



Dimension of Tangible in Quality of Higher Education Services Based on Undergraduate Student's Perception

Hanif Al Kadri, Widiawati Widiawati^(✉), Lusi Susanti, and Ermita Ermita

Department of Educational Administration, Universitas Negeri Padang, Padang, Indonesia
widiawati@fip.unp.ac.id

Abstract. Providing services quality for students as the main customers of education is the main task of universities as service providers in the field of higher education. Service quality, one of which is the tangible dimension, has become a concern for universities so that it has a positive impact on customer satisfaction. This study aims to determine undergraduate students' perceptions of the dimensions of the tangible dimension of services quality at higher education. This research was conducted with a mix method approach. A total of 282 students from a state university participated in this study. Research data were collected through questionnaires and open-ended questions. Quantitative data were analyzed using descriptive statistical analysis. While the qualitative data were analyzed by analysis, reduction and drawing conclusions. The results showed that in general students have a relatively good perception on the dimensions of tangible in higher education with an achievement percentage of 85.89%. Nevertheless, the dimension of tangible still need to be improved, for example the availability of facilities to support learning in the classroom. This implication of this study is the importance of improvement the dimension of tangible that are able to meet improving educational services at higher education.

Keywords: Service Quality · Tangible · Undergraduate Student Perception

1 Introduction

Pendidikan menjadi fokus utama untuk meningkatkan kualitas sumber daya manusia (Nafukoh et al., 2004). Pendidikan dianggap sebagai investasi. Sebagaimana dalam teori Human Capital dijelaskan bahwa keuntungan dari pendidikan sebagai bentuk investasi dalam sumber daya manusia (Aliaga 2001). Maka dari itu, pendidikan harus berkualitas. Setiap lembaga pendidikan harus menjaga kualitasnya agar lembaga tersebut memiliki kekuatan bersaing. Mutu harus menjadi fokus perhatian. Oleh sebab itu, penelitian tentang mutu layanan dalam dunia pendidikan tinggi telah menjadi fokus perhatian karena permintaan akan keunggulan dalam pendidikan (Ramseook, 2010).

The quality of education services is an approach that explains that the quality of education is used as a quality in service (Kuo et al., 2011). In one opinion it is explained that service quality is a construct that is difficult to understand and an abstract that is difficult

to define and measure (Carman, 1990; Kao, Wub, & Deng, 2009). Ideally, good service will give a good impression to customers. A good higher education service is a service that can understand the wants and needs of its stakeholders and strives to provide more value to stakeholders. Every educational institution must try to participate in improving the quality of the services they provide, because in one aspect, improving education services is an effort to improve the image of universities. According to Zeithaml & Bitner, (2009) service quality cannot be perceived by users in a one-dimensional way but based on various factors relevant to the context. One of the scales that can be used as a tool to evaluate in an institution, service quality is referred to as servqual (Service Quality) (Sahney et al., 2004). Servqual was created by Parasuraman et al. (1988) in five dimensions (tangibility, reliability, responsiveness, assurance, and empathy).

According to Parasuraman et al. (1988), perceived service quality is measured and compared to customer expectations for the same service. There are various indications that may be used to assess service quality. They are as follows: 1) Tangibles: physical facilities, equipment, and personnel appearance; 2) Reliability: the ability to perform the promised service reliably and accurately; 3) Responsiveness: willingness to assist customers and provide prompt service; 4) Assurance: employees' knowledge and courtesy, as well as their ability to inspire trust and confidence; and 5) Empathy: attention, individual attention given specifically to customers (Parasuraman et al., 1988; Zeithaml & Bitner, 2009).

