Do Employers and Secondary School Stakeholders View the “Core Skills” as Important?

Kathryn Gow and Alicia Birch
Queensland University of Technology
Australia

Abstract

This article reports on the perceived importance of the Queensland Core Skills compared to other skills (Generic Competencies, Virtual Competencies and Entrepreneurial Attributes) required of graduates to generate an income in the 21st Century. One hundred and twenty two senior students, 70 employers, and 50 school guidance officers were surveyed about this issue. The ratings of importance that all participants assigned to the Core Skills were found to be significantly lower than the ratings of importance that were assigned to the other three attribute areas. The employer and school guidance officer groups were found to assign similar ratings of importance to Core Skills, Generic Competencies, Virtual Competencies and Entrepreneurial Attributes.

Whilst the Core Skills were found to be rated significantly less important than the other three attribute areas, they were, however, rated as moderately important by all participants. Moreover, the mean ratings given to these skills by the employers and school guidance officers also indicates that these skills are perceived as important, thereby suggesting that the demonstration of such Core Skills are necessary for graduating senior students to generate an income in the 21st century.

Preamble

Over half of Australia’s graduating senior students will endeavour to transfer the skills that they have acquired within their schooling to the world of work (Department of Employment, Education and Training, 1993). The difficulties in achieving this will become a reality as they attempt to obtain employment, or to generate an income in their own business. Due to the lack of available employment opportunities (Coventry & Bertone, 1998; Jamrozik, 1998a) most secondary school students already possess realistic expectations with regard to the difficulty of obtaining employment (Gow, 1992). This reality has necessitated that senior school students possess knowledge, skills and abilities that prepare them, not only to meet the competency standards required by employers of new workers, but also to assist them to adapt to new ways of generating an income.

Core Skills

Australian government policy makers and educators have been attempting, since the early 1990’s, to redirect young people from entering the workplace after Year 12 to entering further education (Dwyer & Youth Research Centre, 1996). However, more than half of Australia’s graduating senior students enter the workforce with little more than a year twelve education (Department of Employment, Education and Training, 1993). Thus high school constitutes the most substantial source of formal skills they can acquire. Researchers assert that educators, who teach and enable the development of skills and competencies required in the future workplace, will ensure their graduates succeed in the changing global society (e.g. Mayer Committee, 1992; Poole, 1995; Wood & Gow, 1997). Bryner (1997) asserts that the basic knowledge and skills that are acquired through education are central to any activity in employment and that problems with basic skills lead to problems in acquiring more specific work related skills.

In 1997, 87% of senior students graduated with an assessment of particular knowledge and skills that educators and policy makers maintain are common elements of the curriculum (Board of Senior Secondary School Studies, 1997). Within Queensland, such knowledge and skills are assessed through the Queensland Core Skills Test (QCS), consisting of 49 common curricula elements that emanate from all Board subjects and are identified as the ‘core’ of the senior curriculum. This test is thoroughly syllabus-based, but not subject specific (Board of Senior Secondary School Studies, 1997; Pitman, 1993); however, some of the common curriculum elements contain a mathematical undertone (Tasmanian Secondary Assessment Board, 1997). Nonetheless, assessment procedures were incorporated in the QCS test to ensure that only common mathematical curriculum elements were assessed.

The 49 common curriculum elements are clustered into five assessment criteria areas which include these skills: “comprehend and collect”; “structure and sequence”; “analyse, assess and conclude”; “create and present”; and “apply techniques”. The QCS test is recognised as being able to be applied to all students with similar types of education systems, for example in all OECD (Organisation for Economic Co-Operation and Development) countries (Tasmanian Secondary Assessment Board, 1997).

Pitman (1993) argued that the skills, referred to as Core Skills, produced from the common curriculum elements are more realistic and attainable than the seven Key Competencies developed by the Mayer Committee (1992). The Mayer Committee (1992) reported that the seven Key Competencies (“collecting, analysing and organising information”; “communicating ideas and information”; “planning and organising activities”; “working with others and in teams”; “using mathematical ideas and techniques”; “applying technical knowledge and skills”; “assessing and evaluating one’s work”).
“solving problems”; and “using technology”) are needed by young people to effectively participate in the future world of work. Moreover, they were postulated as being “essential elements of a general education” and capable of being applied “cross-curricula” (Mayer, 1992, p. 8). “Cross-curricula” means that these competencies can be developed and applied across the range of common curriculum areas within the schools.

