

Enhancing Graduates' Employability Skills: A Malaysian Case

Name: Rafikul Islam

Institution: Kulliyah of Economics and Management Sciences, International Islamic University Malaysia, 53100 Gombak, Malaysia.

Title: Professor, Dr.

E-mail: rislam@iium.edu.my

Name: Mohamad Shukri Abdul Hamid

Institution: School of Quantitative Sciences, Universiti Utara Malaysia, 06010 Sintok, Kedah, Malaysia.

Title: Mr.

E-mail: mohdshukri@uum.edu.my

Name: Noor Hazilah Abd Manaf

Institution: Kulliyah of Economics and Management Sciences, International Islamic University Malaysia, 53100 Gombak, Malaysia.

Title: Assoc. Professor, Dr.

E-mail: hazilah@iium.edu.my

ABSTRACT

In an era of globalization and competitiveness, employers are looking for versatile graduates who are able to drive their organizations to compete successfully in the market. Now-a-days, obtaining a good degree is no longer sufficient for getting a job. Graduates should equip themselves, not only with technical skills, but more importantly with soft skills. The main objectives of this study are to identify Malaysian graduates' employability skills, to identify the priority of each skill and to highlight the gap between the importance of graduates' employability skills to employers and their satisfaction on that skill. In general, the results of the gap analysis showed that employers perceive graduates' employability skills performance as being lower than the importance assigned to those skills. The widest gap was found in communication skills, especially the skill of the English language usage. Using the Importance-Performance Analysis (IPA), 13 attributes fell into the improvement quadrant (concentrated here). This means that improvement efforts and corrective actions must be taken to improve employers' overall satisfaction.

Keywords: *Employability skills, Importance-Performance Analysis (IPA), Higher education in Malaysia*

INTRODUCTION

The rapid growth in the number of Higher Education Institutions (HEI) in Malaysia is aligned with the government's agenda to prepare a skilled and professional workforce, to achieve the status of a developed country by the year 2020. Presently, there are 20 fully-fledged public universities and 48 private universities in Malaysia. In a challenging economy, the role of HEI is not only to produce graduates with specific areas of specialization, but more importantly, to develop graduate employability skills that are most demanding in the 21st Century (Lee and Tan, 2003).

If the increasing number of graduates is not aligned with the number of jobs created, this could contribute to a serious unemployment problem in the country. According to Wong (2011), the number of jobless graduates in Malaysia (in 2009) was as many as 60,000. Several factors have been identified that have led to an increasing number of unemployed graduates. Firstly, the supply of graduates from HEIs exceeded the number of job vacancies in the workforce market. This situation created an imbalance between workforce supply and demand. As a result, some graduate employees only managed to get jobs that were below their qualifications (Salina, Nurazariah, Noraina Mazuin & Jagatheesan, 2011) and others fail to find work at all. Another factor that contributes to the unemployment of graduates is their skills and abilities competency. Employers complain about the lack of various graduate's skills. According to Rahmah, Ishak, and Wei Sieng (2011), graduates are found to be lacking in employability skills, and have low performance in the work place. Zabeda (2009) revealed that job vacancies for graduates do exist; but employers found that candidates are not equipped with the relevant skills and knowledge needed by their companies. This finding was also supported by Shukran, Hariyati Shariman, Saodah, and Noor Azlan (2006), who revealed that students lack the relevant skills, abilities, knowledge, and other characteristics, required by employers. Salina *et al.* (2011) revealed that as many as 30,000 graduates only managed to get casual or temporary work that was below their qualifications, mainly because of their lack of English.

This study attempts to identify a list of employability skills, examine the importance of these employability skills to an employer, their satisfaction with these skills, and the gap between employers' importance and satisfaction with a skill.

