

## **AN ANALYSIS OF SBM-ITB LIBRARY SERVICE QUALITY: A CASE STUDY OF THE UNDERGRADUATE STUDENTS' PERCEPTION AND EXPECTATION**

Ayu Gema Lestari and Gatot Yudoko  
School of Business and Management  
Institut Teknologi Bandung, Indonesia  
ayu.gema@sbm-itb.ac.id

**Abstract-** *the main theme of this research is service quality analysis and focus on SBM-ITB library. The purposes of this research are to measure the undergraduate students' perception and expectation of the SBM library services and to propose future improvement using the service quality model (SERVQUAL) and the library service quality (LibQUAL). The questionnaire consists of five major dimensions with a total of 26 variables. They include Tangible dimension (7 variables), Responsiveness dimension (6 variables), Assurance dimension (4 variables), Reliability dimension (5 variables), and Empathy dimension (4 dimensions). Each variable measure perception and expectation with a 7-point Likert Scale. Sampling plan used disproportionate stratified random sampling for 400 students, consisting 100 students for the undergraduate students Batch 2016, 100 students for Batch 2017, and 200 students for Batch 2018. The number of returned questionnaires that can be processed is 233 or 58.2% response rate. Data collected were processed through normality testing using Kolmogorov-Smirnov test, construct validity testing using Pearson correlation coefficient, reliability testing using Cronbach alpha reliability coefficient, and gap calculation and analysis. All data do not follow normal distribution. All dimension passed the item-to-total Spearman correlation tests. All dimensions have Cronbach alpha coefficient of at least 0.8. All variables have negative gap values. Based on these gaps, future improvement alternatives are proposed.*

**Keywords:** *library service quality, SERVQUAL, LibQUAL, perception, expectation, improvement*

### **Introduction**

One of the important SBM facilities is its library, located in its main building in Jalan Ganesa 10, Bandung. Its main functions is to support education and research and resource for students and faculty members. One of the major users of SBM library is the undergraduate students. In order to maintain its service quality, SBM library needs regularly measure its services to the undergraduate students. The results of this measurement can be used to maintain and/or improve its service delivery. Therefore, the major purposes of this study are to measure the undergraduate students' perception and expectation of the SBM library services and to propose future improvement.

### **Literature Review**

#### ***Service Quality and SERVQUAL***

SERVQUAL is a tool for measuring how customer perceives the quality of the service. This tool is based on five dimension of service quality and based on a comparison between what customer expected from the service and what customer receive in reality. The five dimensions are Tangibles, Reliability, Responsiveness, Assurance, and Empathy.

**A. Tangible Dimension**

Tangible is defined as appearance of physical facilities, equipment, personnel, and communication material. Tangible provide physically representations or images of the service that costumer will use to evaluate quality. So the firm should consistent to keep tangible dimensions in a good way because that is the customer can see straightly with an eye. For example, the firm should make sure that the table they use to service the customer is in the customer is in a good condition and the employees always wear clean and neat clothes.

**B. Reliability Dimension**

Reliability is defined as the ability to perform the promised service dependably and accurately. Reliability promises about delivery, service provision, problem resolution, and pricing. Reliability also means that the service firm provides right first time and honors its promises. This means that the service firm provide the customer with accurate at the first time without making any mistakes and deliver what it has promised to do by the time that has been agreed before.

**C. Responsiveness Dimension**

Responsiveness is defined as willingness to help customer/visitors and provide prompt and timely service. Responsiveness dealing with customers requests, questions, complaints, and problems. Responsiveness communicated to customer by the length of time they have to wait for assistance, answers to questions, or attention to problem.

