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The Students Satisfaction Oriented: Academic Service Improvement Strategy, Department of Aquatic Resources Management, Bogor Agricultural University, Indonesia

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Abstract

Higher education institutions must have a strategy change management in the increasingly competitive business environment. A continous performance improvement should be made accordingly. This study was conducted with the case of MSP-IPB, to analyze the priority of academic services improvement which were oriented in student satisfaction. This study used a survey design. Conducted using SERVQUAL instrument with 195 active students of undergraduate program in academic year 2014/2015 as respondents. Principal component analysis (PCA) was used to assess the SERVQUAL dimension that was most important to address to enhance students' satisfaction with MSP-IPB. The finding of this study suggest that the academic service performance of MSP-IPB needs to be improved because it shows negative gap value for all service quality attributes. Priority in changes management performed is to focus on internal factors of MSP-IPB. Recommendations change management strategy as follow to make service standards for the overall education services, to build customer relationship management (CRM) system, to build the capacity of MSP-IPB through the principles of good university governance, improvement of contents curriculum, teaching materials, and changes in teaching methods and to reallocate the resources that can support the success of improving the quality of education services provided. Results from this study indicate that the university management must make changes and improvements oriented student satisfaction for facing the era of globalization and increasingly severe business challenges in the present and in the future.

Keywords: Academic service, Change management, MSP-IPB, PCA, SERVQUAL, Students satisfaction.
JEL Classification: I21, I23.

Contents

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1. Introduction

Higher education in Indonesia has changed over the last few decades. As stated by Indrajit and Richardus (2006) there have been changes in terms of paradigm, management, and competition such that universities are required to be not only centres of knowledge, research, and community-based services, but also science-producing corporate entities that can compete to ensure the sustainability of the organisation. It is impossible for higher education institutions to avoid change and activities related to change if they are to ensure their futures. An organisation can survive in a competitive business environment if it undergoes continuous change in its business practices that are tailored towards improving its market condition (Mitra, 2009; Abeyta, 2013).

Department of Aquatic Resources Management, Bogor Agricultural University or *Departemen Manajemen Sumberdaya Perairan, Institut Pertanian Bogor* (MSP-IPB) should be able to formulate a strategy change management in the increasingly competitive business environment. Currently, the status of MSP-IPB depends on the results of an external audit conducted by SUCOFINDO as part of an application for International Organization for Standardization (ISO) 9001:2008 certification, which stated that the performance of MSP-IPB is needs to improve its service and pay attention to complaints from its consumers ([SUCOFINDO] Sucofindo International Certification Services, 2014).

MSP-IPB, as part of higher education institution, is a student-centric organisation. Therefore, it needs to implement an effective business strategy to be able to manage its relationships with students. One of the biggest problems for university that have not met their students requirements is that dissatisfaction negatively impacts the relationship between the institution and the students (Gocek and Beceren, 2012). Kotler (1993) states that one of the key ways in maintaining the consistency of higher quality services than their competitors is by adjusting or exceeding expectations of customer's service quality. Parasuraman *et al.* (1985) formulate a model of service quality, namely SERVQUAL (acronym of *service quality*) model.

Based on such concerns, MSP-IPB must improve the quality of the education that is provides to its key stakeholders; i.e. its students. The student perception is a major factor in improving quality of education (Katiliūtė and Kazlauskienė, 2010). Dongguk University in South Korea listens to the opinions of students, as consumers of education, via the University Customer Satisfaction Index to assess the quality of the education offered by the university in accordance with feedback from students. This is performed to encourage a more student-oriented university in the future and to avoid falling behind in the increasingly competitive higher education environment (Kim, 2014).

In accordance with such efforts, it is necessary to analyse the level of students' expectations and their actual perceptions as they pertain to the education service quality of MSP-IPB, to assess any gap between these two parameters, and finally to formulate a change management strategy to narrow the gap.