LITERATURE REVIEW

Over the past few decades, employers' needs and job requirements in the work environment have changed dramatically. In a challenging economic condition, new graduates are not only required to possess knowledge of an academic subject, but they must also be equipped with the relevant soft skills that will enhance their competency to join the job market (Zubaidah & Rugayah, 2008). A study to determine the types of graduates' soft skills required by employers is essential, in order to provide details about the relevancy of soft skill development programmes to the current employment market. Most studies found in literature, showed that the highest ranking of employability skills from an employer's perspective was communication skills (Azian & Mun, 2011; Rahmah *et al.*, 2011; Rasul, Ismail, Rajuddin & Rauf, 2010; Zubaidah & Rugayah, 2008). This was supported by Billing (2003), who revealed that the importance of communication skills amongst graduates also existed in the United Kingdom, the United States, New Zealand, Australia, and South Africa.

According to Azian and Mun (2011), a survey conducted by the Malaysian Employers Federation showed that 68% of employers named communication skills as being the most needed skill in a job application. This was followed by work experience (67%), interpersonal skills (56.2%), passion and commitment (55.7%), being a team player (47.8%), having the right degree (46.3%), good academic results (37.9%), a desire to learn (37.9%), can work well under pressure (34.0%), and is able to take the initiative (32.5%).

Meanwhile, Zubaidah and Rugayah (2008) examined the attributes of non-technical skills required by foreign and local companies in Malaysia's manufacturing industries. They identified seven important non-technical skills from an employer's perspective, namely communication, creative thinking and problem-

solving, information management, leadership and organization, group effectiveness and teamwork, work-related disposition and attitudes, and personal traits and self-management. Under the communication skill's category, they found that English was the most important language used by both local and foreign companies. However, Bahasa Melayu was only found to be important within local companies. Meanwhile, in the creative thinking and problem solving category, both local and foreign companies placed importance on problem-solving, the ability to prioritize assignments and tasks, critical thinking through observation, and effective questioning. Furthermore, on computer skills, both foreign and local companies were looking for graduates that were able to analyse information, in order to make better decisions. They also found that teamwork commitment, group cooperation, and leading and managing groups, were most important. Foreign and local companies also placed significant importance on job commitment.

Munir, Aniswal, and Haslina (2005) listed the skills and abilities required by graduates in the arts and related fields (i.e., Humanities, Social Sciences, Communication, Management, and Information Technology) by Malaysian employers. Their study showed that the order of the list reflected the importance of each attribute from the surveyed employer's point of view. This indicates that the ranking of competencies of potential graduates, as needed by employers, is as follows: management skills, personal qualities, communication skills, interpersonal skills, thinking skills, and ICT skills. However, they also found that the ranking of competency skills and abilities of graduates varied according to the type of firm. For example, industry related firms placed high weightage on personal qualities (i.e., helpful, knowledgeable, skilful, obedient, and compliant); and service-related firms placed considerable emphasis on management skills (i.e., able to delegate work, positive expectations, and comments towards others' potential).

Furthermore, Zulaikha, Ariffin, Ezanee, and Fazli (2005) examined employers' perceptions of Bachelor of Information Technology alumni, from the Faculty of Information Technology, Universiti Utara Malaysia. From their literature review, they devised a competency list consisting of 56 elements, concentrating on

various performance and soft skills. In their study, they identified graduate competency gaps, based on the differences between employers' rated importance levels and competency levels. They found that the top three gaps were non-verbal interpersonal skills, verbal presentation skills, and written interpersonal skills. They also realized that most of the elements with wide gaps were the soft skills related to effective communication and teamwork.

Salina *et al.*, (2011) applied Importance-Performance Analysis (IPA) to identify the gap between importance of employability skills and performance of business school graduates, on the skills used in their post graduate employment. They found that factors such as soft skills and personality development should be concentrate on for improvement in the future. Meanwhile, factors such as explicit knowledge, hard skills, intellectual abilities, conscientiousness, and emotional stability, needed to be maintained with current resource allocations.

In another study, Rasul *et al.*, (2010) developed an employability skills assessment tool, for technical graduates in the manufacturing industry, using the Kepner-Tregeo (K-T) method. They found that the highest ranking of employability skills was interpersonal skills, which includes working in a team, negotiation, and working with cultural diversity. These are followed by employability skills, such as thinking, resource skills, personal qualities/values, system and technology skills, basic skills, and information skills. Using this tool, graduate employability levels can be measured before joining a workforce.

