UNIVERSITY STUDENTS' READINESS FOR THE NATIONAL WORKFORCE: A STUDY OF VOCATIONAL IDENTITY AND CAREER DECISION-MAKING

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Abstract – The purpose of this study was to determine the level of vocational identity and career decision status of students at the Hashemite University which was assumed to be an indication of their readiness for the national workforce in Jordan. A total of 641 students participated in the study by completing the 'Vocational Identity Scale' (VIS) and the 'Career Decision Scale' (CDS) selected for the study. The results indicated that students have a high sense of vocational identity and greater career decidedness as represented by their overall mean values. Furthermore, there were no significant differences among university students in perceiving the VIS and CDS that are attributed to their gender and academic standing. However, differences on the VIS and CDS were found that are attributed to type of faculty. The study concludes by offering a number of theoretical and practical implications for the field of career and vocational development.

Introduction

The world of work is changing rapidly due to global complexities, technological advances and economic developments which make it unlikely for students to follow the traditional career development path of education-employment-retirement (Brown, 2000; Madaukalom, 2000). The change in one's life to the world of work from the university environment is not always easy and can be a confused experience. The focus in the workplace shifts to persistence toward a career goal, making the right career decision, and meeting project deadlines. With this trend facing today's university students who will soon be entering the workforce, there is one question that remains in mind centring on what will equip these individuals to deal with this new phenomenon in employment.

It is essential for students to develop vocational identities and career decisionmaking skills during the university years. However, many university students do

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not possess adequate vocational self-knowledge and/or the career decisionmaking skills necessary to enter the workforce (Gati & Saka, 2001; Gaffner & Hazler, 2002). People are expected to know themselves well enough to make a career decision during university years or between 18 and 24 years-of-age (Erikson, 1968; Super, 1987). Students need to acquire the skills necessary to investigate the world of work and to make career decisions in relation to knowledge of self that will provide high level of personal, professional and financial satisfaction throughout life (Herr & Cramer, 1996; Kelly & Pulver, 2003). As a result, the vocational identity and career decision-making status of university students have, for several years, commanded the attention of career development researchers, career counsellors, vocational psychologists and members of academia (Kelly & Pulver, 2003).

Research suggests that individuals who are uncertain about their career direction are undecided due to lack of a clear sense of personal identity (vocational identity) and understanding of the world of work (McAuliffe, 1992; Zagora & Cramer, 1994). Holland, Daiger & Power (1980) defined vocational identity as the 'possession of a clear and stable picture of one's goals, interest, personality, and talents [which] leads to relatively untroubled decision-making and confidence in one's ability to make good decisions in the face of inevitable environmental ambiguities' (p. 1). Students who have established a strong vocational identity are more likely to have made good decisions regarding their career choices (Super, Savickas & Super, 1996). Vocational identity is established when an individual has achieved congruence between his/her knowledge of personality and his/her environment. Vocational identity is developed through observations of work, identification with working adults, general environment and general experiences. As experiences become broader in relation to awareness of the world of work, the more the vocational identity is formed (Zunker, 2002). As a consequence, students with strong vocational identities are likely to display strong career decisionmaking skills (Holland, 1997).

While there are numerous reasons for lack of readiness to make career decisions, many students are not prepared because of a poorly formed vocational identity (Zagora & Cramer, 1994). Links between vocational identity and career decision-making have been proposed in theoretical literature and supported with empirical studies. Research has clearly established the presence of a link between vocational identity and other vocational-related variables, one of which is career decision-making. For example, Erikson (1968, p. 132) stated, 'in general, it is the inability to settle on an occupational identity which most disturbs young people' from deciding on a career. Vocational identity is negatively related to social avoidance and distress and is positively related to a high level of career maturity, decisiveness, confidence in decision-making and the tendency to use a rational

career decision-making style (Holland, Johnston & Asama, 1993; Hoang, 1995). Poe (1991) found high vocational identity as an indicator of readiness for career decision-making. Research also suggests that students learn class materials better when it is consistent with their vocational identity (Wolfolk, 1993). Students who have not yet identified career options may feel trapped and frustrated, and may have little or no commitment to school (Lawallen, 1993).

