SERVICE QUALITY OF LIBRARY TOWARD AN INTERNATIONAL COLLEGE QUALITY

RORIM PANDAY

Pakuan University, Bogor, Indonesia , Indripan@yahoo.co.id

ABSTRACT

Library has a very important role in the learning process, both for primary, secondary and higher education level. So the main function of the library is to serve students and educators or users of outside education in finding a reference to a sub-field of science or science they are studying. For that, a library that can serve, have references required by the user, can read books and learn in library room. The comfort room and amenities will be a good service value. Library staff who serve also reinforce a good service system. E-library services connected with a variety of e-library of agencies in the country and abroad will be an added value to the quality of library services. This study aims to determine how the quality of service of a library. Data taken using a questionnaire developed from the SERVQUAL, where the number of respondents as many as 125 people. Analysis of the data by using the pair-test and factor analysis. From the analysis, showed Tangible components of quality of service already exceeded expectations, while for components Reliability, Responsiveness, Assurance and Empathy, the service quality value is still below the expected value.

Keyword: service quality, expected value, perceived value, SERVQUAL

RESEARCH BACKGROUND

Library has a very important role in supporting teaching learning in higher education. The presence of a library, so students and faculty can gain more knowledge and find the solutions to the problem being studied and trend so remerging. Completeness of books, such as reference books, thesis, dissertation, both in scientific magazines and in digital format will be very supportive for students and faculty in understanding the science or apart of science. For that, a good library, it is fitting to have a data base systems and computer networks associated with the library network in the world, or with other universities, both

domestically and abroad. With the Library, the university will be rich with its management content. University that have a management content are many and varied, will encourage the universities become the famous universities in the world. The library of Christian University of Indonesia is one of the libraries that are already equipped with an e-library and connected with library in the world in the Internet network system.

Library of Christian University of Indonesia established since the end of 1986, beginning of the fore runner of the current economic faculty library was only 3 employees, with the motto "Serving Not Served" until now, the Indonesian Christian University library serves the academic community on two (2) location, i.e: Cawang and college campuses Diponegoro 84-86, Central Jakarta. On the web page there is a Lecturer Publications, Online Catalog, Mail Live @ edu, as well as various Electronic Journal: ProQuest, EBSCO, Portal Garuda Cengange and built in cooperation between the Directorate General of Higher Education and Scientific Information and Documentation Centre (WWII-LIPI) and various contributors.

Currently the Christian University of Indonesia has 7 faculties, of which 6 (six) is in the Campus Faculty Cawang, and 1 (one) is in the Campus Faculty Diponegoro. In 2011 CUI library services that used to change the system using Closed System (Close Access) is now the Open Systems (Open Access), which is now the student can immediately pick up and read a book shelf or directly into the collection chamber. Libraries on Campus Cawang located on the first floor building B, the total area of the building/room: 1,982m². Libraries on Campus Jl. Diponegoro total area of the building/room: 376m². The plan in the time soon will begin immediately centralization of medical school libraries, but all activities are under the administrative center library fetched as well as the law school library at Jalan Diponegoro, Central Jakarta. Of the various types of activities the college library that should be provided, only part of it that can be implemented by the central library CUI, namely:

1. Procurement activities of library materials.
2. Service Activity (circulation).
3. General Reference Service Activity.
4. Event Information Services selected

Procurement is collection through purchase are the most important ways to be more profitable and because we determine which collection we want, it is different if the collection is obtained by way of a grant/gift. The purpose of procurement of library materials is to meet the needs of service users, in other words the procurement of the library collection is intended to continue to present the latest information for its users.

Services were held at the central library CUI cover circulation services, service reading room reference and selected information services. Borrowers allowed to choose their own desired books on a bookshelf.

The purpose of the library service is effort that done by the library to serve the users with the intent to meet the needs of the user. Therefore it can be said the quality of a library will be reflected in terms of services provided to the user.

Beside service to be brought the home, the library also serves read in places/services the reference. In essence this is the reference service activity to find the information, and answer the questions by using the reference collection as well as provide guidance to find and use the reference collection.

To carry out the work properly, it is necessary adequate the reference collection, the capable officer in collaboration between the other college library by way of catalog exchange.

The reference collection includes:

1. Almanac and yearbook
2. Handbooks and magazines
3. Directory
4. Encyclopedia
5. Dictionary

The objective Reference is to provide assistance to the users of reference service both students, lecturers and researchers. To search for, collect, assess and use library materials in the learning activities, teaching instructional and research.

CUI library in the reference services it can be said to implement semi open. Which meant a semi-open is in providing some services the reference books in the reading room, a bookshelf, which can be used without having to ask the concierge service at the reference, while the thesis must be a serving by officer.

Type collections of the reference room are:

- 1.The reference-books
- 2.Thesis
- 3.Magazine
- 4.Newspaper

Selected Information services is aimed to teachers/lecturers of CUI, by sending a copy the content of the scientific magazine related to each department.