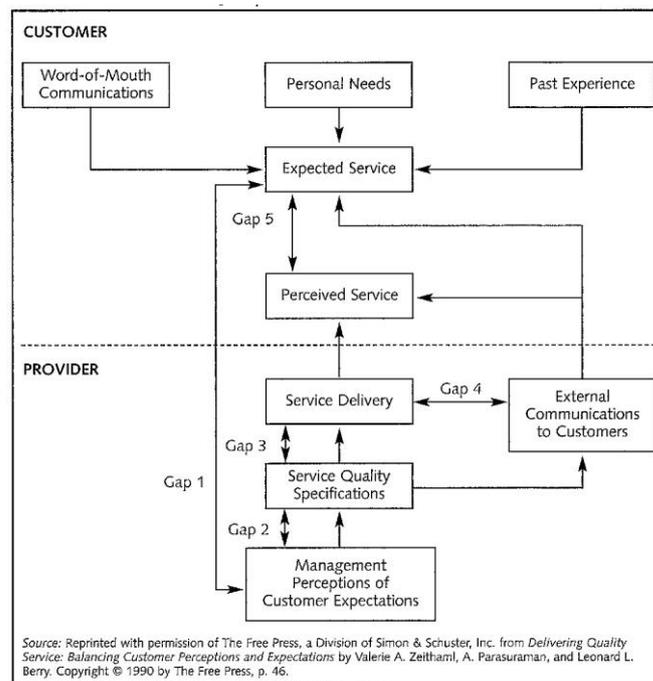
**D. Assurance Dimension**

Assurance is defined as the knowledge and courtesy of employees and their ability to inspire trust and confidence. Assurance is important for service that customer perceive as high risk or for services of which they feel uncertain about their ability to evaluate outcome, example: banking, insurance, and medical. Assurance means that the employee's behavior will give customer confidence in the firm and the firm can make the customer feel safe.

**E. Empathy Dimension**

Empathy is defined as caring, individualized attention given to customer. The essence of empathy is conveying, through personalized service, that customer is unique and special and that their needs are understood. In other word, the firm understands customer's problem and they performs in their best to serve the customer.

The SERVQUAL Model



### Gap Analysis

Gap analysis is the analysis conducted by sees the gap between customer expectations and perceptions. Customer expectations are standards or reference points that customer bring into the service experience, consist of what a customer believes should or will happen, whereas customer perceptions are subjective assessments of actual service experiences. In order to get gap between customer perceptions and customer expectations, each of them should use the same scale.

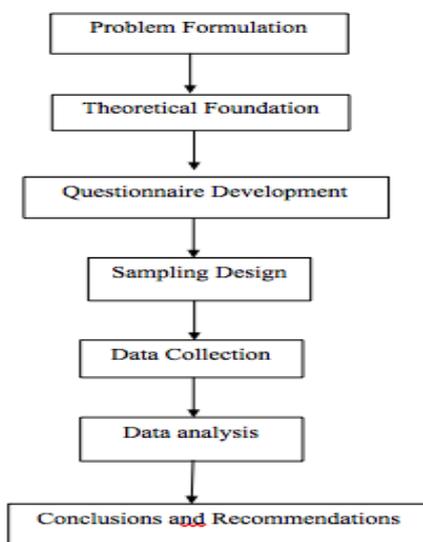
The gap means that perceived service is not consistent with the expected service. This gap can happened as a result of bad quality and a quality problem or bad word of mouth between the customers. But the gap also can be positive, which is the perceived service that customer get is more that expected, it's called over quality. If the value of gap is negative, it means that the perceived service is less than the expected service, but if the value of gap is positive, it means that the perceived service is more than the expected service.

### Library Service Quality (LibQUAL)

Library service quality or LibQUAL is the application of SERVQUAL in the library service. LibQUAL aims to understand the issue relevant to service quality assessment process in libraries for subsequently developing a conceptual model of aligning library quality of service assessment for effective reporting of library value and performance to stakeholders with focus on service quality and factors that exert significant relationship in regards to the SERVQUAL analysis.

### Methodology

In this research, the author uses several steps of process to bring out a result of research. The steps are:



### Data Analysis

Variables used and their notations

Dimension	Variable	Notation
Tangible	SBM Library has enough tables and chairs for my study	Tan1
	SBM Library has neat layout	Tan2
	SBM Library looks clean	Tan3
	SBM Library is a comfortable room (i.e., AC, lighting)	Tan4
	SBM Library has good looking (neat) staff	Tan5
	SBM Library has enough printer(s)	Tan6