2. Methods

This study used a survey design. Conducted using SERVQUAL instrument with 195 active students of undergraduate program in academic year 2014/2015 as respondents. The questionnaire included 41 questions. The questionnaire covered five dimensions of service quality academic services, namely tangibles, reliability, responsiveness, assurance, and empathy. The SERVQUAL questionnaire was used, with items scored on a 5-point Likert scale. Students were asked to respond to each statement by selecting from among five options. For assessment of their expectations, the options were as follows: 1 (*very unimportant*), 2 (*unimportant*), 3 (*regular/neutral*), 4 (*important*), and 5 (*very important*). For assessment of students' perceptions, the options were: 1 (*very unsatisfied*), 2 (*unsatisfied*), 3 (*regular/neutral*), 4 (*satisfied*) and 5 (*very satisfied*).

Data was analysed using Microsoft Excel (Microsoft Corp., Redmond, WA, USA), SPSS for Windows (ver 15.0; SPSS Inc., Chicago, IL, USA), and Minitab (ver. 16.0; Minitab Inc., State College, PA, USA) software. Validity and reliability tests were applied. A difference test was used to assess differences between students' levels of expectations, and actual perceptions, of education quality. SERVQUAL gap analysis was conducted to evaluate the perceived service quality of MSP-IPB. Importance performance analysis, a technique designed to assess the extent of satisfaction of respondents with respect to institutional performance, was also used, and the results of the analysis were illustrated using a Cartesian diagram; average levels of expectation and perception for each variable or attribute were calculated (Natalisa, 2007). Principal component analysis (PCA) was used to assess the SERVQUAL dimension that was most important to address to enhance students' satisfaction with MSP-IPB. This procedure was also performed by Paas and Sijtsma (2008) who conducted a strategy analysis to improve students' perceptions of the service quality of two public facilities within a major university in the Netherlands.

3. Results and Discussion

3.1. Results

Data analysis with SPSS showed that the calculated r values were greater than the r values obtained from the statistical table for all questions, indicating that all of the questions were valid. Additionally, the Cronbach's alpha values were 0.944 for students' expectations, and 0.945 for students' actual perceptions, of education quality. Thus, it can be concluded that the questionnaire is reliable. The results of the difference test showed a difference between students' expectations, and actual perceptions, of the education quality of MSP-IPB. The majority (71.79%) of the research sample was female, and more than half (73.85%) came from the Java region. The most represented entry year (42.56%) was 2012.

3.1.1. Seroquel Gap Analysis

Based on the results of the SERVQUAL gap analysis, the level of expectation of the students exceeded their actual perceptions of the quality of the services provided by MSP-IPB (Table 1). The three attributes with the

greatest gap between expected, and actually perceived, quality were as follows: availability of adequate worship facilities (attribute 7), comfort of the lecture room (attribute 3), and transparency of assessments (quizzes/assignments/exams) (attribute 31). Additionally, based on average values for each dimension, the dimension of 'physical evidence' exhibited the largest gap between expectations and actual perceptions.

