Portfolio Analysis of Academic Programmes in UiTM Pahang

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ABSTRACT

This paper analyses the various teaching programmes offered at Universiti Teknologi MARA (UiTM) Pahang to identify the least and most successful areas of teaching provisions and use the information to affect a strategy. Some benchmark criteria used in assessing each of the teaching programmes include employability of graduates, recruitment success, and relative student turnover and cost recovery performance. The courses are ranked accordingly that would ultimately serve as an input to strategic leaders' decision in ensuring that the teaching programmes are moving towards the achievement of its vision, mission and objectives.

Keywords: *benchmark, portfolio analysis, programmes, strategy*

Introduction

Identifying institutional strengths and weaknesses is paramount in today's competitive business environment. Barney (1995) pointed out that company's strengths determine the complement of resources with which it competes and exploits the strengths in conjunction with industry and competitive conditions are big drivers in how well the company will be able to perform in a dynamic competitive marketplace.

In higher education, the competitive strengths include competent and experience lecturers, support staff, students, and the academic programmes offered in addition to the physical resources available. In private academic institutions where profit motive is the primordial indicator for above average achievement, academic programmes are being evaluated and ranked for its success.

In commercial sectors, portfolio analysis can be implemented by using matrices: GE matrix / Mckinsey matrix and Boston Consulting Group (BCG) matrix where Strategic Business Units (SBU) are analysed to de-

termine their strengths and positions to enable the company to exploit the most attractive industries or markets to penetrate. With portfolio analysis, the company can decide which SBU should receive more investments, develop growth strategies for adding new businesses / products to the portfolio and decide which businesses / products should no longer be retained. These moves lead to gain a sustained competitive edge over rivals.

Applied in the parlance of universities, these business models can be successfully beneficial with some modifications as university-based business portfolio planning differs from the business model in several specific ways; they are: the university has longer time frame which usually takes 5 or more years, no clearly defined customers as universities do not only serve the students but also include the community, the government and many more. Moreover, subject universities have the utmost goals of delivering satisfactory services to the target markets and simultaneously gain competitive edge in the sector as the same time producing graduates with employable skills. Barry Munitz, the former CSU chancellor noted that universities need to establish where their strategic competitive advantage is. These business models have been the basis of this article.

The Study

This study focuses on the feedback from the graduating students of year 2006. The secondary data available and produced by the university was primarily the basis of this article. Furthermore, it is highly centred to Universiti Teknologi MARA (UiTM) Pahang, a branch campus of UiTM Malaysia and the sixth branch campus being established in January 1985. This government funded educational institution offers sixteen (16) academic programmes as shown in Table 1. As at October 2006, the campus, inclusive of Kuantan City Campus and Raub, has a total enrolment of 4944 students of which 1,304 (26.4%) students have successfully completed their academic graduation requirements. This batch of students forms part of the sample size of the study.

The objective of this exploratory paper is to gauge the employability of the graduates upon completion of the course, students' satisfaction rating on both physical and non-physical infrastructure, and cost recovery performance of the branch.

Table 1: Course Offered and Frequency of Graduates

No	Name & Programme Code		No of Students	%
1	AC 110	Diploma in Accountancy	186	14
2	AC 220	Bachelor in Accountancy	72	5.5
3	AM 110	Diploma in Public Administration	16	1.2
4	AM 225	Bachelor in Corporate Administration	4	0.30
5	AS 110	Diploma Planting Management	106	8
6	AS 117	Diploma wood Technology	62	5
7	AS 119/120	Diploma in Science	91	7
8	BM 111	Diploma in Business Management	139	11.0
9	BM 112	Diploma in Business Management (Banking)	60	5
10	BM 115	Diploma in Business Management (Insurance)	79	6
11	BM 220	Bachelor in Business Management	13	1.0
12	BM 770	Executive Master in Business Administration	16	1.2
13	CS 110	Diploma in Computer Science	95	7.3
14	EC 110	Diploma in Civil Engineering	140	10.2
15	OM 114	Diploma in Office Management & Technology	225	17.9
16	OM 221	Bachelor in Office Management & Technology	0	0
	Total		1304	100

Findings and Discussions

UiTM Pahang offers sixteen (16) courses ranging from diploma courses (69%), bachelor (25%) and master programme (6%). Roughly 1,300 over graduates complete their programme requirements every year since its inception in 1985. The top-5 individual programmes with the highest graduate's turnover rates are Diploma in Office Management and Technology (17.9%), Diploma in Accountancy (14%), Diploma in Business Management (11%), Diploma in Civil Engineering (10.2%) and Diploma in Computer Science (7.3%).

