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EDITORIAL

HAPPY BIRTHDAY AJCD

Over two decades have passed since the foundation editor of the journal, Meredith Shears (1992), wrote ‘Welcome to the inaugural edition of the *Australian Journal of Career Development*’ (p. 2). For the current issue, I have the honour of writing welcome to the 21st volume of the *AJCD*. The journal has grown considerably since 1992 and it is right and proper to once again acknowledge the individuals who contributed to its birth: Esther Care, Ruth Chapman, Margaret Gambley, Anna Lichtenberg, Col McCowan, Ern Reenders, Greg Slattery, Robyn Townsend, Joanne Tyler and Rob Ware. It is also fitting to restate the acknowledgement presented in the first issue by the project manager, Rob Ware (1992):

The *Australian Journal of Career Development* is a joint initiative of the National Association of Graduate Careers Advisers, and the Australian Council for Educational Research, published with assistance from Careers Services, Swinburne University of Technology, and the Department of Employment Education and Training (p. 3).

Successive editors, Meredith Shears, Wendy Patton and James Athanasou, and the respective editorial boards also deserve acknowledgement and thanks. I am sure the past editors will join me in thanking the professionals in the publication production team at the Australian Council for Educational Research. They quietly work their magic to turn raw manuscripts into beautifully presented issues.

The journal continues to evolve in order to keep pace in a very competitive publication market and to serve the continuing professional development, and research and development needs of the career development profession. In this issue, you will see minor changes that streamline the journal’s production process. Change continues, but the soul of the journal remains the same: ‘The *AJCD* will provide an avenue for promoting career counselling as a profession, while allowing practitioners, academics and interested parties to share ideas and concerns’ (Ware, p. 3). Indeed, the profession has grown considerably over the past decades. It encompasses career counselling, career education, career learning, career information and a host of other professional activities under the aegis of various professional standards published by different international associations. With ever-louder calls for evidence-based practice, the *AJCD* continues to provide informative updates on conceptual, empirical and practically oriented research and development that informs theory and professional practice.

In this issue, Cassie and Chen highlight developmental differences in gender evidenced in the context of an intervention. McHugh, Lenz, Reardon and Peterson provide evidence that observational learning and modelling are demonstrably influential upon how students seek career information. McIlveen, Morgan and Bimrose present a longitudinal study of the impact of a career education program for rural school students that aimed to stimulate students’ aspirations for higher education (the review of the manuscript was managed by a previous editor). Muller and Waters provide a review of research that has used the psychometric scale that measures the latent and manifest benefits of employment (viz., the LAMB). Reddan and Rauchle provide evidence of the impact of career education that includes work-integrated learning within an undergraduate exercise science program. The issue concludes with a review of a book on career counselling by a luminary in the field, Mark Savickas.

I wish you enjoyable reading.

Peter McIlveen, Editor

REFERENCES


THE GENDER-MEDIATED IMPACT OF A CAREER DEVELOPMENT INTERVENTION

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This study examined the differential impact of an educational intervention on high school students’ career maturity based on gender. Dimensions of career maturity investigated include congruence, career certainty, career indecision, career decision-making self-efficacy and career exploration. Females were found to increase significantly in congruence and decrease significantly in career indecision as a result of the intervention. Males’ career decision-making self-efficacy was positively and significantly affected by the intervention, and the extent of their career engagement was found to have been significantly and negatively affected. These gender differences suggest the development of career maturation occurs differentially for males and females.

INTRODUCTION

Previous research on the relationship between gender and career maturity has yielded inconsistent results but Patton and Creed (2001) noted that most studies conducted over the past two decades have concluded that females are more vocationally mature at a younger age than their male counterparts. Gender differences in the career decision-making process have also been documented. For example, Gottfredson (1981) demonstrated that female students explore a narrower set of career options than do their male counterparts. Patton and Creed (2001) found that females expressed a greater degree of career choice certainty at ages 13 and 14, but significantly lower certainty at age 17. These authors speculated that the career development processes of students were largely determined by contextual factors. Accordingly, they attributed the inability of female students to make career decisions at the time when the school system requires them to do so as a likely result of the salience of the choice between career and motherhood (Patton & Creed, 2001). Indeed female students consider family matters when making
career decisions to a far greater extent than do males (Luzzo, 1995).

Other notable findings of gender difference relate to the disparity in gender-role perceptions between males and females and how such perceptions affect dimensions of an individual’s level of career maturity: specifically, how such perceptions affect the extent to which individuals exhibit readiness to cope with the career-related demands of the environment (Super, 1990). Schulenberg, Goldstein and Vondracek (1991) found that adolescent females show more interest in traditionally stereotypic occupations (for example, teacher, secretary, nurse) when they are certain about their career decision and have low aspirations. This finding highlights the multidimensionality of the measure of career maturity. Specifically, had Schulenberg, Goldstein and Vondracek selected career certainty as the only measure of career maturity, their findings may have yielded the result that these females were more vocationally mature than their counterparts who explored less traditional occupations. That Schulenberg and colleagues linked the career certainty of these students to gender-limited exploration of occupations suggested that career certainty would be an inadequate representation of the career maturity construct. It is, thus, conceivable that previous research revealing inconsistent findings relating to gender differences in career maturity reflect inadequate conceptualisation of this important construct.

Furthermore, research investigating the perceived level of acceptability of engaging non-traditional work roles has revealed pronounced differences. McKenna and Ferraro (1991) investigated the extent to which Grade 9 students found non-traditional work roles acceptable and found that 85% of girls and 52% of boys believed it was acceptable to work in a non-traditional work role. While McKenna and Ferraro’s study suggested that the majority of adolescent females endorse a cross-fertilisation of work roles, Davey and Stoppard (1993) reported that approximately one-third of female Grade 12 students expected to attain occupations that were more traditionally female than their most preferred occupations. Perhaps accounting for these seemingly incongruous findings, Armstrong and Crombie (2000) reported that, over the course of secondary school, females make a series of significant changes to their aspirations towards more and more traditionally female selections.

The consequences of such reported trends are significant for women: traditionally female occupations are few in number and limited in salary, status and opportunities for promotion (Betz & Fitzgerald, 1987). Clearly, the dynamics at play in secondary school years that sculpt females’ career directions are not yet fully understood. Some researchers deduce from the existing literature that, in comparison to males, ‘understanding the career maturity of girls may be more complex’ (Post-Kammer, 1987, p. 420). Perhaps findings of gender differences can be better accounted for by the inadequacy of theoretical models with regards to female life career development. This inadequacy is further influenced by realities such as the male-dominated paid workforce that served as the basis for the earliest investigations of career development and the historic predominance of male career theorists. These factors inevitably contribute to a theoretical focus on the male career development process.

Theory of Circumscription and Compromise

Despite a historical focus on male career development, contemporary and female theorists have taken strides in integrating research findings into comprehensive theories that reflect variation based on gender as well as other factors. Gottfredson’s theory of circumscription and compromise (1981, 1996, 2004), for example, was developed to account for the range of research findings associated with factors such as gender, race and social class. Gottfredson’s theory emphasises the role of socialisation in the process of career decision-making. The hallmarks of her theory include the processes of circumscription and compromise.

Circumscription is the process by which people eliminate from the range of career possibilities occupations that conflict with the way in which each individual has come to view him- or herself, thereby creating a zone of acceptable alternatives (Gottfredson, 1981, 1996). Factors that influence the selection and exclusion of occupations for consideration include power, sex roles, social valuation and characteristics of one’s unique self. At the culmination of the process of circumscription, Gottfredson (1981) suggested that an individual’s career options have narrowed significantly.
Compromise is the process by which people further limit their aspirations for what they perceive as being more realistic occupational choices. The purging of occupations from consideration that occurs in circumscription and compromise is theorised to occur primarily during adolescence. Gottfredson contended that compromise is governed by a hierarchy in which an individual is most likely to compromise interests, followed by prestige, then sex-type in an occupational selection (Gottfredson, 1981, 1996).

Self-efficacy Theory
Self-efficacy is also hypothesised to account for gender differences in career maturity. In fact, Gottfredson and Lapan (1997) suggested an interplay between self-efficacy and the processes of circumscription and compromise whereby increasing an individual’s self-efficacy may reverse, in part, premature elimination of occupations from consideration. The psychological construct of self-efficacy was first introduced by Bandura (1977a, 1977b) but implemented in a vocational context by Betz and Hackett (1981). In this context, self-efficacy is thought to be a vital variable (Betz, 2000; Betz & Borgen, 2000). Here, the predominant aspect of self-efficacy examined is career decision-making self-efficacy. Although this construct has been shown to correlate with overall perceptions of self-efficacy and self-esteem (Luzzo & Hackett, 1987), career decision-making self-efficacy is an independent measure of the extent to which an individual is confident of his or her abilities to make competent and appropriate decisions regarding occupational selection, planning and attainment.

In previous research, career decision-making self-efficacy has not been shown to be related to gender (Taylor & Popma, 1990) or to ability levels (Taylor & Betz, 1983) but has been shown to relate to numerous other variables. For instance, an attitudinal dimension of career maturity has been shown to relate to career decision-making self-efficacy (Luzzo, 1993), to commitment and motivation in career decisions (Luzzo & Hackett, 1987) and to the range of occupations considered (Church, Teresa, Rosebrook & Szendre, 1992). It has also been shown to correlate strongly with sex-role orientations (Gianakos, 1995). An inverse relationship has been demonstrated between career decision-making self-efficacy and career indecision (Luzzo & Hackett, 1987; Taylor & Betz, 1983). Only one study to date has examined the relationship between self-efficacy and the extent of career exploratory behaviour. Blustein’s (1989) findings suggested that those individuals with high self-efficacy in their decision-making capabilities were more likely to be proactive in their career development by seeking out information about their career options.

As a consequence of variations in the construct of career maturity, researchers are left to choose from a variety of indexes to measure this important construct. For example, one could consider a single index, such as the extent to which an individual is committed to a career choice, as the sole measure of the career maturity construct. Jepsen and Prediger (1981) combined measures of career choice certainty with four other measures: career exploration, career decisiveness, career ‘planfulness’ and involvement in career-planning activities. Others have measured an individual’s self-efficacy for career decision-making (Betz & Hackett, 1981; Luzzo & Hackett, 1987; Taylor & Betz, 1983; Taylor & Popma, 1990), congruence between espoused and tested career interests (Carson & Mowsesian, 1993; Healy & Mourton, 1985; Spokane, 1985) or extent of engagement in career exploratory behaviour (Blustein, 1989; Gianakos, 1995; Stumpf, Colarelli & Hartman, 1983). Clearly, none of these measures alone captures the entire meaning of career maturity and, as stated earlier, such variability across studies may contribute to inconsistent findings about the career maturation and career development processes.

The present study investigates selected indexes of career maturity (career decision-making process, congruence between espoused and tested career interest, extent of career choice certainty and extent of engagement in the career decision-making process) with respect to gender in the context of a mandated career development intervention. Two hypotheses were considered:

- selected indices of career maturity will be positively correlated with participation in the mandated career development intervention;
- females will exhibit greater career maturity than will males.

**Method**

**Participants**
Participants were 371 Grade 10 students from eight public schools, spanning a large Canadian province encompassing urban, suburban and rural locales.
The sample was nearly equivalently distributed between genders with 44.0% male and 56.0% female participants. Students were assigned to treatment \((n = 200)\) and control \((n = 171)\) groups by their enrolment in one of two classes in their respective secondary schools, representing a quasi-experimental, non-equivalent groups design. Although the groups formed are statistically non-equivalent, the classes chosen for involvement in the study were mandatory half-courses offered in tandem such that students took one course for the first half of the term and switched to the second course during the same school period for the second half of the term. The groupings are thus not affected by course selection practices or the availability of other courses. Despite these safeguards, this design is not statistically as strong as random selection and assignment, but such design is not often possible in educational settings (Gall, Gall & Borg, 1999).

**Description of the Intervention**

The intervention administered to the experimental group is a provincially mandated half-course for Grade 10 students that is designed to equip students to intelligently and purposefully interact with their world (now and in the future) so that they live, work, and participate in it as satisfied and contributing members of society. (Ontario Ministry of Education, 2000, p. 4.2.1)

The course operates over half a semester and encompasses 55 hours of class time. The objectives of this course are based on three strands: ‘Personal Knowledge and Management Skills’; ‘Exploration of Opportunities’; ‘Preparation for Transitions and Change’. The learning objectives for each strand are an assessment of personal qualities and interests and integration of these with career goals; the ability to retrieve career information and incorporation of this information into career goals; a preparedness for career- and life-related changes; and skill in effective decision-making. This course was developed in conformity with the Blueprint for Life/Work Designs (National Life/Work Centre, n.d.), a framework based on the American National Career Development Guidelines. The objectives of this course resonate with the rudiments of the major career development theories and, in particular, the career maturity construct.

**INSTRUMENTS**

**Self-directed Search**

The Self-directed Search (SDS) is a paper-based inventory that can be either self- or group-administered. It is based on John Holland’s theory of vocational choice and consists of four item formats for which the first three item formats are forced choice. The SDS was selected to identify and measure students’ career interests. Career interests are represented with a three-letter summary code that reflects the test-takers’ three dominant personality typologies arranged in order of most dominant typology to least dominant typology. There are six possible typologies: realistic, investigative, artistic, social, enterprising, and conventional. Each typology is scored quantitatively.

According to Brown (2003), the SDS is a ‘sound vocational interest inventory that has a great deal of utility for a variety of career development applications’. The instrument’s reliability has been established for secondary students and adults, and is presented in the SDS Technical Manual (Holland, Fritzche & Powell, 1994).

The test-retest reliability coefficients ranged from .76 to .89, suggesting that the summary scales have substantial stability over intervals of four to twelve weeks. Internal consistency is also established for female and male adults and students from high school or college settings. Coefficients for the activities, competencies and occupations scales ranged from .72 to .92, and the summary scale coefficients ranged from .90 to .94. The self-estimate ratings ranged between .37 and .84. The test–retest reliability coefficients ranged from .76 to .89 suggesting that the summary scales have substantial stability over intervals of four to twelve weeks. Concurrent validity was calculated by comparing 1330 female and 810 male respondents’ high-point typology to the respondents’ one-letter aspiration or occupational code. The overall hit rate for the 1994 sample was 54.7%. This was deemed high and acceptable since typical hit rates for similar instruments are generally somewhat lower.