Pitman (1993) commented that teachers show acceptance of the common curriculum elements through instilling them across the curricula in all subjects, therefore, the Core Skills must be more realistic and attainable.

In the wider environment, the appropriateness of the employability attributes that are learned in the education sector have become a concern. This concern relates to the education sector not producing young people with the attributes that enable them to become employed (Poole, 1995). Therefore, graduating students who fail to benefit from the skills provided by the education system, may be ill equipped to compete for employment. Thus, there is a need to examine other competencies and attributes that may equip the graduating senior student with the capacity for generating an income in the future.

**Stakeholders**

Stakeholders such as families, parents, teachers, school guidance officers, employers and governments have long been acknowledged by researchers as possessing the experience, knowledge, information and influence that contribute to the senior students success at generating an income (e.g., Berkely, 1981; Dwyer & Wilson, 1991; Way & Rossman, 1996). Students have also been recognised for their contribution as stakeholders (Dwyer, 1991; Gow, 1995a; Pascoe, 1996). While there is little detailed consensus about the proportion of the contribution that these stakeholders make in assisting senior students to generate an income, there is no doubt that each stakeholder group is an important contributor.

**Government**

The influential nature of the government’s stake in contributing to the graduate’s success at generating an income has been evidenced via a number of different policies. Pathway policies have included directions towards increasing retention rates for years 11 and 12, directing young people into post-secondary education (Australian Council of Social Service, 1996), along with attending to the young people who are “work bound”. These policies aim to help young people secure an income, whether this be through increasing their skills level (“Enterprise Education,” 1998) or offering opportunities to obtain on-the-job work skills through such programs as apprenticeships or traineeships (Office of Youth Affairs, 1997). However, Jamrozik (1998b) claimed that the “good intentions” of the government policies often resulted in failure since they ignored the conspicuous problems associated with youth unemployment. Students need to be equipped, in the best manner possible, to compete in a declining employment market, or to commence their own business.

**Families**

Way and Rossman (1996) identified the family as being able to exert influence on the development of work readiness before, during, and following, the efforts of educators. Parents are viewed as important motivators in helping students find and retain employment (Gow, 1995a), providing emotional and material support, finding out about opportunities and contacts, as well as assisting in job applications and interview preparation (Hannan, Fegson, Pollock & Reeders, 1995).

**Senior Students**

Gow (1995a) found senior students believed that their success in preparing to work depends primarily on the “school leaver’s own self”. Pascoe (1996) examined young people’s thoughts on future career options and Australia’s economic future through a focus group study, and found that self employment or owning a business was recognized as an ideal solution to the instability and uncertainty of the employment market. Given the established high unemployment statistics for youth in many countries across the world, young people now tend to believe that achievement in the workplace results from individual resourcefulness, knowledge and skills, and tend to rely less on the natural and economic resources of the nation. However this does not mean that youth do not regard personal factors, such as developing their abilities to the fullest and the achievement of a position of influence within a secure and well-paid job, as unimportant for their future employment (see Dwyer, 1991).

Senior students are often neglected as a resource, and are often regarded simply as passive recipients of the services provided by education. Whilst they have been involved in research such as exploring their career options (e.g. Dwyer, 1991; Pascoe, 1996), they have generally been denied any involvement in the consultation processes relating to the way in which they might effectively attain the competencies required in the workplace (Gow, 1995b; Sweet, 1995).

**Employers**

For a graduating senior student to be successful at obtaining employment, they need to transfer the skills acquired at school to the workplace; therefore these skills need to equate with the standards required by employers. However, this balance has not yet transpired, as employers view that those entering the labour market are not equipped with the competencies required within the workforce (Australian Council of Social Service, 1995; Wills, 1995). Such workplace competencies have emerged as a direct reflection of the demands and pressures that have been produced from changes in the world of work (Thomson, 1995). The first hand knowledge and experience that employers have of the competencies required in the workplace make them influential stakeholders who are able to assist senior students in becoming mindful of job seeking and job retention skills, knowledge of job prerequisites, and the realities of the world of work (Dusseldorp Skills Forum and Career Education Association of Victoria, 1997).