However, looking at the point of view of academic grouping, the science fields that comprises of four (4) programmes, have a total of 399 gradu-

ates (30.60%) for the same period, Business Management (23%), Accountancy (19.5%), Office Management (17.9%), Computer Science (7.3%), Executive Masters (1.2%) and others (0.5%), This is a manifestation that the UiTM Pahang is now gearing towards offering science related programmes to meet the industrial needs of the country.

Among the bachelor courses offered, Accountancy has the highest number of graduates for the year 2006 as shown in Table 1. In the same year, UiTM Pahang has successfully produced sixteen graduates (1.2%) from its master programme. In terms of population, graduates in diploma courses comprise of 92%, bachelors (6%) and masters (1.2%).

Findings indicate that UiTM Pahang concentrates more on offering diploma courses, and less on the bachelors and masters programme. An argument poses on preparing calibre graduates for top ranking work assignments. The commercial industry highly requires skillful and competent graduates who can meet job requirements in the workplace. Certainly, a diploma graduate would have less preference of being accepted at better job posting as compared to bachelor and master holders.

Delivering more competent Bumiputras in the industry requires more graduates from bachelors' and masters' levels. This is an indicator for UiTM Pahang to pad more on bachelors' programmes to fill the labour requirement by multinational companies in the State of Pahang. Moreover, as the country heads for industrialisation, universities are expected to turnaround more bachelors' graduates at par with other world class universities.

Employability of Graduates

Table 2 shows the graduates status after graduation. The finding shows that, on the average, 24.9% of the graduates are able to find jobs within 6 months after completion of the programme. In terms of ranking, the masters' graduates (87.5%) have the highest rank of being employed after graduation, bachelors' (80.9%), and diploma (19.9%). Further findings indicate that 62.8% of the diploma holders pursue their studies to bachelor programmes, and that bachelor and master graduates have nil percent of continuing their studies immediately after graduation.

On the issue of unemployment within 6 months after graduation, the study finds that bachelor graduates have highest rate (19.1%), diploma (17.3%), and master (12.5%). Contrary to the employability rate of the bachelor graduates as stated earlier, the chance of getting a job or not wholly depends on the willingness of the concerned graduates to take the job offered and not on the academic qualification. The bachelor gradu-

ates' unemployment rate of 19.1% which is slightly higher than those of diploma holders indicates that the former are selective enough. However, on the average, the study shows that the higher the educational status of an individual, the lower the chance of being unemployed assuming preferential attitudes are put aside as shown in Table 2. Thus, the university is not a factor for non-employment of graduates.

Table 2: Graduates' Status within 6 months after Graduation

No.	Programme Codes	Employed		Furthering Studies		Unemployed		Total
		Frequency	%	Frequency	%	Frequency	%	
1	AC 110	51	27.4	102	54.8	33	17.7	186
2	AC 220	55	76.4			17	23.6	72
3	AM 110	16	100					16
4	AM 225	4	100					4
5	AS 110	25	23.6	63	59.4	18	17	106
6	AS 117	4	6.5	44	71	14	22.6	62
7	AS 119/120	4	4.4	74	81.3	13	14.3	91
8	BM 111	30	21.6	89	64	20	14.4	139
9	BM 112	9	15	42	70	9	15	60
10	BM 115	5	6.3	61	77.2	13	16.5	79
11	BM 220	13	100					13
11	BM 770	14	87.5			2	12.5	16
13	CS 110	23	24.2	57	60	15	15.8	95
14	EC 110	13	9.3	108	77.1	19	13.6	140
15	OM 114	59	26.2	113	50.2	53	23.6	225
16	OM 221							
		325	**24.9**	**753**	**57.8**	**226**	**17.3**	**1304**
	Diploma	**239**	**19.9**	**753**	**62.8**	**207**	**17.3**	**1199**
	Bachelor	**72**	**80.9**			**17**	**19.1**	**89**
	Master	**14**	**87.5**			**2**	**12.5**	**16**