**Career Decision Scale**

The career decision scale (CDS) measures career certainty and career indecision. The former is the ‘measure of the degree of certainty that the student
feels in having made a decision about a (course or program) major and a career’ (Osipow, 1987, p. 1). This measure is based on student responses to two questions in which they are required to indicate on a four-point scale the extent to which a statement is like them. Career indecision is regarded as an enduring trait describing an inability to make career-relevant decisions. It is based on 17 questions of the same format as those used to indicate the career certainty measure. Kelly and Lee (2002) claimed that this instrument is ‘particularly effective in reflecting treatment changes’ (p. 304).

Norms for the CDS have been established for high school samples and are based on year and gender ($N$ ranged from 132 to 251). Test–retest reliabilities have been found to range between .82 and .90 at a two-week interval and .70 at a six-week interval (Osipow, 1987). Validity has been demonstrated by increased decidedness scores for test-takers who participated in career planning interventions.

**Self-report Inventory**

The self-report inventory was designed by the researcher and can be completed in approximately ten minutes. The instrument consists of questions that relate to participants’ gender and occupational interest and includes composite measures of reported engagement in career-related activities and self-efficacy for career decision-making. Composite measures consist of a series of questions for which participants indicate responses to items based on a Likert scale ranging from ‘A great deal’ with a value of 5 to ‘Not at all’ with a value of 1. Internal reliability for items of the career exploration and career decision-making self-efficacy measure were determined to be $\alpha = .81$ and $\alpha = .83$, respectively. Pilot testing with a group of twelve students (six male and six female students) found that the readability and length of the instruments were appropriate for the research sample.

The variable ‘gender’ was obtained by student self-report on the self-report inventory. The measures for career decision-making self-efficacy and career exploration were obtained from composite scores of these measures on the self-report inventory. Values for career certainty and career indecision were obtained by scoring the career decision scale.

**Congruence**

The measure of congruence in this research attempts to deal with the quantitative values ascribed by participants to the top three environmental typologies on the SDS. It was computed by comparing students’ occupational choice to their summary code from the SDS. The extent to which one’s occupational selection is congruent with one’s summary code was determined by referring to the online resource, O*Net, an electronic database that catalogues more than 950 occupational titles and provides information on skills, abilities, knowledge, tasks, work activities, work context, experience levels required, job interests, work values, work needs and salary information. Descriptions of job interests are based on the Holland classification of occupational interests by ascribing a quantitative value for the extent to which each occupation is consistent with interests in realistic, investigative, artistic, social, enterprising and conventional domains. These values are derived from individuals in each respective occupation, similar to the way in which the SDS Occupations Finder was developed.

In order to compute the congruence score, the researcher identified the top three job interest typologies on O*Net for the occupation that each student identified as his or her occupation of interest. For example, if a student indicated that she was interested in becoming a dentist, the top three interest typologies are investigative, realistic and social, with respective interest values of 100, 72 and 61. Since each occupation has a different total sum of occupational interest values for the first three typologies, it was necessary to convert these values into proportions on a per 100 basis. In the above example, this would be computed by adding 100 + 72 + 61 to obtain the sum value 233. Each occupational typology value would then be divided by 233 to obtain per cent values of 0.43, 0.31, and 0.26, respectively, such that these values sum to a total of 1.

The next step was to identify the student’s interest values as determined by the SDS for each of these typologies. Then, each of the previously identified top three person-typology values, which from the above example are I, R and S values, were multiplied by their respective occupational typology index. For example, building on the previous example, if the individual scored 36, 27 and 24 on investigative, realistic and...
social typologies based on the SDS, then 36 would be multiplied by 0.43, 27 by 0.31 and 24 by 0.26 to obtain values 15.48, 8.37 and 6.24, respectively. The sum of these values forms the congruence score of 30.09.

**Procedures**

All students in the selected classrooms were invited to participate in the research by their classroom teacher and a guidance counselor. An informed consent form required students and their parents or guardians to indicate assent and consent respectively, by jointly signing a statement of assent and consent provided to them.

No specific training is required in order to administer the selected research instruments. The instruments were administered by the guidance counselor or the classroom teacher at the beginning of the term. This administration is referred to as pre-testing. These same research instruments were administered a second time at the end of the term (completion of the half-course) and is referred to as post-testing. Completion of the testing required approximately 90 minutes. In order for accurate measure of change, the same instruments needed to be administered to both groups at both times.

**Results**

Statistical analyses were conducted to determine whether or not the intervention would yield differential impacts based on gender for the selected indices of career maturity. Such analyses were computed separately for male and female students to yield the results. A one-way analysis of covariance (ANCOVA) was selected as the statistical operation since it elicits results that control for measured differences that may have existed at pre-testing between the control and experimental group for the variable in question. Levene’s test for equality of variances and homogeneity of slopes assumptions were met for the analyses. Significant results are displayed in Table 1.

Informing significant results are the observed descriptive trends of data from pre-test to post-test times. For congruence and career certainty, females not enrolled in the course exhibited a decrease in these measures while enrolled females exhibited an increase over this time frame. The reverse trend was observed among females with regards to career indecision. Observation of career decision-making self-efficacy revealed that males not enrolled in the course exhibited a decrease on this measure from pre- to post-test times whereas males enrolled in the course exhibited an increase over the same period.

**Discussion**

The data analysis found that males and females were differentially affected by the intervention, in that congruence scores of females enrolled in the mandated career development course were significantly different from scores of those not enrolled. These discrepant findings suggest that the process by which Grade 10 students understand their career directions and career interests is different for males and females. Specifically,

**Table 1: ANCOVAs for Selected Dimensions of Career Maturity**

<table>
<thead>
<tr>
<th>Dimensions of career maturity</th>
<th>Gender</th>
<th>F-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congruence</td>
<td>Male</td>
<td></td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>F(1.63) = 4.778</td>
<td>p = 0.03</td>
</tr>
<tr>
<td>Career decision-making self-efficacy</td>
<td>Male</td>
<td>F(1.100) = 5.992</td>
<td>p = 0.02</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td></td>
<td>ns</td>
</tr>
<tr>
<td>Career certainty</td>
<td>Male</td>
<td></td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td></td>
<td>ns</td>
</tr>
<tr>
<td>Career indecision</td>
<td>Male</td>
<td></td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>F(1.131) = 9.102</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td>Career exploration</td>
<td>Male</td>
<td>F(1.63) = 4.547</td>
<td>p = 0.04</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td></td>
<td>ns</td>
</tr>
</tbody>
</table>
females seem to be making changes to their career plans or to understanding their career interests in a manner that undermines the important link between these factors. This finding is reflected by a reduction in congruence over the duration between pre- and post-testing among females not enrolled in the career development intervention. A similar tendency has been identified in previous research in which Armstrong and Crombie (2000) noted that females make a series of important changes to their aspirations during the course of their secondary school experiences such that their aspirations become more and more similar to traditional female occupational roles. If this is the case for the present sample, then it appears that this intervention is appropriate, as results suggest that enrolment in this course is related to an increase in congruence between tested and expressed career interests. In contrast to females, males, regardless of participation in the intervention, tend to be integrating their interests and career choices more consistently over time.

As with congruence, the impact of the mandated career development intervention was different for males and females in terms of career decision-making self-efficacy. It is notable that male participants who received the intervention exhibited significantly greater self-efficacy at post-testing than males who did not receive the intervention. Results also indicated that males responded to the intervention at a time when their self-efficacy for career decision-making otherwise appeared to decrease as reflected by a reduction in career decision-making self-efficacy between pre- and post-test times. What is perplexing is that males seem to be making positive gains in terms of congruence regardless of the intervention. That the absence of the intervention is associated with a decrease in career decision-making self-efficacy for males—while the intervention is associated with increased career decision-making self-efficacy—highlights the importance of intervention at this time in males’ career development. Moreover, it suggests that, with respect to this dimension of career maturity, males are responsive to the intervention. These findings also reinforce the differences between genders in the development of selected dimensions of career maturity and the interrelationships among them.

ANCOVAs for career certainty for both males and females were not significant suggesting that neither males nor females exhibited changes in the extent to which they were certain of their career direction in association with participation in the career development intervention. This finding is contrary to the research hypothesis, as career certainty is often regarded in the literature as a correlate of career maturity. Nevertheless, some theorists (for example, Krumboltz, 1998) may suggest that the value of the career certainty variable as an element of career maturity is questionable, particularly given the considerable personal development that is yet to occur for these adolescent participants. Further study is required to deduce whether or not a lack of change in degree of career certainty in the context of the mandated career development intervention is appropriate given these considerations.

Career indecision, a measure of the inability to make career-relevant decisions, also yielded notable gender differences based on exposure to the intervention. Specifically, females in the experimental group exhibited significantly less indecision than females in the control group. Males, on the other hand, exhibited no difference based on group. That males exhibited greater indecision at pre-testing than females and that female indecision tended to increase with time in the absence of the intervention highlights gender differences in career development associated with the absence of a career-relevant intervention such as the course that is the focus of the present research. The former finding may suggest that a natural process of decreased indecision over time at this developmental stage for males exists. It may also be accounted for by the stimulation of indecision that may have arisen as an unintended consequence of completing the research instruments at pre-testing. Similarly, the finding that females not enrolled in the course exhibited increased indecision over time may reflect a natural course for indecision to grow over time but, in a like manner, it is also possible that females who were not enrolled in this course experienced a sense of anxiety about their career decision-making as a consequence of completing the research instruments. Unlike their counterparts enrolled in the career development intervention, their anxiety may not have been assuaged. Regardless of the
reasons, these findings point to differences between the genders on this dimension.

The finding that males respond to the intervention with a decrease in exploratory behaviour is confounding, given the emphasis in the curriculum on exploration. These results contradict the anticipated research results as well as expectations, given the findings associated with the other dimensions of career maturity. For instance, one might expect that since males have greater indecision at pre-testing than females, they might then engage in exploration more than females. But the finding that males who do not receive the intervention exhibit less career decision-making self-efficacy is consistent with the finding that these students may engage in greater career exploration. Perhaps the decrease in self-efficacy that is seen for those males not enrolled in the course is a result of anxiety or motivation elicited from completing the research instruments. In response to these stimuli, these students engage in more career exploration. It is likewise possible that it is developmentally appropriate for Grade 10 males to explore their career direction, although this explanation does not account for why males who receive the intervention might engage to a lesser extent than those not enrolled. It is also plausible that there is a satiation effect associated with exploratory activities conducted in the course intervention, adding clarity to male students’ planned career direction and reducing the need for subsequent exploration of career options.

In summary, the findings highlight that gender differences exist regarding the impact of the intervention, as well as the development of the aforementioned dimensions of career maturity. The results further suggest that Grade 10 is a critical time for females in the development of congruence and career indecision and for males in the development of career decision-making self-efficacy.

Implications for Theory and Practice
The research findings support the value of Super’s (1990) and Holland’s (1985) theories in providing a conceptual backdrop for career maturity. However, these theories proffer definitions of the construct that have limited operational capacity. Since the findings in the present research support the notion that career maturational processes of males and females may respond differentially, the empirical need is for further investigation of the validity of the career maturity construct, the nature of its dimensions and, most importantly, its utility as a tool or resource in career-relevant empirical investigations.

More so than Super’s and Holland’s theories, Linda Gottfredson’s (1981, 1996, 2004) theory of circumscription and compromise offers considerable conceptual clarity to our understanding of gender differences associated with the developmental consequences of career-relevant interventions. In combination with Betz’s (2000, 2004) ‘mechanisms’ that promote self-efficacy, as noted earlier, key tenets of Gottfredson’s theory account for some of the gender differences found in the study. What is missing is a set of postulates that could help elucidate an analysis of the complex inter-relationships among selected variables.

That the research found significant differences over the period of a half-course is promising, although the finding that the gains in career maturity as a result of the course were found to be gender-specific suggests that the intervention is not suited to the specific needs of males and females. Unlike other dimensions of career maturity investigated, self-efficacy is not a specific component of the intervention’s curriculum. Based on the theory and empirical evidence, increasing self-efficacy can influence the extent of development in other career-related processes. According to this theory, influencing self-efficacy depends on four sources of efficacy information: ‘performance accomplishments, vicarious learning (modelling), emotional arousal (anxiety), and social persuasion and encouragement’ (Betz, 2004, p. 340). In order to increase students’ self-efficacy for career decision-making, this particular course or, more generally, the secondary school guidance curriculum needs to incorporate these indices of efficacy. For example, students need to experience success with regard to career decision-making. Inviting students to engage a sequence of simple to complex career-relevant
decisions followed by discussion, self-reflection and positive feedback has been shown to foster self-efficacy. This gives students a sense of mastery in the domain of career decision-making. If we wish to further strengthen career development processes, the secondary school curriculum should include vicarious learning opportunities for students. This can occur when students are exposed to individuals similar to themselves who model exemplary navigation of career- and educationally-relevant decisions, thus making their own success with these career skills more conceivable (Flouri & Buchanan, 2002).

To encourage female students to explore opportunities available in non-traditional occupational roles, educators must invite young women who have succeeded in non-traditional work roles to participate as career mentors with female students. Several researchers recommend the use of web-based mentoring as an important career development resource for all students and advise that it may be of particular benefit to students in isolated regions (Single & Muller, 2001).

The third correlate of self-efficacy, emotional arousal, can also be associated with anxiety. When such arousal does not generate a debilitating level of anxiety, it can contribute to self-efficacy. Should emotional arousal generate debilitating anxiety, the anxiety can be reduced by career counselling in which the counsellor discusses in a calm and reassuring manner the career and educational decisions that students may be required to make. A calm interaction in advance of the need to make important decisions arouses students’ interest without threatening their sense of well-being. Further, when these same students are also introduced to and encouraged to practise using robust problem-solving and decision-making skills, students no longer fear career decision-making tasks and may even feel positively challenged by opportunities to select from a range of educational and career-relevant choices.

A fourth correlate of self-efficacy in career decision-making, social persuasion and encouragement, operates much like the importance associated with the management of anxiety. Again, students must be ‘aroused’ to a point where they have received the counsellor’s (or teacher’s) communication that is informing them they possess the capability to make appropriate career decisions and to maintain their engagement in related problem-solving activities. Although Betz (2000, 2004) has defined self-efficacy and explained how it is promoted, one notes as well that there is considerable affinity between Betz’s postulates and those of Carl Rogers. Certainly Rogers’ necessary and sufficient conditions for therapeutic interaction (psychological contact, unconditional positive regard, minimum state of anxiety, empathic understanding, and so forth) are similar to Betz’s sources of efficacy information noted above (Rogers, 2000).

LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

This study is limited in that it employs a non-equivalent groups design. Although the statistical analyses implemented controlled for possible differences between groups at pre-testing, this study would be stronger if the samples were obtained through random selection and assignment.

Another limitation of the present research relates to the fact that different classrooms provide students with unique learning environments. Although participants in the research had a mandated educational intervention based on the same course outcomes or course expectations, they did not receive the same educational intervention. This is an unfortunate consequence of conducting research within a regular classroom setting, in which lessons are based on provincial curriculum. Further research that examines the interaction effects between characteristics of the course with the course content would enhance our understanding of the development of the selected dimensions of career maturity. In addition, future research in the area of gender-specific gains associated with participation in career guidance interventions is also required.

REFERENCES


Articles


This study investigated the extent to which a ten-minute video based on a theoretical approach and commonly used in service delivery, for example, reinforcement theory and social modelling, could enhance the information-seeking behaviour of students engaged in a university careers-planning process in a university careers-planning environment. The video portrayed a student seeking careers services and counselling in an environment that was reinforced by the student using information resources such as books, websites, and non-verbal reinforcement. Participants who viewed the video were more likely to use the video as well, and non-verbal reinforcement, than students in a control group. They also spent less time seeking information than students in the control group. Implications for the use of the video in future research and practice are discussed.
Earlier research has shown that audio and video tapes modelling careers counsellors using verbal and non-verbal reinforcements for career information-seeking behaviour increase that behaviour in those who receive the counselling (Fisher, Reardon & Burck, 1976; Jones & Krumboltz, 1970; Krumboltz & Schroeder, 1965; Krumboltz & Varenhorst, 1967). This earlier research, based on behavioural modelling and operant conditioning, revealed that reinforcement in a variety of ways (for example, verbally and non-verbally) and being rewarded for obtaining desired information could strengthen the frequency of the behaviour. In addition, research on incidental learning (Bandura & Huston, 1961) supported the proposition that much of social learning is imitative. Several studies combined videotaped modelling based in behavioural and social learning theory to increase careers information-seeking behaviour in college students (Fisher et al., 1976; Jones & Krumboltz, 1970; Krumboltz & Schroeder, 1965; Krumboltz & Varenhorst, 1967). (It is beyond the scope of this article to speculate on the reasons for the neglect over the past three decades of this successful and useful line of research.)

To further explore this evidence-based practice, a treatment video was created using principles of behaviourism and social learning theory carefully gleaned from past empirical research. In the present study we replicated and extended prior research, especially the work by Fisher et al. (1976), using modern video media. Given the literature supporting the effectiveness of modelling and behavioural techniques in shaping behaviour via media resources, a primary research question was specified:

• What is the impact of viewing an information-seeking behaviour treatment video on the frequency and range of information-seeking behaviour employed by college students seeking careers information, the amount of time spent seeking information, and the number and variety of resources used in a research assignment?

This question was based on the earlier research, showing that students in a treatment group who viewed the video would spend more time and use a greater variety of resources for careers exploration than those in a control group.

Methods

Participants

Complete data were gathered from 280 volunteer participants from a pool of 355 students in an undergraduate careers planning course at a large US-based university. Data were collected over two consecutive semesters from ten sections of the course: five from first semester (fall), five from second semester (spring). Attrition occurred because some students dropped the course after the first class meeting when research forms were collected, and some only took the course for one credit and were not present for the final data collection on the last class day. Class sections were randomly assigned to treatment or control conditions with three classes in the first semester and two in the second assigned to watch the information-seeking behaviour treatment video, resulting in 139 participants in the treatment group and 141 in the control group.

Participant ages ranged from 18 to 30 ($M = 20.5$), and the gender distribution was female 42% and male 58%. Participants’ ethnicity was reported as follows: Caucasian = 58%, African-American = 23%, Hispanic-American = 10%, Asian-American = 6%, Other = 2%, and American Indian or ‘prefer not to respond’ less than 1%. Year in college consisted of first year (freshman) = 9%, second year (sophomore) = 18%, third year (junior) = 21%, and fourth year (senior) = 53%. The six most frequently endorsed majors were business (17%), social sciences (11%), undecided (6%) and 5% for each of sociology, criminology and international affairs.

Measures

Information-seeking behaviour questionnaire

A questionnaire was adapted by the researchers to assess three key areas:

• the frequency of information-seeking behaviour
• the amount of time spent engaged in careers information-seeking behaviour
• the variety of careers information-seeking strategies used.

(A similar method was employed by Fisher et al. (1976) and Krumboltz and Varenhorst (1967).) Directions asked participants to identify which of six careers information-seeking strategies they used: reading, writing, listening, visiting, observing and talking—and then to report how many times they engaged in each of the six activities.
and the number of hours they spent engaged in these activities during the preceding six weeks.

The total frequency of information-seeking behaviour for all 280 students ranged from 2 to 3695 times ($M = 72.26, SD = 205.18$), while the amount of time (hours) ranged from 3 to 885 with ($M = 78.33$ and $SD = 221.02$). The presence of outliers was adjusted with statistical procedures described below. The variety of information-seeking strategies used by students ranged from 1 to 6 with a mean = 5.11 and standard deviation = 1.21.

**Career field analysis assignment—Number of resources used**

A ‘career field analysis’ paper was a required assignment for the course. On the sixth day of class, participants were instructed to research either one or three occupations or fields of study. On the eighteenth day of class (about six weeks later) the papers were submitted for grading. A frequency analysis of the number of resources cited on the assignment’s reference pages (CFA1) was conducted to assess the number of sources used. Two research assistants judged the number of resources for 20 reference pages selected at random from both groups, and they recorded a 100% agreement rate for the 100 sources listed on those 20 reference pages.

**Career field analysis assignment—Varied types of resources used**

The reference pages of the career field analysis assignments were also analysed to determine the varied types of references cited by each student (CFA2). For purposes of this study, the reference types were grouped into six categories:

- books, reference books and reports
- periodicals and occupational briefs
- computer-assisted career guidance systems
- professional and government websites
- additional online resources
- information interviews.

Two research assistants judged the variety of resources for 20 reference pages selected at random from both groups, and they had a 98% agreement rate regarding the types of resources used in writing the paper.

**Information-seeking Behaviour**

**Treatment Video**

The model-reinforced video used in this study was based on and similar to videos used by Krumboltz and Thoresen (1964) and Fisher et al. (1976). The video was designed to increase the influence of modelling through scripting, acting, and the frequency and duration of visual and auditory reinforcement of the six types of information-seeking behaviour. The model counsellor, a Caucasian female aged 28, frequently clarified the behavioural expectations for information-seeking behaviour in the video by clearly stating how to seek careers information, demonstrating desirable information-seeking behaviour, reinforcing such behaviour and making positive statements about successful outcomes of careers information-seeking behaviour. In addition, the competence of the model counsellor was demonstrated using her credentials—a graduate degree in careers counselling and national careers counsellor certification—and her position as assistant director of university careers services. These qualifications were listed at the beginning and end of the video to reinforce competency and to influence observer behaviour.

Certain points in the video showed ‘fast forward’ scenes of a Caucasian male student, aged 19, visiting professional staff, observing people at work and talking with people in his field of interest. Since these were intended to show future events, the actor portraying the student changed clothes several times. Since there were several hours of video in the initial draft, it was important to be able to scroll through all of the footage to find desired scenes, cut those scenes and move them to the appropriate location in the final video. This was accomplished in VegasPro using a technique called ‘splitting’. During the original video creation reported by Fisher et al. (1976), this technique was equivalent to ‘splicing’, which means to literally cut and tape film together. The final video used in the present study was ten minutes long.

The control condition in this study involved students completing the same course assignments and research assignment as the students in the treatment group. The only difference between groups was that these students did not see the information-seeking behaviour video. In effect, the control condition was an alternative treatment group using the standard course assignment.

**Procedures**

The career field analysis research paper was a major course assignment presented in the context of exploring information about careers options: for example, occupations or fields of study. Detailed instructions
for completing this assignment were presented on the sixth day of class, including evaluation criteria for the field analysis paper, reviewing sample papers and using class time in the careers centre library to find resources that could be used in the research paper.

Administration of the treatment condition (the information-seeking video) occurred during the class presentation on the career field analysis paper and a lecture on learning how to explore careers options. Instructors played the video on a large screen in the classroom and participants who were not present that day watched the video later in the careers centre computer lab. Participants completing this study had five points added to their performance contract to encourage participation in the research. Participants in the control and treatment groups were given packets containing assessments randomly alternated in each folder to control for order effects.

During the second semester, as a treatment validity check, participants completed a five-minute video feedback questionnaire, assessing their reactions to the quality of the video. Using a five-point Likert scale (1 = strongly disagree, 5 = strongly agree), participants agreed or strongly agreed that the video provided them with new methods for getting information (89%), introduced new careers resources (87%), informed them how to use the careers centre (96%) and motivated them to explore careers resources (79%). Participants agreed or strongly agreed that the counsellor explained things well (99%), that they were able to identify with the student in the video (76%), that the overall assessment of video quality was positive (82%) and that the quality of the video sustained their level of interest in it (68%).

The feedback form also assessed immediate retention of the information-seeking behaviour modelled and reinforced in the video. Based on a spontaneous recall task, the capacity of the participants to retain information about careers information-seeking strategies from the video was supported with an average of 89% recalling the information-seeking strategies: for example, reading and writing. These results indicated that participants did learn and recall information presented in the information-seeking behaviour treatment video.

During the final class meeting, all participants received their research packet after taking their end-of-term course examination. The research packets included their signed informed consent forms and post-test information-seeking behaviour instrument.

**Data Analysis**

Before the data were analysed, descriptive statistics were assessed to determine if the assumptions of normality were met for all continuous post-test only variables. The mean, standard deviation, skew and Levene’s test of equality of error variance (LTEEV) were analysed to determine normality of variance (Table 1). These tests indicated the ISB1, ISB2, ISB3, CFA1 and CFA2 were not normally distributed. The normality of each variable improved with logarithmic transformation statistics except for the CFA2, which was later analysed in the original form (see Table 1).

**Results**

The research question examined the impact of viewing an information-seeking behaviour treatment video on: the frequency and range of information-seeking behaviour employed by college students seeking careers information; the amount of time spent in such behaviour; and the number and variety of resources used in the career field analysis paper.

In analysing the results of the information-seeking behaviour video intervention, a Wilk’s lambda (.916, \(p = 0.001\)) omnibus test indicated a significant multivariate effect between the treatment and control groups on the respective dependent variables (Table 2). As a result, post hoc univariate analyses were conducted with continuous measures to determine significant (\(p<0.05\)) differences between groups.

**Strategies Used in Information-seeking Behaviour**

A test of between-subjects effects revealed significant differences between groups—\(r(1) = 2.75, p<0.01\)—for the six information-seeking strategies (for example, reading and writing). The variety of careers information-seeking strategies employed by the treatment group (\(M = 1.38, SD = 0.44\)) exceeded that of the control group (\(M = 1.25, SD = 0.34, ES = 0.16\)) (see Table 2, ISB1).

**Time Spent Seeking Information**

A test of between-subjects effects revealed significant
Table 1: Distributions for ISB1, ISB2, ISB3, CFA1 and CFA2 before and after Statistical Transformations (N = 280)

<table>
<thead>
<tr>
<th></th>
<th>ISB1</th>
<th>ISB2</th>
<th>ISB3</th>
<th>CFA1</th>
<th>CFA2</th>
</tr>
</thead>
<tbody>
<tr>
<td>M/SD</td>
<td>Raw data</td>
<td>5.11/1.21</td>
<td>205.18/72.26</td>
<td>221.02/78.33</td>
<td>3.142/7.86</td>
</tr>
<tr>
<td></td>
<td>Transformed</td>
<td>0.4/1.32</td>
<td>0.48/1.51 = 0.32</td>
<td>0.52/1.51 = 0.34</td>
<td>0.16/0.92 = 0.17</td>
</tr>
<tr>
<td>Skew</td>
<td>Raw data</td>
<td>–1.31</td>
<td>3.98</td>
<td>7.59</td>
<td>2.02</td>
</tr>
<tr>
<td></td>
<td>Transformed</td>
<td>0.92</td>
<td>0.67</td>
<td>0.34</td>
<td>–0.99</td>
</tr>
<tr>
<td>LTEEV</td>
<td>Raw data</td>
<td>0.000</td>
<td>0.626</td>
<td>0.015</td>
<td>0.050</td>
</tr>
<tr>
<td></td>
<td>Transformed</td>
<td>0.001</td>
<td>0.348</td>
<td>0.270</td>
<td>0.039</td>
</tr>
</tbody>
</table>

ISB1 = Information-seeking behaviour questionnaire: six research strategies
ISB2 = Information-seeking behaviour questionnaire: number of times engaged in information-seeking behaviour
ISB3 = Information-seeking behaviour questionnaire: hours spent seeking information
CFA1 = Career field analysis assignment: total number of references used
CFA2 = Career field analysis assignment: number of types of resources used

Table 2: Univariate Comparison between Treatment and Control Groups

<table>
<thead>
<tr>
<th></th>
<th>ISB1</th>
<th>ISB2</th>
<th>ISB3</th>
<th>CFA1</th>
<th>CFA2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment M</td>
<td>1.38</td>
<td>1.46</td>
<td>1.44</td>
<td>0.93</td>
<td>3.90</td>
</tr>
<tr>
<td>Treatment SD</td>
<td>0.44</td>
<td>0.50</td>
<td>0.53</td>
<td>0.14</td>
<td>1.06</td>
</tr>
<tr>
<td>Control M</td>
<td>1.25</td>
<td>1.56</td>
<td>1.58</td>
<td>0.91</td>
<td>3.41</td>
</tr>
<tr>
<td>Control SD</td>
<td>0.34</td>
<td>0.44</td>
<td>0.49</td>
<td>0.17</td>
<td>1.19</td>
</tr>
<tr>
<td>t</td>
<td>2.75</td>
<td>1.76</td>
<td>2.31</td>
<td>0.97</td>
<td>3.62</td>
</tr>
<tr>
<td>df</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>p-value</td>
<td>0.01***</td>
<td>0.08</td>
<td>0.02*</td>
<td>0.34</td>
<td>0.00***</td>
</tr>
<tr>
<td>Cohen’s d</td>
<td>0.33</td>
<td>0.21</td>
<td>0.28</td>
<td>0.12</td>
<td>0.43</td>
</tr>
<tr>
<td>Effect-size r</td>
<td>0.16</td>
<td>0.10</td>
<td>0.14</td>
<td>0.06</td>
<td>0.21</td>
</tr>
</tbody>
</table>

Note: ISB1, ISB2, ISB3, CFA1, and CFA2 are transformed data (see Table 1)
Computed using α = .05
* = .05
** = .01
*** = .001
ISB1 = Information-seeking behaviour questionnaire (strategies)
ISB2 = Information-seeking behaviour questionnaire (frequency)
ISB3 = Information-seeking behaviour questionnaire (time)
CFA1 = Career field analysis assignment (number of references)
CFA2 = Career field analysis assignment (variety of types of references)
differences between treatment and control groups—
$t(1) = 2.31, p < .02$—regarding time spent seeking
information. The number of hours engaged in careers
information-seeking behaviour was less for the
treatment group ($M = 1.44, SD = 0.53$) and more for
the control group ($M = 1.58, SD = 0.49, ES = 0.28$) (see Table 2, ISB3).