According to Shukran *et al.*, (2006) employers' expectations of graduate's skills and abilities go beyond the mastery of academic subjects. Other factors exist, outside of the academic curriculum, which graduates need to prepare before they join the employment market. These include involvement in co-curricular activities, training and development programmes, and other activities that can enhance a graduates'

competence. Also, apart from providing students with technical knowledge, universities should also engage in an effort to equip students with soft skills that are required by employers.

IMPORTANCE-PERFORMANCE ANALYSIS

Importance-Performance Analysis (IPA) was introduced by Martilla and James in the 1970s to improve marketing strategy. Later, it was widely used to understand customer satisfaction and service quality (Ainin & Hisham, 2008; Siniscalchi, Beale & Fortuna, 2008). It has been used in various areas of research, including information systems (Ainin & Hisham, 2008), education (Siniscalchi *et al.*, 2008), and sports (Rial, Rial, Varela & Real, 2008). As an evaluation tool, IPA graphically depicts the comparison of importance and performance of service quality attributes. The basic concept of the IPA method is to examine the importance of an attribute, and customer's satisfaction with that attribute. According to Rial *et al.*, (2008) the main advantage of the IPA technique, is its ease of application. There are three steps in IPA, which are as follows (Hendricks, Schneider & Budruk, 2004):

- i) Identify a list of attributes to evaluate
- ii) Rate these attributes in terms of how important they are to customers and how well an organization performs on them
- iii) Plot the importance-performance rating on a two dimensional grid

Graphically, importance and performance data are plotted on a pair of coordinate axes; where “importance” is displayed along the y-axis and “performance” is displayed along the x-axis. Then, the data is mapped into four quadrants (Martilla & James, 1977), as shown in Figure 1. Each quadrant shows the rating of importance and performance of an element of the service assigned by customers (Rial *et al.*, 2008).

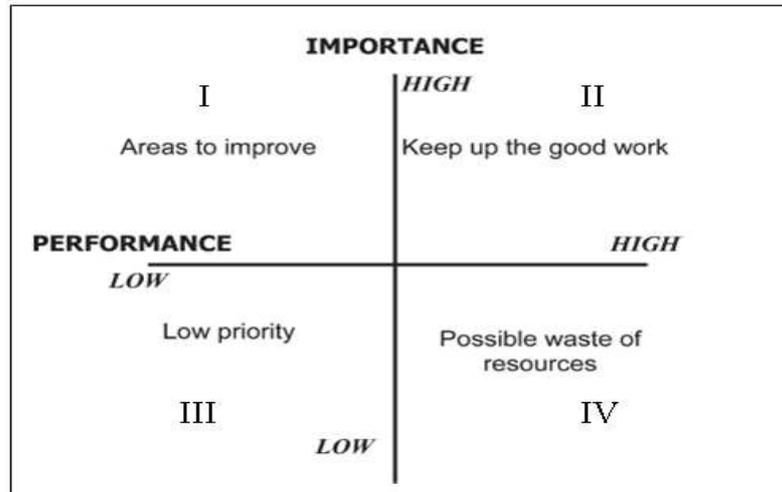


Figure 1 Importance-Performance Map
 (Source: Martilla & James, 1977)

Quadrant I: Represents the attributes that are perceived to be important by the respondents, but whose performance levels are low. This suggests that improvement efforts should be given top priority and corrective action must be taken in order to improve overall satisfaction.

Quadrant II: Represents the attributes that are perceived by the users as high, both in importance and performance. This indicates that the performance of the existing system is already good and should continue.

Quadrant III: Represents the attributes that are perceived low in performance, and at the same time, these attributes are not perceived as important. Even if the performance of the organization is perceived as low, the management should not overly concentrate, since these attributes are not perceived as very important. Limited resources should be spent on these low priority attributes.

Quadrant IV: Represents the attributes that are perceived as low in importance, but high in performance. This indicates that the management should realize that the present effort on these attributes is unnecessary and might consider reallocating the resources elsewhere.