Employers have a responsibility towards, as well as a vested interest in, ensuring that senior students who enter the workplace directly from school
have acquired competencies that match employer expectations (Mael, Morath, & McLeUan, 1997). Any involvement employers have in undertaking this responsibility will provide them with an early stake in preparing the future workforce. Moreover, the Department of Employment, Education and Training (1993) assert that the input that employers have in competency development and standards, and the subsequent curriculum development, is critical.

School Guidance Officers

Employment preparation begins long before the graduating senior student embarks upon entry into the workplace. A school guidance officer’s responsibilities are fundamental to the senior student’s employment preparation through providing advice on available employment, counselling those who are experiencing difficulties in making employment decisions, and coordinating the school’s careers programs (Gati, Houminer, Fassa, 1997; Pemberton, 1998). Having knowledge of the changes that have occurred within the workplace is mandatory for the school guidance officer, as the information that they provide has a significant influence on the career decisions that senior students make (Cotterell, 1997; Pascoe, 1996).

School guidance officers are also responsible for making clear the relationship between the skills students are acquiring through school and the demands of the workplace (Hannan, Ferguson, Pollock & Reediters, 1995). Thus the stake that school guidance officers have in the success of the graduating senior student in generating an income is dependent on up-to-date knowledge and information on employment opportunities and the skills required in the workplace. However, some propose that such up-to-date employment information that school guidance officers provided to many students is limited to tertiary prerequisites (Dixon, 1993; Gati, Houminer, & Fassa, 1997).

Current Research Project

The study sought to determine, from a sample of stakeholders (senior students, employers and school guidance officers), which attributes would be important for graduating senior students to generate an income in the 21st century. This article reports on one aspect of those findings in relation to the “Core Skills”.

Using the data from all participants, Core Skills rating of importance were assessed against other attribute areas (Generic Competencies, Virtual Competencies and Entrepreneurial Attributes). Ratings of importance were examined between employers and guidance officers on Core Skills, Generic Competencies, Virtual Competencies and Entrepreneurial Attributes. Using the combined employer and school guidance officer groups, items were reduced to a more parsimonious solution of the attributes and the resulting factors were examined for differences of rated importance, along with differences in rated importance for each stakeholder group.

Hypotheses

The common curriculum elements that underpin the QCS test appear to reflect an academic imperative, and seem to contain a mathematical and analytical undertone.

(H1): Given that the current study is directed towards employment attributes, the ratings of importance that all stakeholders groups assign to the Core Skills would be expected to be lower than the ratings given to the other attributed areas (Generic Competencies, Virtual Competencies and Entrepreneurial Attributes).

Both employers and school guidance officers have been recognised as stakeholders who possess up-to-date knowledge and information about the workplace. Thus it was expected that both responsibilities were fundamental to the senior student in generating an income. This article reports on one aspect of those findings in relation to the “Core Skills”.

H2: There would be no difference in the ratings of importance that these two stakeholder groups allocate to the Core Skills, Generic Competencies, Virtual Competencies and Entrepreneurial Attributes.

Method

Participants

The 242 participants included 122 Year 11 and 12 students (60 males; 62 females), 50 school guidance officers (18 males; 31 females; 1 unspecified) and 70 employers (43 males; 27 females). Senior students and school guidance officers were accessed from both private and state secondary schools. The employers were selected from various industries, including automotive, fitness, service, human resource, consultancy, banking, computer/technology, retail and training. The ranges of ages for the groups were as follows: senior students 15 to 18 years (M = 16.25 yrs; SD = .77 yrs); school guidance officers 29 to 65 years (M = 46.97; SD = 7.5); employers 25 to 65 years (M = 44.80 yrs; SD = 10.3). More than half of the senior students (55%) were employed.

Survey

A 100 item questionnaire was developed to determine the extent to which the stakeholders perceived the nominated attributes as being important for graduating senior students to generate an income in the 21st century. Demographic information such as age, gender, employment status, type of occupation and parent(s)’ occupation type was included on the final page of the questionnaire.