Table-1. Gap between actually perceived and expected quality

No	Dimension and Question Item	Dimension	Average per item		Gap
			Expectation	Perception	
1	Structuring the interior of building of MSP-IPB	Tangibles	4,45	2,91	-1,54
2	Structuring the exterior of building of MSP-IPB		4,35	2,76	-1,58
3	Comfort of lecture room		4,83	2,62	-2,21
4	Comfort of laboratory		4,83	2,73	-2,10
5	Completeness and availability of lecture meterial		4,82	2,96	-1,86
6	Completeness and availability of practice meterial		4,70	3,01	-1,69
7	Availability of adequate worship facilities		4,79	2,45	-2,34
8	Availability of discussion room for students		4,39	2,72	-1,67
9	Availability of sufficient hotspots for Internet access		4,87	2,88	-1,99
10	Lecturers wear clothes/appear neatly		4,37	3,94	-0,44
11	Employees wear clothes/appear neatly		4,31	3,84	-0,47
Average per dimension			**4,61**	**2,98**	**-1,63**
12	Capability of lecturer in teaching	Reliability	4,87	3,83	-1,04
13	Capability of lecturer in providing guidance and consultation		4,77	3,57	-1,20
14	Capability of lecturer in controlling the class		4,72	3,52	-1,19
15	Lecturer teaches on time/discipline according to the determined schedule		4,68	3,36	-1,32
16	Conformity of curriculum with the mandate of MSP-IPB		4,67	3,49	-1,18
17	Conformity of curriculum with the expected competence		4,76	3,44	-1,32
18	Academic Information System (SIMAK)		4,71	3,15	-1,56
Average per dimension			**4,74**	**3,48**	**-1,26**
19	Capability of lecturer in answering questions in and out of the class	Responsiveness	4,77	3,81	-0,96
20	Capability and facilitation in lecture and administrative services		4,75	3,43	-1,32
21	Capability of MSP-IPB to respond to and recognise complaints from students		4,76	3,17	-1,58
22	Efficiency of lecturers in serving the students		4,61	3,35	-1,25
23	Efficiency of employees in serving the students		4,54	3,54	-1,00
24	Kindness attitude and services of the employees		4,69	3,71	-0,97
Average per dimension			**4,69**	**3,50**	**-1,18**
25	MSP-IPB has very competent lecturers in their fields	Assurance	4,85	4,14	-0,71
26	Conformity of teaching schedule of lecturers with the existing schedule		4,72	3,33	-1,39
27	Readiness of lecturer to teach in class		4,72	3,80	-0,92
28	Availability of complete lecture/practice materials (handout/module/practice manual)		4,70	3,20	-1,50
29	Lecture/practice self-assignment and exam questions according to the delivered lecture materials		4,57	3,37	-1,20
30	Punctuality of lecturer in giving score 2 weeks after the exam (Mid-Test/UTS and Final Test/UAS)		4,62	2,63	-1,99
31	Transparency of assessment (quizzes/assignments/exams)		4,72	2,60	-2,12
32	Education level of lecturers		4,49	4,11	-0,38
33	Education level of employees		4,08	3,69	-0,39
34	Capability of employees in serving the students		4,56	3,76	-0,80
Average per dimension			**4,60**	**3,46**	**-1,14**
35	Facilitation contact with lecturers	Empathy	4,69	3,15	-1,54
36	Facilitation contact with employees		4,47	3,43	-1,04
37	Capability of advisory lecturer in understanding the behavior and needs of students		4,68	3,41	-1,27
38	Employees always serving the needs of students friendly and respectful		4,53	3,66	-0,88
39	There is communication among students, lecturers, and employees		4,67	3,31	-1,36
40	MSP-IPB always prioritize the interest of students		4,64	3,19	-1,45
41	Study period is controlled by MSP-IPB		4,64	3,52	-1,12
Average per dimension			**4,62**	**3,38**	**-1,24**
Average of all items			**4,64**	**3,33**	**-1,31**

Source: Field data

3.1.2. Cartesian Diagram Analysis

Cartesian diagram analysis is a process carried out subsequent to SERVQUAL gap analysis. The average values for level of expectation and actual perception of the quality of MSP-IPB services are illustrated in the diagram with four quadrants shown in Figure 1. Quadrant A includes the attributes influencing students' degree of satisfaction with MSP-IPB for which action needs to be prioritised by management. For these attributes, students' actual perceptions of quality did not meet their expectations; therefore, the managers of MSP-IPB need to improve their performance with respect to these attributes. The attributes included in quadrant A (high priority) are as follows:

a. Comfort of lecture room (attribute 3)
b. Comfort of laboratory (attribute 4)
c. Completeness and availability of lecture material (attribute 5)
d. Completeness and availability of practise material (attribute 6)
e. Availability of adequate worship facilities (attribute 7)
f. Availability of sufficient hotspots for Internet access (attribute 9)
g. Academic Information System (SIMAK) (attribute 18)
h. Capability of MSP-IPB to respond to and recognise complaints from students (attribute 21)
i. Availability of complete lecture/practise materials (hand-outs/modules/practise manuals) (attribute 28)
j. Transparency of assessment (quizzes/assignments/exams) (attribute 31)
k. Facilitating contact with lecturers (attribute 35)