Varied Types of Resources Used
in Information-seeking Behaviour
A test of between-subjects effects revealed significant differences
between groups—$t(1) = 3.62, p < .001$ —for CFA2. The number of careers
information resource types used by
the treatment group ($M = 3.90, SD = 1.06$) exceeded that of the control
group ($M = 3.41, SD = 1.19, ES = 0.43$) (see Table 2, CFA2).

**DISCUSSION**
The purpose of this study was to examine the effects
of modelling and behavioural reinforcement via video
media on careers information-seeking behaviour. It was
an extension of previous research by Fisher et al. (1976),
Jones and Krumboltz (1970) and others. We concluded
that viewing the ten-minute video had an impact on the
number of information-seeking strategies employed,
the amount of time spent seeking information and the
types of resources used in research. It did not have an
impact on the frequency of engaging in information-
seeking behaviour or the total number of references
used in career field analysis research.

**Strategies Used in Information-seeking
Behaviour**
We expected participants who viewed the treatment
video to employ a wider variety of information-seeking
strategies in writing their assignment than those who
did not, and the results confirmed this expectation.
The effect size of this finding as measured by
Cohen’s $d$ (0.33) was moderate. This finding supports
previous studies about the effectiveness of behavioural
reinforcement and modelling on information-seeking
behaviour (Fisher et al., 1976; Jones & Krumboltz,
1970). Six strategies for seeking information were
introduced verbally and visually in the beginning and
at the end of the treatment video.

These strategies were reinforced throughout the
video with explicit instructions for information-
seeking behaviour, verbal and non-verbal praise of the
student from the careers practitioner model, behaviour
modelling by the actor playing the student, inflection
in the actors’ voices and successful outcomes for the
student portrayed in the video. While employing
varied information-seeking strategies,
the actors demonstrated and reinforced the strategies by using
varied types of careers information
resources, such as books, videos,
the internet, observations and
informational interviews.

**Time Spent Seeking Information**
The matter of time and effort engaged
in information-seeking behaviour was
measured by assessing the self-reported
time spent seeking information over a six-week period.
While differences were statistically significant ($p < 0.05$),
measures of effect size of Cohen’s $d = 0.21$ and $r = 0.10$
revealed a mild practical significance. We expected
to find that students viewing the video modelling
information-seeking behaviour would spend more
time in this activity than students in the control group
because we thought viewing the video would enhance
motivation to explore and spend more time on task. But
the opposite was the case. One possible explanation for
this counter-intuitive finding has to do with the efficacy
of the video in demonstrating for students how to gather
information about careers efficiently and effectively.
According to this line of logic, students watching
the video learned how to expedite the information-
gathering process in less time than students in the
comparison group. Nevertheless, this finding should
encourage instructors to use the video in conjunction
with the class presentation on the career field analysis
research assignment.

**Number and Varied Types of Resources
Used in Seeking Information**
The use of resources for information-seeking behaviour
was measured by assessing the number and variety
of resources used in completing the career field analysis
research paper. The results revealed insignificant
differences between groups for the number of
references (for example, book, interview, internet) used
to complete the assignment. One possible explanation
for this finding involved the fact that the written
directions for the course assignment emphasised the
importance of using the correct number of resources. Moreover, instructors anecdotally reported repeating this direction on multiple occasions. These directions for completing the assignment may have limited the differences between the treatment and control groups for the number of resources used.

Students in the treatment group did report using more varied types of sources in producing the career field analysis research paper. A Cohen's $d$ (0.43) revealed a moderate practical effect size for this variable. Such resource options included books, journals and occupational briefs, computer-assisted careers guidance systems, professional websites, additional online resources and information interviews. While the treatment video did not explicitly reinforce the importance of using the required number or variety of resources in completing the career field analysis assignment, it did show the actor in a variety of settings using varied types of resource materials in information-seeking behaviour. In effect, through modelling, students saw a demonstration of a student effectively using varied information sources and being verbally reinforced for doing so. We offer this as a plausible explanation of why participants who viewed the treatment video cited a significantly wider variety of careers resources on the occupational research assignment.

**Frequency of Information-seeking Behaviour**

We expected that the frequency of seeking information for the treatment group would exceed that of the control group but this did not happen as in previous research (Fisher et al., 1975). This finding merits further attention. One possible issue has to do with the nature of the data—which appeared to be heavily skewed—for this variable. In addition, asking participants to recall the frequency of seeking information over a six-week period may have introduced error into this measure.

**Limitations**

Several aspects of this study may limit the generalisability of the results. Data were collected from a criterion sample of students self-enrolled in a careers development course in a large university in the USA. Intrinsic differences may exist between students who enrol in an elective careers course in comparison with those who do not. Self-reported reasons for enrolling in the course indicated participants were quite cognisant of their need for assistance in careers decision-making and they therefore may have responded and behaved differently in this study from students not enrolled in a careers development course. Completion of the information-seeking behaviour questionnaire depended upon respondents' retrospective accounts of their history of information-seeking behaviour, which may have questionable accuracy. The use of a weekly diary might have provided more accurate data.

Two potential threats to internal validity could have reduced the effectiveness of the treatment video. It is possible that students in treatment and control sections of this course may have socialised and discussed their experiences. Since this research took place over two semesters with ten class sections, it was not possible to isolate the treatment and control groups.

**Future Research**

Some aspects of this study warrant examination in future research. Future research could focus on the optimal number of repetitions needed to elicit desired behaviour. The effect size of the treatment video could also be increased through improved attractiveness (production quality), advertisement strategies (targeting audiences) and active participation (for example, interactive video options, participant involvement in recording the setting of information-seeking behaviour goals and self-monitoring behaviour related to those goals).

The effect of characteristics of the principal actors in a video has been considered in past research. Akamatsu and Thelen (1974) reviewed the role of observer characteristics on the imitative process, considering demographics such as sex and the influence on intersubject variability. This study dealt with the potential gender influence of the actors by selecting both male and female actors for the model-reinforced video with the counsellor played by a female and the client a male. Future research could explicitly compare the interactive effects of participant and model gender as well as other demographic variables.

**Implications for Practice**

This study tested a novel way to introduce and support a research assignment in a careers course. Many individuals in need of careers services do not possess the time or financial means to participate in traditional individual or group counselling. Additionally, there
are not enough service providers to assist all those in need of careers counselling and information (Sampson, Dozier & Colvin, 2011).

A treatment intervention such as the brief ten-minute video used in this study could be a useful tool to enhance individual counselling, group counselling or classroom instruction. The video used in this study appeared to have inherent power to modify information-seeking behaviour in the treatment group without any direct consequences: for example, reward, pay-off, a higher grade. The use of an empirically based psycho-educational and behavioural tool for the targeted goal of acquiring careers information could free careers practitioners and clients to focus on other issues affecting careers decision-making, such as negative cognitions and emotions, family dynamics or finances.

Prospective college students on campus visits are sometimes accompanied by family members concerned about students’ future careers choices. A video available in the campus careers centre could be provided to tour groups or provided to parents and guardians as a way to promote the careers centre as an effective student resource and to demonstrate careers information-seeking behaviour. In other situations where personal careers interventions are not possible, a model-reinforced video available in varied formats could be disseminated to the general public through public libraries, community-based resource centres or the internet for little to no cost.

The methods of delivering careers information that enhance learning associated with information-seeking behaviour are especially important in this information age. The models in the video demonstrated a student seeking careers counselling services from a qualified careers practitioner. Participants in this study were observed eliciting assistance from careers practitioners in their campus careers centre and from careers course instructors. They were also observed engaging in careers information-seeking independently and within small spontaneously formed peer cohorts. A model-reinforced video such as the one used in this study could enable people to develop careers information-seeking skills while also increasing autonomy and self-efficacy.

Previous research indicates that a client’s preconception of counselling is strongly related to the likelihood the client will seek professional help (Cramer, 1999). Providing the public with a video modelling a positive counselling experience could potentially increase positive attitudes towards the counselling service and increase the likelihood of using that service. This idea could be applied to a wide variety of psychological services other than careers counselling.

Finally, to the extent that a model-reinforced video effectively increases careers information-seeking behaviour in students or clients, the use of such a tool in a time of increased emphasis on evidence-based practice has implications for the provision of careers services. For example, when and with whom should the tool be used? What kind of training is required for staff to use it effectively? What careers resources should be available in a library or on a website to support information-seeking behaviour? What counselling or treatment modalities are most compatible with such a tool? Answers to these questions await attention by researchers and careers practitioners.

References
This study investigated students’ experiences of a career development program that was established to foster interest in and aspirations for higher education within high school students residing in rural and isolated areas of Australia. Nine students who participated in the program were interviewed 18 months later to explore their recollections of the experience. Results of the study revealed three themes pertaining to the value of career planning: information, elaboration and confirmation of career thoughts and the social connectedness and positive experience the program provided. It was concluded that the program had a long-term positive impact and that there should be consideration given to exploring the cost–benefit of such programs in terms of university attrition rates.

**Introduction**

Hailing from a rural background is a major factor contributing to whether young people enter into tertiary study (Australian Education Council, 1991). Moreover,
there is concerning evidence of fewer students from rural and remote areas successfully completing a degree compared to urban students (9.2% versus 11.3%) (Athanasou, 2001). Greater career awareness and improved career planning are fundamental to help students to consider tertiary education as a post-compulsory path (Kucker, 2000).

Tinto (1998) argued that students with a strong career focus are more likely to persist with their tertiary studies. Indeed, more recently, the landmark Review of Australian higher education (Bradley, Noonan, Nugent & Scales, 2008) made the case for enhanced awareness, access and achievement in higher education. A report derived from the Longitudinal Surveys of Australian Youth found evidence that students certainly valued career advice as being useful to their decision-making (Rothman & Hillman, 2008). Further, it has been argued that career education and counselling give students the potential to overcome disadvantage by ensuring that they know what career path they want to pursue and how they might achieve their goals through higher education (McIlveen, Everton & Clarke, 2005). Accordingly, this article considers the long-term impact of a career development program upon a group of rural high school students who explored higher education as a post-compulsory educational pathway.

### A Career Development Program for Rural School Students

The University of Southern Queensland (USQ) has a substantial proportion of students from rural and regional Australia. It is therefore appropriate that the university provide rural students living in its geographical region with the knowledge and resources to successfully negotiate a career path based upon a higher education qualification.

Accordingly, USQ has operated a career development program to assist with the transition to university over six years before the current study, and preliminary evaluations have indicated a positive impact (McIlveen, Ford & Everton, 2005). The clinical experience of the counsellors at the university’s Student Services suggests that students from rural and isolated areas experience a different transition and adjustment process from their metropolitan peers. A recurring theme presented to counselling staff is that rural high school students have limited access to career education and guidance in their home schools in comparison to their metropolitan counterparts.

Although similar factors influence the formation of aspirations for higher education within rural and outer metropolitan students (Shaw & Larson, 2003), the successful transition of students from rural and remote areas of Australia to university includes social experiences and socio-economic, cultural and educational opportunities (Stevens, 1995). For example, in a study of health careers, themes emerged from rural schools in Western Australia when health career choices were restricted by geographic location, stereotyping, obligations and community and family loyalty (Durey, McNamara & Larson, 2003).

There is thus reason to provide career education and counselling that is specifically formulated for rural students.

Given evidence that career education can positively influence career decision-making self-efficacy and the confidence of high school students (for example, McWhirter, Crothers & Rasheed, 2000), the program assumed that if rural students are given quality career education and guidance, web resources and access to university career counsellors for a private session, they would be better prepared to make informed career choices and consider a tertiary education as a post-secondary school option. The program included career education classes and also dealt with issues pertaining to rural background, such as lack of finances, loneliness, being the first generation to attend university, the university’s discourse, and a student’s mindset in relation to university. The initial evaluation of the program demonstrated that universities could respond to the needs of rural secondary students and that such a program influences positively students’ decision to attend university (McIlveen, Ford & Everton, 2005).

### Student participants

Year 12 coordinators and guidance officers from rural and remote high schools around south-west Queensland were requested to select senior Year 12
students, on behalf of the university, and to offer them an opportunity to attend the university’s main campus to explore their career paths in relation to higher education and to experience campus life. Importantly, school staff were requested to encourage students who they believed may not necessarily consider university as post-secondary education, but who may have a chance of success at a tertiary level if given sufficient exposure to raise their aspirations. Funding was provided by the university and there was no cost to the students.

Career education classes
Three career education classes were developed to encourage students to experience practical exploration activities. The first class dealt with their career-related values and entailed the completion of the Australian Interest Measure (Naylor & Care, 2007). In the second class, students received feedback on the results of their vocational interest test. This feedback process included discussions on educational pathways and opportunities related to their results. Students were also given an assignment designed to develop their skills for the use of the My Future website (www.myfuture.edu.au). They were required to explore the site and find information about the occupations that attracted them the most in accordance with their career interest profiles. The third session involved further exploration of their information in a group that included additional demonstrations of some of the key functions of the My Future website, so they could find relevant information independently when they had gone home.

Career counselling
Students were provided with an opportunity to have a private one-hour session with a university career counsellor to further clarify career goals based upon their career assessment data and career education class activities. Additional sessions were provided if necessary. It should be emphasised that the career counsellors were under no obligation to recommend tertiary education to students. As per their professional standards (Career Industry Council of Australia, 2006) they were required to formulate a preferred career plan according to the needs of the students.

Complementary program
A student’s successful transition from high school to university is a continuous, evolving process that encompasses academic, personal and environmental development, and is a complex phenomenon. Rendon (1995) suggested that two areas of adjustment are vital to student retention:
• a successful transition into college (or university)
• making connections at college.