Students' Satisfaction Rating

Academic Programmes

Table 3 indicates the index derived on a Likert Scale where a score of 3.00 indicating satisfaction. On issues relating to the academic programmes, the finding indicates that graduates are highly satisfied on the scope of their academic programmes (4.08), industry training programme (3.96), core curriculum course (3.85) and balanced mix of both theory and practice (3.81). Based on the average score of 3.93, the study shows that the students' satisfaction rate on the core curriculum subject (3.81) and the mix of both theory and practice on their curriculum programmes attended are below the average score. Comparatively, this indicates that concerned parties need to do some continual improvement on these areas for mutual benefits. Although the index derived from these issues are high, it should be at par with other tested items as shown in Table 3.

Table 3: Satisfaction Index on Curriculum Courses Offered

Faculty	Appropriate of Programme Contents	Balanced Mix of Theory and Practice	Practical Training	Core Curriculum Subject	Total
AC	4.19	3.80	3.99	3.89	3.97
AS	4.19	4.15	4.21	3.95	4.12
BM	4.04	3.62	3.58	3.84	3.82
CS	3.69	3.39	3.96	3.57	3.65
EC	4.05	3.76	3.40	3.85	3.83
OM	4.06	3.87	4.14	3.80	3.97
AM	4.35	3.90	3.83	4.00	4.04
Total	4.08	3.81	3.96	3.85	3.93

Examination Grading System

Table 4 shows the satisfaction index of the graduates over the university's academic evaluation system. The study shows that the graduates are highly satisfied with the final examination marking by their lecturers (4.01). Likewise, the students are satisfied with the course work marking, (3.98). However, the students place lower index (3.94) for the systems transparency and fairness in its implementation. A marginal satisfaction

index from the Information Technology and Quantitative Science graduates (3.76) is indicated in the findings as shown in Table 4. In totality, examination grading system and other issues tested have been rated highly by the students.

In commentary, the graduates have comparatively given lower rating on the transparency and fairness of the university grading system. It is the norm for a lecturer to highlight the ways and means grades are calculated at the beginning of the semester as stated in the syllabus of a given course in addition to sets of rules of class management. As a lecturer, the writer highly emphasise on making the students understand the mechanics of the course evaluation and grading system. However, along the course, graduates forget. Thus, added emphasis on this issue is paramount. Again, this is a relevant issue of continuous improvement for each academic staff for the interest of the graduates and students as a whole. In addition, students must always be reminded to approach the concerned lecturer in case of any ambiguities for added mutual benefits.

Table 4: Satisfaction Index on the Academic Evaluation System

Faculty	Fairness	Course Work Marking	Examination Marking	Total
AC	4.02	4.02	4.03	4.03
AS	4.04	4.08	4.16	4.10
BM	3.93	4.01	4.07	4.00
CS	3.72	3.78	3.76	3.76
EC	3.93	3.94	3.96	3.95
OM	3.83	3.88	3.88	3.86
AM	4.10	4.25	4.00	4.12
Total	3.94	3.98	4.01	3.98

Counseling Services

Table 5 shows the five (5) items tested on counseling services. The findings show that the graduates have indexed work placement support as the least service being provided (3.28). Job interview skills (3.61) and preparation of job application letter (3.62) have more or less similar index. The counseling office has been highly indexed to have provided related information on further studies (3.84) and job / career information opportunities (3.70). The study shows that the counseling office has high incli-

nation to rendering support services on academic relation issues to the students as compared to work placement support.

In terms of job placement support ratings from the individual faculty, the Administrative Science graduates are the least satisfied group (3.05), followed by Information Technology and Quantitative Science (3.07) and Accountancy (3.19). Job placement support is a valuable support service that the university can offer to the graduates to lessen the unemployment rate and improve the graduates' job competitiveness. More effort and innovative ideas should be instituted for better student services. This is an issue for continual improvement.

