

Enhancing students' self-efficacy in making positive career decisions

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Field Project A is an elective course in the Bachelor of Exercise Science program at Griffith University and includes elements of both career development learning and work-integrated learning. This paper aims to determine the effects of the learning activities and assessment items developed for the course on students' self-efficacy in making positive career decisions. Prior to commencing a work experience placement, workshops were conducted based on the SOAR model (Kumar, 2007), including activities related to the development of the first three phases of the model - self-awareness, opportunity awareness and aspirations. The career decision self-efficacy scale (CDSS) and a questionnaire were administered prior to and on completion of the course. Comparison of scores demonstrated significant differences in relation to students' confidence in self-appraisal, occupational information, goal selection, planning and problem-solving. Students perceived the course increased their awareness of personal strengths and weaknesses related to employability and their knowledge of specific occupations. (*Asia-Pacific Journal of Cooperative Education, 2015, 16(4), 291-300*)

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BACKGROUND

Self-Efficacy Theory

The potential importance of the self-concept and self-esteem to vocational behavior has long been recognized (Leong & Barak, 2001). More recently research has focused on the construct of self-efficacy, which refers to an individual's beliefs in their ability to perform a particular behavior. This concept is specific to a particular scenario (e.g., driving a car) and thus needs to be related to a particular behavior to be meaningful. Self-efficacy theory can be perceived as an application of social learning or social cognitive theory to vocational education (Lent, Brown & Hackett, 1994). Self-efficacy expectations refer to a person's beliefs concerning his or her ability to successfully perform a given task or behavior and were perceived to be major mediators of behavior and behavior change (Bandura, 1977). Low self-efficacy expectations regarding a particular behavior could lead to avoidance of those behaviors, whereas stronger self-efficacy expectations would more likely lead individuals to approach behavior. 'Approach' behavior describes what we will try, whilst 'avoidance' behavior refers to things we will not try (Betz, 2000). The behavioral consequences of perceived self-efficacy were thus considered to include (a) approach versus avoidance behavior; (b) quality of performance of behaviors in the target domain; and (c) persistence in the face of obstacles or negative experiences (Betz, 2000). Thus, self-efficacy expectations can be useful for those involved in vocational education in understanding and predicting behavior. Additionally, interventions designed to facilitate approach behavior tend to prove effective because they increase the individuals' expectations of self-efficacy in regards to a behavior that may have previously been avoided.

Bandura (1997) specified four sources of information through which self-efficacy expectations are learned and through which they can also be modified. These sources of information include: (a) performance accomplishments, that is, the experiences of successfully performing the behaviors in question; (b) vicarious learning or modeling; (c) verbal persuasion, for example encouragement and support from others; and (d) lower levels

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of emotional arousal (anxiety) in connection with the behavior. Past performance accomplishments, which Bandura also calls 'enactive mastery experiences', serve as indicators of capability and are the most influential sources of efficacy information. Success builds a robust belief in one's personal efficacy. Failures undermine it, especially if failures occur before a sense of efficacy is firmly established (Bandura, 1977). The second source of efficacy information is vicarious learning or modeling. Bandura suggests the greater the perceived similarity between the individual and the model, the more persuasive will be his or her successes or failures. Social persuasion from others is effective in enhancing and sustaining a sense of self-efficacy if the target behavior is within realistic boundaries. Thus, persuasion and encouragement should be focused on realistic challenges rather than impossible tasks, failure on which will be detrimental to perceived self-efficacy. The fourth source, emotional arousal, refers to somatic information conveyed by physiological and emotional states. Self-efficacy can be enhanced by reducing the extent to which the individual experiences these indicators, for example by managing stress and anxiety responses and by increasing physical fitness levels. Thus, the theoretical context of the construct of self-efficacy provides not only a means for understanding the development of an individual's self-efficacy beliefs, but the means for their modification through interventions utilizing positive applications of the four sources of self-efficacy information.