Rendon includes other areas that are to be considered, such as poor academic preparation, low socio-economic background, lack of clear goals and the different culture of the university. Being perceived as different, leaving old friends behind and the experience of living between two worlds (home and campus) were identified as important facets of transition. Transition from high school to tertiary education can be affected by differences in learning approaches, homesickness and fear of failure (Lee, 1997). Having a feeling of safety plays a large role in students adjusting to their new home, with those students who feel secure being more likely to stay. Harvey-Beavis and Robinson (2000) found that Australian students reported experiencing university staff as socially and intellectually strange and distant, and that students did not understand the day-to-day activities of university. This highlights the need to provide transition services to students so that their entry into university life is not a culture shock.

Every university has a unique environment, culture and discourse to which students must adjust, and first-year students must make the greatest adjustment. In addition to the career education classes and counselling, students also participated in complementary activities that exposed them to university life and culture. Representatives from each faculty presented information on the programs for various disciplines, the majors that were taught and what types of jobs students could expect from the degree qualifications. A lecture was given to the students so they knew what they could expect from university and how education here differed from high school. Students were also provided with demonstrations by the multimedia and information technology staff on how university students use computers for their learning. A tour of the university library showed them how to search for resources using the extensive online databases available at the university, and also demonstrated how to find print materials (for example, books, journals). The Student Guild (union) provided information on the various activities and supports they offered around campus (for example, sporting and cultural clubs).

Another important experience in the program was staying at the USQ’s residential colleges and learning
what it would be like to live away from home with a number of other students, as—for many—attending university would be the first time they would be living away from home. Student mentors who were senior university students were employed to be with the students 24 hours a day and conducted tours of the campus and city. They also provided a valuable and informal opportunity for students to find out what university was really like and have their questions answered by a university student and for the mentors to share some personal experiences. Some of the other activities organised after hours were ten-pin bowling, going to the movies and shopping.

The Current Study
There is ample evidence that career interventions produce positive outcomes for clients, at least in the short to medium term, after an intervention (for example, Brown & Ryan Krane, 2000; Whiston, Sexton & Lasoff, 1998). Evidences of its benefit in the longer term also exist. Bimrose, Barnes and Hughes (2008) and Bimrose and Barnes (2006) have published results of a five-year longitudinal study of 50 adult clients, investigating what constitutes effective guidance. In this study, ‘effective’ was defined as what the client found useful (Bimrose, Barnes, Hughes & Orton, 2004). In the first year of the study, 49 of the 50 participating clients (98%) reported that their career guidance interview had been ‘useful’ immediately after their careers interview. While this proportion decreased over the period of the study, it was found that even five years after their careers interview, 19 of the 29 clients (66%) who were successfully followed up in the final year said that they still valued their careers interview (Bimrose et al., 2008).

Although the university’s career development program has been evaluated with respect to its immediate impact upon participants, there has been a need to consider its long-term impact (McIlveen, Ford & Everton, 2005). Useful research to guide such an approach to evaluation would be the UK longitudinal study referred to previously (Bimrose, Barnes & Hughes, 2008). This study entailed follow-up interviews every year over five years with clients using a qualitative research design. The career education program that is the focus of the current study was specifically developed to improve rural students’ aspirations of their higher education as a post-secondary education pathway, with immediate feedback suggesting that the students were satisfied with the service (McIlveen, Ford & Everton, 2005). Accordingly, by using a longitudinal approach, the current study sought to evaluate students’ experiences of the program by exploring their recollections of the program 18 months later. The study aimed to explore whether the program fostered aspirations for higher education.

METHOD

Research Design
The current study was constructivist in its epistemology and sought to understand participants’ experiences of the program through an analysis of their recollections derived from recorded interviews. The qualitative method interpretative phenomenological analysis (Smith, Flowers & Larkin, 2009) informed the interview process and data analysis. This method entails two separate but interrelated processes: exploration of the phenomenological experience recorded as interview transcripts; and hermeneutic processing to construct higher-level themes that subsume the phenomenology of the participants’ experiences.

Participants
The present whereabouts of the 23 students from the 2006 program was checked using their addresses supplied at that time of the program in that year. Upon completion of the search, the location of 14 of the original student group was unknown. Of those nine remaining students whose whereabouts was determined, all agreed to take part in the current study. While the final proportion of participants was 40% of the original population, interpretative phenomenological analysis requires purposive selection of participants, rather than large sample sizes for its validity (Smith et al., 2009). The participants’ median age was 18 years; seven were female. All were enrolled in post-secondary qualification courses, with eight at university and one at a technical college.

Sources of Data
Participants were interviewed using a brief semi-structured questionnaire. Items in the questionnaire covered several areas:
- the program’s broad elements of career education
sessions, faculty presentations and accommodation (for example, what do you remember most about the program?)
• specific components of the career education sessions (for example, what was the most useful piece of career information you received?)
• career guidance provided by other agencies (for example, what other career guidance have you received since the program?)
• the participants’ current situation (for example, what work or study are you doing at the moment?)
• the participants’ future (for example, what are the next steps in terms of your career?).

Interviews ranged from 10 to 20 minutes in duration and they were digitally recorded for transcription by a professional agency.

Data Analysis

Nine transcripts were analysed using the guidelines for interpretative phenomenological analysis. Firstly, one transcript was read repeatedly and then analysed before moving to the others. This initial processing served to embed the analyst in the process. In conducting multiple readings of a transcript, the analyst sought to construct specific descriptions of experiences evident in the text of the transcript. These lower-level descriptions were subsequently compiled into themes, which were connected to the participant’s experience as indicated in his or her transcript, yet sufficiently abstract to enable connection to the themes constructed in other transcripts. These themes were reiteratively checked against the lower-level experiences highlighted in the transcript to ensure their meaningfulness. The process was repeated for every transcript. Upon completing an analysis of each transcript, the themes were clustered into a final group of higher-level themes that subsumed the themes and experiences of each participant.

In line with suggestions for check on validity in interpretative phenomenological analysis (Smith et al., 2009), an audit was undertaken by a third party who was not involved in the original research design, data collection or analysis. The initial data analysis was reviewed and amendments made. Broadly, there was agreement on the emergent themes. One major theme—originally ‘valuing of career information’—was amended to ‘valuing of career guidance’, since the auditor found evidence on a component of the program (one-to-one career guidance interviews) that had not originally been picked up. Additional evidence of the other two major themes was also added from the participants’ scripts. In addition to the amendments to the three major themes, two minor themes were added: participants valued the program as it allowed them to familiarise themselves, in a positive way, with a higher education environment; and the program provided a safe environment in which participants could explore with independent experts questions that they could not ask parents, friends or teachers.

RESULTS

The interpretative phenomenological analysis derived three major themes from the transcripts that pertained directly to the participants’ experiences of the program. In addition, other career-related themes were derived from the analysis, and these will be considered after the program-related themes.

Valuing of Career Guidance

For some students, who demonstrate self-reflexivity and independence, a structured career program may not necessarily meet their particular needs. For them, career decision-making is regarded as an intensely personal and private issue. One participant, for example, explained his apparent ambivalence towards the program: ‘It’s a kind of choice you need to make by yourself’ (Participant 2).

This view proved to be exceptional. All, except one, stated that the program provided them timely and useful information and support in their career decision-making. Participant 1 already had sufficient career-related information and had made a career decision. Others remarked on the value of careers information. For example: ‘Certainly, it opened my eyes up anyway, I was like, oh, I didn’t know all this [information] was here’ (Participant 7). This statement exemplifies the surprise that participants experienced upon discovering the enormous volume of career information that is available to them (for example, Australia’s career information service website, My Future), yet were unaware of such resources being at their disposal. Beyond the information per se, participants learned that they had access to sources of expert advice who could direct them to appropriate information: ‘If you want to talk to someone, or I don’t know, talk to someone who has been there and done that, they’re there’ (Participant 4).
In addition to the value placed on career information provided by the program, the importance of one-to-one guidance was emphasised. Three participants highlighted the significant impact of this experience for their own career decision-making. One explained how ‘I really enjoyed the meeting that I had with you because it really made my decision on what uni I should go to and things like that (Participant 3).’ Another observed how ‘the one-on-one career session, that was very useful for me because I actually found out like exact, exactly what I need to study, and I found out the exact career paths that were available’. A third explained how one-to-one career guidance had provided singular access to expertise: ‘You got an in-depth talk to a person instead of having five other people jostling for information at the same time … I just like being able to talk to someone and just say, this is what I plan to do’.

Elaboration and Confirmation of Career Thoughts
It is interesting to note that participants developed some early ideas of what they wanted to do with regard to their career before attending the program but that the program served to elaborate and confirm their ideas; for example: ‘Well, I knew from the start that I wanted to be a teacher so I guess it just kind of emphasised that more’ (Participant 8); and

I already had a fairly good idea what I was doing. But it really did, narrow, guided me a lot and put me on the right path, because I knew what path I wanted to go on, but I just didn’t how to get there (Participant 2).

For participants who felt an information void regarding what a career plan looks like and how to operationalise one, they indicated that the program assisted in advancing their career decision-making: ‘You know how to make a choice to go towards your career inspiration right now, instead of just fumbling in the dark’ (Participant 6). Participant 1, who described confidence in his pre-existing career decision, also stated in relation to the career education classes that ‘they did help me confirm that I didn’t want to do a science’. The program also proved to be critical to the decision-making process for one participant: ‘The program also proved to be critical to the decision-making process’.

Positive Experience and Social Connection
One of the major themes was the overall positive experience of the program at USQ: ‘I remember it was a really good experience’ (Participant 9). Even the participant who already had sufficient career related information reported enjoying the social connectedness of the program: ‘the social setting, the getting to hang with people who ordinarily you’d probably most never meet’ (Participant 1), suggesting that, for a positive educational experience, there needs to not only be useful career-related information and supports but also a balance between educational activities and other parts of their lives such as social interests.

Participants reported their joy about the social activities that were designed to create a relaxed, fun and inclusive environment, while still familiarising them with university life and the engaging in the metropolitan community.

I remember riding there by bike and meeting everybody in a full room and then we did a couple of games and got to know each other and it was a pretty, fun, relaxed environment. We went out to the cinemas and shopping and more fun things (Participant 3).

Participants found that they were not alone in their experiences and that other students from rural and isolated areas were faced with similar career life-choices. Furthermore, for some participants it was their first time away from their rural home and visiting a city-based tertiary institution, so it was important to include social aspects into the program to assist them to feel welcome and connected, and to adopt a belief that it would be possible for them to belong within a university community: ‘I met a lot of people, especially from rural areas and meeting up with them and seeing what uni life is really about I guess’ (Participant 4). The familiarity provided by the program also proved to be key. One participant explained that this had been the pivotal factor in choosing a university: ‘Because I
lived here for a week, is why I chose this residential college and university over the other ones … because it was so familiar’ (Participant 1).

**Minor Themes**

There was some evidence of a theme that pertained to the role of parents and returning to rural life after studies. One area of particular interest was the obvious shift in rural and isolated parental views about education. They are open to careers in non-traditional areas and are happy to support their child in whatever career is of interest. Parents may be beginning to realise that making a living in rural and isolated areas is challenging and that there are many career opportunities available elsewhere. Main supports for students are reported to be parents, school counsellors and teachers and friends but it is interesting that the careers program also offered a safe and expert environment that provided information not available from these other sources. For example: ‘I could ask a question that I wouldn’t. Like, I was too scared to ask’ (Participant 9); ‘I could talk to people and they’d say, well, this is how people got to do it and this is how some people didn’t’ (Participant 6). It is worth noting that friends still appear to play a major role in career decision-making. The appropriateness of the information given by friends is unknown. Returning to work in rural and isolated areas also became another theme throughout the data. Most participants reported that they wanted to use their skills in a rural community after they completed their degree. Participant 8 stated that ‘I’m hoping to finish my degree, and I want to work in a rural town’.

**Discussion**

This study revealed evidence of a positive effect of the program upon participants but it should be noted that most participants had already made some early decisions about their careers before engaging in the program. We presume that this was as a consequence of the Queensland government’s Department of Education and Training (2002) curriculum reform that requires schools to ensure that students have career plans before they finish secondary schooling. Nevertheless, although the participants had a plan, it may not have been fully articulated to an extent necessary for rational and informed decision-making, and the results of the current study suggest that participants found the program informative, inclusive and useful in terms of developing career plans and confirming career ideas.

The program covered transition to the university community through carefully planned social activities, ensuring participants were familiar with each other, the university and the local community. Social aspects of the program were very successful and participants reported that they felt socially connected, which was one of the goals of the program. The program helped students in being able to feel a sense of belonging and that they could be successful in a tertiary education environment. This is consistent with Rendon’s (1995) research, which suggested that for students to make a successful transition to university they had to make connections at college. Lee (1997) also found that thriving students made a successful transition to the university environment and the local community.

Although guidance counsellors in Queensland’s rural and isolated schools provide career information, counselling and education, it is not their only professional responsibility. There are other areas of practice that demand attention (for example, health and welfare counselling). Students may therefore not have access to dedicated career counselling and education services, and may not know where they can find the information and guidance they need to make informed and better articulated career decisions. Indeed, participants in this study reported that they were amazed at the volume of career information available and that they were unaware that these resources were available to them. It also allowed them the peace of mind that they did not have to make decisions without the assistance of people who had specific expertise.

**Limitations**

The current study indicated a positive longitudinal impact, which contributes to the body of evidence that career education and information does have a positive impact on participants. As a longitudinal study the results of the interviews may have been influenced by students’ recall of events, as it requires
good memory from the participants to accurately report on the program in detail. Participants would clearly have some memory decay over 18 months. But it can be argued that this study is of the experience of the program that the participants are living currently—at the time of interview—and how they have over time and in the interview process interpreted their memories of the program. Indeed, it may be argued that the factual veracity of their recall is therefore less important than their current experience and remembering that influences decisions and beliefs in the present moment. The second limitation of the study is the attrition rate. With just over one-third of the original set of students taking part in this study, we are unable to assert that the program was positive for all or the majority of the program’s students in the long term. Perhaps ongoing follow-up with the participants on a more frequent basis after the program might have reduced the attrition rate somewhat. Future research might include another follow-up study in 3–5 years, as most students will have finished their tertiary education and be employed. Apart from the educational enrichment experienced by individual students, this issue behoves universities to operate and evaluate a career development program in terms of costs and benefits (cf. Athanasou, 2007).

