

## SUSTAINABILITY OF POST-GRADUATE PROGRAMMES AT OPEN UNIVERSITY MALAYSIA (OUM): AN IMPORTANCE-PERFORMANCE ANALYSIS

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### ABSTRACT

Identifying the important aspects of the services provided to learners and measuring the institution's performance in providing those services are critical in ensuring continual acceptance and long-term sustainability of an institution's academic programmes.

In this regard, a study was undertaken using the importance-performance analysis (IPA) to identify the strengths and weaknesses of services provided to the post-graduate learners of OUM. A random sample survey was employed using a questionnaire containing 46 service-items, grouped into 8 dimensions which are pertinent to open and distance learning (ODL). The data was obtained from 231 learners from 10 state learning centres throughout the country. A regression analysis was carried out to determine the factors that influence learners' perception on quality, their level of satisfaction and intention to stay.

The results show that the learners' ratings for expectations and performance are high as indicated by the mean importance and performance scores of 6.1 and 5.5 out of a 7- point Likert Scale, respectively. Learners' perception of the quality of services was found to be influenced by three dimensions, namely, responsiveness, assurance and accessibility ( $R^2=54.3\%$ ), while their level of satisfaction was attributed to responsiveness, assurance and affordability ( $R^2=52.4\%$ ). Another pertinent finding in the context of OUM is that learners' intention to stay is influenced by affordability and flexibility.

The study has obvious implications on OUM's efforts to ensure the long-term sustainability of its postgraduate programmes. One of the principal outcomes of the study is that OUM needs to strengthen its academic-related services and reduce those not directly academic-oriented. The other outcome is that OUM needs to strengthen its staff's responsiveness to learners' requirements.

## INRODUCTION

The world of higher education has radically changed by the beginning of the 21st Century. This change was marked by the onward march of globalization, the rise in student mobility, the increase in diversity of learners, greater emphasis on lifelong learning, the proliferation of open universities, growing role of private sector providers; and the advent of the Internet, e-learning and virtual classrooms. To cope with this change, higher education institutions are being driven towards commercial competition (Firdaus, A., 2006). In this regard, these institutions had to be concerned with not only what the society values in terms of skills and abilities of their graduates (Ginsberg, 1991; Lawson, 1992), but perhaps more importantly, how their students feel about their educational experience (Bemowski, 1991). This has led to the increasing attention given to the management processes relating to student support within the institutions as opposed to the traditional areas of academic standards, accreditation and performance indicators of teaching and research (Firdaus, A., 2006).

The change in focus as mentioned above has led to the emphasis on learner-centredness as a driving force in today's higher education institutions. By learner-centredness, we mean that the institutions place their learners as the principal focus or at the centre of their activities. As such, learners' experience becomes a key parameter by which the performance of the organisation is measured. This likened to the principle that the "customer is king" as adopted in traditional business practices. Thus, it becomes important for an institution in a competitive environment to identify what are the critical factors or dimensions that directly affect the experience of its learners.

This realization has resulted in the increasing interest in determining what services are actually important to learners and how well the institutions provide them. Several instruments have been developed in the attempt to measure the performance in these areas. Since they relate to the provision of services, many researchers have focused on service quality measures as the principal yardsticks to obtain inputs and feedback from customers and in the case of higher education, learners. These include SERVQUAL (Parasuraman, A., Zeithaml, V.A. and Berry, L.L., 1988), SERVPERF (Cronin, J.J. and Taylor, S.A., 1992) and evaluated performance (EP) (Teas, R.K., 1993a; Teas, R.K., 1993b). SERVQUAL measures service quality by comparing the perceptions of the service received with expectations, while SERVPERF maintains only the perceptions of service quality. On the other hand, EP scale uses the gap between perceived performance and the ideal amount of a feature rather than the customer's expectations to measure the performance of a service.

Follow-up studies using the above scales have demonstrated the existence of difficulties resulting from the conceptual or theoretical component as much as from the empirical component. A glaring comment on the use of these scales is that they are more suited to the purely commercialized service industry as opposed to the more restraint environment of the novel higher education. As a consequence, Firdaus (2006) proposed a new set of scales which he referred to as HEDPERF to attempt to measure the performance higher education institutions. After conducting very rigorous tests on the scales, he found that they are better in measuring the performance of the services provided by higher education institutions (Firdaus, A., 2006).