Although the thesis including the reference books, but require special work means that can not be copied like other the reference books. Thesis can only be read on the spot. How to lending, it is the same way with borrowing the textbooks. In searching title/subject can be seen through the arrangement of the card catalog, specially with thesis that was in the circulating room with the alphabetical arrangement. As for how lending the thesis can be seen in the libraries rule and also other borrowing.

Various CIU library facilities given to the visitors, so that provide more comfort for visitors to acquire knowledge.

The library facilities provided are:

1. Collection Room and Reading Room
2. Space Discussion

This room can be used by students to work on assignments in groups of Hot Spot:

- a. Internet Facilities based Wireless Fidelity (WiFi) which can be accessed on the device and the communication of mobile phones, PDAs, notebooks to obtain this facility by contact the Bureau of Information Technology.
- b. To a visitor of CUI valid for 1or 2 hours with a password provided by the Library in cooperation with the Bureau of Information Technology.

3. Library collection :

Books : a. Non Fiction : 17.000 Titles 33.275 copies
b. References : 384 Titles 583 Copies
c. Fictions : 541 Titles

Magazine :

- Journal : 7 Titles
- News paper : 4 Titles

- Bachelor thesis : 1473 Titles
- Thesis : 300 Titles
- Dissertation : 78 Titles
- Multimedia : 74 Titles

Given the condition of the library, it will be to know how the service quality of the library to date. Various studies have been conducted about libraries, both in the country and who is outside the country. This study will use the principle of SERVQUAL.

SERVQUAL is the most popular instrument to ascertain service quality. However, some debate exists about its ability to characterize different service environments. Furthermore, there is not a consensus about the inclusion of customer expectations in the model. SERVQUAL was originated in 1988 and it was founded on the conceptual model developed by Parasuraman et al.(1985). The early work of these researchers was based on the comparison of service performance against a single expectation standard. According to this, perceived service quality can be expressed as follows:

Perceived service quality = perceived service (P) – expected service (E)

SERVQUAL instrument (Parasuraman et al., 1988) is used to assess customer's expectations and perceptions. The instrument includes five dimensions of service quality: tangibles, Reliability, Responsiveness, Assurance and Empathy. (Zeithaml et al, 1990). Many research about service quality used the SERVQUAL at many type of services have been done. Generally, the papers, many of which are already using the concept of SERVQUAL to know the quality of their services provided associated with the level of satisfaction of these services.

Relation to customer satisfaction, and quality of service has done the research on the railways, there are some researchers who have conducted research on the matter. Sheeba. A and K. Kumuthadevi (2013), research do on passenger (Customer) satisfaction of Indian railways and service quality. Syed Muhammad Irfan, Daisy Mui Hung Kee and Saman Shahbaz (2012) do research of service quality and rail transportation in Pakistan. They research aims to investigate the passengers' perceptions about the service quality of rail transport system in Pakistan. A modified SERVQUAL instrument including eight service quality constructs: empathy, assurance, tangibles, timeliness, responsiveness, information

system, food and safety and security were employed to measure the passengers' perceptions about the service quality of railways.

Khan Rubayet RAHAMAN and Md. Arifur RAHAMAN (2009), do research of service quality attributes affecting the satisfaction on railway passenger at selective route in southwestern part of Bangladesh.

Abadi dwi Saputra (2010) do his research in Indonesia on analysis of train passenger responses on provided service. The objective of his research is to analyze the relationship between customer satisfaction towards provided service with the desire to do a complaint and to find the factor from service quality that has significant influences to customer satisfaction towards PT KAI services.

Panday Rorim (2013) has done his research on service quality and passenger satisfaction on Argo Parahyangan train Bandung Jakarta route.

Implemented SERVQUAL for service quality research also done by Vera Patrico (2006). He implemented the SERVQUAL in restaurant in a Portuguese Resort.

Particular for this research paper, in Indonesia has been done the research of library related to service quality of library or quality of library, used by many methods and variables that designed regarding by researcher. They use descriptive analysis, qualitative and quantitative methods. Siti Musthofainah (2009) in her research Student Perception on Facilities of The Library of Public State Vocational School 1 Bantul Yogyakarta. Her research objectives is to know the student perception about the facilities of the library of public state vocational school 1 Bantul Yogyakarta. Number of respondent as 92 students. To achieve of data collection by: observation, documentation, interview, questionnaires, and library study. The result of her research is that the library facility has reached 85,9% as good and 14,1 as very good. Building of the school categorized as good (78,2%), very good (10,9%) and bad (10,9%). Library room categorized as Good (84,7%), Bad (12%) and very good (3,3%). Besides, perception on completeness facility and quality aspect can be categorized as good (85,9%) and bad (14,1%). Concluded, that most respondent perceived the building, the room and the completeness of library as good category. Ariful Miftakhuddin (2012) in his research title as "Relations Student perception of Quality and use of the library services library by Class XI and XII area of power Expertise power Plant Engineering SMKN 2 Yogyakarta. This study aims to

determine: 1) the relationship between students' perceptions about the quality of the library and library use by students, 2) the relationship between students' perceptions about library services and library use by students, 3) the relationship of students' perceptions about the quality of the library and library services with the use of the library by students. This research is a kind of ex post facto research. Data collection technique using a questionnaire. As respondents are the student of XI and XII class of Power Installation Engineering Department SMK Negeri 2 Yogyakarta as 71 respondents from 248 students. The data analysis technique used is a simple regression analysis techniques and multiple regression analysis to analyze the hypotheses. The research result of hypotheses is how that positive relation between dependent variable and independent variables.