CONCLUSION
This study extended the first evaluation of the career development program (McIlveen, Ford & Everton, 2005)—which found an immediate positive impact upon participants—to show evidence of a long-term positive impact upon a sample of students. Results from this evaluation provide an indication of the positive impact of residential career development programs on post-secondary school aspirations. Although such programs are inherently expensive to operate due to residential fees and staff resources, the success of the current program suggests that policy-makers and funders of universities and schools might consider the potential cost-benefits in terms of students’ successful transitions into higher education, particularly in light of the rhetoric of the Review of Australian higher education (Bradley et al., 2008). After all, the relative financial cost of a single student dropping out of university would likely fund a career development program such as the one described here.

REFERENCES


A REVIEW OF THE LATENT AND MANIFEST BENEFITS (LAMB) SCALE

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The latent and manifest benefits (LAMB) scale (Muller, Creed, Waters & Machin, 2005) was designed to measure the latent and manifest benefits of employment and provide a single scale to test Jahoda’s (1981) and Fryer’s (1986) theories of unemployment. Since its publication in 2005 there have been 13 studies that have used the scale with 5692 participants in Australian and German samples. This article reviews the use and findings of the LAMB scale and recommends future directions in LAMB research.

INTRODUCTION

The negative psychological and health costs of unemployment have now been well established (Murphy & Athanasou, 1999; Paul & Moser, 2009). Two of the most widely accepted theories in the unemployment literature that have attempted to explain why unemployment has such negative effects are Jahoda’s (1981) latent deprivation model and Fryer’s (1986) agency restriction model. Jahoda argued that it was the loss of five latent benefits of employment (time structure, activity, social contact, collective purpose, and status) that accounted for higher levels of psychological distress found in the unemployed, while Fryer argued that the elevated levels of psychological distress were due to the loss of the manifest benefit of employment (financial income). These models are not mutually exclusive, with previous studies supporting both models. Creed and Macintyre (2001) together with Waters and Muller (2003) have argued for theory integration to provide a better explanation for the deterioration of well-being in the unemployed.
While researchers have already examined the relative contributions of the latent and manifest benefits to well-being, it has only been since the publication of the LAMB scale (Muller, Creed, Waters & Machin, 2005) that studies have been able to use one scale to adequately measure all five latent benefits together with the manifest benefit. The LAMB scale has now been used in a number of national and international studies and has been translated into German (see Selenko, Batinic & Paul, 2011). It is now timely to examine recent findings from these contemporary studies.

The current article aims to review current studies that have used the LAMB scale and report an overview of the recent findings with respect to the latent and manifest functions. Before the Muller et al. (2005) publication, a number of studies used an earlier version of the scale, which had a different number of items in each subscale and different scoring methods (reversed order). These will be mentioned only with respect to the findings. This article will specifically focus on published papers since 2005 using the 36-item version of the scale (Muller et al., 2005).

A Brief Review of Jahoda’s and Fryer’s Unemployment Theories

Before reviewing the recent findings, it is necessary to provide a brief synthesis of the research supporting Jahoda’s and Fryer’s theories to allow contextualisation and support for the need for ongoing research in this area using the LAMB scale.

Jahoda’s (1981) latent deprivation theory is, perhaps, the most influential framework that has been proposed to account for the deterioration in well-being from unemployment. Jahoda proposed that, although people are compelled to work for the manifest benefit (financial income), it is the five latent benefits associated with employment that allowed people to meet their psychological needs. Jahoda argued that:

[individuals] have deep seated needs for structuring their time use and perspective, for enlarging their social horizon, for participating in collective enterprises where they can feel useful, for knowing they have a recognised place in society, and for being active. (1984, p. 298)

Each of the five latent benefits will be briefly discussed. In other research, the terms ‘categories of experience’ and ‘latent functions’ have been used to refer to the ‘latent benefits’. In this article, ‘latent benefits’ and ‘manifest benefits’ will be used.

Employment imposes a time structure on the waking day. Studies comparing students, unemployed and employed participants have demonstrated that the unemployed report less structured and purposeful time use and lower life satisfaction, self-esteem and happiness. Furthermore, among the unemployed, those who perceived their use of time as more structured and purposeful reported higher levels of life satisfaction (Jackson, 1999; Martella & Maass, 2000; Waters & Moore, 2002). Employment also enforces activity. Enforced activity has been strongly correlated with psychological distress, and unemployed people with better access to the latent benefits typically engage in more active leisure activities compared to those with less access (Haworth & Ducker, 1991). Unemployed people who are highly active have also been shown to have better psychological well-being (Evans & Haworth, 1991).

Employment links an individual to goals and purposes that transcend their own. Collective purpose has been found to be associated with well-being in unemployed samples (Evans & Haworth, 1991; Haworth & Ducker, 1991), and correlated with better mental health across both work and leisure domains (Haworth & Paterson, 1995). Employment implies regularly shared experiences and contacts with people outside the nuclear family. When unemployed and employed samples are compared, the unemployed report less social support from close relations and authority figures (Jackson, 1999), and to be considerably less involved in social activities (Underlid, 1996). Unemployed men who report more contact with friends and relatives outside their immediate family are also more likely to show subsequent improvements in mental health (Warr, 1987). Finally, employment defines aspects of personal status and identity. Status has been found to be associated with psychological health and to make a unique contribution to predicting well-being in adult (Creed & Macintyre, 2001) and youth samples (Evans & Haworth, 1991).

In contrast to Jahoda’s latent deprivation model, Fryer (1986) argued that it was the loss of the manifest benefit (income), not the loss of the latent benefits, that was the main negative consequence of unemployment. Fryer (1995) believed individuals to be...
socially embedded agents who are actively striving for purposeful determination, attempting to make sense of, initiate, influence and cope with events in line with personal values, goals, expectations of the future in a context of cultural norm, traditions and past experience. (p. 270)

Fryer emphasised two factors that were central in explaining the negative psychological costs of unemployment for most people. First, the unemployed person had greater difficulty in making any plans for the future; secondly, unemployment generally results in poverty. While Fryer acknowledged the role of reduced access to the latent benefits, he argued that they have a much less important role in explaining the negative impact of unemployment (Fryer & Payne, 1984). Rather, he argued that it was the lack of income that was the main driver of the mental health costs of unemployment.

Financial strain has consistently been related to lower levels of psychological well-being. For example, Rowley and Feather (1987) found that financial strain was significantly negatively correlated with well-being in their unemployed sample, and Feather (1990) found greater psychological distress and poorer life satisfaction and quality of life when levels of financial stress and strain were higher. Financial strain may also play an indirect role in influencing psychological well-being. Studies have demonstrated that those people reporting the greatest amount of financial strain also reported less time structure in their normal day-to-day activities (Rowley & Feather, 1987; Ullah, 1990).

Integrating the Measurement of Latent and Manifest Benefits

Recently, researchers have suggested that consideration of the role of both the latent and the manifest benefits of employment is needed when investigating psychological well-being in the unemployed (Creed & Macintyre, 2001; Waters & Muller, 2003). It is now apparent that there is a more complex relationship between access to the latent and manifest benefits of employment and psychological well-being than the direct, linear relationships previously hypothesised. But, in order to test whether there are alternative models that may be better at explaining the negative effects of unemployment, researchers need access to more reliable and better validated tools to simultaneously measure the latent and manifest benefits proposed by Jahoda and Fryer. The LAMB scale was developed for this purpose.

The LAMB scale measures time structure, collective purpose, enforced activity, status, social contact and financial strain using five 6-item subscales (Muller et al., 2005). Scores on the LAMB subscales range from 6 to 36 or 6 to 42 (depending on version) with higher scores indicative of greater access to the latent benefits, except for financial strain where a higher score indicates greater financial strain. Muller et al. (2005) reported the internal reliability coefficients for the six subscales to be 0.74 (time structure), 0.92 (social contact), 0.91 (collective purpose), 0.89 (enforced activity), 0.91 (status) and 0.93 (financial strain). Discriminant and criterion validity were also established.

E. Hassall, Muller and S. Hassall (2004) examined the LAMB scale and well-being in 193 unemployed people and 206 low-wage earners. Financial strain (LAMB subscale) was found to be an important predictor of well-being in low-wage earners whereas the latent benefits were predictors of well-being in the unemployed sample. S. Hassall, Muller &
E. Hassall (2005) examined the relationship between Protestant work ethic and LAMB in 399 employed and unemployed people. They found that specific components of Protestant work ethic had a range of different relationships with individual LAMB subscales. Muller, Creed and Francis (2004) examined the association between LAMB and spirituality in 231 unemployed people. The strongest association was found between well-being and the LAMB subscales of financial strain, social support and time structure. Spirituality mediated between LAMB subscales of social support and collective purpose and well-being.

Paul and Batinic (2010) surveyed a sample of 998 German unemployed and employed people and people out of the labour force. As expected, decreased access to all latent benefits was associated with distress but access to latent functions was best among young men from higher social classes who lived in an intimate relationship in a comparatively large household with children.

Hoare and Machin (2006), in a study of 371 unemployed people, found that deprivation of the latent benefits measured by the LAMB scale was able to predict psychological distress after controlling for other key correlates. It accounted for 13% of the variance with time structure being the most unique predictor.

Creed and Klisch (2005) found significant associations between psychological distress and the LAMB subscales of social support, collective purpose and financial strain in a sample of 239 unemployed adults. From the correlation matrix, significant associations (r > .32; Tabachnik & Fidell, 1996) were found between psychological distress and social support collective purpose, financial strain, negative future perspective, positive future perspective and neuroticism. Specifically, high levels of distress were associated with low levels of social support, collective purpose, positive future perspective and neuroticism, and high levels of financial strain and negative future perspective. Social support was further associated positively with collective purpose and status, and negatively with financial strain and negative future perspective. Collective purpose was further associated positively with status, and negatively with financial strain. Activity was positively associated with status. This analysis indicated that well-being was positively associated with access to the latent benefits of employment. Associations between psychological distress and time structure, activity and status were in the expected direction, but were weaker, accounting for less than 10% of the variance in each correlation. This analysis also indicated that well-being was positively associated with access to the manifest benefits of employment and future orientation.

Creed and Bartrum (2008) examined LAMB and personal control in a group of 214 unemployed adults in relation to well-being. Personal control explained additional variance over and above the latent and manifest benefits; it moderated the effect of both activity and financial strain on well-being; and it mediated the relationship between financial strain, time structure, collective purpose, status and well-being. Step 1 of the hierarchical regression analysis reported indicates significant associations between the latent benefits of time structure, collective purpose and status, and psychological distress, and a significant association between financial strain and psychological distress.

Selenko, Batinic and Paul (2011) investigated LAMB using a German translation of the scale (LaMB) in a sample of unemployed and employed people and people out of the labour force. They tested the assumption that lack of access to the latent benefits of work led to psychological distress in a sample of 1026 persons, both cross-sectionally and longitudinal in a four-wave study. They found that employed and unemployed people and people out of the labour force had differential access to the latent benefits and that deprivation of latent benefits led to a decrease in psychological health six months later.

Muller and Read (2009) used the 36-item version of the LAMB in a study of 123 Australian retirees and found that increased access to the latent and manifest benefits was correlated with increased quality of life. Furthermore, collective purpose (LAMB subscale) was found to be the only significant unique predictor of quality of life. Mitchell (2010) examined altruism, LAMB and well-being in 141 unemployed people.
She found that altruism was significantly associated with access to LAMB and that LAMB accounted for 33% of the variance in depression with social support (LAMB subscale) being the most important unique predictor.

In summary, research using the LAMB scale has consistently predicted that lack of access to the latent and manifest benefits of employment is associated with decreased psychological well-being. This pattern has held across various samples, such as in low-wage earners, people with spiritual beliefs, people who are unemployed or out of the labour force, and people with negative and positive future perspective. Furthermore, studies have identified different latent benefits as having different levels of association with well-being (see Table 1).

**LAMB as the Dependent Variable**

More recent studies have used the 36-item version of the LAMB with a range of participants. Batinic, Selenko, Stiglbauer and Paul (2010) investigated whether LAMB is different in occupations with different levels of status. They used a German sample of 565 and an online sample of 826, and found support for their argument that higher levels of status had better access to LAMB but that only time structure and status (LAMB subscales) had unique abilities to mediate. A further study compared employees in high-level and low-level positions. Higher-level employees reported significantly better psychological well-being than workers in low-level positions. Concerning latent functions, respondents higher up the work hierarchy reported significantly better access to all latent functions but status. Inter-correlations between level of occupation and psychological well-being, and latent benefits (overall and in detail) were significant or marginally significant, except for status. Considering each of the latent functions individually, social contact and activity significantly contributed to mediation beyond any other mediator (specific indirect effects).

<table>
<thead>
<tr>
<th>Author/s</th>
<th>Country</th>
<th>Year</th>
<th>LAMB subscale/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hassall, Muller &amp; Hassall</td>
<td>Australia</td>
<td>2004</td>
<td>Financial strain</td>
</tr>
<tr>
<td>Muller, Creed &amp; Francis</td>
<td>Australia</td>
<td>2004</td>
<td>Financial strain, social support and time structure</td>
</tr>
<tr>
<td>Creed &amp; Klisch</td>
<td>Australia</td>
<td>2005</td>
<td>Social support, collective purpose, financial strain</td>
</tr>
<tr>
<td>Hassall, Muller &amp; Hassall</td>
<td>Australia</td>
<td>2005</td>
<td>No overall LAMB subscale relationship reported</td>
</tr>
<tr>
<td>Hoare &amp; Machin</td>
<td>Australia</td>
<td>2006</td>
<td>Time structure</td>
</tr>
<tr>
<td>Muller, Goddard, Creed, Johnson &amp; Waters</td>
<td>Australia</td>
<td>2006</td>
<td>Time structure (females only)</td>
</tr>
<tr>
<td>Creed &amp; Bartrum</td>
<td>Australia</td>
<td>2008</td>
<td>Time structure, collective purpose, status, financial strain</td>
</tr>
<tr>
<td>Muller &amp; Read</td>
<td>Australia</td>
<td>2009</td>
<td>Collective purpose</td>
</tr>
<tr>
<td>Batinic, Selenko, Stiglbauer &amp; Paul</td>
<td>Germany</td>
<td>2010</td>
<td>Time structure, activity, status, social contact</td>
</tr>
<tr>
<td>Hoare &amp; Machin</td>
<td>Australia</td>
<td>2010</td>
<td>Social contact, time structure, financial strain</td>
</tr>
<tr>
<td>Mitchell</td>
<td>Australia</td>
<td>2010</td>
<td>Social support</td>
</tr>
<tr>
<td>Paul &amp; Batinic</td>
<td>Germany</td>
<td>2010</td>
<td>All LAMB subscales</td>
</tr>
<tr>
<td>Selenko, Batinic &amp; Paul</td>
<td>Germany</td>
<td>2011</td>
<td>All subscales had differential access</td>
</tr>
</tbody>
</table>
Muller, Goddard, Creed, Johnson and Waters (2006) examined gender differences on the impact of the ‘work for the dole’ program on well-being and access to latent benefits in 45 unemployed people. Gender differences were only found on the subscale of time structure, with females reporting greater access.

