INVESTIGATING EFFECTIVENESS OF INFUSING CAREER EDUCATION INTERVENTIONS INTO A LEARNING SUPPORT COURSE FOR LOW-ACHIEVING BUSINESS COLLEGE STUDENTS

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ABSTRACT

This study relates to an experimental study and it is supplemented by a qualitative study. Using a sample size of 89 subjects (42 students in the experimental group and 47 students in the control group at a business university), ranging from 18 to 23 years of age, the findings of this quantitative study demonstrated that the infusing the model of career education into the learning support course helped students in career decision-making and the use of studying strategies. Analysis of the data revealed that there were statistically significant primary effects for treatment in terms of their perceptions of the career indecision and the study-improvement of the study strategy. In addition, the positive correlations was found between GPA and both learning motivation and time management. Based upon this study’s quantitative and qualitative findings, future research and suggestions for infusing career education interventions into various specialty subjects are discussed.

Keywords: career education course, low-achieving, college students, career indecision

Introduction

The purpose of career education in higher education is to assist college students in the understanding of career paths, in knowing the career ladders of various professional fields, and in having clear directions on how to develop a career (Herr, Cramer & Niles, 2003; Savickas, Van
Current career education interventions in higher education should focus more attention on career guidance for low-achieving college students, and instructors/counselors should learn and understand the background factors that motivate subject selection/career interests, professional learning, and students’ learning methods. Additionally, the issue of many college students facing the confusion of career indecision is not rooted in professional field indecision, but specialty indecision (Savickas, Alexander, Osipow, & Wolf, 1985). The institutions of higher education should pay more attention to the career education for identifying a professional specialty for college students, and encourage students to study and attend an intern practice through tailor-made career planning courses, or career-planning integrated into specialty required courses (Peng, 2014; Peng, 2015a). Facing the challenge of global competition, every department of higher education should strengthen its cultivation of students’ soft power, stimulate students’ learning motivations, and assist in their professional career choice, in addition to providing professional courses designed to nurture professional capability. The most important factors that affect student’s learning motives are the course activity design, and whether or not the department provides various assistance and support in accordance to students’ background factors, personality traits, needs etc. (Peng, 2004; Pascarella & Terenzini, 2005).

**Need For This Study**

The purpose of this study was to investigate empirically low-achieving college students’ career choice conditions and learning strategy status via the implementation of infusing career education interventions into the learning support course. This study assumed that to inspire and motive low achieving college students is the major goal of the career education model, including improving their overall self-understanding related career planning skills and providing effective study strategies to improve students’ academic achievements. The hypothesis was that career education interventions integrating in the learning support course would improve low-achieving college students’ study skills and their career decision-making regarding future employment prospects.
Literature Review

1. Low Achiever/Low Achieving College Students

Even though numerous studies related to low achievers focused on elementary and secondary level students (Chen, Shih-Jay, & Chu, 2015; Horpyniuk, 2015; Karsenty, 2010; Trapman, Gelderen, Steensel, Schooten, & Hulstijn, 2014; Usinger, 2005), Williams (2015) mentioned that there are different academic and social support needs for higher and lower achievers in higher education. Low achieving college students need academic remediation while higher achieving students need academic enrichment. Nurmi, Aunola, Salmela-Aro & Lindroos (2003) found that students’ success expectation predicted academic achievement and satisfaction, but task-avoidance predicted low academic achievement and dissatisfaction. Goal setting is one of the key elements for designing low achieving students’ support programs, Dompnier, Darnon, Meier, Brandner, Smeding & Butera (2015) confirmed that mastery goals predicted performance only when these goals were presented as socially useful but not presented as socially desirable, especially among low achievers, those who need mastery goals the most to succeed. In addition, Hampton (2015) found that to explore student perceptions relative to the effectiveness of academic success courses in increasing academic self-efficacy beliefs. Students identified interpersonal factors (e.g. time management practices) and external factors (e.g. meeting with their professors outside of class and participation in activities and services on campus) that led to increased academic self-efficacy beliefs.

