

The following, **Table 1**, are questions in a questionnaire used to measure consumer satisfaction levels, divided into 4 categories and 17 different aspects (Aldemir and Glucan, 2004; Butt and Rehman, 2010; Wong and Chapman, 2022; and Kanwar and Sanjeeva, 2022):

**Table 1.** Types of Questionnaire Questions

Category	Statement sentences for measuring satisfaction with the following rating scale: 5 = excellent; 4 = very good; 3 = good; 2 = average; 1 = poor.	
Teacher Expertise (X <sub>1</sub> )	X <sub>1.1</sub>	Quality of knowledge imparted to students
	X <sub>1.2</sub>	Teacher approachability
	X <sub>1.3</sub>	Teacher’s performance on course delivery
	X <sub>1.4</sub>	Perceived quality of teaching feedback
Courses Offered (X <sub>2</sub> )	X <sub>2.1</sub>	The relevancy of the curriculum to the field of study
	X <sub>2.2</sub>	Fairness of conduct in grading the exam
	X <sub>2.3</sub>	Schedule of courses at class and schedule of examination
	X <sub>2.4</sub>	The properness of the implemented grading system on campus
Learning Environment (X <sub>3</sub> )	X <sub>3.1</sub>	The admission and registration process as a student
	X <sub>3.2</sub>	The academic and non-academic services provided by the administrative staff
	X <sub>3.3</sub>	Classroom and laboratories
	X <sub>3.4</sub>	The academic advisor services at the department
	X <sub>3.5</sub>	The safety at the campus and its surroundings
Facilities (X <sub>4</sub> )	X <sub>4.1</sub>	Extracurricular activities at the campus
	X <sub>4.2</sub>	The internet accessibility
	X <sub>4.3</sub>	Sports Centers such as stadiums, tennis courts, futsal, etc
	X <sub>4.4</sub>	Canteen/cafe on campus

### 3. RESULTS AND DISCUSSION

#### 3.1 Research Findings

##### 3.1.1 Validity Test

This study employed a convergent validity test using the Average Variance Extracted (AVE) coefficient  $> 0.5$  to meet the requirements of acceptable validity values. In the table below, all variables, teacher expertise ( $X_1$ ), courses offered ( $X_2$ ), learning environment ( $X_3$ ), and facilities ( $X_4$ ) in both Non-Degree and Full Degree programs have AVE values  $> 0.5$ , indicating good convergent validity. The results of the Validity Test are shown in **Table 2** below.

**Table 2.** AVE Values (Researcher's Processed Data, 2023)

Variable	Average Variance Extracted (AVE)	
	Non Degree	Full Degree
Teaching Expertise ( $X_1$ )	0.750	0.697
Courses Offered ( $X_2$ )	0.647	0.748
Learning Environment ( $X_3$ )	0.639	0.642
Facilities ( $X_4$ )	0.609	0.754

##### 3.1.2 Reliability Test

Conducting survey research, it is necessary to perform a reliability test to ensure the stability and consistency of the research instrument (Daud et al., 2019). According to Daud et al. (2019), a Cronbach Alpha value  $> 0.8$  is considered excellent, and a Cronbach Alpha value between 0.6 - 0.9 indicates an acceptable reliability coefficient. Meanwhile, according to Daud et al. (2019), a Cronbach Alpha reliability coefficient between 0.7 - 0.9 is considered moderate, and a reliability coefficient between 0.7 - 0.9 indicates high reliability.

**Table 3** below shows that the composite reliability and Cronbach Alpha values of all research variables, both Non-Degree and Full Degree, have values  $> 0.70$ , indicating that the teacher expertise ( $X_1$ ), courses offered ( $X_2$ ), learning environment ( $X_3$ ), facilities ( $X_4$ ), and satisfaction ( $Y$ ) variables have acceptable reliability values.

