Quality of Technology Services as a Mediator Between the Academic Environment and the Image of the Technology Campus on Student Satisfaction

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ABSTRAK

Penelitian ini bertujuan untuk melakukan analisis pengaruh Academic Servicescape terhadap kualitas layanan teknologi dan kepuasan mahasiswa. Penelitian ini juga menganalisis pengaruh citra kampus teknologi terhadap kualitas layanan dan kepuasan mahasiswa. Penelitian ini juga menguji pengaruh kualitas layanan teknologi terhadap kepuasan mahasiswa dan menguji peran mediasi kualitas layanan teknologi dalam hubungan antara lanskap layanan akademik dan citra kampus teknologi terhadap kepuasan mahasiswa. Penelitian ini dilakukan pada mahasiswa Program Studi Bisnis Digital Universitas Amikom Purwokerto. Terdapat 153 siswa yang mengikuti survei ini. Metode analisis yang digunakan adalah analisis Structural Equation Modeling (SEM) dengan Smart PLS. Hasil penelitian menunjukkan bahwa lanskap layanan akademik terbukti menjadi prediktor persepsi kualitas layanan teknologi dan kepuasan mahasiswa. Hasil penelitian juga menunjukkan bahwa citra kampus teknologi mempunyai pengaruh positif terhadap kualitas layanan teknologi dan kepuasan mahasiswa. Hasil penelitian ini juga memberikan temuan empiris bahwa persepsi kualitas layanan teknologi mendorong kepuasan mahasiswa. Hasil penelitian ini juga memberikan temuan empiris bahwa kualitas layanan teknologi berperan sebagai variabel mediasi antara lanskap layanan akademik dan citra kampus teknologi terhadap kepuasan mahasiswa.

Kata kunci*:* Servicescape Akademik; Citra Kampus Teknologi; Kualitas Layanan Teknologi; Kepuasan Mahasiswa

ABSTRACT

This study aims to conduct an analysis of the influence of academic servicescape on technology service quality and student satisfaction. This study also analyzes the influence of technology campus image on service quality and student satisfaction. This study also tested the influence of technology service quality on student satisfaction and tested the mediating role of technology service quality in the relationship between academic servicescape and technology campus image on student satisfaction. This research was conducted on students of the Digital Business Study Program at Amikom University, Purwokerto. There were 153 students who participated in this

survey. The analytical method used is structural equation modeling (SEM) analysis with Smart PLS. The research results show that academic servicescape is proven to be a predictor of perceived technology service quality and student satisfaction. The study results also show that the image of a technology campus has a positive influence on the quality of technology services and student satisfaction. The results of this study also provide empirical findings that perceived quality of technology services drives student satisfaction. The results of this research also provide empirical findings that the quality of technology services acts as a mediating variable between the academic servicescape and the image of the technology campus on student satisfaction.

Keywords: *Academic Servicescape; Technology Campus Image; Quality Of Technology Services; Student Satisfaction*

INTRODUCTION

Private universities develop in an environment of intense competition. This competition occurs between private universities and also with state universities that have the same study program. The survival of private universities depends on their ability to ensure student satisfaction so that students complete their studies until they graduate and also become a reference for other people who are looking for a university to pursue a higher education level that suits their interests and talents. In the development of private universities, making students satisfied is important in order to recommend them to other prospective students and ensure that these students register each semester (Liang, Choi, & Joppe, 2018). The more satisfied students are, the stronger students will have loyalty (Castaldo, Grosso, Mallarini, & Rindone, 2016).

Strategies to make students satisfied can be implemented if campus management knows the variables that influence student satisfaction. Research on service in electronics stores shows that good service performance can improve, making consumers feel more satisfied (Tse & Wilton, 1988).