In the two study in Indonesian libraries above not apply SERVQUAL. If we look at both these studies examined only one part or several parts of the SERVQUAL. In the study by Siti Musthofainah only deals with Tangibles factor alone, and then only partially tangibles that exist in the library.

Sunani (2012), her research study aims to investigate the quality of service of Politeknik Sriwijaya University (tangible, reliability, responsiveness, assurance, and empathy) simultaneously affect student satisfaction. Furthermore, if the quality of library service each (tangible), (reliability), (responsiveness), assurance), (empathy) effect partially on student satisfaction in getting learning resources. Her research method is done with the initial survey, preparing instruments, test validity and reliability. Furthermore, multiple regression analysis). Hypothesis Testing with Inferential Statistical Analysis of Multiple Correlation test performed (R), Test coefficient of determination (R²), F test, t test using SPSS (Statistical Program for Social Sciences) version 19.0. From the analysis carried out can be concluded that there is an influence of service quality of Politeknik Sriwijaya University (tangible, reliability, responsiveness, assurance, and empathy) simultaneously for student satisfaction in getting learning resources. Furthermore, it turns out the four variables X ((tangible, (reliability), (responsiveness, assurance) each had no effect partially, whereas empathy variable is the one variable that affects the quality of service.

Narit Nimsomboon and Haruki Nagata (2003), Their study examines the overall service quality of Thammasat University Library System from users' perspectives, as well as identifies the dimensions that determine the customers' evaluation of service quality The

concept of the Zone of Tolerance was applied to investigate which are the essential attributes that library managers should allocate the resource for good service quality. The problems users had encountered when involved in library service are also investigated in this study. A survey of undergraduate students, graduate students, faculty members and researchers was used. The modification of SERVQUAL questionnaires were distributed for data gathering. Several insight gained from this study shown that all users desired expectations are not met. The result of the Zone of Tolerance reveals that each user group was treated differently. The three dimensions of service quality ; Affect of service – Organizational, Collection & Access, and Affect of service – Personal were extracted by factor analysis method. The problems users encountered when involved in library service are counted manually and categorized into free categories. The most problematic is about insufficient and non update collection. Some useful recommendations are presented to improve service quality of TU library system.

Julia C. Blixrud (1999), and with her team to make tool evaluation on library called as LibQUAL and applied in USA Library. The tool is development of SERVQUAL that introduced by Parasuraman et al.

Shafiq Ur Rehman (2012), applied LibQUAL in his study investigates the perceived service quality of public and private sector university libraries of Pakistan from its users' perspective. More precisely the study compares the following four aspects between public and private universities: zone of tolerance for overall and individual user groups, dimension wise zone of tolerance for overall and individual user group, gaps between desires and perceptions, and significant differences in the service quality. The data were collected through LIBQUAL print questionnaire from 1473 library users (faculty, graduates and undergraduates) of 22 public and private sector university libraries (main/central) of Pakistan. The psychometric properties of instrument were established through exploratory and confirmatory factor analyses. The comparisons of overall, individual service level, and dimension wise gap scores revealed that private sector university libraries were generally meeting the minimum requirements of their users (except information control dimension) but, on the other hand, public sector libraries were not meeting minimum requirement in information control and affect of service dimensions. The study also found significant difference on service quality between private and public sector university

libraries. The researcher found very interesting findings that small collection creates small expectations, and it is easy to meet or satisfy the needs of the users of small collection. The article also discusses findings, implications of results and limitations of the study at the end.

Ibrahim Danjuma, and Amran Rasli (2012), their study, explored both expectations and perceptions of students on the service quality of the central academic library in a Nigerian technological university. Data for this study was collected by means of qualitative interview. Fifty final year undergraduate students organised into 10 focus groups of 6 each, drawn from faculties of engineering, management and science participated in the focus group discussion. This study reveals five factors: technology, facilities, currency of collections and materials, environment and professionalism as relevant in explaining both expectations and perceptions of students with regards to service quality dimensions of academic libraries in technological universities. Managerial implications, limitations and suggestions for further research were presented accordingly.

