Do Business Graduates’ Attributes Fulfill Industry Requirements and Expectations?

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Abstract: Employers complain that graduates from Higher Education Institutions do not meet their expectations in today’s volatile economic environment and urge them to produce employable graduates who are able to compete and contribute to the current market. This study examines the perceived gap between important dimensions of graduate attributes and the actual performance of these graduates once employed. The study was carried out in two phases, namely Phase 1 which involved a focus group session and Phase 2 which focused on establishing a questionnaire appropriate for the study across a diverse range of industries. The questionnaires were distributed to managers selected from a list provided by the Higher Education Institution Alumni Centre. Graduates’ attributes were analyzed in terms of their knowledge, skills, abilities and personality. The results of this study indicate that managers attach different weightings to different aspects of the graduates’ performance and that the Higher Education Institution should target the improvement of soft skills and the development of specific personality components such as openness and extroversion personalities when developing their curriculum. The study highlights the practicality of importance-performance analysis as a means of assessing and directing ongoing human capital development efforts within the higher education sector. The use of importance-performance analysis to evaluate the managers’ perceptions of graduates can identify how graduates are performing and specific problem areas and facilitate improvement in curriculum design for their Higher Education Institution.

Key words: Human capital, Higher Education Institutions (HEIs), Important-Performance Analysis (IPA), Curriculum Development, Graduate Employability

INTRODUCTION

In today’s highly competitive job market, employers are seeking those who are both highly skilled and have the appropriate academic qualifications to fill positions in their organizations. However, it has been one of the nation’s major concerns in recent years that many graduates do not have the right combination of skills and personal attributes required by the employers, even though some may possess excellent academic qualifications. Hence, they are unable to secure employment which subsequently contributes to an alarming number of unemployed graduates. Based on a Graduate Tracer Study in 2006, 30.7% of graduates remained unemployed six months after their convocation (Khaled, 2009).

Much effort has been expended by industries, the government, universities and colleges, to find solutions to this problem. Industries have accepted undergraduates to undertake internship programs or industrial training at their respective organizations. These are to be completed within a specified period with the general objective of providing relevant hands-on or practical experiences for the undergraduates. Most importantly, through feedback on interns or trainees by the host organizations, corrective actions can be identified by the universities and colleges so that future trainees are better prepared for the employment market.

Graduate Employability:

Employability of graduates is a key performance indicator for Higher Education Institutions (HEIs) (Morley, 2001). In order to compete in the employment market, HEIs are urged to ensure that they are able to produce employable graduates that meet the needs of the industry (Moreau and Leathwood, 2006; Harvey, 2000). Therefore, many HEIs have attempted to embed skills into the curriculum (Atlay and Harris, 2000; Chapple and Tolley, 2000). Meanwhile, Hillage and Pollard (1998) stated that employability of the graduates depended on the graduates’ knowledge, skills and aptitudes.
Nowadays, employers are concerned about graduates’ skills, where these skills are more important in the recruitment process than the graduates’ degree performances (Harvey, 2000). Basically, employers want a graduate who is equipped with interactive, personal (Harvey, 2000) and generic skills (Hager et al., 2002). This finding has also been supported by Purcell et al. (2002) who have revealed that for some employers, a degree may now not represent anything more than a minimum requirement, in addition to other evidence of suitability.

Nicholson and Cushman (2000) found a difference in perception between industry participants and educators when ranking attributes for success in the retailing field. They concluded that HEIs need to be careful not to dwell on cognitive skills at the expense of affective skills such as ‘leadership’ and ‘decision making’ which may be more important for long term success.

Traut et al. (1993) explained that there is an “expectation gap” between industry needs and academic preparation. HEIs must study together to close this gap. HEIs need to place more emphasis on the integration of technologies, applications, data and business functions and less on traditional and formal system development in the case of IT.

According to Raybould and Sheedy (2005), for graduates to be attractive to employers, it is important that they are able to show evidence of having the ability to cope with uncertainty, to study under pressure, demonstrate action-planning skills, communication skills, IT skills, team study, display a readiness to explore and create opportunities, self confidence, self management skills and a willingness to learn.

The concept of KSAO (knowledge, skills, abilities and others) is used to look at the qualities of employees in performing their tasks (Noe et al., 2007). Knowledge refers to factual or procedural information that is necessary for successfully performing a task. Knowledge can be classified into tacit and explicit knowledge (Nonaka and Takeuchi, 1995; Polanyi, 1966). Polanyi (1966) described tacit knowledge as knowledge that is difficult to express and is usually transferred by demonstration rather than description, while explicit knowledge is easily written down and easier to communicate and transfer between individuals. Skills refer to an individual’s level of proficiency at performing a particular task or the capability to perform a job well. Skills can be divided into technical elements and behavioral elements (Noe et al., 2007). Technical elements measure “hard” technical skills while behavioral elements measure “soft” skills which include the attitudes and approaches appointees take to their study, such as the ability to collaborate on team projects. Ability, the opposite of skills, refers to a more general enduring capability that an individual possesses, such as analytical skills, statistical and quantitative skills. Ability can be classified into intellectual abilities and physical abilities.