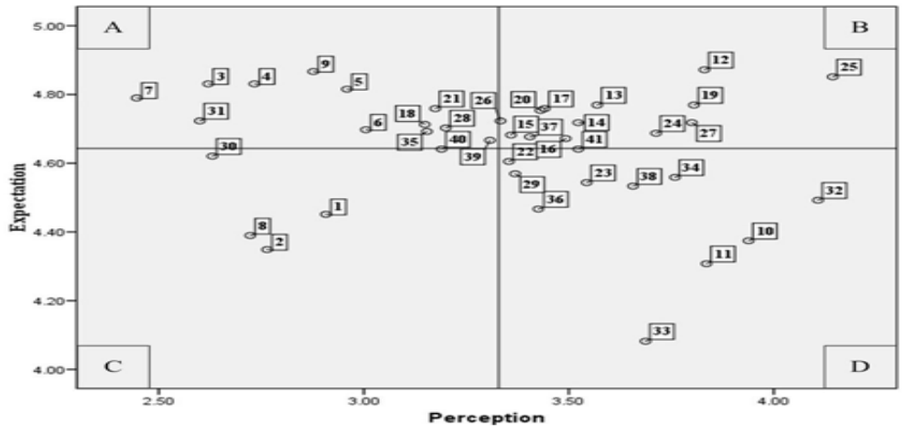

Figure-1. Cartesian diagram of the survey results.

Source: Field data

3.1.3. Principal Component Analysis (PCA)

We established evidence for changes based on PCA and factor analysis of the students' expectation levels. The results of the PCA of students' expectations regarding the quality of the education services provided by MSP-IPB, performed with Minitab, identified two key components that were able to explain 78.3% of the variance in the five service dimensions (Table 2). The results of a factor analysis on students' expectation levels, performed with SPSS, are illustrated in Figure 2. Hereafter, the first factor is referred to as the internal (to MSP-IPB) factor, and the second factor is referred to as the external factor.

Table-2. The results of the PCA of students' expectations

Eigen analysis of the Correlation Matrix					
Eigenvalue	2,885	1,032	0,468	0,384	0,231
Proportion	0,577	0,206	0,094	0,077	0,046
Cumulative	0,577	0,783	0,877	0,954	1,000
Variable	PC1	PC2	PC3	PC4	PC5
Tangibles	-0,019	0,972	-0,223	-0,032	0,070
Reliability	0,462	0,215	0,839	-0,019	-0,190
Responsiveness	0,504	-0,019	-0,357	0,652	-0,440
Assurance	0,536	-0,067	-0,087	0,097	0,831
Emphaty	0,496	-0,072	-0,333	-0,751	-0,272

Source: Field data

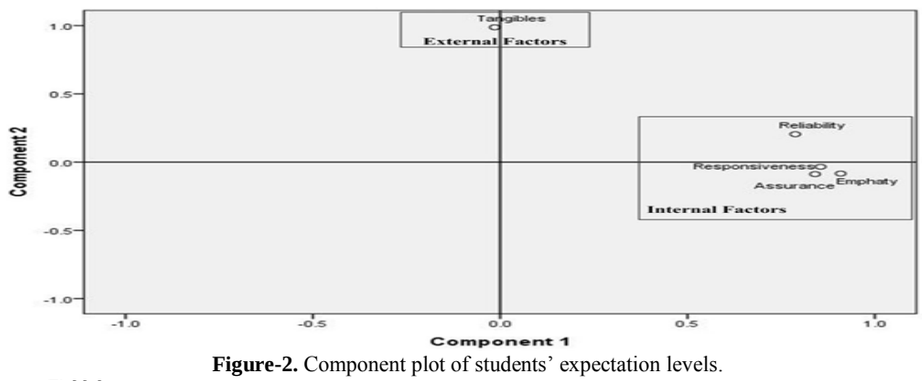

Figure-2. Component plot of students' expectation levels.