	SBM Library has enough photocopier(s)	Tan7
Responsiveness	SBM Library provides services as informed	Res1
	SBM Library staff gives me prompt (quick) service	Res2
	SBM Library staff is always willing to help me	Res3
	SBM Library staff is willing to accept my suggestions	Res4
	SBM Library staff handles my complaint immediately	Res5
	SBM Library allows me to find information by my own	Res6
Assurance	SBM Library staff provides training about information searching to me/users	As1
	SBM Library staff are continuously courteous (polite)	As2
	SBM Library staff have the knowledge to answer my questions/ requests	As3
	SBM Library staff keep me informed about when services will be performed/finished	As4
Reliability	SBM Library has enough textbooks for my study	Rel1
	SBM Library has enough electronic materials (i.e., e-book, journals, reports) for my study	Rel2
	SBM Library has suitable working hours	Rel3
	SBM Library has an enough length of time for book loan	Rel4
	SBM Library has an error-free record of my book loan	Rel5
Empathy	SBM Library staff is willing to help me	Em1
	SBM Library staff is willing to give individual attention	Em2
	SBM Library staff keeps confidentiality of library users	Em3
	SBM Library has convenient working hours to me	Em4

**Normality Testing**

The author conducted Liliefors test to check the normality of each question items in the questionnaire both perceptions and expectations section. The calculation of data is done with Ms. Excel to compute the Lo value of each variable, than compared it with the value of L-table (Lt). With  $\alpha = 5\%$  (0,05) and  $d(f) = 231$  it shown in the table that the value of Lt is 1,6449. Data is normally distributed if  $Lo < Lt$ , and data is not normally distributed if  $Lo \geq Lt$ . And the result is below:

Variable	Perception		Expectation	
	Lo	Conclusion	Lo	Conclusion
Tangible 1	0.9798	Normal	0.8987	Normal
Tangible 2	0.9547	Normal	0.9686	Normal
Tangible 3	0.8905	Normal	0.8787	Normal
Tangible 4	0.8869	Normal	0.8877	Normal
Tangible 5	0.9477	Normal	0.8903	Normal
Tangible 6	0.8715	Normal	0.9133	Normal
Tangible 7	0.872	Normal	0.9132	Normal
Responsiveness 1	0.8331	Normal	0.8639	Normal
Responsiveness 2	0.8981	Normal	0.9494	Normal
Responsiveness 3	0.8752	Normal	0.9524	Normal
Responsiveness 4	0.9507	Normal	0.938	Normal
Responsiveness 5	0.9591	Normal	0.9413	Normal
Responsiveness 6	0.921	Normal	0.9039	Normal
Assurance 1	0.8925	Normal	0.9683	Normal
Assurance 2	0.9162	Normal	0.8694	Normal
Assurance 3	0.9118	Normal	0.9229	Normal
Assurance 4	0.9757	Normal	0.912	Normal

Reliability 1	0.9641	Normal	0.9192	Normal
Reliability 2	0.9763	Normal	0.8643	Normal
Reliability 3	0.9065	Normal	0.8688	Normal
Reliability 4	0.9762	Normal	0.9073	Normal
Reliability 5	0.8817	Normal	0.9005	Normal
Empathy 1	0.9306	Normal	0.8846	Normal
Empathy 2	0.9286	Normal	0.8947	Normal
Empathy 3	0.9437	Normal	0.9143	Normal
Empathy 4	0.9362	Normal	0.9146	Normal

Based in the data above, we can conclude that all question items in the questionnaire are normally distributed. That means the questionnaire is good enough to be distributed for all respondents in SBM library and the next step can be calculated with parametric statistic method.

### Construct Validity Testing

Construct validity testing is used to test whether each variable in a construct or dimension belongs to that construct or dimension. In this regard, validity testing is conducted by calculating Pearson correlation coefficient between the score of an individual variable and the total score of all variables in that dimension. The author was calculating correlation coefficient with SPSS, than compared it with the value of r-table. With  $\alpha = 5\%$  (0,05) and  $N = 233$  it shown in the table that the value of r is 0.116. If correlation coefficient that has been computed  $> r$  table it means that the variable is valid, and if correlation coefficient that has been computed  $< r$  table it means that the variable is not valid. And the result is below:

Variable	Perception		Expectation	
	Coefficient Correlation	Conclusion	Coefficient Correlation	Conclusion
Tangible 1	0.453	Valid	0.645	Valid
Tangible 2	0.528	Valid	0.695	Valid
Tangible 3	0.503	Valid	0.648	Valid
Tangible 4	0.518	Valid	0.708	Valid
Tangible 5	0.521	Valid	0.729	Valid
Tangible 6	0.635	Valid	0.742	Valid
Tangible 7	0.594	Valid	0.726	Valid
Responsiveness 1	0.614	Valid	0.746	Valid
Responsiveness 2	0.718	Valid	0.814	Valid
Responsiveness 3	0.689	Valid	0.785	Valid
Responsiveness 4	0.781	Valid	0.831	Valid
Responsiveness 5	0.751	Valid	0.854	Valid
Responsiveness 6	0.568	Valid	0.750	Valid
Assurance 1	0.527	Valid	0.709	Valid
Assurance 2	0.654	Valid	0.809	Valid
Assurance 3	0.644	Valid	0.793	Valid
Assurance 4	0.642	Valid	0.835	Valid
Reliability 1	0.582	Valid	0.705	Valid
Reliability 2	0.681	Valid	0.748	Valid
Reliability 3	0.621	Valid	0.720	Valid
Reliability 4	0.642	Valid	0.715	Valid
Reliability 5	0.463	Valid	0.648	Valid
Empathy 1	0.679	Valid	0.744	Valid
Empathy 2	0.776	Valid	0.825	Valid

Empathy 3	0.667	Valid	0.834	Valid
Empathy 4	0.576	Valid	0.704	Valid

Based on the table validity test result from SPSS above, we can see that all the variables both of perception and expectation has the valid result. So it can be concluded that these questions can provide precise and accurate results in accordance with the purpose of implementation of the survey.

### Reliability Testing

Reliability testing is required to test consistency of the variables in a dimension. This test is conducted using the Cronbach alpha reliability coefficient in the SPSS software. The results of the tests for the perception is summarized in table below :

Reliability tests for Perception

Dimension	Alpha Cronbach coefficient	Number of variables included	Reliability
Tangible	0.8000	7 (all)	Reliable
Responsiveness	0.8792	6 (all)	Reliable
Assurance	0.7985	4 (all)	Reliable
Reliability	0.8092	5 (all)	Reliable
Empathy	0.8381	4 (all)	Reliable

Reliability tests for Expectation

Dimension	Alpha Cronbach coefficient	Number of variables included	Reliability
Tangible	0.8903	7 (all)	Reliable
Responsiveness	0.9301	6 (all)	Reliable
Assurance	0.9029	4 (all)	Reliable
Reliability	0.8761	5 (all)	Reliable
Empathy	0.8994	4 (all)	Reliable

As we can see all dimensions have Cronbach alpha reliability coefficients with a minimum value approaches 0.8 and a maximum value of 0.88. For the expectation, the results are summarized in table above with a minimum value of 0.88 and a maximum value of 0.93. Because the minimum alpha value of 0.8 has been satisfied, therefore, all dimensions used in the questionnaire are reliable.

### Gap Analysis

Servqual model intends to calculate gap between perception and expectation. A negative value of gap means that perception is below expectation and this implies an area for future improvement for closing the gap by improving the current service so that perception can be better in the future. A positive gap indicates that perception is higher than expectation and this means that the current service has been able to surpass expectation. This situation can be sustained and does not need further improvement until future situation changes on the opposite direction. Table below summarizes all gaps for every variable and all of them have negative values and these mean that they all need improvement.