2. Career Education

Generally speaking, academic achievement during the various learning stages of a students’ academic career often enhances their motivation to learn and often provides them with the confidence necessary to make career decisions in line with their different talents (VanZile-Tamsen & Livingston, 1999). Therefore, the chief mission of career education interventions is to assist individuals not only understanding themselves but also improving their study skills to achieve their goals and dreams. Zhang & Guo (2015) found that the status of career planning courses necessity experience teaching, career planning for college students can produce a more profound impact, playing a positive role in promoting students to a purpose-driven and goal-setting lifestyle, helping students recognize their own career dreams, raising their practical skills, and ultimately improving the chances of successful employment. Career education interventions should aim at providing clients with realistic self-concepts of themselves and a skill-set that enables them to adapt to life’s changing situations (Hooley, 2015; Talib, Salleh, Ghavifekr & Ariff, 2014; Welde,
Bernes, Gunn & Ross, 2015).

3. Career Indecision

In career counseling field, career indecision is a complex problem that includes multiple dimensions that are related to be affected by the services provided by on-campus counseling center or career planning courses by different departments at universities (Choi, Kim, & Kim, 2015; Peng, 2004; Prescod, 2014; Reardon, Fiore, & Center, 2014), contact with mentor/role model/influential people (Abrahams, Jano, & van Lill, 2015; Liao & Ji, 2015; Wong & Rasdi, 2015), and academic achievements (Kumar, 2014). Accordingly, many researchers view the factors affecting student’s career decision-making as a combination of two sets of internal and external factors: Internal factors relate to personal attributes such as career beliefs, levels of self-efficiency, career decision-making styles, and state anxiety assumptions about future careers (Lemeni, 2005; Peng & Herr, 2002; Peng, 2005; Peng, 2015b; Peng, Johanson, & Chang, 2012; Xu & Tracey, 2014; Willner, Gati & Guan, 2015); and, external factors include amounts and types of social interaction, parental and caretaker influence, and the types and prestige-levels of the universities that students attend (Sovet & Metz, 2014; Guntern, Korpershoek, & van der Werf, 2016). While the aforementioned studies have adeptly described career indecision implications of these phenomena, none have focused on the career indecision of low-achieving college students in learning support courses.

Methods

1. Participants

Participants in this study were 89 students enrolled in summer remedial accounting courses at a business university in Taiwan ranging from 18-23 years of age. Thirty-nine percent were sophomores; and 61% were the following: first-year students, 21%; juniors 22%; and seniors 18%. In terms of cultural background, 4 (5%) were overseas Chinese; 2 (2%) were Taiwanese aboriginals; 2 (2%) were student athletes; and 81 (91%) were local “Taiwanese” students. To broaden the spectrum of the sample, participants were from the following diverse fields: Monetary & Finance, Taxes & Finance, Applied Foreign Language, International Business, Accounting, Information Management, and Business Administration.
2. Procedure

Because this was a “career education” study, one of major task is instructors’ willingness to allow the researchers access to the courses and students. This study originally arranged for a population sample of 120 students, but only a total of 89 students were available as subjects for the study. Thus, the subjects of the study were not randomly assigned to the two treatment groups, which were two accounting remedial summer classes.

First, the process of the study was included by consulting the research site university’s administration for permission to implement the career development classes into the summer courses’ accounting-related curriculum and information from course instructors on whom they considered to be low-achieving students, who had low GPA and failed their accounting course before. Following the administration of a series of questionnaires, a control group (n = 47) and an experimental group (n = 42) were created to compare participants’ career indecision on the Career Decision Scale and results on the two subscales of College Students Learning and Studying Strategies Scale.

3. Career Education Interventions

In this study, the career education interventions were designed as supplemental additions to one of the instructors’ accounting courses. Upon obtaining the approval of the two instructors of the accounting summer remedial courses, students from the experimental group received a 60-minute counseling session once a week for eight weeks in conjunction with the accounting sessions. The control group was not exposed to any of the experimental process. The career education inter-ventions adopted for the experimental group were borrowed from Harris, Thoresen & Lopez (2007) and Peng’s (2005) models that integrate and modify the course content according students’ expressed needs with prevalent theories in the career development literature. The experimental group’s career education interventions were comprised of the following career interventions as Table 1.