**Table 3.** Composite Reliability and Cronbach Alpha (Researcher's Processed Data, 2023)

Variable	Non Degree		Full Degree	
	Composite reliability	Cronbach's alpha	Composite reliability	Cronbach's alpha
Courses Offered ( $X_2$ )	0.880	0.819	0.922	0.890
Facilities ( $X_4$ )	0.861	0.790	0.900	0.840
Learning Environment ( $X_3$ )	0.841	0.719	0.898	0.861
Satisfaction ( $Y$ )	1.000	1.000	1.000	1.000
Teacher Expertise ( $X_1$ )	0.923	0.887	0.901	0.852

### 3.1.3 Hypothesis Testing

Hypothesis testing is conducted by considering the significance level, with p-value < 0.05 or p-value < 5% as the threshold indicating the level of significance (Andrade, 2019). The significance level used in this study is 5%, so the hypothesis can be accepted if p-value < 0.05 and the T-Statistic > 1.96. Conversely, if the T-statistic < 1.96 and the p-value > 0.05, the hypothesis will be rejected. The **Table 4** below shows the results of the Non-Degree hypothesis testing.

**Table 4.** Non-Degree Hypothesis Testing Results (Researcher’s Processed Data, 2023)

	<b>Original Sample (O)</b>	<b>T-Statistics ( O/STDEV )</b>	<b>P-Values</b>
Courses Offered -> Satisfaction (X <sub>2</sub> )	0.521	2.776	0.008
<b>Facilities -&gt; Satisfaction (X<sub>4</sub>)</b>	<b>0.037</b>	<b>0.280</b>	<b>0.781</b>
<b>Learning Environment -&gt; Satisfaction (X<sub>3</sub>)</b>	<b>0.029</b>	<b>0.252</b>	<b>0.803</b>
Teacher Expertise -> Satisfaction (X <sub>1</sub> )	0.310	2.212	0.032

The variable teacher expertise (X<sub>1</sub>) has a path coefficient of 0.310, indicating a positive and significant relationship with satisfaction level (Y). Therefore, the hypothesis stating that there is a significant influence between teacher expertise and student satisfaction can be accepted, as the variable X<sub>1</sub> has a p-value of 0.032 and a T-statistic of 2.212, where p-value < 0.05 and T-statistic > 1.96.

The path coefficient of 0.521 indicates that the variable courses offered (X<sub>2</sub>) also have a positive and significant impact on satisfaction level (Y). This is supported by a p-value of 0.008 and a T-Statistic of 2.776. With p-value < 0.05 and T-Statistic >1.96, the hypothesis is accepted, indicating a significant relationship between courses offered and satisfaction level.

However, the path coefficient of 0.029 suggests that the variable learning environment (X<sub>3</sub>) does not have a positive and significant impact on satisfaction level (Y). A p-value of 0.803 and a T-Statistic of 0.252 indicate that the hypothesis is not accepted, meaning that there is no significant influence between the learning environment and satisfaction level (Y). Similarly, the path coefficient of 0.037 indicates that the hypothesis is rejected, meaning that there is no significant influence between facilities (X<sub>4</sub>) and satisfaction level (Y). This is shown by a P-value of 0.781 and a T-statistic of 0.280.

**Table 5.** Hypothesis Testing Full Degree (Researcher’s Processed Data, 2023)

	<b>Original Sample (O)</b>	<b>T Statistics ( O/STDEV )</b>	<b>P-Values</b>
<b>Courses Offered -&gt; Satisfaction (X<sub>2</sub>)</b>	<b>-0.289</b>	<b>1.429</b>	<b>0.159</b>
<b>Facilities -&gt; Satisfaction (X<sub>4</sub>)</b>	<b>0.217</b>	<b>1.097</b>	<b>0.278</b>
Learning Environment -> Satisfaction (X <sub>3</sub> )	0.717	2.581	0.013
<b>Teacher Expertise -&gt; Satisfaction (X<sub>1</sub>)</b>	<b>-0.006</b>	<b>0.026</b>	<b>0.980</b>



The path coefficient value is -0.006, indicating that the variable teacher expertise ( $X_1$ ) has no positive and significant effect on satisfaction (Y) due to a p-value of 0.980 and a T-Statistic value of -0.026, which means that the p-value > 0.05 and T-Statistic < 1.96. Therefore, the hypothesis cannot be accepted because there is no significant influence between teacher expertise ( $X_1$ ) and satisfaction.