HEDPERF has been shown to adequately measure the performance of a higher education institution in general. Is this instrument capable of performing the same task and with the same results for a special kind of higher institutions that has a different kind of delivery mode like the open and distance learning (ODL) institutions? A cursory survey of the literature revealed that this task has yet to be carried out.

## OBJECTIVE OF PAPER

The objective of the paper is to report on study conducted at OUM on the application of the Importance-Performance Analysis (IPA) to determining the sustainability of its post-graduate programmes. The use of IPA was found to be appropriate for this study since it provides a direct feedback from learners on how they rate the importance of the support services provided by the Centre for Graduate Studies (CGS) and how well they rate CGS's performance in delivering those services. Such a feedback is necessary to enable CGS to determine what services should be enhanced, maintained, reduced or even terminated. By doing so, CGS will be able to optimize the use of its resources to ensure the sustainability of its programmes in the future.

## RESEARCH METHODOLOGY

The study utilises the survey method to obtain direct feedback from postgraduate learners. Data were collected by means a structured questionnaire comprising of four sections, namely A, B, C and D. Section A contained 18 questions pertaining to learner respondent profile. The content includes questions on the usual demographic profile.

Section B provides a list of 46 items related to learner support services provided by CGS. The items were generated based on the nature of delivery of services in an ODL institution. Each item was presented as a statement to which a learner-respondent was requested to relate to their feelings about its importance based on the 7-point Likert-type scale ranging from 1 (Not at all important) to 7 (Very important).

Section C consisted of the same number of items as in Section B. All of them were presented as statements and were related to the same set of support services as in the previous section. However, for each item in this section, learner-respondents were requested to rate the performance of the services/facilities that best indicate the extent of their agreement with it again using the 7-point Likert-type scale ranging from 1 (Strongly disagree) to 7 (Strongly agree).

In addition to the main scale addressing individual service-items, in Section D of the questionnaire, respondents were requested to provide an opinion on the overall quality of services/facilities, the level of satisfaction on the services/facilities and whether they have the intention to complete their study at OUM. Finally, the last question in the section, which is open-ended asked learner-respondents to provide reasons why they do agree to complete their study.

Data were collected from learners who were registered in one of the postgraduate programmes at 11 State Learning Centres (SLCs) for the January Semester of 2008. A total of 250 questionnaires were mailed to the specified learning centres and the questionnaires were randomly distributed to learners by the Directors of SLCs. The number of returned and usable questionnaires was 227 and that was the sample size of the survey and represents almost 11% of 2080 registered learners for the semester.

The reliability of the scale was tested using the Crombach Alpha and its validity was tested using Pearson Correlation Test. The data obtained were analysed using SPSS version 14.0 for Windows.

## RESULTS

### *Demographic and Related Variables*

Analysis of the demographic variables reveals that 56% of the learner-respondents were female. In terms of ethnic group, 36% of the students were Chinese, 33% were Malays and 10% were Indians. A large majority (73%) of respondents were married, leaving about 25% who were singles. The results also reveal that in term of age, more than 69% of the respondents were 34 years and above, about 27% were below 34 years and 13% were 55 years and above.

### *Importance Ratings by Items*

The mean importance scores for all the 46 items range from the 5.2 to 6.5 with an overall mean score of 6.1. Table 1 below indicates the ten items of highest importance while Table 2 lists the ten items of lowest importance to the learners.

As can be seen from the table, the highest ranked item in terms of importance to these postgraduate learners is “Quality programmes”, followed by “Knowledgeable and competent facilitators/tutors”, “Up-to-date teaching and learning facilities”, “Staff always willing to help” and “Easy payment of fees by installment”. This ranking clearly indicates that postgraduate learners at OUM are concerned most with those services related to teaching and learning, fees and staff willingness to assist them in their learning.

On the other hand, services related to the physical appearance of staff and learning centres are relatively lower in importance to these learners. “Online forum discussions contributing to overall grades”, “Learning skills workshop”, “Student handbooks made available via online” and “Reachable tool free number” are also of lower importance to the learners. Paradoxically, flexibility in terms of allowing the learners to choose mode of learning and to sit for examinations at any learning centre also belong to this category. Finally, learners also do not rank high in importance items of “Strict examination procedures” and “Personal attention to learners”. It become apparent from these responses that the postgraduate learners being adults, more matured and more independent, do not prefer too much personal interventions and assistance.