Fahimeh Babalhavaeji, Alireza Isfandyari-Moghaddam, Seyed Vahid Aqili, and Ali Shakooii, presented their research aims to assess the performance of libraries at the Islamic Azad University, Sciences and Research Branch (IAUSRB) through gap analysis. To do this, a researcher-developed questionnaire which is based on available standards and quality assessment tools including ACRL standards, LibQUAL and ISO 11620, and some criteria included in the related literature was designed and distributed among users of IAUSRB libraries. Five service quality categories, were included in the questionnaire: "Environment, equipment and physical facilities", "Public services", "Non-book materials", "Staff (librarians and their co-workers)", and "Information literacy and user education". Based on research findings, the most expected library services prioritized by users are "operation time" (mean = 4.2300), "staff" (mean = 4.1461), and "circulation" (mean = 4.1208), while the least expected library services which are of lower importance from users' perspective are "press" (mean = 3.9734) and "audiovisual materials" (mean = 3.8796). The findings also indicate that services offered by the libraries surveyed had a relatively quality performance and average success (perceived quality is 2.9635 $\approx$ 50%). In other words, such a finding emphasizes an average performance of IAUSRB libraries. In addition, confirming five research hypotheses concerning gap analysis, there was a significant difference

between expected quality of five service categories and their perceived quality based on users' viewpoint. It was also realized that the categories with better performance or perceived quality from users' perspective are "staff" (mean = 3.2240), "information literacy and user education" (mean = 2.9998), and "environment, equipment and physical facilities" (mean = 2.9871), and the two libraries "Theology and Philosophy" (mean = 2.2639) and "Medical Engineering" (mean = 2.4507) have offered poor services than the other IAUSRB libraries. So, in their research, they use a simple statistics, mean and t-test statistics.

Based on review literature research above, there are many way how the researchers investigate about the service quality on library, in the school library, university library, private and public library. Some of them used SERVQUAL, and some of another use LibQUAL, and some of researchers use freely instrument that they make based on the condition and involvement of the object of library. In this paper, the research based on the SERVQUAL principle that has been modified.

RESEARCH METHODS

This study uses the concept of SERVQUAL that has modified, adapted with the CU library. SERVQUAL is modified as follows:

1. Tangibles

1. Library has modern-looking equipment
2. The physical facilities are visually appealing
3. Library Employees are neat-appearing
4. Materials associated with the service are visually appealing
5. Library equipped with a computerized data base system
6. Library equipped with air conditioning system
7. Pleasant reading room
8. Library is equipped with e-library

2. Reliability

9. When the library promises to do something by a certain time, it does so
10. When a visitor has a problem, the library shows a sincere interest in solving it

- 11. The library performs the service right the first time
- 12. Services are provided at the time the library promises to do
- 13. The records are error-free

3. Responsiveness

- 14. Employees tell visitors when services will be performed
- 15. Employees give prompt service to visitors
- 16. Employees are willing to help visitors
- 17. Employees are never too busy to respond to visitor's requests

4. Assurance

- 18. The behaviour of employees instil confidence in visitors
- 19. Visitors feel safe in library and convenience
- 20. Employees are consistently courteous
- 21. Employees have the knowledge to answer visitor's questions

5. Empathy

- 22. Library gives individual attention to the visitor
- 23. Employees give personal attention to visitors
- 24. Library understands specific needs of its visitors
- 25. Library has visitor's interest at heart
- 26. Operating hours are convenient to all visitors

This study used a questionnaire, where is intended to determine the expectations value of library by visitors and library service quality with regard to the items being assessed.

Assessment of the value of service expectations:

- 1=Strongly disagree
- 2= disagree
- 3=Agree
- 4=Strongly agree
- 5=Strongly agree completely

Assessment of quality of service are:

- 1 = worst
 2 = Bad
 3 = Moderate
 4 = Good
 5 = Very well

As the respondents in this study were visitors to the library, which is likely to be composed of students, faculty staff and the public. Thus, there are a total of 125 respondents planned. Data processed using SPSS version 11.5, under windows program. Data processed by factor analysis and pair t-test. Description analysis will be done also.

RESULT AND DISCUSSIONS

From the data collected, tested the validity and reliability. This test aims to determine whether the data obtained from the questionnaire, the level of validity and reliability can be trusted and relied on. Using the Pearson Correlation for test validity and reliability testing by calculating Cronbach coefficient. The results of the testing, by using SPSS, can be seen in Table-1 for the data expectations values and of the table-2 for the value of quality of service.

Table-1 Validity test and Reliability test for Expected value

	Pearson correlation		Pearson correlation		Pearson correlation		Pearson correlation		Pearson correlation
E1	,471(**)	E9	,636(**)	E14	,618(**)	E18	,747(**)	E22	,704(**)
E2	,578(**)	E10	,702(**)	E15	,671(**)	E19	,766(**)	E23	,739(**)
E3	,538(**)	E11	,773(**)	E16	,803(**)	E20	,833(**)	E24	,754(**)
E4	,526(**)	E12	,752(**)	E17	,754(**)	E21	,715(**)	E25	,730(**)
E5	,487(**)	E13	,747(**)						
E6	,556(**)								
E7	,649(**)								
E8	,648(**)								
		RELIABILITY ANALYSIS - SCALE (ALPHA)							
Alpha = ,6719		Alpha = ,7692		Alpha = ,6699		Alpha = ,7646		Alpha = ,7682	
** Correlation is significant at the 0.01 level (2-tailed).									
* Correlation is significant at the 0.05 level (2-tailed).									