### Gap Calculation

Dimension	Variable	Mean of Perception	Mean of Expectation	Gap
Tangible	Tan1	4.687	6.034	Gap1 = -1.347
	Tan2	5.116	6.043	Gap2 = -0.927
	Tan3	5.670	6.318	Gap3 = -0.648
	Tan4	5.408	6.232	Gap4 = -0.824
	Tan5	5.013	5.906	Gap5 = -0.893
	Tan6	3.532	5.644	Gap6 = -2.112
	Tan7	3.464	5.639	Gap7 = -2.175
Responsiveness	Res1	4.575	5.858	Gap8 = -1.283
	Res2	4.773	6.009	Gap9 = -1.236
	Res3	4.961	6.017	Gap10 = -1.056
	Res4	4.494	5.734	Gap11 = -1.240
	Res5	4.451	5.845	Gap12 = -1.394
	Res6	4.918	5.871	Gap13 = -0.953
Assurance	As1	4.112	5.712	Gap14 = -1.600
	As2	4.944	6.047	Gap15 = -1.103
	As3	4.850	6.004	Gap16 = -1.154
	As4	4.695	5.923	Gap17 = -1.228
Reliability	Rel1	3.991	6.120	Gap18 = -2.129
	Rel2	4.232	5.991	Gap19 = -1.759
	Rel3	4.352	5.910	Gap20 = -1.558
	Rel4	4.373	5.961	Gap21 = -1.588
	Rel5	4.567	5.738	Gap22 = -1.171
Empathy	Em1	4.858	6.004	Gap23 = -1.146
	Em2	4.519	5.833	Gap24 = -1.314
	Em3	4.828	5.936	Gap25 = -1.108
	Em4	4.455	5.966	Gap26 = -1.511

#### Proposed Improvement Analysis

Proposed improvement will be based on the ordered gaps of each variable in each dimension as shown in the table of previous section and a summary of improvement feedback provided voluntarily by students through the questionnaires as shown in table below

#### Order of Gaps

Dimension	Gap	Variable
Tangible	Gap7 = -2.175	SBM Library has enough photocopier(s)
	Gap6 = -2.112	SBM Library has enough printer(s)
	Gap1 = -1.347	SBM Library has enough tables and chairs for my study
	Gap2 = -0.927	SBM Library has neat layout
	Gap5 = -0.893	SBM Library has good looking (neat) staff
	Gap4 = -0.824	SBM Library is a comfortable room (i.e., AC, lighting)
	Gap3 = -0.648	SBM Library looks clean
Responsiveness	Gap12 = -1.394	SBM Library staff handles my complaint immediately
	Gap8 = -1.283	SBM Library provides services as informed
	Gap11 = -1.240	SBM Library staff is willing to accept my suggestions
	Gap9 = -1.236	SBM Library staff gives me prompt (quick) service

	Gap10 = - 1.056	SBM Library staff is always willing to help me
	Gap13 = - 0.953	SBM Library allows me to find information by my own
Assurance	Gap14 = - 1.600	SBM Library staff provides training about information searching to me/users
	Gap17 = - 1.228	SBM Library staff keep me informed about when services will be performed/finished
	Gap16 = - 1.154	SBM Library staff have the knowledge to answer my questions/ requests
	Gap15 = - 1.103	SBM Library staff are continuously courteous (sopan)
Reliability	Gap18 = - 2.129	SBM Library has enough textbooks for my study
	Gap19 = - 1.759	SBM Library has enough electronic materials (i.e., e-book, journals, reports) for my study
	Gap21 = - 1.588	SBM Library has an enough length of time for book loan
	Gap20 = - 1.558	SBM Library has suitable working hours
	Gap22 = - 1.171	SBM Library has an error-free record of my book loan
Empathy	Gap26 = - 1.511	SBM Library has convenient working hours to me
	Gap24 = - 1.314	SBM Library staff is willing to give individual attention
	Gap23 = - 1.146	SBM Library staff is willing to help me
	Gap25 = - 1.108	SBM Library staff keeps confidentiality of library users

#### Summary of students' improvement feedbacks

No.	Students' Improvement Feedback	Frequency
1	Provide more references books, especially for academic book	31
2	Enlarge library with more comfortable, clean, and modern layout design	22
3	Reduce the fine of the lateness book return	17
4	Open longer	14
5	Get more and updated computer	10
6	Open when the break time	8
7	Be the high tech library. (Examples : e-book, online booked lending system, etc.)	8
8	Need photocopier and printer	7
9	Make a library with high speed Internet connection	5
10	Provide clear information about books	4
11	Staff should be more kind	4
12	Adding meeting/discussion room	3
13	Email student for the reminder time of borrowed book	2

#### Tangible Dimension

All tangible variables show negative gaps. Gap7 (SBM Library has enough photocopier(s)) has the highest gap. Gap7 is also supported by the students' feedback. This gap implies that SBM students expect that SBM Library has photocopiers like in any other study program libraries in ITB. Currently, SBM library does not have any photocopiers because it has a policy that copying of materials can be done outside the library. In one hand, having photocopier(s) in the library will fulfill students' needs for copying. On the other hand, however, because of limited space currently available, SBM library may have to continue with the existing policy for not giving photocopiers in the library.