Most often a person is undecided on a career because not enough information has been gathered to allow for a sound and confident decision. Brown & Brooks (1996) mentioned that 'the process of career decision-making include (1) a clear understanding of yourself, your aptitude, abilities, interests, ambitions, resources, limitations, and their causes; (2) a knowledge of the requirements, conditions of success, advantages and disadvantages, compensation opportunities, and prospects in different lines of work; and (3) true reasoning on the relations of these two groups of facts' (p. 5). Active participation in one's own career selection would yield higher levels of career satisfaction, lower levels of employer expenditure and increased employee performance (Brown & Brooks, 1996). Korschgen & Hageseth (1997) recognised that setting career goals are often among the most difficult decisions that university students face, and that for many the challenge lies in identifying professions that match their interests and abilities.

The study of vocational identity and career decision-making is a prominent research topic that has received a great deal of attention. Teaching individuals to understand their vocational identity and career decision-making status is crucial. In fact, a review of the career development literature would suggest that students are faced with high levels of career indecision as a result of low levels of vocational identity (Ireh, 2000; Santos & Coimbra, 2000; Seibert & Kraimer, 2001). It is therefore reasonable to conclude that students who experience low levels of vocational identity and high levels of career indecision may also experience varying levels of psychological tension and distress (Kelly & Pulver, 2003).

Based on the above discussion, it is essential for students to develop their vocational identities and career decision-making status during university years. As the world of work becomes more complex and technologically dynamic, vocational identity and the ability to make career decisions becomes more important (Madaukalom, 2000). Therefore, university students need to have adequate self-knowledge, occupational information and the decision-making skills when they graduate to be better prepared for work. To our knowledge, no empirical studies in Jordan have directly assessed the level of vocational identity and/or career decision-making status of university students. Based on that, this is an important area of research that is worth investigating.

The research problem and research questions

University students across the nation do not have adequate vocational selfknowledge, occupational information and the decision-making skills when they graduate, leaving them unprepared for work (Gati & Saka, 2001; Gaffner & Hazler, 2002). Educationally and vocationally undecided students due to low levels of vocational identity and career decision-making skills have been a concern for university administrators, faculty, counsellors, academic advisors and researchers for many years. There is a lack of theoretical and empirical research addressing the level of vocational identity and career decision-making status of Jordanian university students. Therefore, the primary purpose of this study was to assess the level of vocational identity and career decision-making status of the Hashemite University students in Jordan. The study also investigated how these two constructs vary by selected demographic variables.

For this exploratory study, the following three research questions have been formulated:

- 1. What is the level of vocational identity and career decision-making status among the Hashemite University students in Jordan?
- 2. Does the level of vocational identity of the Hashemite University students vary by gender, academic standing and faculty?
- 3. Does the level of the career decision-making of the Hashemite University students vary by gender, academic standing and faculty?

Significance of the study

Today, most countries are faced with many challenges and complexities as a result of globalisation, industrialisation and privatisation. These challenges have impacted work practices all over the world. Organisations are expecting university graduates who possess the knowledge, skills and abilities to compete nationally and internationally. One area that students are required to have is knowledge of vocational identity and the ability to make appropriate decisions regarding their future careers (Korschgen & Hageseth, 1997). However, little or no research has been conducted to determine the level of vocational identity and career decision-making status of university students in Jordan. It was anticipated that the present study would make an additional contribution to the literature by utilising standardised measures that can be used with all university students in Jordan. The resulting data would guide career counsellors and vocational guiders in the

selection of specific interventions for the people who are undecided about their career. These can help in identifying what prevents people from reaching closure on their educational and career decisions. Adult programme developers, career counsellors, career development specialists and vocational guiders may become more responsive to the career development needs of university students. This, in turn, can provide researchers and practitioners with challenges to service better those who will be entering the job market in the near future.

Defining terms

In this paper, the term 'vocational identity' is defined as the 'possession of a clear and stable picture of one's goals, interest, personality, and talents [which] leads to relatively untroubled decision-making and confidence in one's ability to make good decisions in the face of inevitable environmental ambiguities' (Holland, Daiger & Power, 1980, p. 1). 'Career indecision' is defined as 'the inability to select, and commit to a career choice' (Tokar et al., 2003, p. 3).