From Table 1, it is seen that the Pearson correlation value for each variable is significant at the 0.01 level. Thus the data obtained from the questionnaires as valid. For Cronbach values for each group questionnaire, where questionnaires grouped in a five component of SERVQUAL, value cronbach also been greater than 0.5, so it can be said the results of the questionnaire is reliable.

Table-2 Validity test and Reliability test for Service quality

	Pearson correlation		Pearson correlation		Pearson correlation		Pearson correlation		Pearson correlation
P1	,563(**)	P9	,561(**)	P14	,539(**)	P18	,699(**)	P22	,703(**)
P2	,533(**)	P10	,789(**)	P15	,658(**)	P19	,783(**)	P23	,684(**)
P3	,465(**)	P11	,765(**)	P16	,778(**)	P20	,852(**)	P24	,774(**)
P4	,630(**)	P12	,763(**)	P17	,698(**)	P21	,773(**)	P25	,766(**)
P5	,676(**)	P13	,702(**)					P26	,687(**)
P6	,533(**)								
P7	,527(**)								
P8	,487(**)								
		RELIABILITY ANALYSIS - SCALE (ALPHA)							
Alpha = ,6746		Alpha = ,7594		Alpha = ,5711		Alpha = ,7790		Alpha = ,7699	
** Correlation is significant at the 0.01 level (2-tailed).									
* Correlation is significant at the 0.05 level (2-tailed).									

From Table 2, it is seen that the Pearson correlation value for each variable is significant at the 0.01 level. Thus the data obtained from the questionnaires as valid. For Cronbach values for each group questionnaire, where questionnaires grouped in a component 5 SERVQUAL, value cronbach also been greater than 0.5, so it can be said the results of the questionnaire is reliable.

Having in mind that the data from the questionnaire is valid and reliable, then the data can continue to be analyzed. The first analysis was to test between the average value of each variable on the expected value with the average value of the Perceived value (service quality) using pair t-test. Results count pair t-test can be seen in Table-3.

Table-3 Mean and t- test result

No	Questionnaires Items	E-Mean	P-Mean			t
1	Library has modern-looking equipment	4,13	4,35	Pair 1	E1 – P1	-4,540
2	The physical facilities are visually appealing and convenience	3,94	4,27	Pair 2	E2 – P2	-5,698
3	Library Employees are neat-appearing	3,89	4,14	Pair 3	E3 – P3	-4,428
4	Materials associated with the service are visually appealing	3,85	4,25	Pair 4	E4 – P4	-6,039
5	Library equipped with a computerized data base system	4,01	4,24	Pair 5	E5 – P5	-4,074
6	Library equipped with air conditioning system	4,06	4,24	Pair 6	E6 – P6	-3,751
7	Pleasant reading room	4,11	4,23	Pair 7	E7 – P7	-2,976
8	Library is equipped with e-library	3,75	4,11	Pair 8	E8 – P8	-6,288
9	When the library promises to do something by a certain time, it does so	3,85	3,49	Pair 9	E9 – P9	6,416
10	When a visitor has a problem, the library shows a sincere interest in solving it	3,89	3,63	Pair 10	E10 – P10	4,815
11	The library performs the service right the first time	3,77	3,58	Pair 11	E11 – P11	3,778
12	Services are provided at the time the library promises to do	3,74	3,64	Pair 12	E12 – P12	2,500
13	The records are error-free	3,72	3,47	Pair 13	E13 – P13	4,804
14	Employees tell visitors when services will be performed	4,02	3,82	Pair 14	E14 – P14	4,281
15	Employees give prompt service to visitors	3,82	3,58	Pair 15	E15 – P15	4,692
16	Employees are willing to help visitors	3,97	3,79	Pair 16	E16 – P16	3,866
17	Employees are never too busy to respond to visitor's requests	3,89	3,74	Pair 17	E17 – P17	3,705
18	The instill of employees confidence in visitors	3,92	3,70	Pair 18	E18 – P18	4,317
19	Visitors feel safe in library and convenience	3,82	3,68	Pair 19	E19 – P19	3,557
20	Employees are consistently courteous	3,84	3,60	Pair 20	E20 – P20	4,678
21	Employees have the knowledge to answer visitor's questions	3,90	3,75	Pair 21	E21 – P21	3,557
22	Library gives individual attention to the	3,95	3,66	Pair 22	E22 – P22	5,013

	visitor					
23	Employees give personal attention to visitors	4,07	3,86	Pair 23	E23 – P23	4,169
24	Library understands specifics needs of its visitors	4,10	3,85	Pair 24	E24 – P24	4,610
25	Library has visitor's interest at heart	3,95	3,74	Pair 25	E25 – P25	4,065
26	Operating hours are convenient to all visitors	3,96	3,67	Pair 26	E26 – P26	5,090