Source: Field data

3.2. Discussion

As an administrator of education programs and sub-programs within IPB, MSP-IPB must participate in supporting the IPB 2014–2018 program. One means of doing this is to perform change management, which constitutes a series of stages for improving quality on an ongoing basis to ensure a better future for MSP-IPB, and to achieve the overall goals of IPB. Accordingly, the change management recommendations for MSP-IPB involve changing the management style such that it is oriented towards student satisfaction. This is in accordance with the first goal of [IPB] Bogor Agricultural University (2014). Expanding access and improving the quality of education and opportunities for development available to students and alumni. This management recommendation is also in accordance with the results of a study by Lamberg (2008) the results of this author's research on the important factors in a consumer-oriented organisation can be used as a basis for planning and implementing change within such an organisation.

The management of MSP-IPB is well aware that it is very important to improve and continuously upgrade the quality of the education services that it provided to its students (i.e. its main consumer), to ensure competitiveness with respect to securing consumers. This is in accordance with studies by Kotler (1993); Al-Alak and Alnaser (2012) in which one of the key methods identified for maintaining consistently high quality services compared with competitors is by adjusting to, or exceeding, consumer expectations with respect to service quality. Accordingly, the desires of students were identified as an area to be targeted to improve the overall quality of the education services available at MSP-IPB.

Based on the results of the SERVQUAL gap analysis and the Cartesian diagram analysis, we conclude that the performance of MSP-IPB, with respect to meeting students' expectation levels as they pertain to education services, still needs to be improved because there is a negative gap value for all indices of service quality. If a score on SERVQUAL is below zero, the service does not meet the expectations of its users. This was also observed in the research of Legčević (2009); Rasli *et al.* (2012) and Mohammadi and Mohammadi (2014); in these studies, the quality gaps for all indices of service quality were negative. Additionally, in research by Bangun *et al.* (2013) the overall variables also had negative gap values. Variables that have a negative gap must be targeted for improvement by the service provider. In the present study, the "facilities/supporting equipment" variable is the highest priority for improvement because it has the greatest weight.

In a study by Sarjono and Natalia (2014) the quality level of services provided to all students in a Business Quantitative Analysis Lab class was not yet satisfactory. These authors' analysis provided information to the university allowing it to pay special attention to the performance indicators with the widest gaps, namely reliability, tangibleness, and responsiveness. However, the university must also consider other dimensions, specifically the dimensions of assurance and empathy, to improve the quality of the services that it provides.

MSP-IPB needs to prioritise improving its 'dimension A' (high priority) services because the quality of the services in this dimension are below students' expectations. Additionally, MSP-IPB must maintain the quality of its 'dimension B' services, as such services are judged to be of outstanding service quality; i.e. are in accordance with the expectations of students. The results displayed in the Cartesian diagram were optimised by applying a scoring analysis to identify attributes that should be prioritised for improving. These attributes are as follows: comfort of the lecture room (attribute 3), comfort of the laboratory (attribute 4), availability of adequate worship facilities (attribute 7), and transparency of assessments (quizzes/assignments/exams) (attribute 31).

Based on the results of the PCA, change management strategies to improve the quality of the education services of MSP-IPB should be influenced both by factors internal to, and external to, MSP-IPB. We determined priority factors for improving the quality of MSP-IPB's education services through internal factors of management at MSP-IPB because it will be easier to coordinate targets of change to improve the quality of education services at MSP-IPB.