According to Ladhari, Souiden, and Dufour (2017), one of the variables that can make consumers feel satisfied. A business organization that has good service means it has made itself more competitive and increased the products it sells (Kandampully, 2000). One of the private higher education campuses developing in Purwokerto is Amikom Purwokerto University. Amikom University Purwokerto positions itself as a technology campus. Changing the name to a university made Amikom Purwokerto's image even better. One of the strategies developed by Amikom University Purwokerto to create an image as a technology campus is by establishing a Digital Business Study Program. The Digital Business Study Program is a new study program that is not yet widely established in Purwokerto and other big cities. As a new study program at a university that is generally accepted by the public, it is necessary to analyze the image of the Digital Business Study Program and link it to student satisfaction.

Image is a general perception that is reflected in customer memory (Keller, 1993). Image is an overall picture of a product or company that is formed from the collection and analysis of information obtained (Keller, 1993). Image or overall image refers to the beliefs, impressions and ideas that consumers have about a particular company, brand, product, service or destination (Rein, Kotler, & Haider, 1993). Image is formed through a thorough assessment of the company and what it offers. In addition, image is also evaluated as a specific product category (LeBlanc & Nguyen, 1996). Image variables are often used as variables that are considered in customer decision making (Brunner, Stöcklin, & Opwis, 2008). Han and Hyun

(2017) obtained research results that there was a positive influence of company image on service quality.

Apart from environmental image, it can also influence service quality. The environment is also called servicescape (Bitner, 1992). In the campus world, the business environment is the academic environment or academic servicescape. The academic environment is where students experience a variety of stress-related situations such as giving class presentations, solving problems against the clock, and facing tests and exams (Rodríguez-Arce, Lara-Flores, Portillo-Rodríguez, Martínez-Méndez, & biomedicine, 2020). Baker (1987) reviewed the impact of the physical environment on the way customers evaluate service. Bitner (1992) suggests that servicescape produces internal reactions from customers and employees, and shapes behavior. As a result, an appropriate servicescape produces good behavioral intentions (Ryu, Lee, & Gon Kim, 2012). In an adequate and supportive service environment, consumers will experience better service. Research by Ali, Kim, and Ryu (2016) on consumers in the aviation industry shows that the physical environment has an impact on the level of consumer satisfaction. El-Adly and Eid (2016) also concluded research that the quality of the physical environment influences consumer satisfaction. Other research conducted by Han and Hyun (2017) also concluded that environmental quality influences restaurant consumer satisfaction. The quality of the physical environment is an important predictor in determining the quality of aviation industry services (Wu & Cheng, 2013).

Based on the previous research above, variables will be developed with the variables technology service quality and the image of the campus as a technology campus (technology campus image). This study contributes to the expansion of literature, especially regarding how the academic environment and technology campus image influence the quality of technology services, which then looks at the impact on student satisfaction.

The aim of this research is to analyze the influence of academic servicescape and technology campus image on perceptions of technology service quality and student satisfaction. In this study, the influence of perceived technology service quality on student satisfaction is also analyzed. Apart from that, an analysis of the mediating role of technology service quality in the relationship between academic servicescape and technology campus image on student satisfaction was also carried out.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Satisfaction
According to Howard and Sheth (1969) satisfaction reflects whether buyers feel adequately or unappreciated according to the sacrifices they make. Satisfaction can be defined as a cognitive consideration that the chosen option is in accordance with previous opinions about that option (Engel, 1982). This definition illustrates that satisfaction refers to customers' evaluations or perceptions of the difference between their hopes or expectations and the experience they get after purchasing or using a product or service. This involves comparing what customers expect with what they feel or receive after use or purchase. So, the customer's cognitive situation involves the difference between expectations and reality when they interact with a particular product or service. Customer satisfaction or dissatisfaction is an emotional feeling in response to cognitive confirmation or disconfirmation. Therefore, customer satisfaction must be defined to show the relationship between cognitive and emotional processes (Woodruff, Cadotte, & Jenkins, 1983).

