What Employers Want: Australian verses American desirable graduate attributes

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Abstract

Employer requirements are often researched when preparing and reviewing curricula, with the match between the graduate attributes of curricula and skills required by employers a common focus. However, although most new marketing graduates must successfully fulfil online recruitment site requirements, the fit between employers’ needs when surveyed compared to what they actually specify in employment advertisements is poorly understood. To address this gap a novel data mining approach is employed, using a large online employment data sample from Australia and the United States. Results suggest that employers seek business knowledge and experience, rather than specific technical skills. A clear gap was also identified between the eight specific skills employers claim to want and the general business knowledge and experience stipulated in many advertisements.

Introduction

Marketing graduates seeking employment are faced with the challenge of addressing the selection criteria of prospective employers, typically through responding to advertisements placed on the internet. Although this is only the first phase in what can be a lengthy recruitment process, graduates must clearly be successful at this stage if they are to have any chance of securing employment. Their success requires them to demonstrate satisfaction of selection criteria developed by employers to reflect the skills and competencies they require from the graduate. While several studies have used surveys to identify the skills and competencies employers require (Hughes, 2004; McClymont et al., 2005), no studies could be identified that have used job advertisements to identify how well employers' rhetoric is reflected in this first stage of the recruitment and selection process.

The purpose of this paper is to explore what employers want based on an analysis of online job advertisements. Given the increasing international mobility of employment, and the growth of global accreditation bodies such as the Association for the Advancement of Collegiate Schools of Business (AACSB), an international focus was also adopted by comparing skills and competencies required by Australian employers with those required by their American counterparts. A brief background to graduate attribute research is given next, followed by an outline of the methodology adopted in this study, before results are given for Australian and US data. Finally, results and their implications for universities are discussed.

Background

The development of graduate attributes, historically the realm of universities, has increasingly been influenced by several stakeholders including governments, accreditation bodies (such as AACSB and EQUIS), both professional and educational, and employers (Ackerman et al. 2003). Increasingly, stakeholders have worked collaboratively to ensure that graduates are well prepared, both professionally and as citizens, for life after university. For example, the Australian Chamber of Commerce and Industry and the Business Council of Australia together identified eight key employability skills: communication, teamwork, problem solving, self-management, planning and organising, technology, life-long learning, and
initiative and enterprise (DEST 2002). Universities have made considerable progress towards mapping these employability skills into their overall graduate attributes (DEST 2007). In addition to these generic skills, universities develop the technical skills required in specific disciplines such as marketing. Considerable research has been undertaken to identify the match between university graduate attributes and employer skill requirements (eg Rundle-Thiele et al. 2005; Kelley and Bridges 2005; Davis et al. 2002).

While employers are generally satisfied with the discipline specific skills of graduates, many believe that employability skills are underdeveloped (DEST 2007). This is supported by research specifically focusing on marketing graduates, which identified that while technical marketing skills were generally considered relevant, they were less valued than more general skills such as problem solving, team work and personal attributes (Hughes, 2004; McClymont et al. 2005). In all cases, research was undertaken through surveys and other methods describing attitudes and perceptions. Identifying this focus on perceptions rather than observation, Rundle-Thiele et al. (2005) analysed marketing curricula against the eight DEST skills and found considerable room for improvement, with marketing educators only going half way towards fulfilling these skills.

The goal of this study is therefore to further contribute to the gap identified by Rundle-Thiele et al. (2005) by analysing online job advertisements to identify the attributes required by employers of marketing graduates. The results give insight into the key attributes sought by employers, together with common skill groupings, and thus may be used by educators to ensure offerings meet business demand.

**Method**

This study uses a content analysis methodology that has previously been applied to ICT employment data (Debuse and Lawley 2008). This involves using software to download employment advertisements from a website, then extracting key concepts using the Leximancer system. These concepts were then further analysed through manual examination of a sample of the data from which they are drawn. This allows their meaning to be estimated, so that uninteresting items can be rejected and the remainder grouped for clarity. The result was a ranked list of terms based around frequency and co-occurrence (Smith and Humphreys 2006). The validity of this approach has been demonstrated across a number of different areas (de la Varre, Ellaway and Dewhurst 2005; Smith and Humphreys 2006).

The CareerOne web site was used to gather Australian data, which links to 100 newspapers from News Limited and claims superior job quantity compared to its competitors (About CareerOne 2006). Positions were selected using the keyword 'graduate' along with the default settings for marketing job searches within CareerOne: no specified location or restriction to part-time, temporary/contract or permanent job types. The resulting 140 positions were sorted by relevance, and thus represented all marketing positions regardless of contract type within Australia that contained the keyword 'graduate'.

The US data was sourced from CareerBuilder, which has a market share (39%) above those of competitors such as Monster (37%) and HotJobs (25%) (Ruiz 2006). One thousand graduate marketing positions were downloaded and cleaned.
Results

**Australian Data.** The key concepts discovered by Leximancer are shown within Table 1. Initial manual examination of a sample of the documents from which the concepts were drawn suggested that the following were standard items included within most advertisements and thus of little interest and hence excluded: career, Australian, role, team, opportunity, work, client, industry, company, environment, apply, opportunities, position, successful, recruitment, candidate, working, high, success and Australia. Further, training appeared to represent training offered by the company to the candidates, rather than a required attribute, and therefore was excluded; similarly, support could refer to the employer's or candidate's roles and was also removed.