MSP-IPB needs to make changes to its internal management to improve the quality of the education services that it provides to its students. The internal factors that should be prioritised for enhancement, to improve overall student satisfaction, are transparency of assessments (quizzes/assignments/exams) (attribute 31), capability of MSP-IPB to respond to and recognise complaints from students (attribute 21), SIMAK (attribute 18), facilitating contact with lecturers (attribute 35), and availability of complete lecture/practise materials (handouts/modules/practise manuals) (attribute 28).

The expectations of students pertaining to the transparency of assessments (quizzes/assignments/exams) can be better met by improving adherence to the rule stating that students should be given information on how assessments are made. This can be done by improving the quality assurance system within departments. Internal evaluation of the scoring system should be performed regularly and scheduled for each semester.

Through academic advisory lecturers, thesis advisory lecturers, education commissions, and the Quality Control Circle, recognising feedback and complaints from students can be facilitated. These parties must address any feedback and complaints from students by submitting them to the MSP-IPB management. Moreover, the criticism and suggestion box at MSP-IPB must be used to evaluate every response and complaint submitted by students. It is necessary to have a regular schedule (i.e. at least twice each semester) with respect to opening the criticism and suggestion box. Every response and complaint submitted by students can be discussed and addressed during weekly meetings at MSP-IPB, which occur every Wednesday. These meetings represent an attempt to communicate to all departments of MSP-IPB that there are responses and complaints from students that need to be addressed immediately by all of the parties concerned. The responses provided by the management of MSP-IPB will increase students' degree of trust in MSP-IPB.

The Academic Information System (SIMAK) ranked third in terms of priority areas for improvement. It is necessary to build an integrated system using AIS to facilitate and accelerate the delivery of academic services. One method of doing this is to design an information system to address the areas of student document submissions, the thesis advisory process, and the provision of teaching materials (lecture and practise materials). This will increase the

speed at which services can be provided and allow students to obtain what they need for their academic activities. Shostack (1987) stated that, to minimise differences in the quality of services provided, standardisation and automation of services should be implemented. Additionally, Gunawan *et al.* (2010) stated that one of the keys to success within performance improvement strategies is the provision of a reliable information system. Effective information can facilitate an efficient management organisation process.

The fourth area that needs to be improved by MSP-IPB is facilitating contact with lecturers. Management needs to communicate to all lecturers within MSP-IPB that students are the main consumers and must be served and cared for. Support from lecturers is one aspect of an academic environment that supports student success (Radovan and Makovec, 2015). This requires a strong commitment from lecturers at MSP-IPB to always be empathetic to the needs of their students. A commitment from MSP-IPB to manage its lecturers effectively will in turn lead to a strong commitment from lecturers to the organisation. This is consistent with a study by Lok and Crawford (1999) and Ismail (2015) who suggested that employee satisfaction in the workplace is most highly correlated with level of commitment: the higher the level of commitment of employees, the higher the performance level achieved, and the more effective the organisation becomes at achieving its goals.

The final area that needs to be improved by MSP-IPB concerns the availability of lecture/practise materials (handouts/modules/practise manuals). Efforts should be made by the management of MSP-IPB to update the teaching materials each year. An evaluation of the availability of teaching materials also needs to be performed each semester. Teaching materials can be provided in the form of hardcopies or computer files. Teaching materials in computer file format should be created using the learning management system provided by IPB so that students can easily access teaching materials. The system can also be used for the development of e-learning student teaching methods (Ghavifekr and Hussin, 2011; Al-Adwan and Smedley, 2012; Lebeničnik *et al.*, 2015).

External factors that are a priority for enhancement are relevant to the 'physical evidence' dimension. Specifically, these concern the availability of adequate worship facilities (attribute 7), comfort of the lecture room (attribute 3), comfort of the laboratory (attribute 4), availability of sufficient hotspots for Internet access (attribute 9), completeness and availability of lecture materials (attribute 5), and completeness and availability of practise materials (attribute 6). However, success in improving the quality of services with respect to external factors is not the sole responsibility of MSP-IPB. This suggestion is made because many factors concern parties external to the management of MSP-IPB, namely those within the wider institution of IPB. Therefore, we suggest that the university should be able to allocate a proportion of funds to update and maintain equipment (Enayati *et al.*, 2013). This is consistent with the studies of Pella *et al.* (2013) in which one of the seven major obstacles that have impact on poor strategy implementation is by financial support. Base on the analysis in the pevious stages, change management strategies are illustrated in Figure 3.