The independent variables employed in the study included cultural background, gender, year of study, GPA, and participation in two treatment groups. The component of the career education interventions comprised of eight 60-minute sessions over eight weeks of structured career development activities. Some of the dependent variables in the study were career indecision score and the two sub-scores of the LASSS. All 89 subjects were asked to complete the following two scales at the beginning and end of the summer course.
4. Instruments

The College Students Learning and Studying Strategies Scale (LASSS; Lee, Chang & Hung, 1991), a modified of Weinstein’s Learning and Study Strategies Inventory (LASSI; Weinstein, 1987; Edwards, Weinstein, Goetz, & Alexander, 2014; Weinstein & Palmer, 2002), which contains eleven sub-scales, is the most commonly-used measurement scale. The College Students Learning and Studying Strategies Scale enables researchers and practitioners to examine college students’ global learning types and projected scholastic aptitude, success rate and educational placement. The first five subscales of this multi-aspect evaluation tool (attitude, motivation, time management, anxiety, concentration) address applicants’ affective characteristics, and the other six sub-scales (information processing, selection main ideas, the implementation of study aids, self testing, test strategies, and problem solving) investigate users’ study-improvement strategies. The coefficient of the retest of the master scale of our implementation of The College Students Learning and Studying Strategies Scale to our participants was set at .85; and the subscale, between 0.70 and 0.86, demonstrating strong reliability. Cronbach’s coefficient was used to solve the consistent coefficient inside the master scale and the aforementioned subscales, which were 0.93; and 0.62–0.82, respectively. Scores from the first five subscales served as the study’s dependent variables. The internal consistency reliabilities were set at .82 for the total score of the inventory.
The Career Decision Scale (CDS; Osipow, Carney, Winer, Yanico, & koschier 1976; Osipow, 1999) was used to estimate the degree of career certainty or indecision about students’ academic and occupational choices. The CDS is comprised of 19 items. It is important for understanding the findings of the present study that the first two questions on the CDS are designed to evaluate and measure participants’ levels of career decision certainty; whereas, questions 3-18 assess participants’ levels of career indecision. The 19th question on the CDS, an open ended free-response question was not used in the present study. The higher the score the more career indecision. The overall test-retest coefficients are reported to be in the range of .70 to .90, with most of the item correlations falling between .60 and .70. Further, Comparing with other assessments of career decision-making difficulties, the Career Decision Scale provides only a single global assessment of individuals’ indecision. The CDDQ reveals various aspects of such career decision styles (Gati & Levin, 2014). The Chinese version of the Career Decision Scale, which was translated and modified from the English version, yielded internal consistency reliability (Cronbach alpha) for all items of .87 and the test-retest coefficient was .84 over a 1-month period (Shieh, 1990). Internal consistency reliability for the present sample was .77.

5. Data Analysis

The research design used was a pretest-posttest, quasi-experimental design. The major dependent variables were the two subscales of LASSS and career indecision of CDS. The major independent variable was treatment, and the statistical methods employed were Pearson’s correlation, the T-test and one way ANCOVA. A one-way analysis of the covariance of the posttest mean scores, with pretest scores as the covariate, were applied to mean ratings on each of the two subscales of the College Students Learning and Studying Strategies Scale, and the career indecision scale of the Career Decision Scale. Additionally, feedback forms filled out by the subjects of the two treatment groups, and interview results were used. Lastly, qualitative research results were the confirmation for the experimental research.

Results

1. Quantitative Research Results

This study empirically investigates the ways that infusing career education interventions into an accounting remedial course to strengthen subjects’ career decidedness and study strategy
status. General information gleaned from the questionnaires revealed that 55% of the entire participants indicated certainty about further studies or employment orientations; moreover, 44.7% were experiencing career indecision, 31.9% reported that they were interested in their major, 66% were not interested and felt unsure.