According to (Churchill Jr & Surprenant, 1982) in an effort to gain a deeper understanding of consumer satisfaction, much research on consumer satisfaction focuses on the cognitive

process of consumption. Consumer satisfaction is not only limited to a simple cognitive evaluation process. In contrast, consumer satisfaction can be a complex human process, involving a variety of psychological and physiological dynamics, including cognitive, affective, and other elements that have not yet been fully identified. Research on consumer satisfaction is moving toward a broader definition, aiming to reflect the ongoing interaction between thoughts and feelings in processing responses to external stimuli such as products and services (Oh & Parks, 1996).

Servicescape

With various terms, Servicescape introduces various environment variables. Some of them are dinescape (Ryu et al., 2012) which includes lighting, facility aesthetics, layout, table settings, atmosphere, and service staff (Ryu & Jang, 2007). Then, Festivalscape which includes space or facilities, surrounding conditions, signs, artifacts and symbols (Lee, Lee, Lee, & Babin, 2008).

Environmental quality in service businesses can be defined as the design of the surrounding environment that aims to create a positive emotional impact, ensure that transactions are satisfying for the customer and profitable for the company, and trigger favorable behavioral intentions, such as loyalty and word of mouth recommendations (Bitner, 1992; Kotler, 1973; Ryu et al., 2012).

Environmental quality is defined through certain parameters to ensure customer satisfaction and encourage profitable behavior for the company such as loyalty and good recommendations. Jeon dan Kim (2012) group and summarize the various environmental dimensions or elements as "environment". This environment includes ambient, namely background conditions that exist below the consumer's direct level of awareness; design (interior and exterior), which is a stimulus that is immediately noticed; and social, which includes individuals living in the environment.

Image

According to Sutisna (2001) image is the view that customers have on objects that are formed through processing information from various sources. Image also describes the impression formed based on an individual's knowledge and experience of something (Alma, 2004). Image reflects the impression of an object on other objects which is formed through continuous processing of information from various trusted sources (Suwandi, 2010). In the image concept, there are three main elements, namely impressions about objects, the image formation process, and the existence of trusted sources of information (Suwandi, 2010).. The object in question can refer to an individual or a company involving a number of people in it. Image formation can occur through continuous reception of information which may cause changes in the image of an object from time to time.

This definition illustrates that image refers to the impression or perception that a person has of an object, entity or brand. Images are formed from the continuous processing of information from various reliable sources. This information may come from direct experience, interactions with products or services, reviews of others, promotions, or other context that influences a person's perception of an entity. The overall experience and information received forms an image that continues to develop over time. Thus, image is the result of continuous processing of information from various sources that are considered credible by individuals.

Service Quality

According to Tjiptono (2004) explains that the essence of service quality focuses on efforts to meet customer needs and desires, while maintaining consistency in meeting their expectations. Service quality is influenced by two main factors identified by Parasuraman (2014), namely expected service and perceived service. Service expectations refer to the

expectations that consumers have regarding the services they will receive, while service perceptions are how consumers assess or experience the services they actually receive.

When what consumers feel or receive is in line with the expectations they have, it results in a positive perception of service quality that makes them feel satisfied. When the service received exceeds expectations, consumers assume that the service exceeds expectations, and this creates a perception of service quality that is considered best or ideal. However, when the service received is much lower than expectations, that can damage the perception of service quality. When there is a major mismatch between expectations and the reality of the service, this often results in dissatisfaction and a negative perception of the quality of the service provided. Creating harmony between expectations and the experience received by consumers is important in maintaining satisfaction and building a positive image of the services provided.

Several marketing experts, such as Parasuraman, Zeithaml, dan Berry (1985), conducted research specifically on various types of services and succeeded in identifying five main factors that influence service quality. These factors include Reliability, Responsiveness, Assurance, Empathy and Tangibles. These dimensions will be adopted to assess services in a technological context with the term "technological service quality".