Importance-performance analysis helps organizations to identify the attributes that need to be concentrated on for improvement and the action that should be taken to minimize the gap between importance and performance. Therefore, the IPA will be used to identify the gap between importance and performance of graduates' employability skills. According to Martilla and James (1977), "importance" represents customers' wants or desires and "performance" represents customers' perception of the service received. Customers have an importance level of service, or in other words, the level of service that they expect to receive. In this study, the gap between importance and performance of graduates' employability skills was studied. Respondents were asked to respond on a scale of one to five, their degree of desirability - from very unimportant to very important, and their degree of satisfaction - from very unsatisfactory to very satisfactory. Mean and standard deviation scores for each of item were calculated for importance and satisfaction levels, and then the gaps were calculated. The mean importance and satisfaction scores were compared for all attributes, so as to identify the gap scores.

METHODOLOGY

Generating a list of attributes is an important part of the IPA procedure. For the purpose of this study, a list of graduate employability skills was developed by reviewing previous studies by other researchers. This procedure generated a list of 52 graduate employability skill attributes. These attributes focused on computational skills, management skills, critical thinking skills, enterprise and entrepreneurial skills, interpersonal skills, communication skills, and thinking skills. This list was reviewed by five Malaysian public universities. Respondents were asked to respond to an evaluation form of the statements, in term of understanding, missing data, length of the questionnaire, and redundant and ambiguous questions. The feedback from the experts were examined for improvement, and decisions were made to maintain, modify or exclude items from the final questionnaire draft of the. Feedback from respondents resulted in a final list of 49 attributes.

The focus of this study is to identify and evaluate the perception of employers towards graduates' employability skills who have completed their degree in business-related fields (i.e., Business, Economics, Accounting, Finance, Banking, etc.) from schools/faculties of business in Malaysian public universities. A random sampling method was used for data gathering. Targeted respondents came from organizations listed in the Federation of Malaysian Manufacturers (FMM) and government and semi-government agencies. A covering letter explained the objectives and significance of the study, and attached to a survey questionnaire, was sent to the Human Resources Manager/ Executive or General Manager of the company. The covering letter assured that all responses would be kept confidential. Furthermore, instructions within the covering letter requested that questionnaires should be returned in the self address stamped envelope provided, within three weeks. Of the 942 questionnaires mailed, 233 questionnaires were found to be usable for further analysis; giving us a 25% response rate.

RESULTS

The mean scores, standard deviations, and Cronbach's alpha, of the importance and satisfaction of graduates' employability skills perceived by employers, are provided in Table 1. The mean scores of the attributes ranged from 3.07 to 4.57 for importance, and 2.90 to 4.03 for satisfaction. Meanwhile, the standard deviations of all attributes were less than unity. The Cronbach's alpha scores for both performance and satisfaction were greater than 0.7.

Table 1: Importance of graduates' employability skills and satisfaction level on those skills

Variables	Means (s.d.)		
	Importance ($\alpha = 0.898$)	Satisfaction ($\alpha = 0.909$)	Difference (S - I)
Interpersonal Skills			
1.Ability to work and contribute to the group/team	4.57 (0.61)	3.64 (0.74)	-0.93
2.Ability to understand other peoples' problems, emotions, concerns, and feelings, related to work	4.31 (0.79)	3.42 (0.78)	-0.89
3.Ability to negotiate with subordinates or colleagues	4.39 (0.69)	3.46 (0.78)	-0.93
4.Ability to encourage and motivate others	4.35 (0.71)	3.27 (0.85)	-1.08
5.Ability to network	4.36 (0.71)	3.53 (0.79)	-0.83
6.Ability to work in a diverse environment (ethnic group, religion, and gender)	4.38 (0.67)	3.46 (0.77)	-0.92
7.Ability to deal with superiors	4.48 (0.65)	3.56 (0.76)	-0.92
8.Ability to manage others	4.32 (0.71)	3.30 (0.80)	-1.02