Career Self-Efficacy

Over the past few decades, increased attention has been paid to the process by which career decisions are made (Miller et al., 2009). Various studies have examined the impact of such constructs as aptitude, ability, needs, personality and values on the career decision making process (Brown & Lent, 2005). Another construct that has received significant research attention is career decision-making self-efficacy (CDSE) which was introduced by Taylor and Betz (1983) with the development of the Career Decision Self-Efficacy Scale (CDESES). The scale was designed to measure an individual's degree of belief that he or she can successfully complete tasks necessary to making career decisions. Several studies have shown CDESES scores to be related to behavioral indicators of educational and career adjustment (Taylor & Popma, 1990; Mathieu, Sowa, & Niles, 1993; Nevill & Schlecker, 1988; Peterson, 1993). Not surprisingly, research is now being focused on the evaluation of counselling interventions designed to increase career decision-making self-efficacy. Career self-efficacy theory is used for understanding, assessing and designing interventions focusing on career behavior. Leong and Barak (2001) suggest that nearly all individuals have some behavioral areas where they lack confidence in their abilities. In many cases, these areas of perceived inadequacy may limit the range of career options or the success with which desired career options are achieved.

The SOAR Model of Career Development Learning

University students should be exposed to a combination of career development learning (CDL) and work-integrated learning (WIL) as part of their formal program of study to maximize their employment potential for optimal economic and social outcomes (Reddan & Rauchle, 2012). SOAR is a tool developed by Arti Kumar (2007) that assists teachers operationalize and contextualize the ideals of career development learning. This model stands for self-awareness, opportunity awareness, aspirations and results. As a result, students develop realistic aspirations based on sound information that can help them achieve the outcomes they desire as they move into the workforce. Individuals can personalize this process to suit their circumstances and aspirations through inbuilt requirements for

reflection, action, analysis and lateral thinking. The model expresses SOAR elements as enabling 'metaskills' and has the potential to promote personal inquiry, the discovery of self and the building of students' unique identity through engagement with opportunities within and outside the curriculum (Kumar, 2007). Engaging students with SOAR elements in a coherent and continuous process can empower them to take control of, and deal constructively with, the variety of factors that influence their personal, educational and professional success in an age of supercomplexity (Barnett, 1999). The SOAR model was used as the basis for teaching pedagogy in the course around which this study is based.

The Career Decision Self-Efficacy Scale

The Career Decision Self-Efficacy Scale (CDSES) (Taylor & Betz, 1983) is a measure of the way people perceive their ability to make educational and vocational decisions. Career decision self-efficacy was originally defined by Taylor and Betz (1983) as an individual's beliefs that he or she has the ability to complete successfully the tasks related to decision making in relation to his or her career. This particular kind of self-efficacy, anchored in the socio-cognitive theory by Bandura (1977, 1997) and more specifically the socio-cognitive theory of careers by Lent, Brown, and Hackett (1994), has attracted the attention of many researchers, mainly because of its central role in the implementation of interventions of vocational guidance and in the assessment of outcomes of such interventions (Betz & Lutto, 1996). The CDSES is one of the most frequently used scales in career counselling and vocational guidance. It consists of 50 items that provide five subscale scores, assessing the degree of confidence that the person has about his or her ability to identify resources, constraints and personal characteristics that might influence their career choices. The authors defined the five CDSES areas on the basis of Crites' (1978) theory of career maturity – self-appraisal, occupational information, goal selection, planning and problem-solving. In the original version, responses were obtained via a 10-level confidence continuum, which ranged from 0 (no confidence) to 9 (complete confidence). Betz and Luzzo (1996) reviewed the research on the CDSES scale and cited research attesting to its reliability, as well as content, criterion and construct validity. Similarly, Prideaux, and Creed (2001) indicated that the CDSES is a well-developed construct with sound psychometric properties. It has become one of the most widely used instruments in the literature related to career development and career counseling (Luzzo, 1993; O'Brien, 2003).