Methodology

Organisational context

The present study took place at the Hashemite University, one of Jordan's state universities, which opened its doors to students in 1995. The Hashemite University now includes 10 faculties. It also includes the Deanery of Scientific Research and Higher Studies, the Deanery of Student Affairs, a Computer Centre, and the Centre of Studies, Consultations and Community Service. Each semester, the Faculty of Educational Sciences offers the Educational Culture class to all university students. Over the years, it has been noticed that an almost equal representation of all majors are included within this class. Students are required to choose among mandatory university courses. The Educational Culture course, which is one of the most attractive courses, is often chosen. However, as students from the Faculty of Educational Sciences do not require this course, it was also decided to randomly selected courses from within this faculty.

Population and sample

The target population for this study was defined as all the Hashemite University undergraduate students. The accessible population consisted of a total pool of approximately 1,230 students enrolled in the educational culture course

(with 11 sessions) and the vocational education course (with two sessions) that were offered during the second term of the 2006-2007 academic year. The sample for this study included a total of 698 randomly selected subjects who volunteered to participate in this study. A total of 641 students completed the survey, representing a response rate of 92%. The resulting sample included 225 males (35.1%) and 416 females (64.9%). There were 118 freshmen (18.4%), 149 sophomore (23.2%), 223 juniors (34.8%), and 151 seniors (23.6%). The mean age of the sample was 19.8 years (SD = 1.13; range from 18 to 22). Based on their majors, students were classified into 10 faculties as follow: 68 students (10.6%) from the Faculty of Economics, 61 students (9.5%) from the Faculty of Science, 57 students (8.9%) from the Faculty of Arts, 62 students (9.7%) from the Faculty of Engineering, 52 students (8.1%) from the Faculty of IT, 51 students (8.0%) from the Faculty of Allied Health, 118 students (18.4%) from the Faculty of Educational Sciences, 55 students (8.6%) from the Faculty of Nursing, 46 students (7.2%) from the Faculty of Tourism and Heritage, and 71 students (11.1%) from the Faculty of Childhood.

Research instruments

Instruments in the present study included: (i) demographic items; (ii) the Vocational Identity Scale (VIS); and (iii) the Career Decision Scale (CDS).

Demographics

The demographic questions asked participants to provide information regarding their gender, age, class standing (freshmen, sophomore, juniors, and seniors) and faculty (economics, science, arts, engineering, IT, allied health, educational sciences, nursing, tourism and heritage, and childhood).

The Vocational Identity Scale

The Vocational Identity Scale (VIS) is a subscale of the 'My Vocational Situation' instrument designed by Holland, Daiger & Power (1980), and is used to assess the clarity of participants' vocational identities. The VIS consists of 18 statements rated on a 4-point Likert scale as follows: 1 - strongly agree; 2 - agree; 3 - disagree; and 4 - strongly disagree. Whereas the higher scores 3 and 4 indicate a strong sense of vocational identity, the lower scores 1 and 2 reflect a diffused vocational identity and an interest in receiving vocational assistance. This scale takes approximately 10-15 minutes to complete. Internal consistency for the VIS

was reported as .86 for high school students, .88 for college students and .89 for workers (Holland, Gottredson & Power, 1980). The test-retest reliability coefficient for the VIS ranged between .63 and .93 for time intervals of up to two weeks (Lucas et al., 1988; Holland, 1997). Moreover, Holland, Johnston & Asama (1993) reported a test-retest reliability coefficient of about .75 for intervals between one and three months. Regarding the validity of the VIS, small to moderate positive correlations between the scale and age (Holland, Diager & Power, 1980), as well as the number and variety of occupational aspirations (Holland, Gottfredson & Power, 1980) have been reported. According to Holland & Holland (1977), VIS has demonstrated convergent and discriminant validity between the VIS and other career-related measures. Finally, construct validity reported by Holland, Gottfredson & Power (1980) indicated that high scorers tend to be rated as organised, confident and competent to deal with life situations.