For ‘others’ attributes, the discussion is focused on the Big Five Personality traits (Stephen and Coulter, 2009) or Global Factors Personality (Russell and Karol, 1994). They comprise openness, conscientiousness, extroversion, agreeableness and emotional stability. Openness is an appreciation of art, emotion, adventure, unusual ideas, curiosity and a variety of experiences. Conscientiousness is a tendency to show self-discipline, act dutifully and to aim for achievement. It is planned rather than spontaneous behavior. Extroversion is energy, positive emotions, urgency and the tendency to seek stimulation in the company of others. Agreeableness is a tendency to be compassionate and cooperative rather than suspicious and antagonistic towards others. Emotional stability is calm, focused, and self-confident in handling stress as opposed to insecure, anxious, and depressed.

Important-Performance Analysis (IPA):

The important-performance concept is based on multi-attribute models. This technique identifies the performance of an attribute that can be changed without affecting the importance of the attribute (Kitcharoen, 2004). According to Nale et al. (2000) a particular application of the technique starts with the identification of the attributes that are relevant to the choice of situation to be investigated.

This approach, also known as quadrant analysis, was introduced by Martilla and James (1977) and focuses on pinpointing those quality and service elements that; (a) are most important to customers and/or are likely to make the strongest contribution to overall customer satisfaction and loyalty and (b) are in need of improvement because customers’ evaluations of the company’s performance of these elements are relatively unfavorable (i.e., customer are dissatisfied and/or perceive that the company’s performance is in need of improvement). By using the central tendency measure such as mean, performance scores are ordered and classified into high or low categories and then by pairing these two sets of rankings, each attribute is placed into one of the four quadrants that are displayed graphically using an importance-performance matrix as in Figure 1 (Eskildsen and Kristensen, 2006). With little modification, IPA has been applied to a diverse range of contexts including hospital services (Yavas and Shemwell, 2001), tourism management (Wade and Eagles, 2003), education (Nale et al., 2000; O’Neill and Palmer, 2004) and service quality (Ennew et al., 1993; Ford et al., 1999).
Fig. 1: Importance-performance analysis

The IPA matrix consists of four quadrants; concentrate here, keep up the good work, low priority and possible overkill (O’Neill, M. and A. Palmer, 2004). The explanation for each quadrant is as below:

- **Keep up the good work (High importance, high performance).** These elements or attributes are assumed to be key drivers of consumer satisfaction/preference and the management’s job is to ensure that the organization continues to deliver/perform well in these areas.
- **Concentrate here (High importance, low performance).** These elements or attributes, also assumed to be key drivers of consumer satisfaction/preference, should be viewed as critical performance shortfalls and the management’s responsibility is to ensure that adequate resources are invested in improving performance in these areas. These areas are priorities for improvement.
- **Low priority (Low importance, low performance).** These elements or attributes are assumed to be relatively unimportant, to the extent that poor performance should not be given a great deal of priority or attention by management.
- **Possible overkill (Low importance, high performance).** These elements or attributes, also assumed to be relatively unimportant, should be viewed as an area of performance “overkill” and management may want to redirect resources from these elements to high-priority areas in need of improved performance.

**MATERIALS AND METHODS**

**Research design:**

The study was carried out in two phases. Phase 1 involved a focus group session of 10 members intended to extract information from managers through a brainstorming session. This session focused on the growing concern among employers about the relevance of the HEI curriculum in the face of developments in the real world today. In Phase 2, the dominant theme(s) emerging from the focus group study were used to establish a questionnaire appropriate for the study involving industries from across the board.

**Measures:**

The quality of a higher education curriculum of a HEI was evaluated based on the important-performance paradigm introduced by Martilla and James (1977). This paradigm was used to analyze KSAP dimensions, namely knowledge, skills, abilities and personality (Salina et al., 2010). The knowledge dimensions can be divided into two parts, namely explicit and tacit knowledge. The skills dimension can be divided into hard skills and soft skills. Meanwhile, abilities dimensions can be divided into intellectual abilities and physical abilities. Lastly, personality dimensions were divided into five parts, also known as big five personality which includes conscientiousness, agreeableness, emotional stability, openness and extroversion.

**Sample:**

The graduates in the study were students from Business Management Faculty of a HEI located in Peninsular Malaysia. The database used to establish the sampling frame was obtained from the records of the
HEI’s Alumni Centre. The records showed a total of 1065 addresses of managers or supervisors of these graduates.

