Selection Determinants In Education Major Graduates Occupations

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ABSTRACT

Taiwan's teacher training system currently faces a serious disorder. The excessive number of teacher education programs being set up in universities by the Ministry of Education has dramatically increased the number of teachers. The situation, coupled with the country of low birth rate and high retirement age, brings about fewer teaching vacancies than the number of available teachers. The over-expansion of universities has resulted in a situation that almost every secondary school graduate can access higher education institutions, which subsequently produce a great number of graduates, far exceeding the vacancies in the workplace. This plus with the recent economic recession intensifies competition among individuals hunting for jobs. Thus, it is imperative to identify the ideal jobs for graduates, and the first step is figuring out the main determinants for selecting jobs and the relative importance of these determinants. A self-developed questionnaire was administered to 200 education major graduates in Taiwan. The result indicated that high job stability was perceived to be the most important factor among participants. Also, the education students considered school teacher or administrator to be the ideal jobs.

Keywords: Occupation; Employability; Ideal Job; Higher Education; Over-Education

INTRODUCTION

A successful education system is the foundation of a country's prosperity and stability, which not only effectively elevate the knowledge and ensure the well-being of people at all levels, but also promote the development of the national economy. Moreover, education is the impetus of social mobility, which helps to achieve social justice and fairness. A well-organized education system is determined by a myriad of factors. However, given that teachers are at the front line of education, they play more crucial roles than other factors. Nevertheless, the teacher training system in Taiwan is facing a serious disorder these years. The excessive number of teacher education programs being set up in universities by the Ministry of Education has dramatically increased the number of teachers. The situation, coupled with the country's low birth rate and high retirement age, results in fewer teaching vacancies than the number of available teachers.

The expansion of higher education has been performed in many countries in the last decade because governments believe that this expansion will bring about an equal educational opportunity and promote economic growth (Baron & Ortiz, 2011; Teichler, 1999; Yorke and Knight, 2006). Taiwan is no exception. The number of higher education institutions increased from 27 in 1960 to 164 in 2009, which has resulted in almost every secondary school graduate having access to higher education institutions. Consequently, higher education institutions in Taiwan are producing a great number of graduates—far more than the number of vacancies in the workplace. This situation coupled with the recent economic recession has intensified the competition for jobs.

Although university undergraduates have not yet entered the workforce, they are aware of the challenges facing them (Al-Harthi, 2011). The transition from education to employment is a crucial but challenging period for many young adults. In the face of extreme uncertainty, most students are skeptical of the knowledge and skills they have obtained during their education. They doubt that these skills and knowledge will help them cope with the requirements of their jobs in the future and thus feel anxious and helpless (Lairio & Penttinen, 2006; Rothwell, Herbert, & Rothwell, 2008). As a consequence, career guidance has become one of the most important tasks in higher education institutions. Sagen, Dallam, and Laverty (2000) claim that students receiving pre-employment training or employment counseling possess not only better employment knowledge and capabilities but also a better

understanding of jobs. Nevertheless, the career counseling systems of higher education in Taiwan are still in their infancy, with the staff, auxiliary equipment, and resources all being significantly behind counterparts in advanced countries. They can barely provide students with high-quality career guidance and sometimes even fail to offer basic information about employment (Bigelow, 1989). Therefore, it is imperative to figure out how to effectively enhance the employment counseling systems of higher education in Taiwan. The first step is to clarify the ideal jobs for graduates. Based on the situation mentioned above, this research probes the following questions:

  (1) What are the determinants of an ideal job perceived by education major graduates?
  (2) What are the major types of jobs in which education major graduates can engage?
  (3) What are the main strengths of the given education-related jobs?

LITERATURE REVIEW

Development of Career-Oriented Educational Systems in Universities

In medieval Europe, universities initially emerged to create a large body of educated politicians for governing countries. At that time, with the rise of theocratic status, students learned not only politics but also theology in universities. After several hundred years, by the early 19th century, this pattern began to change as an increasing number of universities developed elements for advanced knowledge and academic professions beyond the requirements of mere political training. From that period onwards to the 1960s, universities served as a center for elites to conduct research.

Since the 1980s, social progress, and economic development helped promote the popularization of universities, which in turn contributed to a transition from the elite to a mass model in higher education. The drastic expansion of universities not only provided more opportunities for people from different sectors to pursue higher education but also represented the changing roles of universities (Al-Harthi, 2011). Maclean and Ordonez (2007) asserted that universities should shoulder the critical responsibilities to cultivate human capital for the economic development.

In the elite higher education model, universities barely have career counseling systems for their intellectual students as these students were not supposed to face the problem of unemployment. However, the situation is different in mass model higher education. The skyrocketing number of higher education students in recent years has outgrown the job vacancy, and many graduates find themselves in a predicament while searching for jobs. As a result, setting up career counseling systems is of paramount importance in universities (Dedmond, 1996; Goh & Lee, 2003; Wehrly, 1982; Yorke & Knight, 2006).