Computing skills	Importance ($\alpha = 0.854$)	Satisfaction ($\alpha = 0.901$)	Difference (S - I)
9. Level of keyboard competency	4.33 (0.73)	3.89 (0.72)	-0.44
10. Ability to use word processing software	4.28 (0.64)	3.85 (0.76)	-0.43
11. Ability to use statistical software packages	3.94 (0.83)	3.45 (0.79)	-0.49
12. Ability to deliver effective presentations using computer software	4.33 (0.62)	3.51 (0.75)	-0.82
13. Ability to use database programmes for data management	4.06 (0.78)	3.42 (0.76)	-0.64
14. Ability to use spreadsheets for data analysis	4.16 (0.69)	3.48 (0.73)	-0.68
15. Ability to search and manage the relevant information from various sources	4.30 (0.65)	3.39 (0.83)	-0.91
Enterprise and entrepreneurial skills	Importance ($\alpha = 0.912$)	Satisfaction ($\alpha = 0.914$)	Difference (S - I)
16. Ability to explore and identify business opportunities	3.97 (0.90)	3.16 (0.81)	-0.81
17. Ability to develop a business plan	3.91 (0.88)	3.12 (0.92)	-0.79
18. Ability to develop business opportunities	3.87 (0.86)	3.07 (0.88)	-0.80
19. Ability to capitalize on business opportunities	3.85 (0.88)	3.06 (0.89)	-0.79
20. Ability to be self-employed	3.75 (0.99)	3.07 (0.91)	-0.68
Communication skills	Importance ($\alpha = 0.840$)	Satisfaction ($\alpha = 0.951$)	Difference (S - I)
21. Ability to listen attentively and give appropriate feedback	4.56 (0.58)	3.49 (0.78)	-1.07
22. Ability to negotiate and reach consensus	4.47 (0.58)	3.42 (0.78)	-1.05
23. Ability to write effectively in Bahasa Malaysia	4.15 (0.92)	3.86 (0.76)	-0.29
24. Ability to write effectively in English	4.55 (0.58)	3.26 (0.98)	-1.29
25. Ability to write effectively in other languages	3.18 (0.99)	2.90 (0.91)	-0.28
26. Ability to speak fluently in Bahasa Malaysia	4.19 (0.88)	4.03 (0.80)	-0.16
27. Ability to speak fluently in English	4.54 (0.57)	3.32 (0.99)	-1.22
28. Ability to speak fluently in other languages	3.07 (0.99)	2.95 (0.90)	-0.12
29. Ability to communicate formally and informally with people from different backgrounds	4.41 (0.61)	3.46 (0.80)	-0.95
30. Ability to present a case/project effectively	4.35 (0.61)	3.32 (0.83)	-1.03
31. Ability to express own ideas clearly, effectively, and with confidence	4.51 (0.55)	3.34 (0.89)	-1.17
Thinking skills	Importance ($\alpha = 0.904$)	Satisfaction ($\alpha = 0.951$)	Difference (S - I)
32. Ability to recognize and analyse problems	4.53 (0.55)	3.41 (0.78)	-1.12
33. Ability to explain, analyse, and evaluate data and information	4.47 (0.59)	3.35 (0.86)	-1.12
34. Ability to generate creative ideas	4.46 (0.63)	3.33 (0.82)	-1.13
35. Ability to think critically	4.52 (0.59)	3.29 (0.83)	-1.23
36. Ability to learn and apply new knowledge and skills	4.50 (0.56)	3.42 (0.84)	-1.08
37. Ability to understand statistical and numerical data	4.11 (0.72)	3.37 (0.79)	-0.74
38. Ability to think out-of-the-box	4.37 (0.65)	3.15 (0.93)	-1.22
39. Ability to make logical conclusions by analysing relevant data	4.35 (0.63)	3.26 (0.85)	-1.09

Management skills	Importance ($\alpha = 0.939$)	Satisfaction ($\alpha = 0.957$)	Difference (S - I)
40. Ability to lead a project	4.43 (0.65)	3.52 (0.83)	-0.91
41. Ability to supervise group members	4.47 (0.63)	3.55 (0.81)	-0.92
42. Ability to optimize the use of resources	4.53 (0.59)	3.53 (0.79)	-1.00
43. Good time management	4.67 (0.51)	3.54 (0.87)	-1.13
44. Ability to plan, coordinate, and organize a project	4.61(0.56)	3.54 (0.89)	-1.07
45. Ability to monitor group members to achieve targets	4.49 (0.61)	3.46 (0.86)	-1.03
46. Ability to plan and implement an action plan	4.54 (0.57)	3.52 (0.81)	-1.02
47. Ability to work under pressure	4.54 (0.60)	3.52 (0.93)	-1.02
48. Ability to work independently	4.63 (0.55)	3.55 (0.91)	-1.08
49. Ability to deliver expected results	4.63 (0.55)	3.58 (0.84)	-1.05
Mean	4.30	3.41	