**Instrument:**
The questionnaire was divided into two parts. Part A focused on demographic profiles of the respondents, while Part B measured the managers’ perceptions of important characteristics and the performance of the graduates. The questionnaires were distributed to the managers on the list provided by the HEI’s Alumni Centre. This exercise enabled the examination of the gap between the perceptions of managers of the important characteristics of graduates and their actual performance in terms of their knowledge, skills, abilities and personality.

**RESULTS AND DISCUSSION**

**Respondents’ profile:**
Four hundred and seventy nine (479) completed questionnaires were received representing a 45% response rate. The majority of the graduates were attached to service companies (64%) followed by manufacturing and construction industry with 19 and 8% respectively. Most of these graduates were employed by companies located in the central region of Peninsular Malaysia (54%). Half of the respondents of the survey were in top management positions (52%) and the majority of their executive staff was degree holders (40%).

**Validity of the Instrument:**
The survey questions used for this study conformed to the entire validity requirement. Content validity was verified during focus group discussion. The feedback and emergent issues raised by the focus group were translated into scale items in the questionnaire. The focus group had raised few major issues regarding graduates’ attributes such as soft and hard skills, communication skills and level of confidence. The development of the graduates’ attributes dimensions was based on focus groups suggestion and literature review. All necessary dimensions for graduates’ attributes are included. These dimensions are also confirmed as having content validity. Factor analysis was used to establish construct validity for all the scale items of the dimensions employed in this study (Kerlinger and Lee, 2000). All of the items in the dimensions are factor-analyzed and loaded in accordance with prior theoretical expectations. The results of the analysis of data revealed satisfactory outputs for further analysis.

**Reliability of the Instrument:**
The reliability of the data was verified using Cronbach alpha, where the closer the Cronbach alpha is to 1, the higher the internal consistency reliability (Sekaran, 2000). The alpha coefficients for this study are all above 0.70 and were concluded as being reliable (Hair et al., 2006; Nunnally, 1978). Table 1 presents the Cronbach alpha coefficient for each variable. In all cases, it was found that the reliability scores for performance were greater than the reliability scores for expectations, indicating that respondents found it relatively easier to assess the performance of graduates than to estimate their own expectations of the graduates under their supervision.

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Items</th>
<th>Importance</th>
<th>Actual performance</th>
<th>No. of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>Explicit knowledge</td>
<td>0.886</td>
<td>0.922</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Tacit knowledge</td>
<td>0.870</td>
<td>0.917</td>
<td>4</td>
</tr>
<tr>
<td>Skills</td>
<td>Hard skills</td>
<td>0.919</td>
<td>0.928</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Soft skills</td>
<td>0.838</td>
<td>0.909</td>
<td>5</td>
</tr>
<tr>
<td>Abilities</td>
<td>Intellectual abilities</td>
<td>0.906</td>
<td>0.919</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Physical abilities</td>
<td>0.889</td>
<td>0.908</td>
<td>4</td>
</tr>
<tr>
<td>Personality</td>
<td>Conscientiousness</td>
<td>0.914</td>
<td>0.932</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Agreeableness</td>
<td>0.822</td>
<td>0.902</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Emotional stability</td>
<td>0.879</td>
<td>0.914</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Openness</td>
<td>0.890</td>
<td>0.934</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Extraversion</td>
<td>0.867</td>
<td>0.914</td>
<td>4</td>
</tr>
</tbody>
</table>

**Importance-performance Analysis:**
Table 2 presents a summary of managers’ importance-performance means for 11 scale items. The negative gap value between importance-performance means reflect that the graduates’ performances have not met the managers’ perceptions of the importance attributes that should be possessed by these graduates. In other words,
graduates from the HEI were underperforming significantly in all attributes rated important by the supervisors and managers.