**Table 1: 10 Highest Importance Items**

No	Description	Dimension	Mean (I)
1	Quality programmes	Assurance	6.5
2	Knowledgeable and competent facilitators/tutors	Assurance	6.5
3	Up-to-date T&L facilities	Tangibility	6.3
4	Staff always willing to help	Responsiveness	6.3
5	Easy payment of fees by installment	Affordability	6.3
6	Discounts on tuition fees	Affordability	6.3
7	Informing when tutorials/seminars will be held	Responsiveness	6.3
8	Accessibility of myLMS	Accessibility	6.3
9	Flexible duration to complete study programmes	Flexibility	6.3
10	Tutorials conducted according to time-table	Reliability	6.3

**Table 2: 10 Lowest Importance Items**

No	Description	Dimension	Mean (I)
1	Well dressed staff	Tangibility	5.2
2	Appealing appearance of learning Centre	Tangibility	5.6
3	Online forum discussion contributing to overall grades	Responsiveness	5.6
4	Providing learning skills workshops	Empathy	5.7
5	Student handbook accessible via myLMS	Accessibility	5.8
6	Reachable toll free number	Accessibility	5.9
7	Learners allowed to choose mode of learning	Flexibility	5.9
8	Learners allowed to sit for exam at any learning centre	Flexibility	5.9
9	Strict exam invigilation procedures	Assurance	5.9
10	Personal attention to learners	Empathy	5.9

In terms of dimensions, “Assurance” is ranked highest indicating that learners regarded the quality of programmes and competency of facilitators as most important to them. This is followed by “Tangibility” with respect to teaching and learning activities, “Responsiveness” with respect to staff’s meeting learners’ needs, “Affordability” with respect fees, “Accessibility” with respect to myLMS, “Flexibility” with respect duration of study and “Reliability” with respect to the conduct of tutorials.

On the dimension of lowest importance, “Tangibility” tops the list with respect to the appearance of staff and learning centres. This is followed by “Responsiveness” with respect to online discussion contributing to overall grades, “Empathy” with respect to learning skills workshop and personal attention to learners, “Accessibility” with respect to student handbook made available online and toll free number, “Flexibility” with respect to the choice of mode of learning and sitting for examination at any learning centre and “Assurance” with respect to strict examination procedures.

#### ***Performance Ratings by Items***

The mean performance scores for all the 46 items range from the 4.9 to 5.9 with an overall mean score of 5.5. Table 3 below indicates the ten highest performance items while Table 4 lists the ten lowest performance items.

It is very encouraging to note that the services related to teaching and learning again come out highest in the performance ratings by the postgraduate learners. Services related to “Quality programmes”, “Knowledgeable and competent facilitators/tutors”, tutorials conducted on time”, “Quality examination and assignment questions”, and “Strict invigilation procedures” are rated the highest in terms of performance by these learners. Finally, flexibility in terms of “Work experience considered as part of entry qualifications”, “Flexible duration to complete study programmes” and “Programmes with various specializations” are also rated rather highly by learners.

**Table 3: 10 Highest Performance Items**

No	Description	Dimension	Mean (P)
1	Knowledgeable and competent facilitators/tutors	Assurance	5.9
2	Quality programmes	Assurance	5.8
3	Tutorials conducted according to time-table	Reliability	5.8
4	Treating learners with respect	Assurance	5.8
5	Quality exam & assignment questions	Assurance	5.8
6	Work experience considered as part of entry qualifications	Flexibility	5.8
7	Strict exam invigilation procedures	Assurance	5.8
8	Accessibility of myLMS	Accessibility	5.7
9	Flexible duration to complete study programmes	Flexibility	5.7
10	Programmes with various specialisations	Flexibility	5.7

Interestingly, the services that were ranked relatively lower in importance were also rated relatively lower by the learners. These are “Reachable toll free number”, “Providing learning skills workshops”, “Appealing appearance of learning Centre”, “Online forum discussion contributing to overall grades”, and “Well dressed staff”. A disturbing result is that the low rating accorded to staff-related services, namely, “Easy contacts by telephone”, “Attending to enquiries”, “Staff being sympathetic and reassuring” and “Feeling confident with staff”. Another disturbing finding is that the learners rated relatively low on tutors’ response to providing feedback on online forum. One item, “Strict exam invigilation procedures” was ranked relatively low in importance but rated relatively high on performance.