The 100 items contained within this questionnaire were accessed from four areas: Core Skills; Generic Competencies; Virtual Competencies; and Entrepreneurial Attributes. Nine of the 49 common curriculum elements of the Core Skills (Board of Senior Secondary School Studies, 1997) were included in this questionnaire.

Thirty-two Generic Competencies items were accessed from Gow’s (1993) QUT Graduates Survey, selected on the basis of items that were sourced from the Mayer Committee’s (1992) Key Competencies and items that Gow (1993) had sourced as being required by senior students. The 26 Virtual Competency items were selected from Gow and McDonald’s (2000) Future of Work Questionnaire. The Virtual Competency items selected pertained to those that had been found from the research and literature to be important for graduates to generate an income. The selection of the 33 Entrepreneurial Attributes was based on the authors’ search of the literature in respect of the knowledge, skills and abilities that described entrepreneurial behaviour.
Participants were requested to respond to the focus question – “To what extent are the following attributes (knowledge, skills and abilities) important for graduating senior secondary students to generate an income in the 21st century” – rating each attribute along a seven point rating scale with poles anchored at 1 – (not at all important) to 7 (extremely important).

Procedure
All necessary permissions from the Department, principles, parents and students were obtained and ethics clearance was given. Twenty two schools were contacted and five consented to participate. Questionnaire’s were administered, during class time, in three schools by the researcher and in the remaining two schools by a teacher or a school guidance officer. Each administration session began with an overview of the instrument and, upon completion, students were provided with a career information package, compiled by the researcher, which consisted of publications from the Career Reference Centre (QLD) and Centerlink (an Australian Government employment assistance agency).

One hundred questionnaires, with covering letters, were posted to school guidance officers from both State and Private Schools within the Brisbane, Logan and Ipswich areas. School guidance officers were selected from a list of South-East Queensland Secondary Schools provided by the QUT Promotions and External Relations Admissions Department. An additional 160 questionnaires, including personal hand signed letters, were sent to employers within the Brisbane, Logan and Ipswich area. To ensure this sample was representative of the employers of senior students, a broad array of private, government, self-employed and not-for-profit organisations were selected from Business Queensland’s Book of Lists (1996) and the 1997 telephone director.

The response rates for school guidance officers (50%) and employers (43.75%) were superior to other studies that used five page questionnaires (Adams & Gale, 1982).

Results

Overview of Analyses
A series of analyses were performed to ensure an adequate exploration of the hypotheses. Firstly, the importance that all participants allocated to the Core Skills were compared to the importance assigned to Generic Competencies, Virtual Competencies, and Entrepreneurial Attributes, separately (H1 refers). As only a small number of Core Skills were included, their means were compared, pairwise, with the means of the other three areas. Secondly, the employers and school guidance officers were compared on the perceived importance that they assigned to the four areas (Core Skills; Generic Competencies; Virtual Competencies; and Entrepreneurial Attributes) separately (H2 refers). This ascertained whether the school guidance officers’ perception of the attributes required in the future corresponded with the employers’ views. This finding provided the basis for their use in the following analysis.

Preliminary Analysis
Examination of the data was undertaken, separately, for each stakeholder group due to the following analyses being assessed on a group basis (Tabachnick & Fidell, 1996). There was no systematic pattern to the missing values, therefore, these were replaced with the mean for each analysis. This strategy also enabled the sample sizes to be retained without overfitting the data. Examining the skewness and kurtosis values revealed that most values were less than 1 and did not exceed 3. It has been suggested that skewness and kurtosis do not sufficiently effect the analysis when all variables are skewed to approximately the same degree (Tabachnick & Fidell, 1996).

Examining the Importance of the Core Skills
As can be seen in Table 1, t-tests for paired samples determined that the relative importance all participants assigned to the Core Skills was significantly lower than that assigned to Entrepreneurial Attributes, Generic Competencies, and Virtual Competencies (H1 refers). Examining the means of attributes indicated the importance participants assigned to the four attribute areas. On a scale of 1 to 7, the importance assigned to the four attribute areas were ranked with Core Skills (M = 4.95, SD = .69) as the lowest, Entrepreneurial Attributes (M = 5.42, SD = .57) slightly higher, Virtual Competencies (M = 5.44, SD = .62) the next highest and Generic Competencies (M = 5.55, SD = .55) the highest overall. The Core Skills (M = 4.95) were rated between “moderately important” and “quite important”. The Entrepreneurial Attributes (M = 5.42), Virtual Competencies (M = 5.44) and Generic Competencies (M = 5.55) ranged between “quite important” and “very important” on the questionnaire labels.