The same situation occurs with the hypothesis test of the variable courses offered ( $X_2$ ), where courses offered ( $X_2$ ) have no positive and significant effect on satisfaction (Y) due to a p-value of 0.159 and a T-Statistic value of 1.429, which means that the p-value > 0.05 and T-Statistic < 1.96. Therefore, the hypothesis is rejected because there is no significant influence between courses offered ( $X_2$ ) and satisfaction.

On the other hand, the hypothesis test for the variable learning environment ( $X_3$ ) is accepted because there is a significant and positive effect on satisfaction (Y). The path coefficient for the learning environment ( $X_3$ ) is 0.717, indicating a significant and positive influence on satisfaction (Y). The learning environment variable has a p-value of 0.013 and a T-Statistic value of 2.581, indicating that the p-value < 0.05 and T-Statistic > 1.96.

In contrast, the path coefficient for the facilities variable ( $X_4$ ) is 0.217. This indicates that there is no significant positive influence on satisfaction (Y). This is supported by a p-value of 0.278 and a T-Statistic value of 1.097, indicating that the p-value > 0.05 and T-Statistic < 1.96. It can be concluded that the hypothesis is rejected because there is no significant influence between facilities and satisfaction.

## 3.2 DISCUSSION

### 3.2.1 Influence of Variables Teacher Expertise ( $X_1$ ), Courses Offered ( $X_2$ ), Learning Environment ( $X_3$ ), and Facilities ( $X_4$ ) for Non-Degree Program

The variable teacher expertise has a significant influence on satisfaction because it has a p-value of 0.032 and a T-statistic of 2.212, indicated by a p-value < 0.05 and T-Statistic > 1.96, so the hypothesis is accepted. This is supported by the fact that Non-Degree students come to University X because they want to participate in a Student Exchange Program, come from partner universities abroad, or conduct research internships in laboratories with their desired research topics and preferred professors, so they tend to give positive responses.

The same situation occurs with the variable courses offered ( $X_2$ ), where the p-value is 0.008 and the T-Statistic is 2.776, indicating a p-value < 0.05 and T-Statistic > 1.96, meaning that the hypothesis is accepted, indicating a significant relationship between courses offered and satisfaction. Non-Degree students are generally participants in Student Exchange Programs, Laboratory Internships, or Short Courses, so they choose courses that they are truly interested in and can be completed in a short duration (less than 6 months). This research result is consistent with previous studies conducted by [Daud et al. \(2019\)](#), which found that the courses offered are a significant factor in student satisfaction.

However, for the learning environment variable ( $X_3$ ), with a p-value of 0.803 and a T-Statistic of 0.252, indicating that the p-value > 0.05 and T-Statistic < 1.96, it is found that the learning environment variable does not have a significant influence on satisfaction (Y).

From observations in the field, Non-Degree students generally study/research at University X for less than 6 months and come from developed countries such as Europe, so they tend to compare the learning environment at their home university with that in Indonesia.

The same situation occurs with the facilities variable ( $X_4$ ), where the variable does not have a significant influence on student satisfaction due to a p-value of 0.781 and a T-statistic of 0.280, indicating that the p-value  $> 0.05$  and T-statistic  $< 1.96$ . The majority of respondents come from developed countries, so they tend to compare the facilities such as the Sports Center, Cafeteria, and Medical Center at their home country university, which provide better campus facilities than University X.