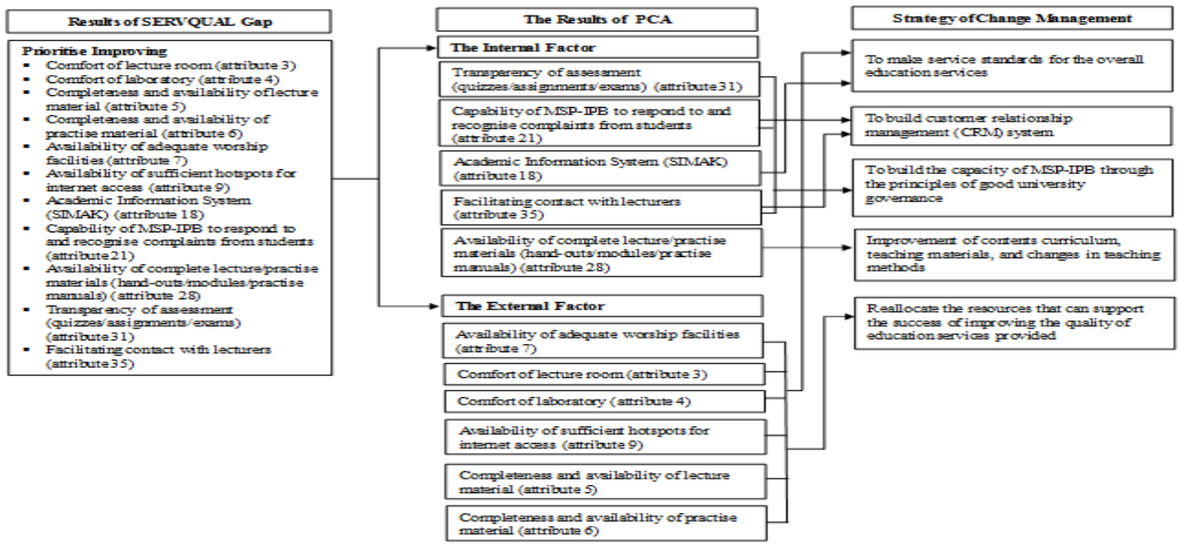

Figure-3. Change management strategy oriented on student satisfaction

Source: Field data

4. Conclusion and Implications

4.1. Conclusion

The finding of this study suggest that the level of interest of students in the quality of education services provided by MSP-IPB exceeds the perceived quality of the services actually rendered. The gap between students' expectations, and their actual perceptions, of the quality of MSP-IPB's services has a negative value for all quality indices. The largest disparities, with respect to internal factors within MSP-IPB (that must therefore be prioritised to improve performance) are as follows: transparency of assessments (quizzes/assignments/exams) (attribute 31), capability of MSP-IPB to respond to and recognise complaints from students (attribute 21), SIMAK (attribute 18), facilitating contact with lecturers (attribute 35), and availability of complete lecture/practise materials (handouts/modules/practise manuals) (attribute 28). The largest disparities with respect to factors external to MSP-IPB (that also need to be prioritised to improve performance) are the availability of adequate worship facilities (attribute 7), comfort of the lecture room (attribute 3), comfort of the laboratory (attribute 4), availability of sufficient hotspots for Internet access (attribute 9), completeness and availability of lecture media (attribute 5), and completeness and availability of practise media (attribute 6).

This research has provided change management strategies to narrow the gap between student's expectations, and the actually perceived, education service quality of MSP-IPB as follow to make service standards for the overall education services, to build Customer Relationship Management (CRM) system, to build the capacity of MSP-IPB through the principles of good university governance, improvement of contents curriculum, teaching materials, and changes in teaching methods and to reallocate the resources that can support the success of improving the quality of education services provided.