As the original CDSES was fairly lengthy (i.e., 50 items) and time consuming, Betz, Klein, and Taylor (1996) published a short form of the questionnaire (Career Decision Self-Efficacy scale – short form (CDSES-SF), which included 25 items (5 for each factor) with a confidence continuum identical to that of the previous version. In 2005 a version was made with the same number of items but with a 5-level confidence continuum – 1 being 'no confidence at all' and 5 referring to 'complete confidence' (Betz, Hammond, & Milton, 2005). CDSES-SF total scores have displayed moderate to strong correlations with scores on measures of career search activity, vocationally exploratory behaviors, career commitment, career indecision, vocational identity and career maturity, and patterns of career choices (Miller et al., 2009). The scale scores can be reviewed to indicate an individual's pattern of higher and/or lower confidence areas as they relate to career decision making competences. These scores can also be used to identify students at risk for academic or decisional difficulties and, hence, those students needing career or academic intervention. The score patterns can suggest which areas of decision are most in need of intervention. Furthermore, the scale scores can be utilized to evaluate the effectiveness of educational and career interventions.

CASE STUDY CONTEXT

Griffith University has several campuses located in Brisbane and the Gold Coast, in Queensland, Australia. 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 A is an elective second-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 organizations 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. Students are required to complete a minimum of 80 hours work experience in an industry of choice. The course involves both career development learning and work-integrated learning (Reddan & Rauchle, 2012). Two days of workshops were conducted prior to the placement based on the SOAR model (Kumar, 2007). These workshops were conducted by the course convener and a career counselor from Careers and Employment and included activities related to self-awareness, opportunity awareness and aspirations. The final element of the SOAR model, results, is addressed in the complementary course, Field Project B, in the final semester of the third year of the program. Students were required to give two oral presentations following their placement, firstly their career action plan and secondly reflections of their experiences during placement. The course is graded and the assessment items included the development of a personal profile, the construction of a career action plan, a personalized job study, performance on placement, a reflective journal related to the placement, as well as oral presentations.

These learning experiences incorporated the four sources of information promoted by Bandura (1977) and Betz (1992) through which career self-efficacy is both acquired and modified. Firstly, performance accomplishments were promoted through the completion of self-awareness and occupational awareness activities. Students integrated information obtained from the assessment of self-interests, goals, abilities, personal characteristics and related group discussions. Assignments required students to complete a personalized job study and formulate goals in a career action plan. Vicarious learning or modeling was accomplished by gathering career-related information using informational interviews with relevant health professionals, observing other students reporting about their career decision-making processes, successes and failures. Additionally, the course lecturers appropriately modeled and discussed aspects of their own career decision-making. Verbal persuasion was presented by positive affirmation and encouragement by the course lecturers and other students. Furthermore, group participants both gave and received support through discussion of past and current career-related successes. Finally, attending to emotional arousal was promoted through developing awareness of negative self-talk throughout all learning activities and focusing on affirmative action and career goal-setting strategies.

RESEARCH METHODOLOGY

Research Purpose

This particular study examined the effectiveness of the learning activities of Field Project A in relation to students' career decision self-efficacy to seek out real-world positions in industries relevant to their undergraduate studies in Exercise Science. The results will be used to

consider possible improvements of the course for future students. The research included three main research questions:

1. What effects did the learning experiences of the course have on students' career self-efficacy?
2. How did the learning activities of the course affect students' career self-efficacy in relation to:
 - a. Awareness of their personal strengths and weaknesses in relation to employability?
 - b. Knowledge related to a specific occupation in which they are interested?
 - c. Ability to set goals for their career?
 - d. Skills in planning to achieve their career goals?
 - e. Ability to solve problems related to their career development?
3. In what ways has the completion of each of the course assignments affected students' confidence in making positive career decisions:
 - a. The personal profile?
 - b. The career action plan?
 - c. The personalized job study?
 - d. The reflective journal?