Based on Table3, it is seen that the average value of the variable X1to X8 of perceived value is greater than the average value of the expected value of the variable.X1to X8 is the Tangibles value, in that it can be interpreted that the respondents' perceptions of service quality X1 to X8 greater than the expectations of respondents to these variables. These results were confirmed by pair-test values are significant, meaning it is proved that the perceived value is larger value and different from the value expected value. For variable X8 to X26, the average value of Expected value is greater than the value of perceived value.

These results were confirmed by pair-test values are significant, meaning it is proved that the perceived value is larger and different value from the expected value. In this case(variable X8toX26) the quality of existing services, has not met expectations(expected) of the respondents. For that we need the improvement of the company to be able to improve and increase the variable X8 to X26.How to increase it is to make a priority of variables. In this study, to make the priority, is to process the data expected value and perceived value by using factor analysis.

Perceived value of factor analysis to value, displayed in Table 4, Table-5 and Table-6. The value of Kaiser Meyer Olkin (KMO) as 0.780. The value of Bartlett Test of Sphericity as 1147,891 at the of significant level 0.000. The value of Anti Image correlation, which are presented in the diagonal value of the matrix are greater than 0,3. All of that, show that the data of 26 variables are adequate for factor computation. Based on the value of eigenvalue greater than 1 (one) (see table-5), there are 8 group of variables. Each group of variables has different value of variance as shown at table-9. Total variance explained, as 67,816 %, which is indicate that the result of factor computation is satisfactory. For each component, the reduce variable as shown at table-6.

Table-4 KMO and Bartlett's test of service quality

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,780
Bartlett's Test of Sphericity	Approx. Chi-Square	1247,891
	df	325
	Sig.	,000

The variance of factor-1 is 24,871 %, the variance of factor-2 is 9,901, the variance of factor-3 is 7,355, the variance of factor-4 is 6,707, the variance of factor-5 is 5,495, the variance of factor-6 is 4,829, the variance of factor-7 is 4,509 and the variance of factor-8 is 4,150.

Table-5 Total variance explained of service quality

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6,466	24,871	24,871	6,466	24,871	24,871
2	2,574	9,901	34,772	2,574	9,901	34,772
3	1,912	7,355	42,128	1,912	7,355	42,128
4	1,744	6,707	48,834	1,744	6,707	48,834
5	1,429	5,495	54,329	1,429	5,495	54,329
6	1,256	4,829	59,158	1,256	4,829	59,158
7	1,172	4,509	63,666	1,172	4,509	63,666
8	1,079	4,150	67,816	1,079	4,150	67,816
9	,847	3,259	71,076			
10	,824	3,170	74,245			
11	,748	2,877	77,122			
12	,649	2,497	79,619			
13	,635	2,440	82,060			
14	,562	2,163	84,223			
15	,507	1,948	86,171			
16	,485	1,865	88,036			
17	,462	1,778	89,814			
18	,424	1,630	91,445			
19	,403	1,551	92,995			
20	,373	1,433	94,429			
21	,330	1,268	95,697			
22	,297	1,142	96,839			
23	,242	,929	97,768			
24	,225	,864	98,633			
25	,185	,713	99,345			
26	,170	,655	100,000			

Extraction Method: Principal Component Analysis.

Referring to Table-6, and the loading factor threshold value for the number of 125 respondents, namely the value of loading factor of 0.50 (Hair, 2000), the 26 variables in the SERVQUAL reduced in eight components. The interpretation of each factor, described in table-7.

Table-6 Rotated component matrix of service quality

Rotated Component Matrix ^a								
	Component							
	1	2	3	4	5	6	7	8
P1	,088	-,007	-,088	,101	,898	,178	,158	,068
P2	-,072	,208	,089	-,079	,735	-,025	-,083	,239
P3	,036	,000	-,030	-,078	,253	,012	,081	,829
P4	,178	-,010	,233	,411	,576	-,111	-,191	-,008
P5	,235	,088	-,024	,709	,389	-,008	,025	-,079
P6	,037	,028	-,058	,790	,043	,017	,199	,036
P7	,104	,281	,128	,747	-,153	,191	-,128	,171
P8	,123	-,101	,088	,185	,033	-,128	,047	,769
P9	,308	-,089	,005	,099	,153	,885	,177	-,047
P10	,707	,288	,074	,153	-,030	,200	,040	,110
P11	,803	,209	-,014	-,017	-,083	-,037	,018	,088
P12	,799	-,033	,147	-,040	,120	,087	,002	,039
P13	,883	,040	,218	,182	,066	-,033	,051	-,098
P14	,530	,123	-,090	,079	,037	,394	,280	,047
P15	,250	,235	,585	-,007	,234	-,118	,180	,148
P16	,114	,791	,182	,148	,122	-,031	,159	,025
P17	,185	,775	,105	,048	,003	,119	,080	-,181
P18	,198	,798	,112	,053	,084	,085	,130	,041
P19	,355	,388	,172	,090	,012	-,083	,807	,047
P20	,297	,338	,496	,087	,038	,058	,524	-,012
P21	,070	,282	,388	,088	-,002	,170	,855	,190
P22	,083	,087	,858	-,025	,054	-,088	,070	-,025
P23	,023	,374	,288	,028	,008	,715	-,054	-,128
P24	,018	,342	,533	-,074	-,310	,424	-,220	-,080
P25	,290	,309	,539	,187	-,037	,396	-,218	,013
P26	,038	,048	,834	,023	-,035	,280	,338	-,014