Higher education institutions have set up a variety of career counseling systems, hoping to effectively enhance the employability of university graduates (Cranmer, 2006). For employment counseling, the first step is to identify a possible job for students and the determinants for an ideal job as perceived by students, then strengthen students' employment capabilities after analyzing the skills and knowledge required for these jobs. Finally, the last step is to build up relationships between schools and entrepreneurs to help students enter the workforce (Hajj & Hamadeh, 1993).

Determinants of Ideal Jobs

Block, Denker, and Tittle (1981) classified six types of determinants that influence job selection for undergraduates: (1) ability, referring to the talents and capabilities for coping with tasks; a job that best matches students' capabilities should be selected; (2) interest, as students tend to find jobs that best match their interests; (3) goal-directed, which relates to the satisfaction received from accomplishing goals; jobs that have more opportunities for attaining goals are more likely to be welcomed by students; (4) practical considerations, as students prefer jobs with high stability; (5) prestige, because generally speaking every job represents the social status of a person, meaning students prefer jobs with high prestige; and (6) financial aspects, referring to the ideas that the principal goal of employment is to receive an income, so a high salary is of significant importance for students when selecting jobs.

Harpaz (1990) investigated different perceptions about ideal jobs among distinct countries. When examining what people hope to obtain from their jobs, she discovered that interesting jobs and a high salary were the most dominant determinants. Both of these determinants were included in Block et al.'s (1981) six job selection determinants. More recently, Harzing (2004) examined the main determinants contributing to an ideal job, and the results showed that the three most important determinants were a high salary, high social prestige, and opportunities for promotion. Mau and Kopischke (2001) identified nine determinants for selecting jobs: salary, fringe benefits, promotion opportunities, working environment, work challenges, job security, supervisors, coworkers, and educational benefits. Liu, Thomas, and Zhang's (2010) more recent research suggested seven determinants—namely, ideal pay, fringe benefits, work challenges, opportunities for promotion, opportunities to use acquired skills and knowledge, job security, and opportunities for learning through jobs.

Based on these findings, we initially defined ten types of job selection determinants: salary, fringe benefits, job challenges, working environment, opportunities for promotion, job stability, supervisors, coworkers, opportunities to use skills and knowledge, and opportunities for learning. We then modified these ten determinants based on feedback from a focus group. The results served as the basis for designing the questionnaire.

METHODOLOGY

This section illustrates the research design and methods adopted in this study. We first describe the research framework and then give detailed information about how the questionnaire was developed. Afterward, we explain the reasons for employing the analytic hierarchy process (AHP) and correspondence analysis.

Research Framework

This research is a two-stage investigation that adopted both qualitative and quantitative research methods. In the first stage, a focus group was implemented to identify what kinds of education-related occupations should be included in the questionnaire. The focus groups members also examined the determinants for evaluating a job to determine which would be included in the questionnaire. In the second stage, the final edition of the questionnaire was utilized as the main instrument for data collection.

Development of Research Instrument

The questionnaire was designed to measure the relative importance of determinants for job selection, and to identify the advantage levels of the given occupation. The questionnaire comprised three parts. The first part was chiefly used for obtaining demographic information of the participants, and the second part consisted of 21 pairs of questions for AHP analysis (mainly for measuring the relative importance of determinants). For the third part, a cross-table in which the rows included the 12 determinants and the columns the six major types of education-related occupations was designed to carry out a correspondence analysis.

For the AHP, an eigenvector λmax was utilized to examine the consistency of the designed structure, which can be available only when the CR value is under 0.1. About correspondence analysis, a Chi-square was adopted to ensure the plausibility of this research (with a p-value smaller than .05).

Adopting the Analytic Hierarchy Process (AHP)

The AHP adopted in this research functions as the major instrument for calculating the relative importance of each determinant for selecting jobs and weighting the significance of the determinants. The essential purpose of AHP is to break down a multiplex problem into several smaller elements that are more easily resolved.