DATA COLLECTION

The research was conducted using 15 second year Exercise Science students who made up the entire cohort in Field Project A at Griffith University. The instruments used for data collection included the Career Decision Self-Efficacy Scale – Short Form (CDSES-SF) (Appendix I), which was completed at the commencement and completion of the learning activities of the course. Students were required to indicate their level of confidence in relation to five variables (25 statements) using a five point Likert scale, with 1 being 'no confidence at all' and 5 referring to 'complete confidence'. These variables included self-appraisal (SA), occupational information (OI), goal selection (GS), planning (P) and problem-solving (PS). Statistical analysis was performed using the Wilcoxon ranked pairs test. This non-parametric test is appropriate for data from an ordinal scale (i.e., a numerical scale in which the numbers are ranks rather than representative of relative differences; for example, a score of 4 is not twice a score of 2). The test determines whether the difference in means is likely to be 0. Scores were obtained in relation to the five subscales - self-appraisal, occupational information, goal selection, planning and problem-solving. Students also completed a two-page self-completion questionnaire specifically designed for this study at the final workshop of the course. The questions allowed students to answer freely and explain their perceptions. The researcher (also the course convener) developed the questionnaire, which consisted of short answer questions focusing on different aspects of the course.

RESEARCH FINDINGS

The research findings are reported here using the research questions as headings.

1. *What effects did the learning experiences of the course have on students' career self-efficacy?*

Table 1 indicates that the scale scores collected at the completion of the course were significantly greater ($p < .05$) than the scale scores achieved by students at the commencement of the course, thus indicating that students had gained significantly in confidence in relation

to their overall career decision self-efficacy and also in each of the five sub-scales of self-appraisal, occupational information, goal selection, planning and problem-solving.

TABLE 1: Comparison of results of CDESES pre- and post-course

Question	N ¹	W	Critical W ²	Conclusion
Self-appraisal	10	1.5	8	Significant difference
Occupational inform.	12	13.0	13	Significant difference
Goal selection	10	7.0	8	Significant difference
Planning	14	2.5	21	Significant difference
Problem-solving	15	15.0	17	Significant difference

Note:

1. Test excludes data pairs that have no difference (i.e., no change in score)

2. This is the test statistic value (W) that corresponds to $p = 0.05$; values smaller than the critical value have $p < 0.05$ in which case it is unlikely that the median difference is 0.

2. *How did the learning activities of the course affect students' career self-efficacy?*

- a. *How did the learning activities of the course affect students' career self-efficacy in relation to developing awareness of their personal strengths and weaknesses in relation to employability?*

Responses indicated that almost all students developed a greater awareness of their strengths and weaknesses in relation to employability following the learning activities conducted during the course. "The activities have allowed me to identify the more important components in which I excel or need to work on." One student noted that he had not experienced any real change, whilst several students suggested their confidence in regards to employability had increased significantly. The personal profile was perceived to be a valuable teaching activity in assisting the development of a deeper understanding of these issues.

- b. *How did the learning activities of the course affect students' career self-efficacy in relation to knowledge related to a specific occupation in which they are interested?*

The majority of students (87%) suggested that they became more knowledgeable about a specific occupation at the completion of the course. Various learning activities were provided to gain more information about particular careers. "The personalized job study was great – it gave me a lot of information about my chosen career." Another student noted that the career plan greatly improved their awareness but it "also made me feel more relaxed knowing the job outlook in the years to come". The placement component of the course was regarded to be very influential in providing both theoretical and practical perspectives of particular occupations. Importantly, students perceived that they had become more aware of the resources to find information, particularly concerning the terms and conditions of particular occupations. Several students indicated that the learning activities of the course had consolidated their ideal career choice, whilst others mentioned that it "was useful to look at other pathways". One student suggested that the course provided clarity in the duties and responsibilities attached to a specific occupation. "The course has given me a greater idea of Exercise Physiology and what the position involves. I had completely the wrong idea."