Model Development

The Influence of Academic Servicescape on Perceptions of Technology Service Quality
A number of researchers refer to the environment as a servicescape (Sherman, Mathur, & Smith, 1997; Wakefield & Blodgett, 1999. Hooper, Coughlan, and R. Mullen (2013) stated that equipment, design, ambience, space and hygiene influence service quality. A study conducted by Reimer and Kuehn (2005) also shows that servicescape has a positive impact on perceived quality. Based on previous research findings, the following hypothesis was formulated:

H$_1$: Academic servicescape has a positive effect on perceptions of technology service quality

The Influence of Academic Servicescape on Student Satisfaction
Findings from several studies, such as those conducted by Zhang (2019), Ali et al. (2016), El-Adly and Eid (2016), Han and Hyun (2017), consistently show that the quality of the indoor or physical environment contributes to the level of satisfaction experienced by consumers. Thus, it can be hypothesized that the quality of the physical environment will have a positive impact on consumer satisfaction. Based on the research results presented, the following hypothesis can be formulated:

H$_2$: Academic servicescape has a positive effect on student satisfaction

The Influence of Technology Campus Image on Perceptions of Technology Service Quality
A study conducted by Chen and Chen (2014) in the tourism hotel service industry in Taipei shows that image variables, such as corporate image, functional image, and operational image, have a significant influence on service quality. Meanwhile, research conducted by Abd-El-Salam, Shawky, and El-Nahas (2013) on international service companies in Egypt, involving 650 respondents, also indicated the positive impact of company image on service quality. From these studies, the influence of image on service quality is illustrated. Based on the findings of previous studies, the following research hypothesis can be formulated:

H$_3$: Technology campus image has a positive effect on perceptions of technology service quality

The Influence of Technology Campus Image on Student Satisfaction

Corporate image is a complex view of consumers about a company involving a variety of different attributes (Bloemer & De Ruyter, 1998). The research results show that the image variable has a positive impact on the level of consumer satisfaction. The results of this study are in accordance with studies (Lai, Griffin, & Babin, 2009; Ryu, Han, & Kim, 2008). Previous research conducted by Ashraf, Ilyas, Imtiaz, & Ahmad (2018); Song, Wang, & Han (2019) found that brand image significantly influences customer satisfaction. Other studies conducted by Sharma & Nayak (2018), also provide the same conclusion namely that the image will increase satisfaction (Ashraf, Ilyas, Imtiaz, & Ahmad, 2018; Mohammed & Rashid, 2018; Sharma & Nayak, 2018; Song, Wang, & Han, 2019). From previous research findings, the following research hypothesis can be made:

H₄: Perception of technology campus image has a positive effect on student satisfaction

The Influence of Perceived Technology Service Quality on Student Satisfaction

In research conducted by Mosahab, Mahamad, dan Ramayah (2010), service quality consists of elements such as reliability, responsiveness, guarantee, empathy, and physical aspects. Findings in previous studies conducted by Ryu & Han (2010); Su, Swanson, & Chen (2016) concluded that perceptions of service quality have a positive impact on consumer satisfaction. These results confirm that the superior the service, the greater the likelihood that consumers will feel satisfaction. Other research conducted by Yoo & Park (2016); Ratanavaraha, Jomnonkwao, Khampirat, Watthanaklang, & Iamtrakul (2016), (Rajaguru, 2016; Ratanavaraha, Jomnonkwao, Khampirat, Watthanaklang, & Iamtrakul, 2016; Ryu & Han, 2010; Su, Swanson, & Chen, 2016; Yoo & Park, 2016)j also concluded that consumer satisfaction is driven by good service quality. Based on previous research, the following research hypothesis can be formulated:

H₅: Perception of technology service quality has a positive effect on student satisfaction