Extraction Method: Principal Component Analysis.

Rotation Method: Quartimax with Kaiser Normalization.

a. Rotation converged in 9 iterations.

Table-7. Interpretasi factor kualitas pelayanan

Factor	Variables	Interpretation
1	P10-When a visitor has a problem, the library shows a sincere interest in solving it P11- The library performs the service right the first time P12- Services are provided at the time the library promises to do P13- The records are error-free P14-Employees tell visitors when services will be performed	These variables in factor-1, have service quality at the first degree

2	P16- Employees are willing to help visitors P17- Employees are never too busy to respond to visitor's requests P18- The instill of employees confidence in visitors	These variables in factor-2, have service quality at the second degree
3	P15-Employees give prompt service to visitors P22-Library gives individual attention to the visitor P24-Library understands specifics needs of its visitors P25-Library has visitor's interest at heart P26-Operating hours are convenient to all visitors	These variables in factor-3, have service quality at the third degree
4	P5-Library equippedwith acomputerized data basesystem P6-Library equipped with air conditiong system P7-Pleasant reading room	These variables in factor-4, have service quality at the fourth degree
5	P1- Library has modern-looking equipment P2- The physical facilities are visually appealing and convenience P4- Materials associated with the service are visually appealing	Those variables in factor-5, have service quality at the fifth degree
6	P9-When the library promises to do something by a certain time, it does so P23-Employees give personal attention to visitors	These variables in factor-6, have service quality at the sixth degree
7	P19-Visitors feel safe in library and convenience P20-Employees are consistently courteous P21-Employees have the knowledge to answer visitor's questions	These variables in factor-7, have service quality at the seventh degree
8	P3- Library Employees are neat-appearing P8- Library is equipped with e-library	These variables in factor-8, have service quality at the eighth degree

The degree of service quality decrease from first degree to eighth degree, so that, variables which lie at eighth degree (factor-8), are variables with the lowest degree of qualityof service variables compared to another degree. The highest degree of quality of service variable lie in the first degree (factor-1). Based on this, then for improving quality of service for library management should increase and improvement to service quality variables by making priority start from variables in eighth degree in factor-8 as firts priority, to the last priority are the variables in factor-1 by considering the result of pair t-test analYSIS. The following is a priority strategy to improve service quality variables.

Table-8 Strategy for improvement

Factor	Variables	Strategy for improvement
8	P3- Library Employees are neat-appearing P8- Library is equipped with e-library	These variables has already good service quality, based on t-test analysis
7	P19- Visitors feel safe in library and convenience P20- Employees are consistently courteous P21-Employees have the knowledge to answer	Library management remind to the staff more attention for safety, convenient, courteous, and continue to find out the

	visitor's questions	answer what visitor's questions.
6	P9- When the library promises to do something by a certain time, it does so P23- Employees give personal attention to visitors	The Library staffs seek to do the promises in certain time and improve the intention as personal.
5	P1- Library has modern-looking equipment P2- The physical facilities are visually appealing and convenience P4- Materials associated with the service are visually appealing	These variables have already good service quality, based on t-test analysis
4	P5- Library equipped with a computerized data base system P6- Library equipped with air conditioning system P7- Pleasant reading room	These variables have already good service quality, based on t-test analysis
3	P15- Employees give prompt service to visitors P22- Library gives individual attention to the visitor P24- Library understands specific needs of its visitors P25- Library has visitor's interest at heart P26- Operating hours are convenient to all visitors	The staffs as soon as possible to serve the visitors, always give attention to visitors individually, seek to understand the specific need of the visitors, always try to serve with heart, and open the library in accordance with the schedule
2	P16- Employees are willing to help visitors P17- Employees are never too busy to respond to visitor's requests P18- The employees instill confidence in visitors	The management always remind the employee to make effort in helping the visitors, never to say busy in respond to visitor request, and always seek to instill confidence to visitors.
1	P10- When a visitor has a problem, the library shows a sincere interest in solving it P11- The library performs the service right the first time P12- Services are provided at the time the library promises to do P13- The records are error-free P14- Employees tell visitors when services will be performed	The library staff always shows a sincere interest in solving the visitor's problem, to give the better service at the first time, always to give the service that has been promised, never make the error in serving and always to tell that the services will be performed.