In terms of dimensions, only four out of the eight were rated in the high performance category. They were “Assurance” (5 items), “Reliability” (1 item), “Flexibility” (3 items) and “Accessibility” (1 item).

**Table 4: 10 Lowest Performance Items**

No	Description	Dimension	Mean (P)
1	Reachable toll free number	Accessibility	4.9
2	Providing learning skills workshops	Empathy	4.9
3	Easy contacts by telephones	Accessibility	5.1
4	Attending to enquiries	Responsiveness	5.2
5	Appealing appearance of learning Centre	Tangibility	5.2
6	Online forum discussion contributing to overall grades	Responsiveness	5.2
7	Well dressed staff	Tangibility	5.2
8	Providing prompt feedback on online forum discussions	Responsiveness	5.3
9	Staff being sympathetic and reassuring	Reliability	5.3
10	Feeling confident with staff	Assurance	5.3

#### ***Importance-Performance Gap Analysis (IPGA)***

An important aspect of the survey was to identify the *performance gaps* between the importance attached to the six dimensions in the survey and their perceived performance as rated by learners. A performance gap greater than 1.0, or 16.7% based on priority indicates that OUM is not meeting learners' expectations, less than 1.0 (16.7%) is generally regarded as meeting learners' expectations and a negative performance gap indicates that OUM is exceeding learners' expectations.

The 10 items with the highest performance gap is given in Table 5 while the 10 items with lowest performance gap is given Table 6.

From Table 5, only two items are found not meeting learners' expectations while the other eight are found meeting their expectations. This clearly indicates a very positive finding for OUM. However, a closer examination of the results reveals that 4 out of 10 items relate to staff performance, particularly in terms of their responsiveness to enquiries by and communication with learners, indicating that staff performance needs to be improved upon.

In terms of dimensions, "Responsiveness" has the most number of items (4), followed by "Accessibility" (2), "Tangibility" (1), "Affordability" (1), "Empathy" (1) and "Reliability" (1).

#### ***Importance Ratings by Dimension***

Importance ratings by dimension are given in Table 7. It is encouraging to observe that the overall importance rating is high (6.1), indicating that the dimensions of the services included in the survey questionnaires are of importance to the postgraduate learners at OUM. "Affordability" is ranked highest in importance, followed by "Assurance", "Reliability" and "Responsiveness". "Tangibility" and "Empathy" were ranked lowest in importance indicating that appearance and care are not in the priority list of these matured postgraduate learners. "Flexibility" and "Accessibility" also do not fare highly in importance to these learners probably because they already have a high degree of accessibility in terms of internet connectivity and mobile communications.

**Table 5: 10 Highest Importance-Performance Gap Items**

No	Description	Dimension	Mean (I)	Mean (P)	IP Gap
1	Attending to enquiries	Responsiveness	6.2	5.2	1.02
2	Reachable toll free number	Accessibility	5.9	4.9	1.02
3	Easy contacts by telephones	Accessibility	6.1	5.1	0.98
4	Up-to-date T&L facilities	Tangibility	6.3	5.4	0.89
5	Providing prompt feedback on assignments	Responsiveness	6.2	5.4	0.87
6	Staff always willing to help	Responsiveness	6.3	5.4	0.86
7	Reasonable tuition fees	Affordability	6.2	5.4	0.80
8	Providing learning skills workshops	Empathy	5.7	4.9	0.78
9	Academic staff delivering what is promised	Reliability	6.1	5.3	0.77
10	Providing prompt feedback on online forum discussions	Responsiveness	6.1	5.3	0.75

**Table 6: 10 Lowest Importance-Performance Gap Items**

No	Description	Dimension	Mean (I)	Mean (P)	IP Gap
1	Well dressed staff	Tangibility	5.2	5.2	0.04
2	Strict exam invigilation procedures	Assurance	5.9	5.8	0.17
3	Work experience considered as part of entry qualifications	Flexibility	6.0	5.8	0.24
4	Small class size	Empathy	6.0	5.7	0.28
5	Student handbook accessible via myLMS	Accessibility	5.8	5.5	0.29
6	Quality exam & assignment questions	Assurance	6.1	5.8	0.32
7	Application/exam forms accessible via myLMS	Accessibility	6.0	5.7	0.33
8	Personal attention to learners	Empathy	5.9	5.6	0.35
9	Online forum discussion contributing to overall grades	Responsiveness	5.6	5.2	0.35
10	Appealing appearance of learning Centre	Tangibility	5.6	5.2	0.38