Tangibles is one of the five characteristics of great service. Tangibles are an institution's capacity to demonstrate its presence to third parties. The look and capability of the institution's physical buildings and infrastructure, as well as the quality of the surrounding environment, are tangible indicators of the service provider's services. Physical facilities (buildings, warehouses, etc.), equipment and equipment utilized (technology), and staff appearance are examples of these qualities (Zeithaml, Valerie A., Berry, Leonard L. 1990). This tangible aspect is an aspect that can be seen in the form of a physical form, which can be enjoyed and felt by every student. It is common knowledge that if a student wants to enter a college, one of the assessments is the physical form of the educational institution. Things that never escape the assessment of prospective students when they will register themselves to become students at a higher education institution is how the shape of the building facilities, which can be seen from the grandeur of the building, the layout of the college location which will affect their comfort level to study, the cleanliness of the environment in the university. The university as well as the availability of sophisticated facilities in accordance with the progress of the times. Therefore, universities with high tangible aspects are one of the factors that influence student expectations and satisfaction at these institutions. Universities that have good tangible aspects, the level of student satisfaction will also be good which later students will perceive that the college has good quality from the aspect of physical services in particular.

Higher education is an institution that provides higher education services where students are the main customers. Therefore, its success can be measured by evaluating its effect on users (students) (Petruzzellis et al. 2006). As the main customer of higher education, the student's perception of the services provided is something that must be considered. Student input in the form of satisfaction ratings is valued in educational

institutions all around the world (Douglas et al. 2006). If every institution pays attention to how students view the services given, the college will get input from students and may make modifications based on that feedback. Student feedback is an important component of the quality management system since it reflects learning (Rowley, 2003). Furthermore, excellent customer comprehension is one of the key values for service firms in a competitive economy (Lassar, Manolis and Winsor, 2000). As a result, the purpose of this study is to ascertain student views of service quality on the dimensions of physical services at universities.

2 Materials and Methods

2.1 Type of Research

This research is a quantitative descriptive study that describes the quality of higher education services, especially about the tangible dimension as perceived by students. This research uses case study method.

2.2 Population and Sample

Population according to Creswell (2005) is defined as a group of individuals who have the same characteristics (which are the center of attention of researchers where the research results will be generalized (Fraenkel, 2012). While the sample is a group of individuals determined by the researcher to be studied (Creswell, 2005) selected from population members.

All 31,139 Padang State University students were used as the research population. This research uses purposive sampling. A total of 282 students were used as samples in this study.

2.3 Instrument

This research only looks at one variable: service quality. The educational services alluded to in this study include palpable, dependable, responsiveness, assurance, and empathy, according to Parasuraman et al., (1988) and Zeithaml & Bitner, (2009). However, this study only looks at one dimension, namely the physical. A Likert scale questionnaire was used to collect research data. The questionnaire has five possible responses: unsatisfied, less satisfied, fairly satisfied, satisfied, and very satisfied. The questionnaire was distributed to students directly via Google Forms. The respondents were then asked a series of open-ended questions to supplement the research findings.

2.4 Pengolahan dan Analisis Data

The research data was processed by performing several steps, namely 1) data tabulation, 2) finding the average score and 3) determining criteria.

The description of the data is done by calculating the average score for each question item. The calculation results are then analyzed by comparing the criteria guidelines. These criteria guidelines are processed with the following steps:

Table 1. Classification of higher education services on the tangible dimension

value range	Classification Criteria
282–507,6	Not good
507,7–733,3	Not so good
734–959	Enough
960–1184,7	Good
1185–1410	Very good

The highest score for each answer: $282 \times 5 = 1410$

The lowest score for each answer: $282 \times 1 = 282$

Number of answer choices: 5 (become the number of class intervals)

The length of the interval class is determined by the number of highest scores minus the number of lowest scores and then divided by five, so that we get $(1410 - 282)/5$: 225,6

Based on the results above, the Table 1 is obtained for the classification of school services.

3 Results

Realizing quality academic services at a university is determined by the tangible dimension. The tangible dimension can be interpreted as a service quality that can be felt and assessed by a customer using his five senses. An example of the tangible dimension is the completeness of existing facilities in universities such as the availability of magnificent, modern buildings and the development of existing facilities in universities, cleanliness and comfort of the environment in universities. Universities with educational facilities that are complete, comfortable, neatly arranged or in other words have good tangible aspects, the level of student satisfaction as their main customers will also be good.

The results of research on tangible aspects related to the quality of academic services felt by Padang State University students obtained information that academic services from the tangible dimension at UNP were well available.