- c. *How did the learning activities of the course affect students' career self-efficacy in relation to ability to set goals for their career?*

Generally students considered that they were more able to set career goals as a result of the learning activities presented. "The course helped me to set goals and identify pathways to specific careers." One student suggested that her goals were "more clear and precise". However, two students (13%) indicated that little change had occurred in this aspect through the course as they had independently conducted their own research and set goals prior to the commencement of the course. "I had already set my goals so I knew what I have to do to achieve them through my own research." Several students noted that the career plan was valuable as "everything has been broken down into manageable steps". Another commented that "the SMART goals initiative was very helpful in designing my goal-setting program". This activity required students to set goals that were specific, measurable, achievable, realistic, and time-framed.

- d. *How did the learning activities of the course affect students' career self-efficacy in relation to skills in planning to achieve their career goals?*

Students suggested that their planning skills were more developed and organized following the course. Several noted that they were more aware of skills they already possessed and those which they need to develop in order to improve their employability. "The course helped develop and identify skills that help to plan and achieve career goals." One student commented that the skills were "cemented, nothing is going to stop me now – this course has really helped", whilst two students indicated that the learning activities conducted during the course assisted in providing places or resources to turn to for assistance. "I learnt where to look for resources, which helped me set short-term goals in terms of courses that I must complete." Another student noted that the personal profile assisted in developing her confidence to successfully plan for her future career.

- e. *How did the learning activities of the course affect students' career self-efficacy in relation to ability to solve problems related to their career development?*

The general consensus of students was that the learning activities assisted their ability to solve problems related to their career development. "It's encouraged me to remain committed and dedicated to my studies and has helped me overcome my fears concerning employment." Students suggested that the work-experience placement, the reflective report, the informational interview and discussions with professionals were very valuable experiences in regards to this specific ability. One student noted that the course created greater awareness of potential problems, but that he was "more informed of where to seek information to solve the problem". Several students indicated that the learning activities provided more direct contacts at the university who can assist students with any problems that might arise in regards to career development.

3. *In what ways has the completion of each of the course assignments affected students' confidence in making positive career decisions?*

- a. *In what ways has the completion of the personal profile affected students' confidence in making positive career decisions?*

Twelve of the students (80%) indicated that completion of the personal profile was beneficial to their self-efficacy in making positive career decisions. The most common response (number of students shown in brackets) focused on greater awareness of personal strengths, weaknesses and values. Responses included "helped me identify my personal strengths and weaknesses to ensure I find the correct place to satisfy my personality and goals" (9).

Students also commented on increased awareness of useful transferable skills and their importance in the workplace. Several students suggested that completion of the personal profile required students to more closely analyze their thoughts and goals. Responses included: "it made me look deeper at myself, which I haven't done for a long time"; "before this I hadn't really explored these type of things"; and "helped me realise what I want out of a career and my personal attributes". The three negative responses indicated that students did not perceive the assignment to be relevant or educational. "I didn't find it useful. I found it hard to relate to and awkward".

b. *In what ways has the completion of the career action plan affected students' confidence in making positive career decisions?*

Fourteen of the 15 students (93%) suggested that the career plan assisted their self-efficacy to make positive career decisions. One student noted that he experienced no real change. "I already had a solid idea of what is required to achieve my goals." Responses indicated the career action plan emphasized the importance of identifying both short- and long-term goals and the relevant action steps required to achieve those goals (8). Typical responses included: "the career action plan helped me visualize exactly where I wanted to go, what I wanted to do and how I was going to get there"; and "I can now break my long-term goal into more manageable steps which makes it more achievable in my eyes instead of something that I would eventually get to". Two students mentioned that it may have been more useful to complete the career action plan after placement "when ideas are clearer and we have more knowledge". One student noted the value of structure for achieving a career goal. "It gave me a structured way to look at a career path, whether or not I wished to continue and how to get there."

c. *In what ways has the completion of the personalized job study affected students' confidence in making positive career decisions?*