4.2. Implications

Efforts to improve the quality of the services offered by higher education institutions include establishing 'service standards', in accordance with the dimension of service quality. Service standards can be established using accreditation forms, which are quality assurance standards for higher education that have been adapted to the specific goals of individual institutions, along with service standards issued by international organisations such as ISO and The Asian University Network-Quality Assurance (Foster, 2012). Antaresti (2014) stated that, when applying a quality assurance system, the standards set need to be adjusted to meet the expectations of students, especially in terms of the standards of academic services. This is consistent with the studies of Palmer *et al.* (2009) and Clarke (1994) both of which asserted that a customer-centred organisation can customise necessary products and services by performing an analysis of its stakeholders. Shostack (1987) stated that inconsistencies in the services provided can be minimised through standardisation and automation of the services.

Higher education institutions is a student-centric organisation. Therefore, it needs to implement an effective business strategy to be able to manage its relationships with students. Customer satisfaction is still a main issue with respect to managing service organizations, especially service organizations that have customer-relationship strategy (Zulganef, 2006). The results of the SERVQUAL gap analysis provide very useful information to institutions concerning the desires of its students. Based on information provided by students, institutions can implement a variety of services. One example would be the creation of a Customer Relationship Management (CRM) system to foster a harmonious relationship between students and management (Astin *et al.*, 2002; Mokhtarian, 2013; Darmawan *et al.*, 2014).

Development of good university governance can be ensured by improving the governance system such that it will foster stakeholder trust and comfort . This governance needs to be translated into good management practises, procedures, and qualified human resources, and must also possess good integrity. The first area that needs to be addressed by higher education institutions is a change in its mind-set. This change is required to ensure delivery of high-performance services that meet the expectations of its key consumers, namely the students. Additionally, changes in the work culture are also important to further prioritise the expectations of students. Business processes that are carried out must be clear, effective, efficient, scalable, and in support of the principles of good university governance.

The management of institutions also needs to consider five essential components to better support internal change, i.e. vision, capability, funds, resources, and action plans (Knoster, 1991). These five components must be addressed when performing change management. Moreover, the management of institutions will only be able to compete in the increasingly competitive world of education if it takes into account, meets, or even exceeds the expectations of its students. This idea is consistent with the studies of Tan and Kek (2004); Çerri (2012); Kuzu and Güleş (2013) which state that changes in the values of a university must be directed towards a conceptual model designed to satisfy students, who are the most important stakeholders of the university. Moreover found that 70% of all efforts towards change are not achieved because the consumers are ignored.

Higher education institutions also must be able to desaign the curriculum with the needs of stakeholders. The availability of lecture/practise materials (handouts/modules/practise manuals) should be made by the management to update the teaching materials each year. Teaching materials can be provided in the form of hardcopies or computer files. The system can also be used for the development of e-learning student teaching methods.

The speed and accuracy of providing services to students also need to be improved within the institutions. This goal can be pursued by improving the competence of Human Resources in terms of providing front-line services to students. Education and technical training for providing services can also be implemented to improve the management of services that are oriented towards the satisfaction of students. This will enhance the capacity-building efforts of institutions. Additionally, reallocation of existing resources is also necessary. This reallocation must also support efforts for improvement that are oriented towards student satisfaction.

The final factor that greatly affects the success of change management is the leadership factor. Leaders of all institutions and programs, need a strong rationale and frame work for organizational change (Demirel, 2015). A high-quality leader who is committed to the planned changes profoundly influences the changes that actually occur in the work culture, and is integral to the improvement of the quality of education services. This is consistent with a statement by Nordin (2011) who said that a leader must be able to lead employees through cultural, structural, and operational changes designed to achieve a number of organisational objectives. In addition, to increase the motivation of employees, it is necessary to consider awards for employees to improve the quality and impact of the change program.

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