Variables in factor-8, factor-5 and factor-4 are variables that already good quality based on the opinion of the visitors, which these variables are variable in tangibles component of SERVQUAL. So that, the strategy toward an international college quality is to maintain the facilities that has been owned by CUI. And then to improve the attitudes, capabilities, competences, and skills of the library staff for improvement in serving the visitors. By supporting the best quality of service on library, CUI will become an international college quality.

CONCLUSION AND SUGGESTIONS

From the results of this study can be concluded as follows:

1. Tangibles variables of service quality in library has already better than expected value.
2. The service quality of Reliable, Responsiveness, assurance and empathy variables are still below than expected value.

As suggestions can be delivered that management of library shall execute the improvement of Reliable, Responsiveness, assurance and empathy variables.

REFERENCES

- Abadi Dwi Saputra, 2010, Analysis of Train Passenger Responses on Provided Service Case study: PT. Kereta Api Indonesia and Statens Järnvägar (SJ) AB, Sweden, Thesis, Service Science Program Karlstad University Spring 2010
- Ariful Miftakhuddin (2012) , Relations Student perception of Quality and use of the library services library by Class XI and XII area of power Expertise power Plant Engineering SMKN 2 Yogyakarta, Skripsi, Prodi Pendidikan Teknik Elektro, Fakultas Teknik Universitas Negeri Yogyakarta
- Hair, Joseph F.JR, Anderson Rolph E, Tatham Ronald L, Black William , 1995, Multivariate Data Analysis With Reading, Prentice Hall, International Edition, New Jersey
- Ibrahim Danjuma, and Amran Rasli (2012), Qualitative Inquiry On Service Quality Of Academic Library In A Nigerian Technological University, Australian Journal of Basic and Applied Sciences, 6(9): 58-65, 2012, ISSN 1991-8178
- Jan Hendrik Peters, 1999, Service Management, managing the image , Trisakti University, Jakarta
- Johnson Richard A, Wichern Dean W, 1992, Applied Multivariate Statistical Analysis, Prentice Hall, New Jersey
- Julia C. Blixrud (1999), Evaluating Library Service Quality: Use of LibQUAL+, Association of Research Libraries (ARL) in collaboration with the Texas A&M University Libraries (TAMU)
- Khan Rubayet RAHAMAN And Md. Arifur RAHAMAN, 2009, Service Quality Attributes Affecting The Satisfaction of Railway Passengers of Selective Route in Southwestern Part of Bangladesh, Theoretical and Empirical Researches in Urban Management, Number 3 (12)/ August 2009
- Narit Nimsomboon and Haruki Nagata (2003), Assessment of Library Service Quality

At Thammasat University Library System, Research Center for Knowledge Communities
University of Library and Information Science, JAPAN

Nurosis, Marija J., 1993, SPSS for Windows Professionals Statistic Release 6.0, Chicago
, SPSS Inc.

Panday, Rorim (2014), Service Quality Analysis of Argo Parahyangan Train as a tool for
improving the service, paper at 11th INSYMA, UBAYA, Batu, Malang

Shafiq Ur Rehman (2012), Measuring service quality in public and private sector university
libraries of Pakistan, Pakistan Journal of Library & Information Science, ISSN 1680-
4465

Sheeba. A. A and Dr. K. Kumuthadevi, 2013, Service Quality of South Indian Railway-
Determinants of Passenger Satisfaction in Trains., International Journal of Business
and Management Invention ISSN (Online): 2319 – 8028, ISSN (Print): 2319 – 801X,
www.ijbmi.org Volume 2 Issue 2 | February. 2013 | PP.49-54

Syed Muhammad Irfan, Daisy Mui Hung Kee and Saman Shahbaz, 2012, Service Quality
and Rail Transport in Pakistan: A Passenger Perspective, World Applied Sciences
Journal 18 (3): 361-369, 2012, ISSN 1818-4952, © IDOSI Publications, 2012, DOI:
10.5829/idosi.wasj.2012.18.03.3044

Siti Musthofainah (2009) , Student Perception on Facilities of The Library of Public State
Vacational School 1 Bantul Yogyakarta, skripsi ilmu perpustakaan pada Prodi ilmu
Perpustakaan, UIN sunan Kalijaga, Yogyakarta.

Sunani (2012), Kualitas Pelayanan Perpustakaan Politeknik Negeri Sriwijaya terhadap
kepuasaan Mahasiswa, Jurnal ILMIAH Volume V No.1, 2012

Vera Patrício, Rogério Puga Leal, Zulema Lopes Pereira (2006), Applicability of
SERVQUAL in restaurants: an exploratory study in a Portuguese resort, Faculty of
Science and Technology, Universidade Nova de Lisboa, Portugal