Hoare and Machin (2010) focused on the impact of re-employment on access to both the latent and the manifest benefits of employment and mental health in a study of 115 unemployed Australians. Participants who gained employment (N = 58) were better off financially, reported greater access to social contact and a better time structure and had significant improvements in their mental health when followed up. Participants who remained unemployed showed no change over time.

In summary, gender, occupational status and employment status predict latent and manifest benefits that positively affect well-being.

Conclusion
LAMB scale studies have demonstrated the efficacy for its use as a scale to test Jahoda’s and Fryer’s theories and to identify the latent and manifest benefits of employment. More specifically, the LAMB scale also allows the identification of specific latent or manifest benefits that may be deprived in different samples and the consequences of this deprivation (see Table 1). It is of interest that time structure, social support and financial strain were the most commonly reported. Furthermore, LAMB has been used with a wide variety of populations (for example, retirees, volunteers, people with spiritual beliefs, the employed, people out of the labour force and the unemployed) across two countries, Australia and Germany. Overall, there is justification for its further use as a measure that can be used to predict well-being in the unemployed. By examining specific subscales, it is possible that LAMB may be used as a tool for assisting the design of interventions to tackle those latent and manifest benefits that are not being accessed that negatively affect well-being.

The LAMB scale has now gained research momentum. Evidence of this has been its recent translation and use in German studies, its translation into Portuguese (personal communication with Marta Sousa Ribeiro, 20 December 2005) and recent requests for permission to translate it into Icelandic (personal communication Klargaard, 26 September 2010) and Japanese (personal communication, Miho Takahashi, 29 September 2011). It is timely that more attention be given to further use of the subscales in determining interventions and it is recommended that a meta-analysis of the LAMB scale be conducted.

The global financial crisis has seen a rapid rise in the unemployment rates of many countries. As such, urgent research is required to inform policy-makers and to assist in the development of effective unemployment interventions. We believe that the synthesis of findings presented above is necessary information for researchers and policy-makers to use in order to minimise the psychological distress that unemployed people face. Future research could use the LAMB scale to assist in designing and evaluating interventions that focus on providing access to latent benefits as a means of increasing well-being in a range of different populations.

References


STUDENT PERCEPTIONS OF THE VALUE OF CAREER DEVELOPMENT LEARNING TO A WORK-INTEGRATED LEARNING COURSE IN EXERCISE SCIENCE

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Work-integrated learning has become a significant feature of Australian universities over the past decade. Earlier research indicates that some form of career development is essential to prepare undergraduate students for a competitive employment market. The 2008 National Association of Graduate Careers Advisory Services (NAGCAS) Symposium sought to establish best practice in the integration of career development learning and work-integrated learning. The NAGCAS Symposium and resulting project served as a catalyst for the current study, which examined the value of career development learning to work-integrated learning through student perceptions of the benefits of career education workshops in Field Project, a final-year course for the Bachelor of Exercise Science at Griffith University, Gold Coast. The findings suggest that university students should be exposed to courses that provide a combination of career education and work-integrated learning as part of their formal studies to maximise their employment potential for optimal economic and social outcomes.

CAREER DEVELOPMENT LEARNING
Career development for adult Australians has only recently become a focus in Australian universities. Previously tertiary students had been provided with programs comparatively less developed than those provided in the compulsory secondary school
system (Organisation for Economic Co-operation and Development—OECD, 2002). The Professional Standards for Australian Career Development Practitioners (Careers Industry Council of Australia, 2006) views career development as the process of managing learning, work, leisure and transitions throughout life to assist individuals in determining their future in the workplace. Career development learning helps

[to] inform, guide and assist students to critically appraise not only the world of work, but also the specific occupation they have selected ... and may be deployed to raise students' awareness of employability and how to self-manage their studies and extracurricular activities to optimise the employability. (Smith et al., 2009, p. 18)

In response to the need for a theoretical framework to understand the complexity of the current world of work, Patton and McMahon (2006) developed the Systems Theory Framework, which reconceptualised work-integrated learning through the lens of career development. Systems Theory Framework encompasses individual, social and environmental influences (past, present and future), as well as chance events. Patton and McMahon (2006) also inferred that part of higher education's role is to develop capacities that will permit graduates to be proactive and self-directed learners. The Systems Theory Framework suggests that the choice of one's career should not be considered as a singular decision with a logically determined pathway and that higher education needs to develop particular skills and abilities that allow graduates to be proactive and self-directed learners (Smith et al., 2009).

**Career Development Learning and Employability**

A significant number of studies have indicated the benefits of career development to individuals (Herr, Cramer & Niles, 2004; OECD, 2004; Purcell et al., 2008). Career development learning has the potential to positively affect social equity and human capital (Access Economics, 2006) and can be viewed at individual, organisational or societal levels, over immediate, intermediate and long-term time frames (Watts, 1999). Within Australian higher education career development, in particular, has been shown to play an important role in relation to access, equity and social justice (Melliven, Everton & Clarke, 2005).

The development of self-management skills in students and graduates will enhance lifelong employability. Graduates from Australian universities experience relatively high levels of full-time employment but these statistics may not accurately represent levels of demand and dissatisfaction related to students' learning experiences or their positioning within the world of work after graduation. Numerous strategies may be employed to raise tertiary students' awareness of employability and to develop the skills necessary to manage their studies and extracurricular activities thereby optimising their employability. Yorke viewed employability as

a set of achievements—skills, understandings and personal attributes—that makes graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy. (2006, p. 8)

The increasing costs involved in higher education internationally have placed greater emphasis on the development of 'graduate employability' (Orrell, 2004). In general, students participate in higher education with the view to improving their career opportunities (Smith et al., 2009), with the relationship between learning and employability clearly identified by the OECD (2004). The landmark Australian report Graduate Employability Skills (Precision Consultancy, 2007) emphasised the need for higher education to provide work-related experiences and also to focus on the development of capacities required for employment.

In 2002 the Employability Skills for the Future Framework was produced by the Australian Commonwealth Department of Employment, Science and Training and indicated generic employability skills required by Australian industry, focusing on communication, teamwork, problem-solving, initiative and enterprise, planning and organising, self-management, self-improvement and technology. The Framework also listed personal attributes that were considered relevant to employability, for example, loyalty, reliability. Many of these employability skills have been expressed in university statements related to graduate attributes. The higher education sector has made significant gains in the promotion of graduate attributes within academic curricula and programs (Bath, Smith, Stein & Swann, 2004; Precision Consultancy, 2007).
Research has demonstrated that students appreciated the inclusion of generic skills in the curriculum in regard to their employment prospects, but they indicated a desire for more opportunities to develop these skills in practical settings, as well as exposure to industry (Blackwell, Bowes, Harvey, Hesketh & Knight, 2001; Crebert, Bates, Bell, Patrick & Cragnolini, 2004). Smith et al. (2009) proposed that the embedding of career development learning in work-integrated learning programs can fulfil this need while students are still in a learning environment.

**The Role of Career Development Services in Career Development Learning**

Career development coursework has been demonstrated to positively affect course satisfaction, selection of a degree major, grade-point average, graduation rates and job satisfaction (Folsom & Reardon, 2003). Patton and McMahon (2006) indicated that preparing for lifelong career development is even more important for students enrolled in non-vocational degrees, as they may be most affected by changes in the world of higher education and work. But the provision of career guidance within higher education has been found inadequate (Watts & Fretwell, 2004). Career services at Australian universities offer a range of career development services but these services vary significantly in staffing and resource profiles. Career services can play an important role in supporting students in individual, group and mass delivery activities. Tertiary career services are in an excellent position to provide services to students and employers and equally well positioned to bring academics and employers together for the benefit of students.

**Career Development Learning Enhances Work-integrated Learning**

The key benefits of career development learning in regard to lifelong learning relate to self-awareness, opportunity awareness, decision-making and transition learning (Watts, 2006). These processes were originally developed as the DOTS analysis (Law & Watts, 1977), which has proven very useful as a model for enhancing work-integrated learning experiences. Watts (2006) indicated that work-integrated learning programs can be designed by academics and employers while students, as the recipients and beneficiaries, are more actively and positively engaged in the process through career development. Through this process, Watts (2008) suggested career development learning significantly augments the quality of work-integrated learning by placing students at the centre of such programs and adding value to their quality by helping students to be career ready, as well as work ready.

Smith et al. (2009) held similar beliefs in the value of career development learning to work-integrated learning. Career development learning integrates students’ workplace experiences, clarifies their career plans and provides a better understanding of the curriculum and relevance of university academic experiences (Smith et al., 2009). But the potential for career management skill development has proven to be generally unrealised in universities (Watts, 2006). A 2002 OECD report noted that many students in Australian tertiary education appear to have little understanding of the purpose of their studies or the direction in which they are heading (OECD, 2002). This is particularly significant in Australia where individuals, rather than institutions, determine their entry pathways into the world of work (Andrews & Wu, 1998; Lamb, Long & Baldwin, 2002).

**Work-integrated Programs in Australian Universities**

Work-integrated learning programs have been available through Australian universities for many years, particularly in vocationally-oriented degrees such as nursing, education and medicine, as a means of providing the links between theory and practice in a logical and transformative experience for students (Smith et al., 2009). Strong emphasis on work-integrated learning in higher education is evident in the international context (Billett, 2008) with Australian universities taking a significant interest (Daniel, 2010), as demonstrated by The work-integrated learning report: A national scoping study (Patrick et al., 2008), the establishment of a national work-integrated learning portal (Australian Collaborative Education Network, 2009) and the project report Career development learning: Maximising the contribution
of work-integrated learning to the student experience produced by the National Association of Graduate Careers Advisory Services, Australia, Inc. (Smith et al., 2009).

Work-integrated learning is generally accepted as a potent medium for developing both generic and professional skills to provide students with the opportunity to enhance their employability and work readiness (Patrick et al., 2008). The Business, Industry and Higher Education Council’s report (Precision Consultancy, 2007) situated work-integrated learning as an important medium for the development of graduate attributes and employability skills. Universities Australia (2008) similarly promoted the importance of work-integrated learning in its statement on establishing a national internship scheme for Australian university students.

Griffith University values the inclusion of work-integrated learning activities in its degree programs and courses. Work-integrated learning experiences at Griffith University are designed to meet the personal and professional aspirations of students and to enable their transition to the world of work. The University’s Teaching and Learning Committee views work-integrated learning as an educational activity that integrates theoretical learning with its application in the workplace (Griffith University, 2006). McCowan and McKenzie (1997) have promoted a similar approach by suggesting that career education should be integrated with the curriculum, rather than added as an extraneous service, with its delivery shared by various parties (for example: educators, employers). This integrative strategy has been used in the development of the Griffith University course which is the focus for this research.

**Assessing Work-integrated Learning and Career Development Learning**

Assessment is a driving force in the design of curricula and students pay attention to those aspects of courses that are assessed. Many undergraduate students do not actively consider their future careers until graduation (Lau & Pang, 1995; Perrone & Vickers, 2003), thus Bridgstock (2009) suggests that the development of career management skills needs to commence early in university programs and should be an assessable component of coursework. Sound assessment practices of work-integrated learning inform educational institutions of the preparedness of their graduates for the workplace. One aspect of this study considered the benefits of changing the status of a course (which included both career management skills and work-integrated learning) from non-graded to graded.

**THE NATIONAL ASSOCIATION OF GRADUATE CAREERS ADVISORY SERVICES SYMPOSIUM AND PROJECT**

The 2008 National Association of Graduate Careers Advisory Services (NAGCAS) symposium in Melbourne was attended by 168 delegates as representatives of the major stakeholders, who came together to characterise best practice in the integration
of career development learning into work-integrated learning in Australian universities. The symposium was followed by a forum of more than 60 students and employers for further discussion of the themes, principles, problems, solutions and models put forward at the symposium. These two major events played important roles in the enhancement of the delivery of career development learning in Australian higher education. The symposium resulted in the discussion paper Career development learning and work-integrated learning in Australian higher education (NAGCAS, 2008) and the final project report Career development learning: Maximising the contribution of work-integrated learning to the student experience (Smith et al., 2009). The NAGCAS project sought to bring work-integrated learning and career development learning together in order to eventually 'potentiate one another so that students' preparations and transitions into and through the world-of-work are fulfilling and rewarding' (Smith et al., 2009). The NAGCAS project served as a catalyst for this particular study, which examined the value of career development learning to work-integrated learning.

**Case Study**

Griffith University has several campuses located in Brisbane and the Gold Coast, Queensland. Griffith University's teaching and learning programs aim to provide opportunities for students to acquire knowledge and skills that can be applied in the community. Field Project is an elective third-year course in the Bachelor of Exercise Science program conducted at the Gold Coast campus. The rationale for including this course in the program is to make students aware of the requirements of the industry they wish to enter and to expose them to the working environment of various organisations in which they may wish to seek employment. The course is designed to link and complement the student's program of study by preparing and introducing them to the work environment. The course has three main objectives:

- to provide students with work experience within the industry in which they may seek employment
- to introduce students to various aspects related to the work environment
- to provide career planning procedures and job search skills training.

Students are required to complete a minimum of 80 hours (approximately one day per week) of work experience in an industry of choice throughout the semester.

The course includes both career development learning and work-integrated learning with 13 two-hour workshops. Students are introduced to professional and personal techniques to assist them to gain entry into the workplace and to function successfully once they are in the workplace. The course is staff intensive, with input from lecturers from the School of Physiotherapy and Exercise Science, Careers and Employment Services and relevant employer groups. The workshops include the following:

- introduction to the world of work (one week)
- career education lectures (seven weeks): career planning, job search, résumés, applications, selection criteria, interviews, mock interview, cultural inclusiveness
- presentations by industry representatives (five weeks): speakers may come from organisations involved in fitness, cardiac services, sleep disorders, sport and recreation, sports coaching and administration, event management, pharmaceutical sales, rehabilitation, physiotherapy.

Assessment items for the course were selected from both career development learning and Work-Integrated Learning and included attendance and participation; résumé and job application; interview performance and reflection; an ePortfolio; performance in fieldwork placement; placement handbook completion; and a critical reflection report.