Gap6 (SBM Library has enough printer(s)) is the second highest gap. Gap6 is also supported by the students' feedback. This is similar to the case of the photocopiers above. Having a printer or two in the library will allow students to print some documents, especially electronic documents. By regulating the maximum number of printing pages, this will fulfill students' needs for printing. This

option can be tried in the existing library since it does not need a big space, although it may reduce the number of chairs and/or desks currently available.

Gap<sub>1</sub> is about the number of tables and chairs available currently in the library. Looking at the existing condition and space limitation, it is hard to add tables and chairs as doing this will make the room look crowded. Thus, there is a possible conflict between functionality of having more tables and chairs and aesthetic of having the library look tidy and crowded.

Gap<sub>2</sub> is concerned with the neat layout and Gap<sub>3</sub> is about library cleanliness. These gaps are supported by the students' feedback (22 students) as they voiced for having more comfortable, clean, and modern layout design. This voice of customers deserves to be considered for future improvement. Gap<sub>5</sub> is concerned with library staff appearance. This gap implies that library staff are expected to improve their good looking appearance, for instance through their clothing, and neat physical appearance. Gap<sub>4</sub> is about library as a comfortable room, for instance, through its AC (air condition) and lighting. To improve this, additional AC and lighting should be prepared. More AC will be effective when more students are working in the library, while higher lighting intensity is comfortable for reading or working in the library when the outside building does not provide enough sun lights. In the students' voluntary feedback, some students expect that SBM library has more and updated computers (10 frequency). This wish may only be fulfilled partially because of the limited space available. In the students' feedback, meeting or discussion rooms in the library is raised. These students may have seen other libraries in ITB which have such rooms. However, with regard to the existing limited space available in the SBM library, this concern is unlikely to be accommodated.

### **Responsiveness Dimension**

Gap<sub>12</sub> shows how SBM library staff handles students' complaint immediately. This gap is the highest one in the responsiveness dimension. Thus, SBM library staff should be reminded that their willingness to handle any student complaint immediately is very important.

Gap<sub>8</sub> is the second highest gap in the responsiveness dimension. It is concerned with library service provision as informed. This gap may indicate that students did not get library services as informed. This gap implies that library staff need to review again their responsibilities and strive to deliver them accordingly to the students. An orientation program for new students or informing new library services to SBM students may have a good impact in terms of students' knowledge about library services.

Gap<sub>11</sub> deals with library staff's willingness to accept students' suggestions. To be fair, library staff should consider any student suggestion selectively. Any feedback for library service improvement that is in line with the library policy can be taken into account, depending upon its feasibility for implementation. If it is easy and benefiting students, then, it can be given priority for implementation.

Gap<sub>9</sub> highlights SBM library staff's prompt service. This gap demands higher level of responsiveness from the library staff in order to be able to respond quickly any service required by students. This gap can function at least for a reminder for the library staff about their willingness and effort for quick response to any student need.

Gap<sub>10</sub> states the SBM library staff's willingness to always help students. Ideally, each and all SBM students have a right to be assisted by the library staff. However, perhaps because of their other duties, a library staff sometimes may have a higher priority for other tasks, making a student's help secondary. In this conflicting situation, the student needs to be aware of the situation, and hopefully can understand and accept it.

Gap13 is concerned with the opportunity given to students to search information by themselves. Actually, currently students can search information by themselves, except for references that can only be done by library staff. Also, computers for library services can also be used only by library staff. Therefore, by providing a computer in the library, any student can find information on their own.

### **Assurance Dimension**

Gap14 is concerned with training for students provided by the SBM library staff and this gap is the highest one in the assurance dimension. In addition, this gap is also supported by the students' voluntary feedback. To respond to this gap, library staff can conduct a regular training about information searching at the library at the beginning of a semester.