Education services at higher education when viewed from the tangible dimension are well available. The research data showed that the percentage of achievement obtained for the tangible dimension is 82.26%. The results of this study can be seen in Table 2.

Based on Table 2, it is known that of the 8 questions asked to students, 2 aspects are in the sufficient category and 6 aspects are in the good category. Aspects that are in the good category are the comfort and cleanliness of the lecture hall, teaching materials provided by the lecturer to complete the lecture material, learning media made by the lecturer, the ease of discussing lecture material with students and lecturers, the ease of using the laboratory facilities of the department/study program and Ease of use of library facilities. The highest achievement is in the aspect of the ease of using library facilities.

Meanwhile, 2 aspects with sufficient criteria are the completeness of lecture reference books in the library with an achievement percentage of 84.22% and the availability of

Table 2. Tangible Dimensions in Higher Education Based on Student Perception

	Tangible	Dissatisfied	less satisfied	quite satisfied	satisfied	very satisfied	Amount	Average	%	Kriteria
1	Availability of facilities and supporting facilities for lectures in class	2,48%	11,70%	46,10%	34,40%	5,32%	926	3,28	82,09	Enough
2	Convenience and cleanliness of the class	1,06%	7,09%	45,04%	39,36%	7,45%	973	3,45	86,26	Good
3	Teaching materials provided by the lecturer to complement the lecture material	1,42%	7,45%	40,07%	48,58%	2,48%	968	3,43	85,82	Good
4	Learning media made by lecturers	0,71%	6,03%	45,74%	44,33%	3,19%	968	3,43	85,82	Good
5	Ease of discussing lecture material with students and lecturers	1,42%	4,61%	41,13%	49,29%	3,55%	984	3,49	87,23	Good
6	Ease of using the laboratory facilities of the department/study program	2,13%	6,74%	42,55%	41,49%	7,09%	972	3,45	86,17	Good
7	Easy to use library facilities	1,42%	7,09%	32,62%	49,65%	9,22%	1010	3,58	89,54	Good
8	Completeness of lecture reference books in the library	1,42%	9,93%	45,04%	37,59%	6,03%	950	3,37	84,22	Enough
		1,51%	7,58%	42,29%	43,09%	5,54%	968,88	3,44	85,89	Good

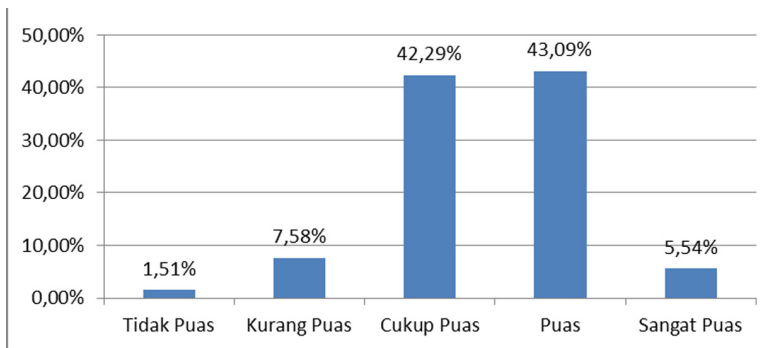
supporting facilities and facilities for lectures in the classroom with an achievement percentage of 82.09%. Of the two aspects that are in this sufficient category, the aspect of the availability of facilities and supporting facilities for lectures in the classroom is at the lowest achievement.

Based on open-ended questions given to students, in general they stated that one of their reasons for studying at UNP was because of good accreditation, supported by good facilities and good infrastructure. They also said that UNP was one of the best universities in their province.

Students' expectations related to this tangible dimension, especially related to classroom facilities and the availability of book references in the library, are that they want the university to be able to complete classroom learning facilities such as in focus, air conditioning in particular so that they can study more optimally. Likewise with reference

Table 3. Research Results related to Tangible Dimensions

Alternative Answer	Tangible
dissatisfied	1,51%
less satisfied	7,58%
quite satisfied	42,29%
satisfied	43,09%
very satisfied	5,54%
Amount	968,88
Average	3,44
%	85,89
Criteria	Good

**Fig. 1.** Percentage of Achievement of Tangible Dimensions (Physical Services) based on Student Perception

books in the library. They hope that library reference books can be equipped with the latest, more complex publications.