The relationship between variables is modeled as in the following picture.
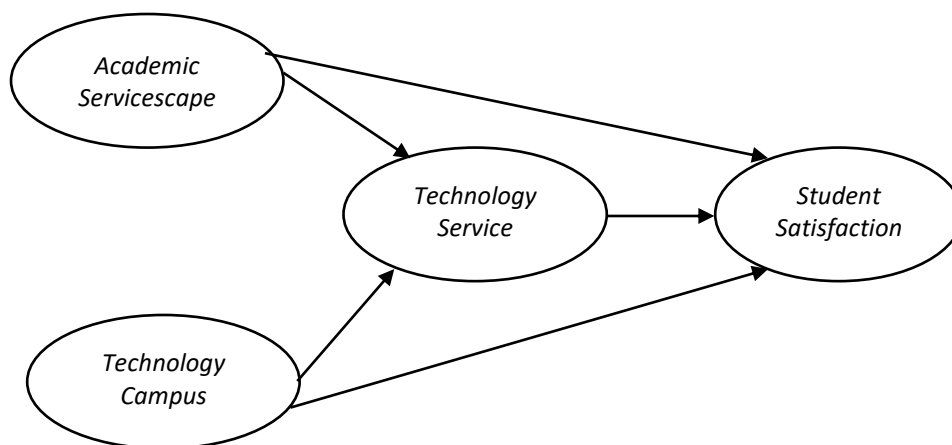

Figure 1. Research Model

METHOD

This study was conducted using a survey approach. The survey was conducted on students registered in the Digital Business Study Program for at least the second semester at Amikom

University, Purwokerto. In this research, primary data comes from information obtained directly from researchers through distributing questionnaires.

The population in this study are students of the Digital Business Study Program in at least the second semester at Amikom University, Purwokerto, class 2019-2022. The population size is 247 students. The sample size was determined using the Slovin method. The minimum sample size is 152.7 or 153. In this study it was planned to use 153 samples. Sampling was carried out using the proportionate cluster random sampling method, namely proportional sampling in each class.

The variables measured in this study used a Likert scale, Strongly Agree (SS) with a score of 5 to Strongly Disagree (STS) with a score of 1. The analytical method used is adapted to the model that will be completed in this research. The model that is structured based on theoretical studies is a model with two substructures. The first substructure is the endogenous variable of technology service quality, the second substructure is the endogenous variable of student satisfaction.

The existence of two substructures in one model requires software that can calculate the four substructures together, so that model and hypothesis testing uses SEM (Structural Equation Model) with the help of the Smart PLS 3 program. Mediation testing is carried out by analyzing the indirect effects in the Smart PLS output and the Sobel test calculator located at https://www.danielsoper.com.

RESULT AND DISCUSSION

Description of Respondent Character Data

Table 1 provides information that the majority of respondents in this study were men, namely 91 respondents or 59.48 percent, while the remaining 62 respondents or 40.52 percent were women. This shows that the composition of technology campus students at Amikom University, Purwokerto, is the choice of both men and women. Regarding services on technology campuses, there is indeed a gap between men and women, as stated (Siddiq & Scherer, 2019), but the gap is getting narrower. Likewise, (Tomassini, 2021) also states that there is a gender gap in the field of scientific and technological progress throughout the world. According to (Kim, Cho, & Kim, 2019) gender can be a moderating variable between promotion, customer satisfaction and behavioral intentions.

Table 1. Respondent description

No	Gender	Total	Percentage
1	Woman	62	40,52
2	Man	91	59,48
		153	100
No	Age	Total	Percentage
1	< 20 years	106	69,28
2	> 20 years	47	30,72
		153	100

Source: Data Processed (2023)

This shows that studying technology is not only dominated by men, but women are also starting to be interested in learning technology. Table 1 also shows that respondents are less than 20 years old. This shows that the respondents were students who went straight to school

when they graduated from high school. Respondents are young students. Businesses that contain young consumers are one of the considerations in determining prices. This condition is relevant to what was stated by (Hervé & Mullet, 2009) that young consumers have a tendency to choose products with more affordable prices. According to (Kim et al., 2019) age can be a moderating variable between promotion, customer satisfaction and behavioral intentions. This shows that when providing services it is necessary to pay attention to the age of consumers so that consumer satisfaction can be provided to consumers of different ages.

Validity and Reliability Test

Table 2 shows the loading factor values for research variables ranging from more than 0.7. The results of the data analysis provide the conclusion that the variables in this study which consist of academic servicescape, student satisfaction, technology campus image, and technology service quality have met the requirements or feasibility of the validity test. This means that the items that measure the variable are able to measure or represent the variable being studied.