Table 1: Australian Employment Data Concepts

<table>
<thead>
<tr>
<th>Concept</th>
<th>Count (abs.)</th>
<th>Count (rel.)</th>
<th>Concept</th>
<th>Count (abs.)</th>
<th>Count (rel.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>business</td>
<td>148</td>
<td>50.3%</td>
<td>development</td>
<td>76</td>
<td>25.8%</td>
</tr>
<tr>
<td>experience</td>
<td>143</td>
<td>48.6%</td>
<td>clients</td>
<td>64</td>
<td>21.7%</td>
</tr>
<tr>
<td>graduate</td>
<td>114</td>
<td>38.7%</td>
<td>market</td>
<td>57</td>
<td>19.3%</td>
</tr>
<tr>
<td>marketing</td>
<td>112</td>
<td>38%</td>
<td>ability</td>
<td>46</td>
<td>15.6%</td>
</tr>
<tr>
<td>skills</td>
<td>99</td>
<td>33.6%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The remaining nine concepts as shown in Table 1 and in descending frequency of occurrence were: business, experience, graduate, marketing, skills, development, clients, market and ability. Apart from the concept of business, experience and graduate ranked second and third respectively in terms of frequency of occurrence. Of interest here is that experience occurred more frequently than graduate, suggesting that while it was important to have a degree, it was as, if not more important to also have experience in conjunction with the degree.

**Figure 1: Leximancer Concept Map for Australian Data**

Further analysis was performed by generating a map (Figure 1) showing the concepts of interest, with brightness denoting frequency within the data, together with their relationships (Smith 2005). The relationships between concept pairs are shown as lines between them, with brightness correlating with concept co-occurrence frequency. The distance between concepts relates to the frequency with which they co-occur with other concepts that are similar. Figure
Table 2: US Employment Data Concepts

<table>
<thead>
<tr>
<th>Concept</th>
<th>Count (abs.)</th>
<th>Count (rel.)</th>
<th>Concept</th>
<th>Count (abs.)</th>
<th>Count (rel.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>sales</td>
<td>1663</td>
<td>17.6%</td>
<td>products</td>
<td>542</td>
<td>5.7%</td>
</tr>
<tr>
<td>marketing</td>
<td>1316</td>
<td>13.9%</td>
<td>pharmaceutical</td>
<td>442</td>
<td>4.6%</td>
</tr>
<tr>
<td>experience</td>
<td>962</td>
<td>10.2%</td>
<td>health</td>
<td>283</td>
<td>3%</td>
</tr>
<tr>
<td>management</td>
<td>590</td>
<td>6.2%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The seven concepts of interest as shown in Table 2 and in descending order of frequency of occurrence were therefore the following: sales, marketing, experience, management, products, pharmaceutical and health. Sales and marketing were the two most frequently occurring concepts. Marketing also covered training that was offered to candidates, as well as defining positions and business goals. Similarly to the Australian data, experience again was in the top three most frequently occurring concepts, however graduate did not appear in the US data. The US concepts were also characterised by a focus on a specific industry sector, that is, health and pharmaceuticals which did not emerge in the Australian data.

Figure 2: Leximancer Concept Map for US Data
Further analysis was again performed using a map (Figure 2) showing the concepts of interest and their relationships in the same format as the Australian map (Figure 1). Figure 2 highlights that experience tends to occur independently to all other concepts, while sales and marketing tend to co-occur. The remaining concepts included health and pharmaceuticals (industry segments), product and management.

**Discussion**

The results suggest that Australian employers are primarily seeking marketing graduates with business knowledge and experience, with specific marketing skills being considerably less important than these attributes. These findings support previous research highlighting employers' emphasis on non-technical skills compared to technical marketing skills (Hughes, 2004; McClymont et al. 2005). However, within the business knowledge and experience groupings, few links to the eight specific DEST skills categories of communication, teamwork, problem solving, self-management, planning and organising, technology, life-long learning, and initiative and enterprise could be found.

The US data shows similar themes; sales, marketing and experience appear to be much more prevalent than specific skills or other business related criteria. One notable difference is that while ‘graduate’ emerged in the Australian concepts it was not evident in the US data. In addition the US data appears to give a much greater emphasis on specific industry sectors, perhaps reflecting the larger pool of job advertisements analysed.

**Conclusions**

A key conclusion from this study is that, whilst previous research has identified key gaps between the skills and competencies employers say they want and those present in graduates, a further gap exists between the selection criteria used by employers in job advertisements and the skills and competencies they say they want. However, one key attribute that does come through in the job advertisements is experience, which may be used by employers as a generic criterion to encapsulate the non-technical skills they say they require.

It is therefore vital that marketing training includes significant experiential components, such as Work Integrated Learning courses, which allow students to gain experience, particularly working in real world situations.

The study has similar limitations to the ICT research upon which it was based (Debuse and Lawley 2008). For example, a single study site and time period within each country studied limits the extent to which the results can be generalised, although this reduces the scope for duplication of advertisements. Further, the results presented here clearly cannot represent a fully accurate picture of the employment market, since the extracted concepts are ambiguous and cannot incorporate the level of importance given to a given theme within an advertisement. Finally, the advertisement data does not represent an exact description of the job requirements, although it clearly aims to summarise them.
References