The results of this study reveal that the employers were satisfied with the graduates' employability skills; as indicated by their mean scores (see Table 1). Employers were particularly satisfied with the following attributes: level of keyboard competency, ability to use word processing software, ability to write in Bahasa Malaysia, and the ability to speak in Bahasa Malaysia. In contrast, respondents were least satisfied with the ability to encourage and motivate others, the ability to explore and identify business opportunities, ability to write effectively and speak fluently in English, and the ability to make logical conclusions.

Table 1 shows that the employers' importance scores were greater than their satisfaction scores for graduates (negative value for differences in mean). Attributes with the biggest gaps between means were the ability to write effectively and speak fluently in English. This implies that universities should improve graduates' ability to write and speak in English, in order to prepare them for the job market. According to Melissa Norman (managing director of Kelly Services (M) Sdn Bhd), an average of six out of ten Malaysian graduates cannot communicate effectively during interviews. Consequently, they cannot explain their knowledge effectively during an interview, due to a poor command of English. In addition, the surveys conducted by the Federation of Malaysian Manufacturers (FMM) on ICT workers in 2004, also found that the majority of employees were poor in English (Hii, 2007). However, the items with the

lowest gap scores were the ability to use word processing software, the ability to be self-employed, the ability to write effectively and speak fluently in Bahasa Malaysia, and the ability to speak fluently in other languages.

In order to validate the results of this gap analysis, a paired-sample T-test was performed between the means of importance and satisfaction of graduates' employability skills. As shown in Table 2, the biggest employability skills gap is in thinking skills and the smallest gap is in computing skills. Overall, all gaps between importance and satisfaction on skills are statistically significant ($p < 0.05$), and thus, confirms that employers are not satisfied with the performance of graduates' employability skills.

Table 2: Paired-sample T-test for the means of importance and satisfaction of employability skills

Variables	Mean Importance	Mean Satisfaction	T	Significance
Interpersonal Skills	4.3976	3.4318	18.249	0.000*
Computing Skills	4.2136	3.5782	13.976	0.000*
Enterprise and Entrepreneurial Skills	3.8636	3.0583	12.455	0.000*
Communication Skills	4.1085	3.3824	16.612	0.000*
Thinking Skills	4.4197	3.2986	18.709	0.000*
Management Skills	4.5551	3.5145	18.727	0.000*