### *Performance Ratings by Dimension*

Table 8 shows the performance ratings by dimension. Compared to the overall importance ratings, the corresponding figure for performance ratings is lower at 5.5. “Assurance” is ranked highest in terms of performance, followed by “Flexibility”, “Affordability” and “Reliability”. “Responsiveness”, “Tangibility”, “Accessibility” and “Empathy” are in the bottom half of the table learners were not too happy with these aspects of the services provided in their postgraduate programmes.

### *Importance-Performance Gap Analysis by Dimension*

Importance-performance gaps (IP Gap) ranking is given in Table 9. The table indicates that OUM appears to perform well in meeting the needs of its postgraduate learners with the overall IP Gap of 0.6.

**Table 7: Importance Ratings by Dimension**

<b>Dimension</b>	<b>Mean(I)</b>
Affordability	6.3
Assurance	6.2
Reliability	6.1
Responsiveness	6.1
Flexibility	6.1
Accessibility	6.1
Empathy	5.9
Tangibility	5.8
<b>Overall service quality</b>	<b>6.1</b>

**Table 8: Performance Ratings by Dimension**

<b>Dimension</b>	<b>Mean(P)</b>
Assurance	5.7
Flexibility	5.6
Affordability	5.5
Reliability	5.5
Empathy	5.4
Accessibility	5.4
Tangibility	5.4
Responsiveness	5.4
<b>Overall service quality</b>	<b>5.5</b>

### ***Importance-Performance Matrix by Dimension***

Using the overall importance ratings of 6.1 and overall performance ratings of 5.5 as the respective demarcation lines for the x- and y-axis, respectively, an Importance-Performance Matrix (IP Matrix) was developed as shown in Figure 1.

From the matrix, only “Assurance” dimension is in the high-importance-high-performance quadrant indicating that OUM performs very well in this category. “Empathy” and “Tangibility” are in the low-importance-low-performance quadrant clearly indicating that they are low-priority services. “Flexibility” lies between Quadrant I and II, “Reliability” and “Affordability” lie between Quadrant 2 and 3 and “Accessibility” and “Responsiveness” lie between Quadrant 3 and 4.

**Table 9: Importance-Performance Gap by Dimension**

<b>Dimension</b>	<b>I-P Gap</b>
Affordability	0.7
Responsiveness	0.7
Accessibility	0.7
Reliability	0.6
Empathy	0.5
Assurance	0.5
Flexibility	0.5
Tangibility	0.4
<b>Overall service quality</b>	<b>0.6</b>

### ***Regression Analysis***

The regression analysis resulted in the following equations:

$$\text{Overall Satisfaction} = -0.05 + 0.35p_{\text{resp}} + 0.25p_{\text{afford}} + 0.38p_{\text{assur}} \quad (1)$$

$$R^2 = 52.4\%$$

$$\text{Overall Quality} = 0.05 + 0.34p_{\text{resp}} + 0.39p_{\text{assur}} + 0.22p_{\text{access}} \quad (2)$$

$$R^2 = 54.3\%$$

$$\text{Intention to Complete} = 3.24 + 0.31p_{\text{afford}} + 0.21p_{\text{flex}} \quad (3)$$