Table 5: Counseling Satisfaction Index

Faculty	Job and Career information Opportunities	Job interview skills support	Preparation of letter of job application support	Job placement support	Available information on furthering studies	Total
AC	3.81	3.52	3.50	3.19	3.88	3.58
AS	3.81	3.66	3.62	3.46	4.02	3.71
BM	3.70	3.66	3.65	3.28	3.85	3.63
CS	3.36	3.15	3.39	3.07	3.56	3.31
EC	3.61	3.42	3.34	3.20	3.84	3.48
OM	3.67	3.94	4.02	3.35	3.74	3.75
AM	3.25	3.15	3.10	3.05	3.50	3.21
Total	3.70	3.61	3.62	3.28	3.84	3.61

University Infrastructure and Facilities

Tables 6 and 7 show the 10 items tested in relation to the existing infrastructural facilities. The findings indicate that the students have high rating for library facilities (3.87), medical clinic facilities (3.81), computer laboratory (3.76), classroom (3.73), hostel (3.71) and security services (3.71).

The university has continuously upgraded its facilities in the past few years. The technology enabled classrooms, refurbishment of classrooms, purchase of new books, acquisition of new and high capacity computers, and complete range of pharmaceutical products for the students are few of the latest initiatives by the university. Providing the students with these world class facilities encourage them to be highly motivated. An atmosphere that is conducive for both lecturers and students is needed for

better learning to take place.

However, there are some negative responses from the graduates. The findings indicate that car park facilities (3.21), sports (3.38) and canteen facilities (3.45) are rated as the least satisfactory by the graduates. This shows that the top management should uplift these worst rated facilities for better students' satisfactions while in campus domicile. On the other hand, transport facilities (3.56) are ranked slightly better than items previously cited. However, they still need some tactical actions to be implemented in due course if students' satisfactions are envisaged in the future.

Table 6: University Infrastructure / Facilities Satisfaction Index

Faculty	Library	Computer laboratory	Classroom	Sport	Canteen
AC	3.82	3.74	3.78	3.41	3.52
AS	3.99	3.85	3.82	3.45	3.61
BM	3.81	3.63	3.59	3.34	3.30
CS	3.96	3.88	3.79	3.40	3.62
EC	3.92	3.87	3.77	3.46	3.49
OM	3.86	3.78	3.78	3.34	3.38
AM	3.55	3.40	3.15	2.85	2.85
Total	3.87	3.76	3.73	3.38	3.45

In terms of students' group, those from the Applied Sciences and Accountancy Faculties have higher satisfaction rates on infrastructural facilities. This indicates that these groups are highly satisfied over the university services as opposed to the Administrative Science students as shown in Tables 6 and 7.

Since early year 2007, UiTM Pahang has undertaken some strategic moves to address these physical assets issues. The action includes additional car park, canteen management, sports and transport facilities. These moves indicate the top management's desires to provide world class academic culture in the best interest of the students and the staff as a whole.

Table 7: Satisfaction Index on the University Infrastructure and Facilities

Faculty	Hostel	Transport	Medical clinic	Car Park	Security	Total
AC	3.73	3.51	3.80	3.29	3.84	3.65
AS	3.94	3.64	4.00	3.33	3.74	3.74
BM	3.51	3.48	3.74	3.18	3.69	3.53
CS	3.85	3.60	3.77	3.16	3.47	3.58
EC	3.71	3.56	3.81	3.14	3.61	3.64
OM	3.71	3.47	3.75	3.13	3.76	3.60
AM	3.10	3.10	3.38	2.80	3.85	3.17
Total	3.71	3.52	3.81	3.21	3.71	3.61

Teaching Staff Competency

The findings indicate that the graduates have very high rating for the competencies of the teaching staff as shown in Tables 8 and 9. The highly satisfied groups are the Applied Sciences (4.28), Accountancy (4.19) and Business Management (3.99). The results show that these groups have achieved higher index than the average (4.13). It is also indicated that Applied Sciences and Accountancy Faculties have consistently earned above average rate in all the tested items as indicated in the same tables. This truly manifests that teaching staff from these faculties have unanimously earned the right competence required for the given programme.