Gap17 measures SBM library staff in keeping students informed about when a service is going to be finished and this gap is the second highest one in the assurance dimension. This gap can be treated as a reminder that library staff is better of telling students about their requests can be or will be completed so that students know whether the completion of their needs is in line with their expectation or not. For example, when a student does get a textbook he or she wants to borrow because all textbooks have been borrowed by other students, the library staff is expected to be able to inform him or her when a textbook will be most likely available.

Gap16 is about knowledge of SBM library staff to answer students' questions or requests. This gap can be minimized by making library staff knowledgeable through training, not only trainings on library service management, but also knowledge on general business and management that may be suitable to deal with the undergraduate students.

Gap5 is about SBM library staff's courteousness. This gap can also be regarded as a reminder for the library staff that they are expected to be courteous in interacting with students.

### **Reliability Dimension**

Gap18 deals with the number of textbooks available in the SBM library to support students' study and this gap is the highest one in the reliability dimension. Surprisingly, this gap gets support from the students' feedback with the highest frequency (31 students). From one hand, this feedback or gap deserves high attention from SBM to increase or add more textbooks for the benefits of the students. On the other hand, however, adding more books also mean more spaces and this is a constraint currently. An alternative solution for this situation is that SBM library needs to consider for having more e-books in the future that will allow more students to get access to their textbooks online. Actually, this solution is also consistent with students' other feedback that expect high speed internet connection in the library and a voice of making SBM library a high tech library. This alternative solution can also respond to Gap19 which is concerned with the sufficient number of electronic materials in the library.

Gap21 is about the length of book loan. This gap may represent students' expectation for having a longer time for book loan. Meeting this request may only make more students are unable to borrow textbooks earlier, especially if the number or the textbooks is limited and the number of students wanting to borrow them is larger. Therefore, it is better off with the existing policy for not extending the length of book loan. A students' feedback related to this issue is about keeping students informed (2 frequency) regarding the remaining time of borrowed book. This is a good idea and should become a policy of the library.

Gap20 is concerned with SBM library's suitable working hours. Actually, this gap is also supported by the students' voluntary feedback in which 14 students expressed their expectation to have SBM library working hours longer. In addition, 8 students proposed SBM library to open at break time. To

extend its working hours, SBM library can extend its operation an hour longer, for example, from 17.00 to 18.00, or, if possible from SBM's policy, from 12.00 to 13.00.

### **Empathy Dimension**

Gap26 is about convenient working hours of the SBM library. This gap is the highest one in the empathy dimension. As mentioned previously, with respect to the office working hours' policy, the existing library working may be proposed to be extended one hour in the evening (17.00-18.00) or in the afternoon (12.00-13.00).

Gap24 is about willingness of library staff to give individual attention, and Gap23 deals with library staff willingness to help students. These both gaps can be associated with one of the students's voluntary feedback, namely library staff should be more kind. Both gaps can be treated as a reminder for the library staff that they are expected to deal with students more kindly and, perhaps more patiently.

Gap25 is about SBM library staff in keeping confidentiality of library users. As long as the information is about library users, this may not need changes. For instance, it is fine to inform students that certain textbooks were borrowed by others. Although some students may get bothered because they were contacted by others, but, they are expected to understand and have empathy for others who have similar needs. One of the students's volutary feedback is reducing the fine for the lateness of book return. Reducing fine may increase students or book borrowers' irresponsibility or carelessness behavior by violating the length of book loan. Therefore, this request can be disregarded. To compensate this request, the proposal for providing information through e-mail about the remaining time of book loan is considered as a fair solution.

## **Conclusions and Recommendations**

### **Conclusions**

Based on the analysis in the previous section, a few conclusions can be identified.

1. Each and all variables in all dimensions have negative gap values and these call for future improvement. With respect to the existing library condition especially its space, some improvements may not be implementable in the future.
2. The largest gap in the Tangible dimension is Gap7 (SBM Library has enough photocopier(s)).
3. The largest gap in the Responsiveness dimension is Gap12 (SBM library staff handles students's complaint immediately).
4. The largest gap in the Assurance dimension is Gap14 SBM (Library staff provides training about information searching to me/users).
5. The largest gap in the Reliability dimension is Gap18 SBM (Library has enough textbooks for my study).
6. The largest gap in the Empathy dimension is Gap26 (SBM Library has convenient working hours to me).