The Career Decision Scale

The Career Decision Scale (CDS) (named the 'indecision scale') was designed by Osipow et al. (1976) to determine the level of career decisiveness of college students and to focus on reasons that inhibit individuals from making career decisions. The 18 items of CDS required respondents to rate their similarity to various components of educational and vocational decidedness. The rating was on a 4-point Likert scale as follows: 1 - is exactly like me; 2 - is very much like me; 3 - is only slightly like me; and 4 - is not at all like me. Whereas the higher scores 3 and 4 indicate greater career decidedness, the lower scores 1 and 2 indicate greater career undecidedness. The raw score for the CDS is obtained by summing the participants' responses to the 18 items. Two items were reverse coded (items 17 and 18). The CDS has an acceptable reliability coefficient of .88 (Bresbin & Savickas, 1994). Furthermore, the CDS manual (see Osipow, 1987), utilising two separate samples of college students, report CDS test-retest reliability coefficients of .90 and .82 respectively.

Translating and standardising the instruments

To ensure equivalence of meaning of the items between the English and Arabic versions of the VIS and the CDS, a rigorous translation process was used that included forward and backward translation, subjective evaluations of the translated items and pilot testing (see Lomi, 1992; Sperber, Devellis & Boehlecke, 1994). Two translators – both bilingual in English and Arabic – translated the English versions of the VIS and the CDS into Arabic (forward translation). These

translators were instructed to retain both the form (language) and the meaning of the items as close to the original as possible, but to give priority to meaning equivalence. When the Arabic translations were finalised, the VIS and the CDS were then back-translated (i.e., from Arabic to English) by two other faculty members, also bilingual in English and Arabic.

The back-translated items were then evaluated by a group of five faculties to ensure that the item meanings were equivalent in both the original English versions and the back-translated English versions. If differences in meaning were found between items, those items were put through the forward and backtranslation process again until the faculties were satisfied that there were substantial meaning equivalence. The Arabic versions of the VIS and the CDS were then pilot tested with a group of 19 students and 10 faculties to collect feedback about instruments content and usage. The feedback from the students did not lead to any substantive changes. The feedback from the faculties emphasised that the instruments have both face and content validity, and are culture-free.

To standardise the instruments, the VIS and the CDS were pilot tested with a group of 100 students representing the 10 faculties under study. These students were excluded from the main sample of the study. Changes recommended by the validation panel and those identified as necessary during the pilot test were incorporated into the instruments. These changes occurred in the wording of the items and in the instructions for completing the instruments. The internal consistency for the instruments was determined using the same group of students used in the pilot study. The calculated reliability coefficients alpha for the VIS and the CDS were .83 and .80 respectively. Checking the quality of the instruments' reliability against the standards developed by Robinson, Shaver & Wrightsman (1991) (i.e., exemplary reliability: .80 - 1.00; extensive reliability: .70 - .79; moderate reliability: .60 - .69; and minimal reliability figures obtained suggest that the two instruments are suitable to measure the vocational identities and career decision-making status of the Hashemite University students.

Data collection and data analysis

As explained in the methodology section, data collection took place during the second term of the 2006-2007 academic year from students (N = 641) enrolled in the educational culture class (with 11 sessions) and the vocational education course (with two sessions). The researchers met with the classroom instructors in charge of the selected students to explain the nature and purpose of the study, and to answer questions regarding the administration process. After obtaining approval for the collection of data from these instructors, the assessment instruments were assembled as a packet that was distributed and collected by the researchers during scheduled class meetings. Data gathering took approximately 23 minutes to complete. Students in attendance were informed of the purpose of the study by the researchers and were guaranteed confidentiality. The voluntary nature of their participation was also underlined. After finishing, the students returned the completed instruments to the researchers in attendance.

Descriptive statistics, including means and standard deviations, were used to answer the first research question. For research questions two and three, independent *t*-tests and one-way analysis of variance (ANOVA) were used to determine if differences, based on demographic characteristics of students, exist in the levels of vocational identity and career decision-making. The *t*-test was used when there were two levels of the variable (e.g., gender). The ANOVA was used when the variable had more than two levels (e.g., academic standing). Tukey's post hoc test was used in case differences were detected among the groups. An alpha level of .05 was set *a priori*.