In the T-test analysis of the pre-test administered to both control and experimental groups, the statistical difference was not significant for Career Indecision score \( t = .77, p < .005 \), indicating that both groups came from the same population. Total scores on the Affective characteristics subscale \( t = .76, p < .005 \) and the Study-improvement Studying Strategy subscale \( t = -6.4, p < .005 \) in the pre T-test also indicated that both groups came from the same population. The differences in scores by gender for the dependent variables of the Career Indecision, Affective characteristics and Study-improvement subscales, with gender as the independent variable. The difference in the Career Indecision \( t = 1.73, p = .005 \) and Affective characteristics subscales \( t = -2.89, p = .005 \) by gender were at the significance level, demonstrating that female students were more troubled than their male counterparts in the area of Career Indecision. The scores of the female students under Affective characteristics in the Studying Strategy and Learning Scale were also higher than those of their male counterparts, revealed that female students performed better in studying strategy applications, as determined by the results of the mean value.

In the Spearman correlation analysis (Table 2) of the total scores from GPA, Career Indecision and five subscales under Affective characteristics, the correlation between GPA and Career indecision was not significant. The GPA variable and the total scores of the Affective characteristics subscale revealed a positive correlation at a significant level \( \gamma = .339, p = .04 \), meaning that the higher the GPA, the higher the total points scored under the five subscales of Affective characteristics. In addition, the subscales of Motivation \( \gamma = .499, p = .002 \) and Time Management \( \gamma = .348, p = .035 \) indicate a positive correlation with students’ GPAs, meaning that the higher the GPA, the higher the probability of higher results on the subscales of Motivation and Time Management of the study strategy scale.

Table 3 revealed that with pre-test partial led out as a covariate, the one-way ANOVA analysis of scores on Career Indecision subscale of CDS and two subscales of LASSS before and after the career education interventions infusing into the remedial course. There were significant differences existed between the experimental group and the control group. The treatment group main effects for career indecision of CDS was \( F_{1, 88} = 4.34 \ ( p < .05 ) \) and study-improvement of LASSS was \( F_{1, 88} = 5.12 \ ( p < .05 ) \). This indicated that the incorporation of the career education interventions mode for accounting remedial course learning did, indeed, assist some students in making career decisions and employing effective Study-improvement of the LASSS studying
strategy scale (information processing, selection main ideas, the implementation of study aids, self-testing, test strategies, and problem solving). There was no significant differences existed for affective characteristics of LASS between the experimental and control group, the treatment group main effects was $F_{1,88} = 2.88$ ($p > .05$).
2. Qualitative Research Results

This study conducted one or two in-depth interviews with each individual subject: four subjects from the experimental group and three subjects from the control group. The qualitative interview results of this study were compiled and summarized in two sections as follows:

2.1 The effectiveness of infusing career education into the learning support course

(1) Concerning the career education interventions effectiveness, interviewees believe that the model of this study helps in promoting personal awareness about themselves, and in determining the future direction of a career choice.

(2) The most impressive units of the infusing career education interventions model to the interviewees are interests’ exploration and ability checking courses. With the help of various activities and psychological tests provided within the courses, interviewees are able to clearly perceive their own interests and abilities.

(3) Additionally, the career education intervention infusing model concerning time management and study methods can assist interviewees in reviewing the problems of their everyday time allocation. In addition, due to the design of time management related content in the curriculum, interviewees are able to give more attention to books concerning this subject after class.

2.2 Recommendations for incorporating career education into learning support courses

(1) With regards to incorporating career education into the learning support course, overall, interviewees believed that it was necessary to incorporate career education related content and activities into the remedial course.

(2) Concerning the course content, interviewees believed that although there was a psychological test included in the course, that it would be helpful to have additional tests in other areas. A majority of the students are interested in the teaching methods that incorporate psychology career planning related tests. While the contents of these tests also contribute to their learning more about themselves.

(3) Furthermore, interviewees believed that if a sharing of practical experience in career planning is added to the curriculum that it can help students understand more specifically how to make career plans for every stage of their life.
Conclusion

The study found that the model of the infusing career education into the learning support course for lower achievers in the business University was effective for the subjects’ decision making and study strategy status. In the future, the class-based learning support program can be implemented to support the business university with a high intake of academically low achievers.