### **Recommendations**

Future improvements are recommended to improve service quality of the SBM Library. these improvements involve all the five dimensions, namely Tangible, Responsiveness, Assurance, Reliability, and Empathy. The proposed improvements are listed below.

1. Improvement for the Tangible Dimension
  - a) Providing a printer and a computer
  - b) Redesigning the library to be more comfortable, clean, and modern layout design
  - c) Reminding library staff to keep their neat appearance
2. Improvement for the Responsiveness Dimension
  - a) Reminding library staff to handle students' needs and complaint immediately

- b) Providing an orientation program for new students or informing new library services to SBM students
- c) Providing a computer in the library to allow any student find information on their own
- 3. Improvement for the Assurance Dimension
  - a) Conducting a regular training about information searching at the library for students at the beginning of a semester
  - b) Keeping students informed about the completion of their requests
  - c) Conducting training for library staff about knowledge on general business and management
  - d) Reminding library staff for being courteous when interacting with students
- 4. Improvement for the Reliability Dimension
  - a) Having more e-books
  - b) Adding electronic materials
  - c) Sending information to students about the remaining time of borrowed books
- 5. Improvement for the Empathy Dimension
  - a) Extending working hours one hour in the afternoon (12.00-13.00) and/or in the evening (17.00-18.00)
  - b) Regularly reminding library staff to deal with students more kindly and perhaps more patiently

## References

- Ahmed, S.M.Z. and Shoeb, Md.Z.H. 2009. "Measuring service quality of a public university library in Bangladesh using SERVQUAL", *Performance Measurement and Metrics*, Vol 10, No.1, pp. 17-32.
- Bakti, I.G.M.Y. and Sumaedi, S. 2013. "An analysis of library customer loyalty: The role of service quality and customer satisfaction, a case study in Indonesia", *Library Management*, Vol. 34, No. 6/7, pp. 397-414.
- Coulthard, L.J.M. 2004. "Measuring service quality: A review and critique of research using SERVQUAL", *International Journal of Market Research*, Vol. 46, No. 4, pp. 479-497.
- Fitzsimmons, J.A. and Fitzsimmons, M.J. 2008. *Service Management: Operations, Strategy, Information Technology*, 6th Edition, Singapore: McGraw-Hill.
- Hsu, M.K., Cummings, R.G. and Wang, S.W. 2014. "Business Students; Perception of University Library Service Quality and Satisfaction", *Contemporary Issues in Education Research*, Vol. 7, No. 2, pp. 137-144.
- Jacobs, F.R. and Chase, R.B. (2014). *Operations and Supply Chain Management*, 14<sup>th</sup> edition. Global Edition, McGraw-Hill.
- Kiran, K. 2010. "Service quality and customer satisfaction in academic libraries: Perspectives from a Malaysian university", *Library Review*, Vol. 59, No. 4, pp. 261-273.
- Metters, R., King-Metters, K., Pullman, M. and Walton, S. 2006. *Successful Service Operations Management*, 2<sup>nd</sup> edition, Singapore: Thomson South-Western.
- Parasuraman, A., Zeithaml, V.A., and Berry, L.L. 1988. "SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality", *Journal of Retailing*, Vol. 64, No. 1, pp. 12-40.
- Pedramnia, S., Modiramani, P. and Ghanbarabadi, V.G. 2012. "An analysis of service quality in academic libraries using LibQUAL scale: Application oriented approach, a case study in Mashhad University of Medical Sciences (MUMS) libraries", *Library Management*, Vol. 33, No. 3, pp. 159-167.
- Sahu, A.K. 2007. "Measuring service quality in an academic library: an Indian case study", *Library Review*, Vol. 56, No. 3, pp. 234-243.
- Sekaran, U. and Bougie, R. 2010. *Research Methods for Business: A Skill Building Approach*. 5th Edition. West Sussex: John Wiley & Sons.