Results

The data collected from all the participants were coded, entered into SPSS spreadsheets and analysed using version 11.5 of the SPSS software package. Descriptive statistics for all the variables in this study were examined using SPSS frequencies. The minimum and maximum values for each variable were examined to check the accuracy of data entry by inspecting out of range values. An examination of these values did not reveal the existence of out of range values. No missing subjects were not detected either. Reliabilities for the VIS and the CDS were .89 and .87 respectively. These results indicate that these two scales are reliable measures for this study.

Results pertaining to research question 1

Research question 1 inquired about the level of vocational identity and career decision-making status among the Hashemite University students in Jordan. To answer this question, the overall mean values and standard deviations were calculated for each scale. As shown in Table 1, the overall mean value for the VIS was 3.08 and the overall mean value for the CDS was 3.25, indicating a strong sense of vocational identity and greater career decidedness among the university students at the Hashemite University.

Scale	Ν	М	SD
Vocational Identity	641	3.08	.34
Career Decision-Making	641	3.25	.36

TABLE 1: Means and standard deviations for the VIS and the CDS among university students

Results pertaining to research questions 2 and 3

Research questions 3 and 4 inquired about the differences in the level of vocational identity and career decision status among the university students in relation to a number of demographic variables, namely, gender, academic standing and faculty. *T*-tests for independent samples were used to examine the gender variable. As shown in Table 2, there were no significant gender differences among students at the Hashemite University in their levels of vocational identity and career decision status. Examining the confidence intervals of the *t*-values of the effect of gender on levels of vocational identity (-.006, .106) and career decision status (-.100, .010) confirmed the conclusion that, in both cases, no difference can be attributed to the gender variable, as '0' falls within these intervals.

 TABLE 2: The differences between male and female university students on their levels of vocational identity and career decision status

Scale	Gender	n	М	<i>t</i> -value	95% Confidence Interval of the Difference	р
Vocational Identity	М	225	3.11	1.75	(00(10()	
	F	416	3.06	1.75	(006, .106)	.08
Career Decision Status	М	225	3.22	1 47	(100 010)	.14
	F	416	3.26	1.4/	(100, .010)	

On the other hand, one-way analysis of variance (ANOVA) was utilised to identify whether the Hashemite University students' variances of the four academic standing level groups and the variances of the 10 faculty level groups were significantly different or not. Table 3 shows that there were no significant differences among the four academic standing level groups (i.e., freshman, sophomore, junior and senior) on their levels of vocational identity and career decision status. However, significant differences were found among levels of vocational identity and career decision status based on the 10 faculty groups (see Tables 4 and 5).

TABLE 3: The differences among the four academic standing level groups (i.e., freshman, sophomore, junior and seniors) on their levels of vocational identity and career decision status

Scale	Sum of Sq	df	F	р	
Vocational Identity	Between Groups Within Groups Total	.089 77.623 77.712	3 637 640	.243	.867
Career Decision Status	Between Groups Within Groups Total	.929 84.942 85.871	3 637 640	2.322	.074

 TABLE 4: The differences among the 10 faculty groups on their levels of vocational identity and career decision status

Scale	Sum of Sq	df	F	р	
Vocational Identity	Between Groups Within Groups Total	5.262 72.450 77.712	9 631 640	5.092	.000
Career Decision Status	Between Groups Within Groups Total	3.752 82.119 85.871	9 631 640	3.204	.001

TABLE 5: Post hoc test for differences in levels of vocational identity and career decision status based on the 10 faculty groups

Scale	Faculty	М	Mean difference	р
Vocational Identity	Economics vs Allied Health Economics vs Educational Studies	3.23/2.96 3.23/3.00	.264 .231	.040 .019
Career Decision Status	Economics vs Arts	3.23/3.09	.277	.009