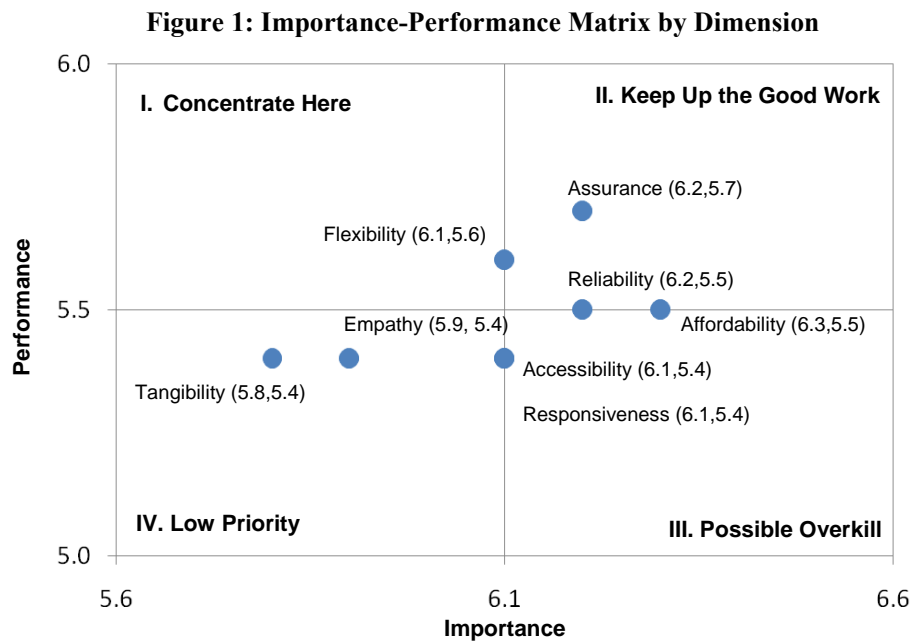
$$R^2 = 27.8\%$$

Equation (1) shows that learners’ level of satisfaction was attributed to responsiveness, affordability and assurance with an  $R^2$  of 52.4% while Equation (2) indicates that learners’ perception of the quality of services was determined by three dimensions, namely, responsiveness, assurance and accessibility with an  $R^2$  of 54.3%. Equation (3) indicates that learners’ intention to stay is influenced by affordability and flexibility with an  $R^2$  of 27.8%.

## DISCUSSION AND IMPLICATIONS OF RESULTS

The results presented above may be summarised as follows:

1. The high overall ranking in terms of importance of 6.1 out of 7.0 for all service items in the survey questionnaires indicates that they are service-items which are of importance to the postgraduate learners of OUM.



2. The results further indicate that postgraduate learners at OUM placed very high importance on academic-related services as opposed to services related to physical infrastructure, learning skills development, personal attention and examination procedures. This is evident from the high importance rankings accorded to the quality of academic programmes, tutors' competency and staff responsiveness and relatively low rankings given to well-dressed staff, appearance of learning centres, learning skills workshops, personal attention to learners and strict examination procedures.
3. It is encouraging to observe that learners also rated the performance of academic-related services highly compared to the others. In this regard, OUM has performed well in providing these services to its postgraduate learners.

4. The results of the IP Gap analysis indicate learners were not very happy with the staff responses to their enquiries and communications via the telephone services. The IP Gaps of these services are above 1.0 implying that they are not meeting learners' expectations.
5. In the IP Matrix, four (4) out of eight (8) dimensions fall in the "Keep up the Good Work" Quadrant indicating again that OUM has done relatively well in providing these services to its learners.
6. However, OUM has to review the services relating to physical infrastructure and empathy. These groups of services were placed in the low priority quadrant of the IP Matrix by learners. To optimize its resources, OUM needs to review the provision of these services.
7. The regression analysis indicates that learners' satisfaction is a function of responsiveness, affordability and assurance. This result thus indicates that to increase our postgraduate learners' satisfaction, OUM has to improve on its staff responsiveness to learners' needs, ensure that its fees and fees payment structure are affordable and maintain the quality of its academic programmes and delivery mechanisms.
8. The regression analysis also indicates that quality is determined by responsiveness, assurance and access. Thus, to maintain quality, OUM needs to improve on its staff responsiveness and quality of its programmes. In addition, OUM also needs to increase the accessibility of its programme offerings.
9. Finally, for learners to complete their study programmes, OUM must ensure that its fees are affordable and it is flexible enough to meet the needs of its varying learners' requirements.

## CONCLUSION

In conclusion, this study had been able to identify the types of services which are important to the postgraduate learners of OUM. The study had also been able to determine which of these services were well-delivered to these learners.

Thus, the study has obvious implications on OUM's efforts to ensure the long-term sustainability of its postgraduate programmes. The results of the study would be able to assist OUM in both the planning and actual delivery of these services in order to further improve their quality to meet the needs of the learners. In terms of planning, expenditure on those services which are of low priority, such as physical infrastructure and learner interventions, may be reduced. On the other hand, expenditure and efforts on academic-related services need to be increased.

On the implementation side, further improvements in the delivery of academic-related services need to be made including, such as the enhancements to the tutors' knowledge and tutoring techniques. Staff responsiveness and promptness with regard to enquiries and feedback from learners need to be adequately addressed.

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