Table 1. Validity Test Results

Indicator	Academic Servicescape	Student Satisfaction	Technology Campus Image	Technology Service Quality
AS1	0,817			
AS10	0,809			
AS11	0,796			
AS12	0,814			
AS13	0,795			
AS14	0,842			
AS15	0,870			
AS16	0,854			
AS17	0,793			
AS18	0,862			
AS19	0,818			
AS2	0,773			
AS3	0,773			
AS4	0,758			
AS5	0,772			
AS6	0,767			
AS7	0,829			
AS8	0,829			
AS9	0,797			
Sat1		0,847		
Sat2		0,881		
Sat3		0,857		
Sat4		0,847		
Sat5		0,858		
TCI1			0,864	
TCI10			0,773	
TCI2			0,830	
TCI3			0,775	
TCI4			0,857	
TCI5			0,856	
TCI6			0,771	
TCI7			0,797	

Indicator	*Academic Servicescape*	*Student Satisfaction*	*Technology Campus Image*	*Technology Service Quality*
TCI8			0,827	
TCI9			0,806	
TSQ1				0,828
TSQ2				0,879
TSQ3				0,836
TSQ4				0,848
TSQ5				0,885

Source: Data Processed (2023)

Reliability tests were carried out using Cronbach's Alpha reliability, rho_A, composite reliability and Average Variance Extracted. The results of the reliability test can be seen in Table 3.

Tabel 2. Relliability Test Results

Variable	*Cronbach's Alpha*	*rho_A*	*Composite Reliability*	*Average Variance Extracted (AVE)*
Academic Servicescape	0,971	0,973	0,973	0,655
Student Satisfaction	0,910	0,913	0,933	0,736
Technology Campus Image	0,944	0,948	0,952	0,666
Technology Service Quality	0,908	0,911	0,932	0,732

Source: Data Processed (2023)

Table 3 shows the Cronbach's Alpha value, rho_A value, composite reliability more than 0.7. Average variance extracted (AVE) value, more than 0.5. Based on the reliability values of Cronbach's Alpha, rho_A, composite reliability and Average Variance Extracted, it can be interpreted that the research variables consisting of academic servicescape, student satisfaction, technology campus image and technology service quality have met the reliability requirements. After testing the validity and reliability of the construct, the discriminant validity test was then carried out. A summary of the analysis results is presented in Table 4.

Table 4. Summary of Discriminant Validity Analysis Results (Fornel Larcker Criterion Method)

Variable	*Academic Servicescape*	*Student Satisfaction*	*Technology Campus Image*	*Technology Service Quality*
Academic Servicescape	**0,810**			
Student Satisfaction	0,733	**0,858**		
Technology Campus Image	0,760	0,797	**0,816**	
Technology Service Quality	0,717	0,786	0,785	**0,855**

Note: The diagonal in bold is the root of AVE
Source: Data Processed (2023)

Referring to Table 4, it is known that the AVE root value (the bold diagonal is the AVE root) is greater than the correlation value between variables located in one column and one row. The academic servicescape column has an AVE root value of 0.810, the correlation value of other variables in one column is smaller than 0.810. The student satisfaction column has an AVE root value of 0.858, the correlation value of other variables in one column and one row is smaller than 0.858. The technology campus image column has an AVE root value of 0.816, the correlation value of other variables in one column and one row is smaller than 0.816. The

technology service quality column has an AVE root value of 0.855, the correlation value of other variables in one column and one row is smaller than 0.855.

Direct Effect

The Influence of Academic Servicescape on Technology Service Quality
The influence of academic servicescape on technology service quality is shown by the path coefficient. The path coefficient for the influence of academic servicescape on service quality is 0.285, the t test value is 3.181 with a p-value of 0.002**. These results show that the academic servicescape is statistically proven to have a positive and significant influence on the variable perception of technology service quality, meaning that the better the academic servicescape, the better the perception of technology service quality.