**Research Methodology**

This particular study examined the links between career development learning and work-integrated learning through student perceptions of a series of career education workshops within Field Project, an Exercise Science course at Griffith University, Gold Coast. The results will be used to improve the outcomes for future students. The research included eleven research questions:

1. What did students consider to be the five most important outcomes of the course?
2. How effective did students perceive the career education workshops in preparing them for their future careers?
3. How did students perceive the career education workshops assisted their development in regards to the four tasks outlined in the DOTS
(decision-making, opportunity awareness, transition learning and self-awareness) analysis?
4 Which workshops were considered to be of most benefit to students' career development?
5 What did students consider they learned about themselves from their experiences in the workshops?
6 How did students perceive the workshops prepared them for their placements?
7 To what degree did students consider the workshops improved their employment potential by maximising the benefits of their studies and extracurricular activities?
8 In what ways did students believe the career education workshops affected their employability?
9 How important did students consider the inclusion of career education in Field Project?
10 What suggestions did students have to improve the content or methodology of the workshops?
11 What impact did the fact that the items were marked, rather than non-graded, have on students' motivation and outputs?

**PROCEDURE**

The research was conducted using 22 students in their final semester of study in a three-year Bachelor of Exercise Science, who made up the entire cohort in the course Field Project at Griffith University. The instruments used for data collection included the Measure of Guidance Impact (Killeen, 1992), which was administered before and after the workshops. The questionnaire used a five-point Likert scale with students asked to respond to questions such as 'I have a good idea of a job that will suit me' and 'I have made a plan for my working life'.

Students also responded to a self-completion questionnaire designed for this study. The questions in the first part of the questionnaire, relating to the DOTS analysis, are summarised in Table 1. Students were asked to rate how the workshops had assisted their career development in 11 areas, using a six-point Likert scale with 0 representing 'no development' and 5 representing 'a very high level of development'.

The second part of the questionnaire asked students to recall the details of the career education workshops and activities and respond to the eleven open-ended questions mentioned previously.

The Measure of Guidance Impact was used for data collection as it is a valid and reliable instrument, which is completed before and after guidance related to career development. Its main purpose is to provide objective information to assist training organisations and guidance agencies to evaluate the effectiveness and monitor the learning outcomes of adult guidance programs and interventions (National Foundation for Educational Research, 1992). The Measure of Guidance Impact may be used to provide a general indication of the value added through guidance services or to compare the value of different types of guidance in relation to their longer-term economic outcomes (Christophers, Stoney, Whetton, Lines & Kendall, 1993).

There are two forms of the Measure of Guidance Impact comprises two forms—the first form is used pre-guidance and the second is used post-guidance. Each form contains 25 statements for which clients are asked to record, on a scale of 1 to 5, the extent of their agreement. The maximum score that can be achieved is 125 (25 × 5). Average scores (norms) were previously developed as a result of a large-scale pilot study involving 807 subjects. The statements are simply phrased and have been designed to be read by the majority of adults. The needs of those clients who are learning English have also been considered in the construction of the statements.

The Measure of Guidance Impact provides an overall score for clients, demonstrating the extent of change that may be attributed to the effect of the guidance they have received. This is achieved by measuring the level of career awareness the clients demonstrate when they commence a guidance program, compared with the level they attain following the program. The first form for the Measure of Guidance Impact was administered during the first lecture of the course, while the second form was completed after the lectures and workshops had been concluded.

Students also completed a two-page questionnaire (as outlined above) to allow them to answer freely and explain their perceptions, suggestions and experiences. The researchers developed the questionnaire, which consisted of short answer questions focusing on different aspects of the program. Some questions were closed to elicit specific information and ratings while other questions were open to allow students to provide personal responses to the effectiveness of the program and make suggestions with regard to possible future improvements in the course.
RESULTS

The Most Important Course Outcomes

Students were asked to nominate the five most important outcomes of the course from a list or to make additions where appropriate. The results demonstrated a mix of career education and work-integrated learning outcomes, emphasising the importance of providing both aspects in courses of this nature. The major outcomes nominated by the students were marked with a 1–5 scale. The overall results (in order of considered importance) were as follows:

- gained experience in being interviewed
- developed job application writing skills
- gained insight into professional work
- research and/or practical skills enhanced
- improved development of career path.

The results demonstrated a mix of career education and work-integrated learning outcomes, emphasising the importance of providing both aspects in courses of this nature.

Career Education Workshops: Perceived Effectiveness and Impact on DOTS Analysis Tasks

The first part of the Measure of Guidance Impact was administered in the first workshop of the course. Mean scores obtained were 80.4 for Griffith students (out of a possible maximum of 125 points), while scores for the second form (completed after all the lectures and workshops) demonstrated a mean of 99.1. The change in mean scores of the Griffith students from results obtained from the first and second forms was 18.7, indicating the effectiveness of the course in preparing students for the workforce (two tailed t-test: t = 6.2, p < 0.05).

Students were asked to rate how the career education workshops assisted their development in relation to the four tasks outlined in the DOTS analysis via a self-completion questionnaire. The mean scores (out of maximum possible of 5) are shown in Table 1. The overall mean of 3.75 indicated that the students perceived that the career education workshops provided moderate to high development in the four tasks.

Specific Benefits of the Career Development Workshops

Students were given a list of the career education workshops and asked to nominate the workshops that they considered to be of most benefit to their career development. Two workshops were nominated equally by students as providing most benefit to their career development: developing a résumé; and mock interviews.

Student responses were sought in relation to the aspects they had learned about themselves from their experiences in the career education workshops. The common responses were (number of students shown in brackets):

- confidence in interview situations (8)
- better understanding of skills and knowledge developed in my degree (7)
- how to direct my résumé to the criteria (5)
- my personal limitations or areas for improvement (4)
- relevance of transferable skills (3).

Students were asked how the workshops prepared them for their industry placements. The typical responses to this question were: ‘Prepared me for situations involving language or cultural difficulties’, ‘Developed a professional attitude in dealing with patients and professional problems’, ‘Directed me to a particular industry in which I wish to work’ and ‘Reinforced the need to take advantage of opportunities’.

Students provided their considerations of the effects of the career education workshops on their employment potential through the focus of maximising the benefits of their academic studies and extracurricular activities in their résumés and job applications. The data indicated significant benefits with responses such as: ‘Highlighted my key skills and qualities that I have learnt from my degree’, ‘Better understanding of how to use my studies and community activities to market myself’, ‘See the broad range of skills, both clinical and personal, that I have developed’ and ‘Identified areas of my study that are valued in the workplace’.

Students provided a variety of responses in relation to their perceptions as to the ways in which the career education workshops affected their employability—some responses were related to professional behaviour, whilst others were more specific and personal. Some of the examples provided by students were:

- ‘Developed my résumé to a professional level’
- ‘I have now some idea of what to expect in an interview’
‘The idea of approaching an organisation like a hospital previously dumbfounded me—now I have a means to approach such an organisation’
‘They awake students to the complexity, time and effort involved in getting a job’
‘Guidance for structuring answers during interviews using the STAR approach’
‘I can now emphasise the strengths I can bring to the job’
‘Now I can actually respond to selection criteria and answer questions succinctly’
‘Gives me the tools to showcase myself to the best of my ability’.

**Students’ Suggestions for Improvement**
Students provided minimal suggestions as to possible improvements to the content or methodology of the workshops, probably as the course had been continually updated following student feedback over the last 10 years. Some typical responses included the following:

- ‘I have no suggestions – they were great!!!!!!!!!’
- ‘More group discussions on résumés and responses to selection criteria’
- ‘Identify main career goals of individual students—try to tailor discussions to cover those goals’
- ‘Bring in more guest speakers from different occupations in the health industry’.

**The Significance of Grading**
All students commented that marking increased their motivation and effort in completing assessment tasks. Several students also indicated that a good grade would boost their grade-point average, which would assist when applying for entry into postgraduate programs.

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**Table 1: Student Perceptions of the Benefits of the Career Education Workshops to the Four Tasks Outlined in the DOTS Analysis**

<table>
<thead>
<tr>
<th>Process</th>
<th>Skill or ability</th>
<th>Perceived level of development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-awareness</td>
<td>Identify knowledge, abilities and transferable skills developed by your degree</td>
<td>3.7</td>
</tr>
<tr>
<td></td>
<td>Identify personal skills and how these can be deployed</td>
<td>3.8</td>
</tr>
<tr>
<td></td>
<td>Synthesise your key strengths, goals and motivations as they apply to job searching</td>
<td>3.9</td>
</tr>
<tr>
<td>Opportunity awareness</td>
<td>Demonstrate knowledge of general trends in graduate employability and opportunities</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>Demonstrate understanding of the requirements of graduate recruiters</td>
<td>3.6</td>
</tr>
<tr>
<td>Decision-making</td>
<td>Relate self-awareness to knowledge of different employment opportunities</td>
<td>3.0</td>
</tr>
<tr>
<td>Transition learning</td>
<td>Demonstrate understanding of effective job search strategies</td>
<td>4.2</td>
</tr>
<tr>
<td></td>
<td>Apply understanding of recruitment/selection methods to applications</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>Demonstrate ability to use relevant vacancy information including ways of accessing unadvertised vacancies</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>Demonstrate capacity to vary self-presentation in résumés and interviews to meet requirements of specific job opportunities</td>
<td>3.9</td>
</tr>
<tr>
<td></td>
<td>Demonstrate ability to present oneself effectively in selection interviews and other selection processes</td>
<td>3.8</td>
</tr>
</tbody>
</table>
The following responses were relevant to the issue of the graded versus non-graded status of a course:

I personally think that grading the course was a great idea. I was motivated to produce a high quality résumé and to give 100% effort in the mock interview process, which will prove beneficial during job career searching. My résumé is now employer ready, with the only adjustment being to keep it updated.

Having marked work has been beneficial in knowing what level of quality my work has been. In real life a résumé will be judged on more than just a Pass/Fail basis. It helps our employment prospects if we can identify areas which need improvement.

**Perceived Importance of Career Education**

All—100%—of the students responded positively in response to the question ‘Do you believe career education should be part of a work experience course?’ This is a significant demonstration of the link between career education and work-integrated learning. Some typical reasons given by students for this response included:

- ‘Learn how to behave in a professional environment’
- ‘Provides a clearer career path’
- ‘Gives you knowledge to apply to a variety of jobs’
- ‘Gives students perspective of employers’
- ‘Fully prepares students for life after placement’

These reactions provide the authors with a strong conviction of the importance of the integration of career education and work-integrated learning opportunities for students in Australian universities.

**Conclusions**

The results of this research clearly identify positive trends in students’ perceptions in regard to the benefits of this course, which combines work-integrated learning with career development learning. Although the course has a heavy workload, the benefits to the students in terms of preparation for their careers are significant. This research has clearly identified the added value that career development learning brings to work-integrated learning, as well as the importance of embedding career development learning within an assessable environment.

In summary, there were several important findings from this study:

- At the start of this course students were below average in work readiness (as determined by the Measure of Guidance Impact). This is of concern as the students are in their final year of study. While many other students in their cohort did not complete this course and were therefore probably ill-prepared for the workforce, the participants’ work readiness changed significantly by the completion of the course, demonstrating its effectiveness.
- The five most important outcomes of the course (as perceived by students) identified a mix of career education and work-integrated learning outcomes, demonstrating the important links between these aspects of the course.
- The career education workshops, which were tailored specifically for Exercise Science students, provided moderate to high development in the four tasks outlined in the DOTS analysis: decision-making; opportunity awareness; transition learning; and self-awareness.
- Students indicated they had achieved significant personal development through involvement in the workshops, which had improved their employability and readiness for the workforce.
- All students in the course agreed with the inclusion of career education in a work experience course, clearly identifying the link between career education and work-integrated learning. Their positive responses suggest that courses incorporating this integrated approach should be provided to students in Australian universities to increase their employment potential.
- The change from non-graded to graded status of the course had significant positive effects on student motivation and outputs. Students appreciated that Pass/Fail is not sufficient in the preparation for a competitive job market.

**Recommendations for Practice**

It would seem appropriate that university students should be exposed to a combination of career education and work-integrated learning as part of their formal program of study to maximise their employment potential for optimal economic and social outcomes. University academics and career development practitioners need to work closely with industry partners to integrate their services to produce graduates who can not only find satisfying employment but also successfully manage their lifelong careers. This research has provided a practical example of the integration of
career development learning and work-integrated learning for the benefits of students in relation to their employability and adds weight to the strategies promoted in the NAGCAS Report (Smith et al., 2009). Further research is required in regard to the effects of other combinations of career development learning and work-integrated learning in other Australian universities, and academic programs and courses in order to enhance student employment prospects in a rapidly changing world.

References


Several years ago, I participated in a workshop delivered by Professor Mark Savickas at the conference of the Australian Association of Career Counsellors (now the Career Development Association of Australia) that was held at Coolangatta. The workshop included demonstrations of Savickas’ approach to career counselling, including his ‘career story interview’ technique. It was a marvellous introduction to his ideas brought to life in practice. Countless keynote presentations, workshops, chapters and journal articles later, Savickas has at last written the book. It was worth the wait.

The book, Career Counseling, begins with the usual introduction regarding changes in the world of work. Fortunately, Savickas spares the reader of much of the overly rehearsed material that is so commonplace in the literature, and gets directly into the important concepts and matters of practice. There is an overview of concepts of self and identity, and a description of a model of the process of narrative counselling. This model of process is important because it guides the practitioner in how narrative career counselling might progress and engage the client in the process of self-constructive discovery and change.

The remainder of the book is devoted to a description of practices, proceeding from assessment to generation of solutions, steps towards action, and ultimate change. The chapter on the Career Story Interview deals with its application through the five key questions pertaining to role models, magazines, favourite stories, mottoes and early recollections. The book contains an appendix with the questions of the Career Story Interview, a very useful glossary of terms and a list of resources.

Career Counseling is part of the Theories of Psychotherapy Series published by the American Psychological Society. At fewer than 200 pages in length, it is succinct and easy to digest due to the author’s smooth style. The price is comparably low too. Readers may also benefit from the DVD products that accompany Career Counseling and the other books in the series. This book is well suited to career development practitioners and other counselling professionals who are seeking a handbook for practice. It is also suitable as a specialist textbook for courses in career counselling.

Savickas deserves our gratitude and praise. Indeed, this book is a masterpiece by a master craftsman. Not since the opus by Cochran (1997)—Career counseling: A narrative approach—has there been a monograph of such practical value. I am sure it will become a popular guidebook for practitioners and scholars.

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