The results of this study indicate that infusing career education interventions into major courses may have an overall positive effect on low-achieving students regarding career decision making and study-improvement study strategies (information processing, selection main ideas, the implementation of study aids, self-testing, test strategies, and problem solving). Before elaborating on the study’s findings, however, it is first important to note a number of limitations in the investigation’s research design. First, the population sample (n = 89) is very small, the effect size is only moderate and small. Hence, future researchers would be advised to build on the foundation forged by the present study and conduct similar such studies with a larger population base.

As for gender, career indecision was higher among the female students than their male counterparts. Studying Affective characteristics sub score among female students were also higher than those of the male students, even though there was no significant difference on Study-improvement sub score between both genders. Therefore, career education curricular planners should take gender into account when considering incorporating career education into remedial courses such as those of the present study.

There are two phenomena found in the qualitative research of this study. (1) Concerning the findings via case interviews, it was found: that incorporating career education into the learning support course curriculum may improve the individual’s self-understanding, which helps with career choice and in deciding the future direction of career development. The interests and abilities checking activities of the career education in this study were deemed very helpful. Moreover, the content of time management and study methods were helpful in identifying the issues concerning time allocation and in improving study methods. (2) In the case interviews of the experimental group, everyone agreed that incorporating career education into the learning support course helps to clarify interests and career exploration requirements. In addition, because students of different study levels are in the same learning support class, they suggested that particular attention should be made to the requirements of individual career counseling for students of different ages or study levels.

Despite these limitations, the study’s findings suggest that major courses in different
departments in higher education such as those under investigation in this research should consider the education of career education interventions infusing/integrating into their learning support curricula in order to assist low-achieving university students solve their learning problems and meet their career development needs. According to Nurmi et al. (2003), students’ achievement motivation and related learning strategies have a significant impact on students’ academic performance. This study supports this notion, for study-improvement sub score of LASSS was found to be positively significant between pre-test and post-test. Similarly, a positive significant difference between pre-test and post-test on career indecision score of CDS was detected. This study confirmed Williams’s study (2015) that low achieving university students need academic remediation while higher achieving students need academic enrichment. As above mentions, the infusing model of this study is valuable for low-achieving college students in higher education.

Future researchers should focus on students enrolled in varying fields and specialties so that they can dove-tail their career-development educational practices with students’ direct needs. Studies that take larger sample sizes or different professions into consideration could also compare effectively the difference between both high and low-achieving students of various disciplines. Moreover, a wealth of topics related to career-decision making could be implemented into similar such studies by considering promoting career maturity, career efficacy, and assessing means of reducing career-indecision anxiety among low and high-achieving students.
References


Horpyniuk, P. (2015). *How effective is using project-based learning with junior high students to*
achieve improvements in their academic results and schooling experience? (Doctoral dissertation). Retrieved from https://dspace.library.uvic.ca/handle/1828/6095


Peng, H. (2015a). Infusing positive psychology with spirituality in a strength-based group career counseling to evaluate university students’ state anxiety. *International Journal of Psychological Studies, 7*(1), 75-84. doi:http://dx.doi.org/10.5539/ijps.v7n1p75


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生涯教育融入學習支持課程
對商學院低成就學生輔導效果之研究

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摘 要

本研究旨在探討生涯教育融入學習支持課程對商學院學業低成就學生之輔導效果。本研究為實驗研究，輔以質性研究作爲量化分析之佐證與補充。研究樣本共計 89 名商業大學學生（實驗組 42 名，控制組 47 名），其年齡介於 18 至 23 歲間，課程內容包括：認識生涯規劃、探索興趣與能力，讀書方法與時間管理及生涯決定四大主題。研究結果顯示，生涯教育融入學習支持課程有助於學生之生涯決定及讀書策略。資料分析顯示，受試者後測分析中在生涯未決定及讀書策略有顯著差異。此外，學業平均成績（GPA）與受試學生之學習動機及時間管理有正相關，學習動機及時間管理量表得分愈高其 GPA 愈高。最後，希冀藉本研究質與量之研究結果，提供未來相關研究及生涯教育融入各種課程之參考。

關鍵字：生涯教育課程、低成就學生、生涯未決定