However, there are a number of faculties whose teaching staff needs some improvement and meet the average index as indicated in Tables 8 and 9. The affected faculties include Information Technology & Quantitative Science (3.72), Civil Engineering (3.92), Office Management & Technology (3.93) and Administrative Sciences (3.90).

The same tables show the competency variables that include practical experience, human relations, teaching innovativeness and creativity, teaching and industry linkage, experience sharing, teaching deliveries, and communication skills. As these issues are complicated and diverse, the heads of the faculties concerned are to evaluate the competency of each academic staff to determine the strategic moves to be undertaken if relative core competency is desired. The most recent strategic moves are

to hire teaching staff with a cumulative grade point of 3.0 and above, hiring post graduates rather than bachelor's degree holders, and industrial attachment for lecturers.

Table 8: Satisfaction Index on the Teaching Staff

Faculty	Balanced of Theory & Practical Experience	Interaction with Students	Teaching Innovative & Creativity	Teaching & Industry Linkage Capability	Experience Sharing in Class
AC	4.16	4.15	4.02	4.03	4.03
AS	4.35	4.31	4.20	4.18	4.18
BM	4.07	4.11	3.97	4.01	3.99
CS	3.78	3.79	3.79	3.63	3.72
EC	3.99	4.07	3.96	3.92	3.92
OM	4.05	4.04	3.90	3.90	3.93
AM	4.10	4.10	3.95	3.65	3.90
Total	4.11	4.12	4.00	3.99	3.99

Table 9: Satisfaction Index on the Teaching Staff

Faculty	Presentation in Class	Qualification	B. Melayu Communication Skills	English Communication Skills	Total
AC	4.08	4.38	4.47	4.40	4.19
AS	4.18	4.37	4.47	4.29	4.28
BM	3.99	4.24	4.35	4.29	4.11
CS	3.72	4.03	4.22	3.95	3.86
EC	3.97	4.19	4.29	4.07	4.04
OM	3.96	4.21	4.33	4.25	4.06
AM	3.95	4.25	4.60	4.40	4.10
Total	4.02	4.27	4.38	4.26	4.13

Lecturer-Student Ratio (LS Ratio)

As per record, the lecturer student ratio of UiTM Pahang as at the year 2006 was 1:26 which means that there are twenty six (26) students for every lecturer. The average LS ratio of UiTM is 1:17. Comparatively, UiTM Shah Alam achieved an LS ratio of 1:10. This indicates that UiTM Pahang needs to hire more academic staff to meet the growing number of student population in line with its objective of 15,000 students by year 2015 and also at par with the UiTM LS ratio.

However, to achieve an average LS ratio of 1:17, additional funding is needed to subsidise the additional physical infrastructure, classroom furniture and fittings and operational costs from increased academic staff. With lower LS ratio, lecturers have more time for student monitoring activities and other academic excellence activities such as writings and publications.

Cost Recovery Performance

Table 10 shows the related funds inflows and outflows for the year 2006. For the sake of confidentiality, the figures are more or less adulterated to the least minimum. Findings indicate that UiTM Pahang has reasonable cost recovery performance where it spends an approximate of RM7,200 cost per student per year as opposed to the funding allocation of RM7,500. The outflows are mainly for teaching related items (53.24%), supplies and services (39.2%), students' related training (0.096%) and miscellaneous and students welfare (6.6%).

Basically, UiTM Pahang spends RM3,600 per semester per students or RM800 per month per student calculated based on 4.5 months per semester. Assuming that UiTM Pahang has to be self-sufficient, where no government subsidy is granted, a minimum fee of RM3,600 per semester per student is levied. This fee includes academic fees, library fees, hostel fees, sports, and car park charges. A slightly lower fee can be charged for non-science students. The charge is exclusive of food, inflation rate adjustment and calculated on average basis. UiTM Pahang could also exploit the use of other resources available by increasing the number of student enrolment if added inflows reserved are anticipated vis-a-vis its quality service.