Based on Table 3, it can be seen that based on perceptions or based on what is felt by students related to tangible aspects, it is well available with an achievement percentage of 85.89%. Interpreting this level of achievement can mean that Padang State University has attempted to provide good services from the tangible aspect by completing campus facilities, campus cleanliness and comfort and so on.

For more details about the tangible aspects related to the services available at Padang State University, the following graph shows the level of service delivery from the tangible dimension (Fig. 1).

Based on the graph related to the tangible dimension of academic services above, it can be concluded that most of the students, namely 43.09% stated that they were satisfied with the availability of physical services provided by the campus. In addition, there were as many as 5.54% of student respondents who stated that they were very satisfied with the availability of campus physical services. Based on the answers put forward by the

student respondents, it can be interpreted that campus academic services when viewed from the tangible aspect are well and even very good.

In addition, 42.29% of students stated that they were quite satisfied with the academic services provided by the campus from the tangible aspect. Meanwhile, the remaining 7.58% and 1.51% of students perceived that they were less satisfied and dissatisfied with the academic services provided by the campus from the physical services available.

Based on the results of data processing, it can be concluded that students are satisfied with academic services from the physical aspect available on campus. This means that the university has provided physical services (tangible aspects) well so as to create student satisfaction as the main customer of the university.

4 Discussion

Universities that have a quality tangible dimension, the level of student satisfaction will also be good which in the future the student will perceive that the college has good quality from the dimensions of physical services in particular. Therefore, providing quality services optimally must heed the tangible dimension. The tangible dimension as proposed by Zeithaml & Bitner (2009) is the availability of institutional physical facilities, institutional equipment, and the appearance of school personnel. As also explained by Chowdhary & Prakash (2007) in their research that the tangible aspect is a more important aspect for services with more tangible actions.

The research above provides information that students perceive that the tangible dimension has been implemented well. However, in this case, there are aspects that are felt by students that are still not optimal, namely the availability of facilities and facilities to support lectures in the classroom and the completeness of lecture reference books in the library. A study also provides information that the low tangibles aspect of school services in general they assess the condition of school buildings and school classrooms that many are damaged so they need renovation or construction of new buildings, the condition of student toilets is also not used because it is damaged and not well maintained. (Fredy, F., Tembang, Y., & Purwanto, R. 2019). In this case, students expect an increase in learning facilities or facilities in the classroom. As the expert opinion that the facilities available in every educational institution have the most important impact on students' assessment of service quality (Hampton, 1993; Shank et al., 1996).

Higher education facilities have been studied as one of the strong determinants of the quality of education. The success of an education and learning process in higher education is related to the provision of adequate learning facilities. According to Akande (1985), learning can occur through a person's interaction with his environment. The environment referred to here is the availability of adequate facilities to facilitate the learning process of students. This includes the availability of learning reference books, audio-visuials, educational technology software and hardware; likewise, the size of the classroom, seating position and arrangement, availability of desks, chairs, blackboards, shelves on which instruments for practice are arranged (Farrant, 1991). The availability of facilities has been found to affect efficiency and productivity and has also been found to affect learning (Owoeye, & Olatunde Yara, 2011).

Based on the results of these studies, the tangible dimensions of higher education need to be managed properly and fulfilled. As explained that the quality of education services

is far more than just providing education, but also relates to the physical, institutional and psychological aspects of education (Ramseook & Nundal, 2013).

5 Conclusion

From the research that has been done, it can be concluded that in general the dimensions of the physical services are in the good category with the percentage of achievement of 85.89%. However, there are aspects that still need to be improved in quality, namely the completeness of lecture reference books in the library with an achievement percentage of 84.22% (enough) and the availability of facilities and facilities for supporting lectures in the classroom with an achievement percentage of 82.09% (enough). This implies that it is necessary to increase the availability of existing facilities in the classroom and complete reference books in the library through a budget and careful planning by completing these needs gradually.

Acknowledgements. We are very grateful to LP2M UNP which has facilitated researchers to carry out this research and provided space for researchers to publish the results of this research.