**Table 2: Summary of means**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Items</th>
<th>Importance</th>
<th>Performance</th>
<th>Gap (P-I)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>Explicit knowledge</td>
<td>6.297</td>
<td>5.284</td>
<td>-1.013</td>
</tr>
<tr>
<td></td>
<td>Tacit knowledge</td>
<td>6.237</td>
<td>5.241</td>
<td>-0.996</td>
</tr>
<tr>
<td>Skills</td>
<td>Hard skills</td>
<td>6.338</td>
<td>5.263</td>
<td>-1.075</td>
</tr>
<tr>
<td></td>
<td>Soft skills</td>
<td>6.275</td>
<td>5.229</td>
<td>-1.046</td>
</tr>
<tr>
<td>Abilities</td>
<td>Intellectual abilities</td>
<td>6.296</td>
<td>5.31</td>
<td>-0.986</td>
</tr>
<tr>
<td></td>
<td>Physical abilities</td>
<td>6.153</td>
<td>5.265</td>
<td>-0.888</td>
</tr>
<tr>
<td>Personality</td>
<td>Conscientiousness</td>
<td>6.266</td>
<td>5.267</td>
<td>-0.999</td>
</tr>
<tr>
<td></td>
<td>Agreeableness</td>
<td>6.154</td>
<td>5.155</td>
<td>-0.999</td>
</tr>
<tr>
<td></td>
<td>Emotional stability</td>
<td>6.285</td>
<td>5.284</td>
<td>-1.001</td>
</tr>
<tr>
<td></td>
<td>Openness</td>
<td>6.277</td>
<td>5.245</td>
<td>-1.032</td>
</tr>
<tr>
<td></td>
<td>Extroversion</td>
<td>6.312</td>
<td>5.21</td>
<td>-1.102</td>
</tr>
<tr>
<td>Overall</td>
<td></td>
<td>6.263</td>
<td>5.25</td>
<td></td>
</tr>
</tbody>
</table>

Note: (P-I) value is significant at p<0.05

The importance-performance map is presented in Figure 2. The data used to construct the importance-performance grid were the overall means of importance and performance for all scale items, 6.26 and 5.25 respectively.

**Fig. 2: Importance-performance map**

Note: (1) Explicit knowledge; (2) Tacit knowledge; (3) Hard skills; (4) Soft skills; (5) Intellectual abilities; (6) Physical abilities; (7) Conscientiousness; (8) Agreeableness; (9) Emotional stability; (10) Openness; (11) Extroversion

Three items fall into the “concentrate here” quadrants (high importance/low performance) which are extrovert personality, soft skills and openness personality. HEIs need to take immediate action on these human capital attributes. While five items were located in the quadrant “keep up the good work” (high importance/high performance), which are explicit knowledge, emotional stability personality, intellectual abilities, conscientiousness personality and hard skills. These five attributes are the strength attributes possessed by graduates from the HEI in the sample, which means that graduates produced by this institution possess good intellectual abilities, explicit knowledge, hard skills, emotional stability and conscientious personalities. The two attributes that fall in the “low priority” quadrant are in relation to tacit knowledge and agreeableness. This indicates that both these attributes do not require immediate resource allocation as they are performing at the level appropriate to the importance attached to them at the present time. However, the HEI should hold in reserve resources to cope with a possible change of importance attached to them due to future changes in the employment environment. Physical ability is the only attribute located in the “possible overkill” quadrant. This
requires the HEI to immediately remove resources allocated to developing this attribute and redeploy the “saved” resources to developing attributes located in the “concentrate here” quadrant.

Discussion:
This study has provided evidence of the usefulness of the IPA in designing curriculum development for the HEI. The outcome of the analysis provides impetus for enhancing the quality of the HEI’s curriculum and thereby making it relevant to the needs of the market and industries. The study highlights the practicality of the IPA as a means of assessing and directing ongoing human capital development efforts within the higher education sector. The use of the IPA in evaluating managers’ perceptions of graduates can identify how graduates are performing, identify specific problem areas and help target corresponding improvement efforts.

The study reveals the factors relevant to the managers’ perceptions of the graduates and their satisfaction level with the performance of the HEI’s graduates. The results of this study indicate that managers attach different weightings to different aspects of the graduates’ performance and, therefore, curriculum development efforts should be directed towards attributes that are expected of the graduates. This will allow for corrective actions which can improve perceived problem areas.

Conclusion:
As a conclusion, this study suggests that the HEI should target improvements or inclusions of soft skills and specific personality development components pertaining to openness and extroversion in its Business Management curriculum. The HEI should reduce its resources to enhance physical abilities in the curriculum and maintain a low level of resource deployment to develop tacit knowledge and a sense of agreeableness in the manner in which the curriculum is delivered.

Clearly, from the above discussion, this study contributes new findings to the field of graduate employability and HEIs’ curriculum development. Besides focusing on the knowledge, skills and abilities; this study introduces the big five personalities (KSAP) which are also vital for graduate employability. The graduates need to be equipped with such personalities in order to be competent, industrious, of high quality and able to fulfill the industry’s requirements.

Future Research:
It should be noted that this is a case study of graduates from one HEI. Future research could seek to establish whether a consistent pattern is observable across graduates from HEIs in different categories of industry and the different levels of managers’ expectations within the provision of HEI. It also should be noted that the quantitative analysis used does not explain why the observed ratings occurred. A supplementary exploratory study is required to address this concern. However, it must be remembered that the managers’ expectations and performance ratings for specific attributes change over time due to changes in the macro environment.

REFERENCES