The majority of students (13) indicated that this assignment was valuable in the development of their self-efficacy to make positive career decisions. One student suggested that "it didn't help in making a career decision, but it did allow me to better understand how to find this information". The most frequent response (8) related to the acquisition of important information relevant to specific careers. "This was my favorite assessment piece – it gave me a lot of information about my chosen career. It helped me assess whether it was something that I definitely want to do." Three students noted that the information collected from professionals sparked greater personal interest in particular careers. "It brought to my attention what my ideal job consists of and what it has to offer me in regards to pay and entitlements." One interesting response mentioned the importance of being aware of changes in the industry researched. "The study allowed me to recognize the changing job market and how work opportunities are changing all the time."

d. *In what ways has the completion of the reflective journal affected students' confidence in making positive career decisions?*

Ninety-three percent of students suggested that the reflective journal was beneficial in terms of the students' ability to make positive career decisions. One student commented that "reflection is amazing but shouldn't be assessed". Five students (33%) indicated that this assignment enabled them to reflect on the aspects of the particular career which they enjoyed and other challenges they had to overcome. "The journal allowed me to reflect on aspects of the placement that I found enjoyable and the skills/qualifications I need to improve or

obtain." A similar response noted: "it helped me to learn more about myself and what I enjoy. It was useful to reflect on the positive and negative aspects of the career".

DISCUSSION AND CONCLUSIONS

The results of this research clearly indicate positive trends in students' perceptions to the benefits of the course, Field Project A, in regards to enhancing their career decision self-efficacy. Graduates from Exercise Science programs in Australia enter a very competitive employment market in which self-efficacy in regards to making career decisions is essential. Thus, Field Project A provides students with a variety of learning experiences that have been demonstrated to significantly improve their self-efficacy in this regard. These results support Betz's (1992) strategies for increasing career self-efficacy through addressing performance accomplishments, vicarious experiences, verbal persuasion and emotional arousal. Students became more aware of their personal accomplishments through the completion of numerous self-awareness and occupational activities. Vicarious learning was enhanced from students conducting informational interviews with relevant health professionals and also through observing other students reporting about their successes and failures in their career decision-making processes. The encouragement from course lecturers and other students, along with an emphasis on positive self- and group-talk, offered an ideal environment for students to gain confidence in their ability to influence the development of their careers. Furthermore, the SOAR model (Kumar, 2007) provided an excellent pedagogical platform for the organization of course content and delivery and played a significant role in the positive changes in students' career self-efficacy.

Each of the course assignments were found to assist in improving students' confidence in making positive career decisions. The general consensus suggested that the personal profile increased students' awareness of their strengths, weaknesses and values. Students indicated the career plan consolidated their awareness of the necessary strategies required to achieve both short- and long-term goals. The personalized job study provided students with significant information concerning particular careers in which they were interested. Students suggested that the reflective journal enabled them to reflect on both the positive and negative aspects of the careers which they experienced during their placements. It would be useful in future years to integrate the personal profile and career plan as a single assignment so that students can more thoroughly comprehend and apply the findings from their personal profile to their individual career plan. Similarly, students would benefit by using the knowledge gained in this first assignment to the personalized job study in order to determine the optimum pathway to their career goal. The integration of these assignments would provide a more beneficial and holistic approach to students' long-term career development.

In summary, there were several important findings from this study. Students became more aware of their personal strengths and weaknesses in relation to employability following the course. The learning activities were found to be valuable in providing students with knowledge concerning specific occupations in which they are interested. Students indicated they were more able to set and develop plans to achieve career goals at the completion of the course. In general, students suggested they were also more confident in their ability to solve problems and more aware of possible contacts within the university to assist them in their career development.

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Research reports should contain; an introduction that describes relevant literature and sets the context of the inquiry, a description and justification for the methodology employed, a description of the research findings-tabulated as appropriate, a discussion of the importance of the findings including their significance for practitioners, and a conclusion preferably incorporating suggestions for further research.

Topical discussion articles should contain a clear statement of the topic or issue under discussion, reference to relevant literature, critical discussion of the importance of the issues, and implications for other researchers and practitioners.



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