References

- Aliaga, A. O. (2001) 'Human capital, HRD and the knowledge organization', in O. A. Aliaga (ed.) *Academy of Human Resource Development 2001: Conference Proceedings*, Baton Rouge, LA: AHRD, p. 427–434
- Nafukho, F. M., Hairston, N., & Brooks, K. (2004). Human capital theory: implications for human resource development. *Human Resource Development International*, 7(4), 545–551. doi: <https://doi.org/10.1080/1367886042000299843>
- Ramseook-Munhurrun, P., Naidoo, P., & Nundlall, P. (2010). A proposed model for measuring service quality in secondary education. *International Journal of Quality and Service Sciences*.
- Kuo, Chang, Lai. 2011. Identifying critical service quality attributes for higher education in hospitality and tourism: *African Journal of Business Management* Vol. 5(30) ISSN 1993-8233; *Academic Journals*.
- Rowley, J. (2003), "Designing student feedback questionnaires", *Quality Assurance in Education*, 11(3). 142–149. <https://doi.org/10.1108/09684880310488454>
- Lassar, W. M., Manolis, C., & Winsor, R. D. (2000). Service quality perspectives and satisfaction in private banking. *Journal of Services Marketing*, 14(3), 244–271. doi: <https://doi.org/10.1108/08876040010327248>
- Petrzellis, L., D'Uggento, A. M., & Romanazzi, S. (2006). Student satisfaction and quality of service in Italian universities. *Managing Service Quality: An International Journal*, 16(4), 349–364. doi: <https://doi.org/10.1108/09604520610675694>
- Carman, J. M. (1990). Consumer perceptions of service quality: An assessment of the SERVQUAL dimensions. *Journal of Retailing*, 66(1), 33–55
- Kao, Y. F., Wub, C. M., & Deng, W. J. (2009). The relationships among service quality, perceived value, customer satisfaction, and post-purchase intention in mobile value-added services. *Computers in Human Behavior*, 25, 887–896

- Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2009). *Services marketing: Integrating customer focus across the firm*. New York: McGraw Hill.
- Parasuraman, A., Zeithaml, V., & Berry, L. (1988). SERVQUAL: A multiple-item scale for measuring customer perceptions of service quality. *Journal of Retailing*, 64(1), 12–40.
- Hanaysha, J.R.M. 2012. Service Quality And Satisfaction: Study On International Student In Universoties Of Nort Malaysia. *International Journal of Research in Management Issue*, Vol. 3 ISSN 2249-5908; UUM
- Zeithaml, Valerie A., Berry, Leonard L. (1990) *Delivering Quality Service*, The Free Press, New York, N.Y
- Chowdhary, N. (2000). Two factors theory: quasi experiments with service quality. in Edvardsson, B. and Brown, S.W. (Eds), *QUIS 7 – Service Quality in the New Economy: Interdisciplinary and International Dimension*, International Service Quality Association, New York, NY
- Hampton, G. M. (1993). Gap Analysis of College Student Satisfaction as a Measure of Professional Service Quality. *Journal of Professional Services Marketing*, 9(1), 115–128. doi: https://doi.org/10.1300/j090v09n01_10
- Shank, M. D., Walker, M., & Hayes, T. (1996). Understanding Professional Service Expectations: Do We Know What Our Students Expect in a Quality Education? *Journal of Professional Services Marketing*, 13(1), 71–89. doi: https://doi.org/10.1300/j090v13n01_08
- Fredy, F., Tembang, Y., & Purwanto, R. 2019. Analisis Kepuasan Orangtua dan Siswa terhadap Kualitas Layanan Pendidikan Dasar. *Musamus Journal of Primary Education*, 59–66.
- Owoeye, J. S., & Olatunde Yara, P. (2011). School facilities and academic achievement of secondary school agricultural science in Ekiti State, Nigeria. *Asian social science*, 7(7), 64–74.
- Akande, O.M. (1985). *Hints on Teaching Practice and General principles of Education*. Lagos, OSKO Associates.
- Farrant, J. S. (1991). *Principles and practice of Education (Tenth Impression Singapore Longman*.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