Figure 1. Major Dimensions and Determinants of an Ideal Job
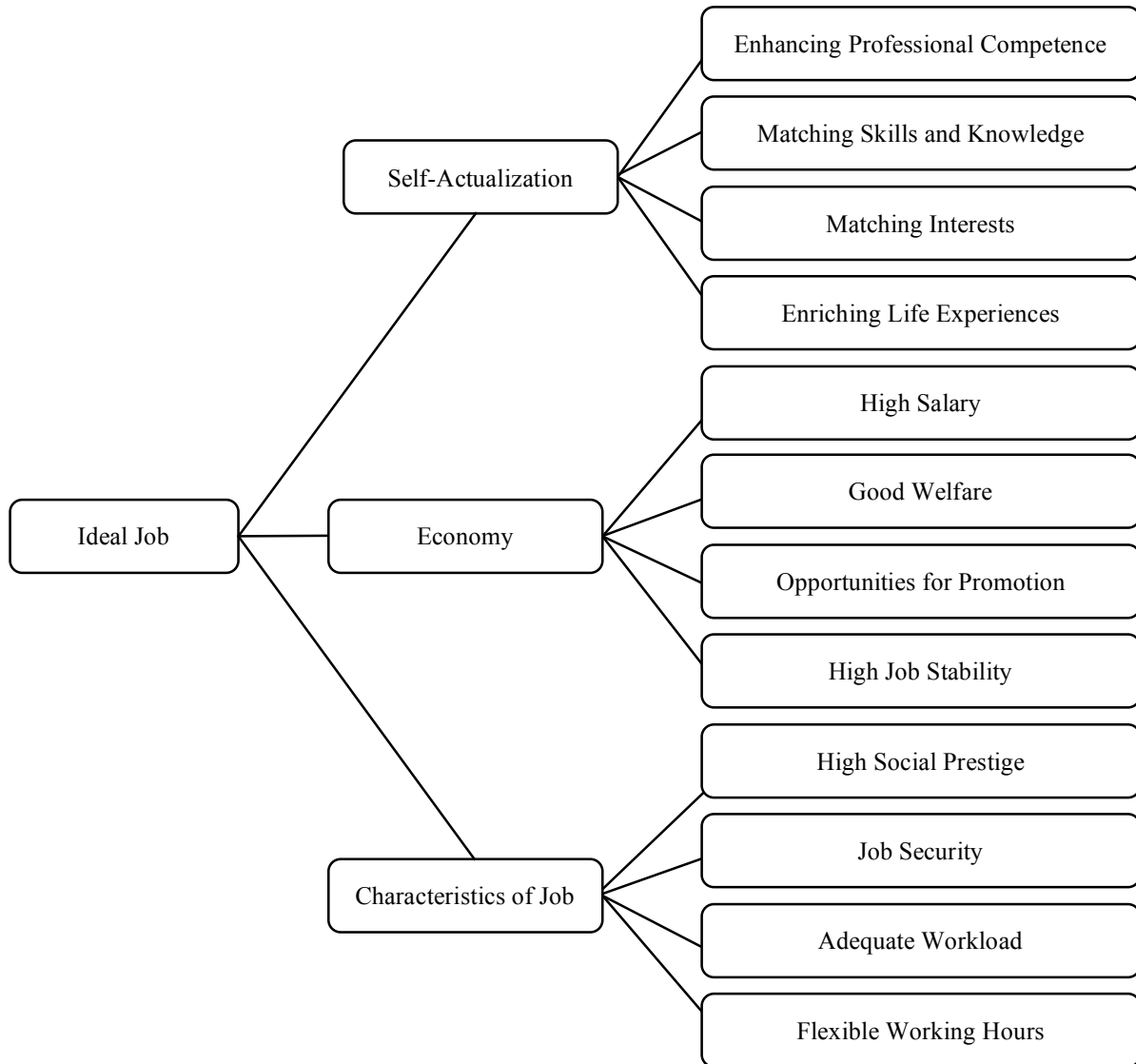
When designing an AHP structure, the subordinate relationships of each determinant are also clarified—namely, the AHP serves as a method to simplify and reform complex problems into a well-structured hierarchy. The prime goal occupies the first level, the second level (making up all the secondary goals) contributes to the primary goal, and these secondary goals are comprised of several determinants that fabricate the lower level. This process continues until the structure is complete.

The AHP structure was created based on the literature reviewed. As Figure 1 illustrates, the main goal—to select an ideal job—is placed in the topmost level; the next level consists of the three major dimensions (i.e., self-actualization, economy, and characteristics of jobs) while the last level comprises the determinants for considering the given dimensions.

Correspondence Analysis

Correspondence analysis is a technique mainly used to analyze two-dimensional and multivariate tables. A table of nominal variables is transformed into a two-way picture, with the title of each row and each column being illustrated as a point. To operate the correspondence analysis in this research, we created a cross table with 6 column variables (education-related occupations) and 12 row variables (determinants of job selection). Afterward, a Chi-square statistic was adopted to calculate the distance between points on the perceptual map, and a *p*-value less than the 0.05 standard suggested that the study is plausible. Every space between the rows and columns accounted for a 4-point Likert scale, and the results of the points served as the foundation for calculating the relative weights of every occupation listed in the table. The data were then utilized to perform a correspondence analysis and create a perceptual map.