Note: *Significant at the 0.05 level

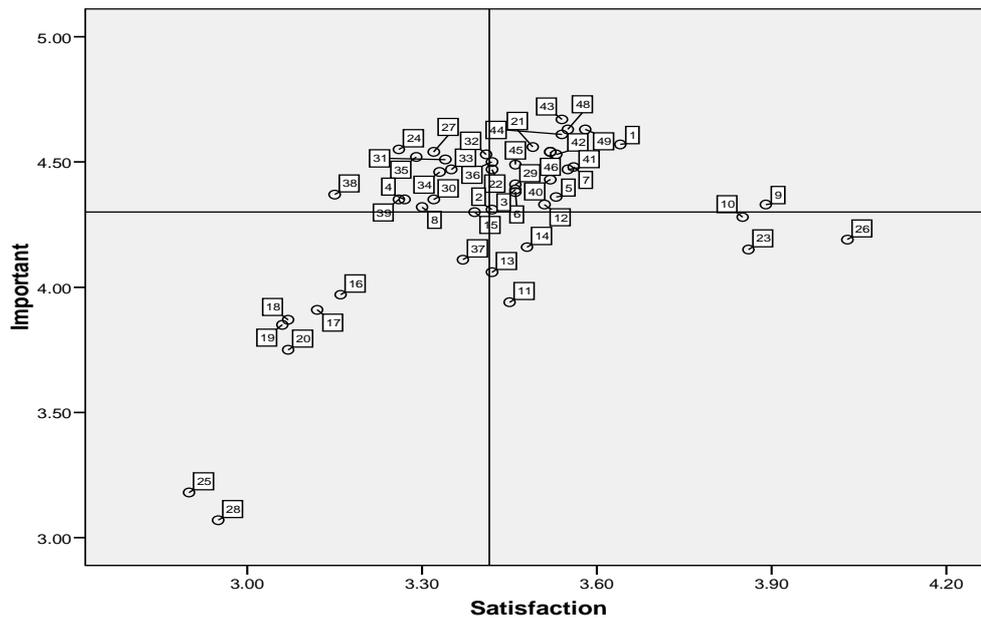


Figure 2: Map of employability skill attributes

Based on the gap analysis results, an IPA map was constructed, as shown in Figure 2. Referring to Figure 2, the X-axis shows the mean levels for satisfaction and the Y-axis shows the mean levels for importance. The figure also shows that most of the attributes fell into the upper-right quadrant (i.e., keep up the good work), suggesting that the importance and satisfaction of these attributes to employers are high. Therefore, all of these activities and resources should be maintained. In contrast, 13 attributes fell into the upper-left quadrant (i.e., concentrate here), which mean that these attributes are perceived as important by employers, but their satisfaction levels are low. This suggests that improvement efforts and corrective actions must be taken, in order to improve the overall satisfaction of these 13 attributes. These attributes are:

- i) The ability to encourage and motivate others
- ii) The ability to manage others
- iii) The ability to search for and manage relevant information from various resources
- iv) The ability to write effectively in English
- v) The ability to speak fluently in English

- vi) The ability to present a project effectively
- vii) The ability to express own ideas clearly, effectively, and with confidence;
- viii) The ability to recognize and analyse problems
- ix) The ability to explain, analyse, and evaluate data/information
- x) The ability to generate creative ideas
- xi) The ability to think critically
- xii) The ability to think out-of-the-box, and
- xiii) The ability to make logical conclusions by analysing relevant data.

It was also noted, that eight attributes received low scores for both importance and performance, which indicates that these attributes possess a low priority and are not perceived as important. Hence, universities may not overly concentrate on these attributes. These attributes are:

- i. The ability to explore and identify business opportunities
- ii. The ability to develop a business plan
- iii. The ability to develop business opportunities
- iv. The ability to capitalize on business opportunities
- v. The ability to be self-employed
- vi. The ability to write effectively in other languages
- vii. The ability to speak fluently in other languages, and
- viii. The ability to understand statistical and numerical data.

Lastly, six attributes received low in importance but in contrast the satisfaction levels of the employers on that attributes are high. Since the employers' satisfaction on these attributes is high, and not so important them, universities should restructure their resources and activities towards other attributes that give a significant impact on graduates' employability skills development.

CONCLUSIONS

Importance Performance Analysis (IPA) is an effective evaluation tool in identifying the gap between the importance of a service and the performance of that service to a customer. Data is mapped in four quadrants, namely 'concentrate here', 'keep up the good work', 'low priority', and 'possible overkill'. IPA can identify areas of concern and thus help to close the gap between the importance and performance of attributes. The attributes that fell into the 'concentrate here' quadrant, should be given priority for improvement. This is because these attributes are perceived as very important to the customer, but their organizational performance is low.

In this study, the importance and performance attributes of graduate employability skills were examined amongst employees in Malaysia. The key results show that employees had a lower mean data of all performance attributes, rather than importance attributes, and most notably, the ability to write effectively and speak fluently in English and the ability to encourage and motivate others. Furthermore, 13 attributes fell into the 'concentrate here' quadrant, which means that further investigation should be made for their improvement.

The results of this study can help universities to improve their curriculums, in accordance with current market requirements. Furthermore, universities should conduct a study to determine the level of graduates' competency on employability skills. Therefore, this information can assist them to re-allocate their resources and implement improvement programmes, such as facilities development, financial re-allocation, and curriculum development, in order to improve graduate's employability skills.

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