Table 10: Inflows and Outflows

Outflows/Inflows	Percent	Value (RM)
Teaching & support related	53.24	18,868,200
Supplies and Services	39.2	13,905,400
Students' related training	0.96	339,400
Miscellaneous	6.6	2,324,900
Total	100	35,437,900
Outflow per student per year		7,200
Receipts		37,267,900
Inflow per student per year		7,500

However, passing this fee to the student requires the consideration of many vital factors that could not be put into figures such as institutional image, the obligation to all Bumiputra, especially the needy but deserving students, to becoming professionals at all sphere of academic endeavors and many more. A social obligation of UiTM is paramount to its people in leading the whole world.

UiTM Pahang has many more business portfolios that are targeted for greater heights of performance in the field of agriculture and academics which could be sourced of other discussions in the future.

Conclusion

Based on the above analysis, UiTM Pahang produces graduates with employable skills manifested by its ranking: master (87.5%), bachelor (80.9%) and diploma (19.9%). It is concluded that the higher the level of educational hierarchy a graduate posseses the better the chance of employability. However, when measured based on programmes, it is concluded that the AM is top on the list, followed by AC , OM , CS , BM , AS and EC. It can be further concluded that most of the programmes have lower graduate employability because the majority of the graduates pursue to higher level of education as shown in Table 11.

In terms of graduate satisfaction level on the university academic evaluation system, the graduates are highly satisfied as shown in Table 11 where AM (4.12), AS (4.10), AC (4.03), BM (4.00), EC (3.95), OM

(3.86) and CS (3.76). This is a manifestation that graduates are happy with their academic performance and evaluation system adopted by UiTM Pahang.

Table 11: Summary of Survey Results

Faculty	Employ-ability of Graduates (Percent)	Aca-demic Progrm ames	Exami-nation Grad-ing System	Coun-seling Ser-vices	Infra-structure & Facili-ties	Teaching Staff Com-petency
AC	41.5	3.97	4.03	3.58	3.65	4.19
AS	12.7	4.12	4.10	3.71	3.74	4.28
BM	23.1	3.82	4.00	3.63	3.53	4.11
CS–	24.2	3.65	3.76	3.31	3.58	3.86
EC	9.3	3.83	3.95	3.48	3.64	4.04
OM	26.2	3.97	3.86	3.75	3.60	4.06
AM	100	4.04	4.12	3.21	3.17	4.10
Total	-	3.93	3.98	3.61	3.61	4.13

On counseling services, the OM graduates (3.75) have the highest satisfaction level and followed by AS (3.71), BM (3.63), AC (3.58), EC (3.48), CS (3.31) and AM (3.21). It can be concluded that the counseling services offered by UiTM Pahang is above the satisfactory level but as services are intangible, then, a standard level of service are to be maintained at all times to achieve uniformity.

Similarly, the infrastructure and facilities provided by UiTM Pahang have more or less similar ratings as to that of the counseling services of 3.61 as shown in Table 11. This shows that there are needs for continuous improvement so that service recipients are highly satisfied.

On matters relating to teaching staff competency, it can be concluded that the AS (4.28) and the accountancy (4.19) faculties have above average teaching staff competency as indicated in Table 11. Faculties are below the average of 4.13 are BM (4.11), CS (3.86), EC (4.04), OM (4.06) and AM (4.10). As all lecturers are highly competent to discharge their duties and responsibilities, there are still avenues for improvement in delivering daily academic routines to provide higher level of student satisfaction.

In terms of LS ratio, UiTM Pahang (1:26) is slightly higher that the

UiTM average LS ratio of 1:17. Hiring additional academic teaching staff is the ultimate move to reduce this ratio to the average as students numbers are beyond the university control.

With regards to cost recovery performance, UiTM Pahang spends RM7,200 per student per year as against inflow of RM7,500 per student per year. It can be concluded that there is enough funds available to subsidise yearly expenditure but the university does not have reserved funding available for immediate capital expenditure projects.

With sufficient funding available, competent teaching staff, good infrastructure and facilities and support services, UiTM Pahang is envisage to continuously supply high calibre Bumiputra graduates into all government and private sectors, which is vital in sustaining the economic, social, and political stability of the country and the global at large.

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