Conclusions

This study is an investigation of the Hashemite University students' readiness for the national workforce in Jordan by examining their levels of vocational identity and career decision status. It was concluded that a relatively strong sense of vocational identity and greater career decidedness exist among the Hashemite University students. This emerged from their overall mean values on the VIS (M = 3.08) and the CDS (M = 3.25), with both scales allowing scores up to 4. This result may be due to the fact that students have been experiencing increased attention from the university administration in the past 10 years. Assisting students with life transitions through the provision of programmes at colleges and universities is among the purposes of higher education. To achieve this purpose, it is expected that educators help students identify career objectives and secure employment by encouraging students to explore their values and interests. To this end, the Hashemite University has established the 'Vocational Guidance Centre' that has the following five goals:

- 1. To provide undergraduate students with vocational guidance regarding their choice of major and proper future careers. Students (from freshmen to seniors) are guided regularly, each semester, through workshops, seminars and conferences.
- 2. To provide students with vocational guidance software that helps them match their personality, abilities and interests with the proper career. Students are exposed to an array of assessment tools that lead them at the end to a career that best fits them.
- 3. To provide students with short-term and long-term forecasts of the existence of their chosen major and/or career along with its future social and financial estimates.

- 4. To establish a strong alliance with public and private organisations. This provides students with internships that help them experience the real world and help them make decisions about their field of study.
- 5. To arrange with colleges within the university campus to provide courses that focus mainly on career choice, workplace requirements, workplace ethics, guidance and counselling.

Based on the above discussion, it can be said that the students at the Hashemite University are provided with high levels of vocational guidance. This helps them to have a clear and stable picture of their goals, interest, personality and talents that lead, in turn, to relatively untroubled decision-making and confidence in one's ability to make good decisions regarding major and future careers. The vocational guidance practices at the Hashemite University are consequently in line with current understandings that students should be provided with an opportunity to unearth career possibilities, discover leading-edge interests, assess problems, motivate constructive behaviour, as well as acquire a cognitive structure for evaluating career alternatives, clarifying expectations, planning interventions and establishing ability range (see Spokane, 1991).

Another strand of results regarding demographic variables reveals that gender and academic standing had no effect on levels of vocational identity and career decision status among university students. In line with other research (see Berger & Romano, 1994; Wei-Cheng, 1999; Wilson, 2000), the present study found no significant effect of gender on these two variables. These results can be explained by the fact that both genders are receiving the same vocational guidance at the Hashemite University. With regard to the effect of academic standing on vocational identity and career decision status, it must be said that this is the first study to examine this demographic variable. Students, regardless of their academic rank, are exposed each semester to all types of workshops, seminars, conferences, counselling and guidance. The last demographic variable studied was the type of faculty. Students from the Faculty of Economics had higher levels of vocational identity than students from the Faculty of Allied Health and the Faculty of Educational Sciences. Moreover, students from the Faculty of Economics had higher levels of career decision status than students from the Faculty of Arts. These results can be explained in term of the economical trends, such as privatisation and investments, in Jordan. As a result, the Faculty of Economics is focused on preparing highly qualified students internally (within the faculty) and externally (within the university and the community).

Recommendations

Based on the conclusions of this study, the following theoretical and practical recommendations are being put forward. From the theoretical standpoint, it is recommended to study other demographic variables, such as parental educational level and the type of occupation held, to determine their influence on such high levels of vocational identity and career decision status of university students. It is also recommended to conduct research that encompasses all types of colleges and universities in Jordan. This would render the results more valid and reliable. The final recommendation is to include a qualitative part in future studies, as this would lead to more meaningful findings. From the practical standpoint, university vocational centres should be established and maintained in order to better prepare students for the national workforce. Such centres should study the personality, needs, values, abilities and interests of students and match them with suitable majors and careers. Moreover, there is an urgent need to meet with parents, high school principals, administrators and high-level officials to focus on the importance of preparing students vocationally in their early years of education throughout the university years. This collaborative effort may yield substantial outcomes represented in producing efficient and effective workforce that can have the cutting and leading edge in a technologically, industrialised and globalised economy. Finally, it is urgently needed to have students choose majors and careers that best fits them, as this can have a tremendous impact on their performance.

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