Table 5. Results of Data Analysis Using SEM PLS

No	Exogen Variable	Endogen Variable	Path coeficient	t	p
1	*Academic Servicescape*	*Technology Service Quality*	0,285	3,181	0,002**
2	*Academic Servicescape*	*Student Satisfaction*	0,202	2,395	0,017*
3	*Technology Campus Image*	*Technology Service Quality*	0,568	5,815	0,000**
4	*Technology Campus Image*	*Student Satisfaction*	0,364	3,141	0,002**
5	*Technology Service Quality*	*Student Satisfaction*	0,355	3,998	0,000**

Note : * : Significant at 5% error level ($\alpha = 0.05$)
      **: Significant at 1% error level ($\alpha = 0.01$)
Source: Data Processed (2023)

The Influence of Academic Servicescape on Student Satisfaction
The influence of academic servicescape on student satisfaction is shown by the path coefficient. The path coefficient for the influence of academic servicescape on student satisfaction is 0.202, the t test value is 2.395 with a significance of 0.017*. These results conclude that there is a significant positive influence of academic servicescape on student satisfaction, meaning that the better the academic servicescape, the higher the level of student satisfaction.

The Influence of Technology Campus Image on Perceptions of Technology Service Quality
The influence of technology campus image on technology service quality is shown by the path coefficient. The path coefficient for the influence of technology campus image on technology service quality is 0.568, the t test value is 5.815 with a significance of 0.000**. This shows that there is a significant positive influence of technology campus image on technology service quality, meaning that the better the technology campus image, the better the perception of technology service quality.

The Influence of Technology Campus Image on Student Satisfaction
The influence of technology campus image on student satisfaction is shown by the path coefficient. The path coefficient for the influence of campus image technology on student satisfaction is 0.364, the t test value is 3.141 with a significance of 0.002**. This shows that there is a significant positive influence of technology campus image on student satisfaction, meaning that the better the technology campus image, the higher the level of student satisfaction.

The Influence of Perceived Technology Service Quality on Student Satisfaction
The influence of technology service quality on student satisfaction is shown by the path coefficient. The path coefficient for the influence of technology service quality on student satisfaction is 0.355, the t test value is 3.998 with a significance of 0.000**. This shows that there is a significant positive influence of technology service quality on student satisfaction, meaning that the better the perception of technology service quality, the higher the level of student satisfaction.

Mediation Analysis
Apart from the indirect influence in the results of data analysis with Smart PLS, to test mediation, a mediation t test was also carried out using online mediation calculator software from https://www.danielsoper.com. A summary of the calculation or analysis results is presented in Table 6.

Table 6. Summary of Test Results pf The Mediating Role of Technology Service Quality in The Relationship Between Academic Servicescape and Technology Campus Image and Student Satisfaction

No	Indirect Effect	t	p
1	*Academic Servicescape- Technology Service Quality- Student Satisfaction*	2,489	0,006**
2	*Technology campus image - technology service quality- student satisfaction*	3,295	0,000**

Source: Data Processed (2023)

Table 6 shows the results of the mediation t test from academic servicescape on student satisfaction through technology service quality of 2.489 with a significance value of 0.006. The mediation t test results from technology campus image on student satisfaction through technology service quality were 3.295 with a significance value of 0.000. Based on the results of this mediation test, it can be interpreted that perceptions of technology service quality can increase the influence of academic servicescape on student satisfaction, and technology campus image on student satisfaction.

Discussion
The Influence of Academic Servicescape on Perceptions of Technology Service Quality
Based on the results of data analysis, it was concluded that the academic environment (academic servicescape) and the quality of technology services (technology service quality). These findings indicate that environmental conditions in an academic context, such as equipment, design, atmosphere, space, and cleanliness, have a positive and significant influence on how technology in services is perceived. This means that the better the environmental conditions in the academic environment, the better the perception of the quality of the technology services provided.