Employers and School Guidance Officers Differences
Ratings of importance were examined between the 70 employers and 50 school guidance officers on Core Skills, Generic Competencies, Virtual Competencies, and Entrepreneurial Attributes.

<table>
<thead>
<tr>
<th>Variable pairs</th>
<th>Means</th>
<th>df</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Skills</td>
<td>4.95</td>
<td>241</td>
<td>-19.41***</td>
</tr>
<tr>
<td>Generic Competencies</td>
<td>5.55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core Skills</td>
<td>4.95</td>
<td>241</td>
<td>-14.53***</td>
</tr>
<tr>
<td>Virtual Competencies</td>
<td>5.44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core Skills</td>
<td>4.95</td>
<td>241</td>
<td>-14.53***</td>
</tr>
<tr>
<td>Entrepreneurial Attributes</td>
<td>5.42</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes. The rating scale used in this study had poles anchored at 1: not important to 7: extremely important. Bonferroni adjustment p<.001/3 i.e., ***p<.0003

Table 1
Core Skills Comparison against Attribute Areas
Generic Competencies, Virtual Competencies, and Entrepreneurial Attributes using One Way Analysis of Variance. As can be seen in Table 2, no significant differences were found between the ratings of importance that employers and school guidance officers allocated to these skills (H2 refers). This established that these two stakeholder groups were cognate in their perceived importance of the attribute areas.

Discussion

This research project aimed to explore with a sample of senior students, employers and school guidance officers which attributes would be important for graduating senior students to generate an income in the 21st century.

Relative importance of the Core Skills. As was expected (H1), the Core Skills were rated significantly lower on importance compared to the ratings that the stakeholder groups (senior students, employers and school guidance officers) assigned to Generic Competencies, Virtual Competencies and Entrepreneurial Attributes (H1). Bearing in mind the warning of Tilley (1994) about large sample sizes contributing to a significant outcome, the Core Skills were still rated as important by this sample (i.e., $M = 4.95$ was .05 below the rating of quite important).

Although this study utilised only nine of the 49 Core Skills, this finding suggests that these skills are important for the graduating senior students to generate an income; it also found some confirmation for Brynner’s (1997) previously noted assertion that the skills acquired through education are central to any employment activity.

Similarities between employers and school guidance officers. The finding that no differences existed in the ratings of importance that the employer and school guidance officer groups assigned to all attribute areas (Core Skills, Generic Competencies, Virtual Competencies and Entrepreneurial Attributes) (H2 refers) indicates that this sample of guidance officers possess similar knowledge to employers, of the attributes that senior students need to generate an income in the future.

Table 2

<table>
<thead>
<tr>
<th>Variable</th>
<th>Employers</th>
<th>School Guidance Officers</th>
<th>F (1, 118)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Skills</td>
<td>4.96</td>
<td>5.03</td>
<td>0.41</td>
<td>.52</td>
</tr>
<tr>
<td>Generic Competencies</td>
<td>5.63</td>
<td>5.61</td>
<td>0.05</td>
<td>.81</td>
</tr>
<tr>
<td>Virtual Competencies</td>
<td>5.49</td>
<td>5.61</td>
<td>1.23</td>
<td>.26</td>
</tr>
<tr>
<td>Entrepreneurial Attributes</td>
<td>5.48</td>
<td>5.37</td>
<td>1.28</td>
<td>.25</td>
</tr>
</tbody>
</table>

Notes. The rating scale used in this study had poles anchored at 1: not important to 7: extremely important.

This finding suggests that this school guidance officer group had up-to-date knowledge and information on the attributes required by senior students, thus enabling them to impart information about the direct relationship between the skills students are acquiring through school and the demands of the workplace (see Hannan, Ferguson, Pollock & Reeder, 1995).

Implications for Future Research. Future research comparing all 49 Core Skills against the other three attribute areas may determine their relative importance for graduating senior students to generate an income in the 21st century.

References


View the “Core Skills” as Important?