### **3.2.2 Influence of Variables Teacher Expertise ( $X_1$ ), Courses Offered ( $X_2$ ), Learning Environment ( $X_3$ ), and Facilities ( $X_4$ ) For Full Degree Program**

The context of the teacher expertise variable ( $X_1$ ), the hypothesis is not accepted because the p-value is 0.980 and the T-Statistic is -0.026. This indicates that the p-value  $> 0.05$  and T-Statistic  $< 1.96$ . This result shows that there is no significant relationship between the teacher expertise variable and satisfaction. From the research findings, there are indicators such as the way teachers communicate in delivering lectures ( $X_{1.3}$ ) and the clarity of academic feedback from teachers ( $X_{1.4}$ ) that explain why the teacher expertise variable does not have a significant influence on satisfaction. Some teachers use the Indonesian language even though the class is conducted in English, making it difficult for students to understand the lectures. In addition, other participants in the Full Degree program are Kemitraan Negara Berkembang (KNB) scholarship students, who have to attend lectures in Indonesian. Despite taking a one-year Indonesian language course, they still find it difficult to understand the lectures, leading to a lack of motivation.

The same situation occurs with the courses offered variable ( $X_2$ ). In this variable, a p-value of 0.159 and a T-Statistic of 1.429 are found. This means that the p-value  $> 0.05$  and T-Statistic  $< 1.96$ , so the hypothesis is rejected, indicating no significant relationship between courses offered and satisfaction among Full Degree students. This indicates that the more suitable the courses offered are to the students' expectations, the more positive the relationship will be with satisfaction, and vice versa. University X is expected to identify popular and highly demanded courses by international students and offer programs with interesting courses that meet the needs of the job market (Daud et al., 2019).

A different result is found for the learning environment variable ( $X_3$ ), where the university is perceived to exceed the respondents' expectations, resulting in a positive response to satisfaction. This is supported by the research data, with a p-value of 0.013 and a T-statistic of 2.581, indicating a p-value  $< 0.05$  and a T-Statistic  $> 1.96$ , showing a significant relationship between the learning environment variable and satisfaction. University X is perceived by the respondents to create a comfortable and secure learning environment, leading to student satisfaction. This research result is consistent with a study conducted by Butt and Rehman (2010), which found a significant relationship of the learning environment toward student satisfaction.

For the variable of facilities ( $X_4$ ), the hypothesis is rejected because the p-value is 0.278 and the T-Statistic is 1.097. This indicates that the p-value  $> 0.05$  and T-Statistic  $< 1.96$ , indicating no significant relationship between facilities and student satisfaction. This can be seen from the feedback provided by the respondents in the questionnaire, where they

expressed a desire for better facilities and cleanliness for facilities within the campus, such as the Sports Center, cafeteria, student dormitories, and Medical Center.

#### 4. CONCLUSION AND SUGGESTIONS

This research categorizes international students into two groups, namely Non-Degree students and Full-Degree students. Non-Degree students are those who pursue short-term education (2 weeks - 1 semester) such as student exchange, lab internships, and summer programs at University X. On the other hand, Full-Degree students are recipients of the Kemitraan Negara Berkembang (KNB) scholarship and international students who enter through the regular scheme. The research findings differ for both groups of students, leading to the conclusion that the students' origin and duration of stay influence their satisfaction ratings. Non-Degree students generally come from developed countries such as Europe and America, where they have expectations and comparisons with their home universities. The research results show that for Non-Degree students, teacher expertise and offered courses have a positive impact on satisfaction. However, the learning environment and facilities do not significantly affect satisfaction. Non-degree students have already chosen the courses they will take to fulfill the subjects required by their home universities, so they expect to gain the same knowledge as in their home universities. On average, international students are satisfied with the teaching and materials provided by the instructors.

Full-Degree students, only one variable, the learning environment, has a positive influence on satisfaction. These students feel satisfied with the supportive learning environment during their education in Indonesia. This research has limitations due to the implementation period of international programs. From 2020 to 2022, activities were mostly conducted online and only resumed in 2023, resulting in many adjustments or a restart of offline internationalization. In addition, the number of respondents is still insufficient to answer the questionnaire comprehensively and obtain more comprehensive results.

Further research on international student satisfaction can be developed with more detailed indicators and variables for each program. This evaluation model can be provided to every student at the beginning and end of the program to serve as a basis for evaluating each program and for the development of the quality of international activities conducted.

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