The results of this study support the findings of previous studies which concluded that certain aspects of the service environment, such as equipment, room design, atmosphere and cleanliness, have an influence on service quality. Research from Hooper et al. (2013) have also confirmed that these dimensions have a significant relationship to service quality. Other research by Reimer dan Kuehn (2005) also supports this finding by showing that the service environment (servicescape) has a positive impact on perceptions of service quality.

These findings emphasize the importance of paying attention to and improving environmental conditions, such as equipment, design, atmosphere, space, and cleanliness in academic

environments, as this can positively influence the perception and quality of technology services provided.

The Influence of Academic Servicescape on Perceptions of Student Satisfaction

The results of data analysis provide findings that the academic servicescape has a positive and significant influence on student satisfaction, meaning that the better the conditions of the academic environment, the more satisfied students will be in carrying out their lecture activities. This finding is in line with previous research, such as Zhang (2019) which also highlights the positive influence of environmental quality on consumer satisfaction. The results of this study are also relevant to the findings of previous research conducted by Han and Hyun (2017); Ali et al. (2016) serta El-Adly and Eid (2016) who concluded that the quality of the physical environment will encourage consumer satisfaction. The results of this study emphasize the importance of a good environment in creating a satisfying experience for users.

The Influence of Technology Campus Image on Perceptions of Technology Service Quality

The results of data analysis evaluating the influence of the technology campus image on perceptions of the quality of technology services show a positive and significant influence. This indicates that the better the perception of the image of the technology campus, the more positive the perception of the quality of the technology services provided. The results of this study confirm that the image of a technology campus has a significant role in shaping individual perceptions regarding the quality of technology services provided. Previous research in different contexts also corroborates these findings by showing that company image or service image has a strong impact on how services are assessed by consumers or users. Previous research findings, such as research by Chen and Chen (2014) in the hotel service sector in Taipei, confirm that corporate image, functional image and operational image have a significant impact on service quality. The same results were also found in the research of Abd-El-Salam et al. (2013), which shows that company image has an impact on service quality.

The Influence of Technology Campus Image on Student Satisfaction

Results of data analysis examining the influence of campus image technology on student satisfaction. The test results show that there is a positive and significant influence of the technology campus image on student satisfaction, meaning that the better the perception of the technology campus image, the more satisfied students will be in undergoing the lecture process. The results of this research are consistent with previous research which states that there is an influence of image variables on consumer satisfaction (Lai et al., 2009; Ryu et al., 2008). The results of this research also support previous research which states that the better the image of a brand will make consumers feel proud of the brand so that they will feel satisfied when they become its users (Ashraf et al., 2018; Mohammed & Rashid, 2018; Sharma & Nayak, 2018; Song et al., 2019).

The Influence of Perceived Technology Service Quality on Student Satisfaction

The results of data analysis examining the influence of technology service quality on student satisfaction provide evidence that there is a positive influence of perceived technology quality on student satisfaction. This means that the better the perception of the quality of technology services, the more satisfied students will be in undergoing the lecture process. The results of this research support previous research which states that consumers will feel more satisfied when the services provided are of high quality (Rajaguru, 2016; Ratanavaraha et al., 2016; Ryu & Han, 2010; Su et al., 2016; Yoo & Park, 2016).

CONCLUSION

Based on the results of the analysis, several conclusions were obtained, namely: academic servicescape has a positive influence on perceptions of technology service quality, there is an influence of academic servicescape on student satisfaction, there is an influence of technology campus image on perceptions of technology service quality, there is an influence of technology campus image on student satisfaction, there is an influence of technology service quality on student satisfaction.

The results of this research show that the influence of academic services is associated with perceptions of technology service quality and student satisfaction. The results of this research can then be used for further research on technology service quality and student satisfaction by looking for new research gaps and solving them with technology service quality.

Higher education management can determine various policies to increase student satisfaction by improving the educational environment, campus technology image and technology services to students. This can be done more precisely by first identifying student needs related to the educational environment and technology campus.

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