RESEARCH RESULTS

Participants' Demographic Information

The questionnaire was administered to 200 education major graduates in Taiwan, of which 123 completed and returned the questionnaire, resulting in a 62% response rate. Of those who completed the questionnaire, 33 (26%) were males and 90 (74%) were females. Also, 24 (20%) participants graduated from schools in northern Taiwan, 83 (67%) from southern Taiwan, and 16 (13%) from eastern Taiwan.

AHP Results

As the second and third levels of the AHP structure in this research were constituted by more than two dimensions and determinants, eigenvector consistency tests were utilized to confirm the reliability and validity. The CR value at the second level (three dimensions) was .01. The CR value at the last level (three positive matrixes) were .01, .01, and .03—all far below the .1 standard. Thus, the consistency was confirmed. The results of the second-level AHP analysis demonstrated that education major graduates considered economy (.494) to be the most important dimension, followed by self-actualization (.269) and characteristics of the job (.237).

Table 1. Weights of the Three Dimensions Perceived by All Participants

Participants			
CR	Dimension	Weight	Ranking
.01	Self-Actualization	.269	2
	Economy	.494	1
	Characteristics of Job	.237	3

Table 2 represents the third level of the AHP analysis. As it shows, high job stability (.202) was regarded as the most important determinants by the participants, followed by (in descending order) high salary (.143) and matching interests (.107). On the contrary, opportunities for promotion (.049), matching skills and knowledge (.044), and high social prestige (.037) were less emphasized.

Table 2. Weights of the 12 Determinants Perceived by All Participants

Dimension	CR	Determinant	Dimension CR	Weight To Dimension	Weight to the Main Purpose	Ranking
Self-Actualization	.01	Enhancing Professional Competence	.01	0.241	0.065	6
		Matching Skills and Knowledge		0.164	0.044	11
		Matching Interests		0.398	0.107	3
		Enriching Life Experiences		0.197	0.053	9
Economy		High Salary	.03	0.289	0.143	2
		Good Welfare		0.204	0.101	4
		Opportunities for Promotion		0.099	0.049	10
		High Job Stability		0.409	0.202	1
Characteristics of Job		High Social Prestige	.03	0.156	0.037	12
		Job Security		0.352	0.083	5
		Adequate Workload		0.255	0.060	7
		Flexible Working Hours		0.238	0.056	8

Table 3 compared and contrasted male and female participants' different perceptions of the three most important dimensions. Both male and female participants considered economy to be the most important (.513 and .484, respectively). Males stressed self-actualization (.303) more than females (.256) whereas females attached greater importance to characteristics of the job (.259) than their male counterparts (.184).

Table 3. Weights of the Three Dimensions Perceived by Male and Female Graduates

Male			Female		
Dimension	CR	Weight	Dimension	CR	Weight
Self-Actualization		.303	Self- Actualization		.256
Economy	.00	.513	Economy	.02	.484
Characteristics of Job		.184	Characteristics of Job		.259

The AHP analysis results for the third level (Table 4) showed that both male and female participants considered high job stability to be the most important job selection determinant. High salary ranked second for both genders (.142), while matching interests ranked third (.126 for males and .100 for females).

Table 4. Weights of the 12 Determinants Perceived by Male and Female Graduates

Determinants	Male			Female		
	CR	Weight to the Main Purpose	Ranking	CR	Weight to the Main Purpose	Ranking
Enhancing Professional Competence	.03	0.066	5	.01	0.064	7
Matching Skills and Knowledge		0.051	10		0.042	11
Matching Interests		0.126	3		0.100	3
Enriching Life Experiences		0.060	7		0.050	9
High Salary	.02	0.142	2	.04	0.142	2
Good Welfare		0.113	4		0.096	5
Opportunities for Promotion		0.065	6		0.044	10
High Job Stability		0.193	1		0.203	1
High Social Prestige	.03	0.028	12	.03	0.041	12
Job Security		0.055	8		0.097	4
Adequate Workload		0.047	11		0.066	6
Flexible Working Hours		0.055	8		0.056	8

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Correspondence Analysis Results

In the final part, a correspondence analysis was used to produce a perceptual map (Figure 2) representing the level of advantages of the 12 determinants and the six occupations. The x^2 (481) and CR value (.000) indicated that the perceptual map was feasible. The perceptual map indicated that students majoring in education considered a school teacher or administrator to have the most bearing on high social prestige, adequate workload, and job security. A business owner has the most bearing on enriching life experiences and enhancing professional competence. The staff at a cram school has the most bearing on matching skills and knowledge. The staff at a publication company has the most bearing on matching interests and high salary. Business staff has the most bearing on opportunities for promotion and enriching life experiences. Finally, government officials have the most bearing on good welfare and high salary.
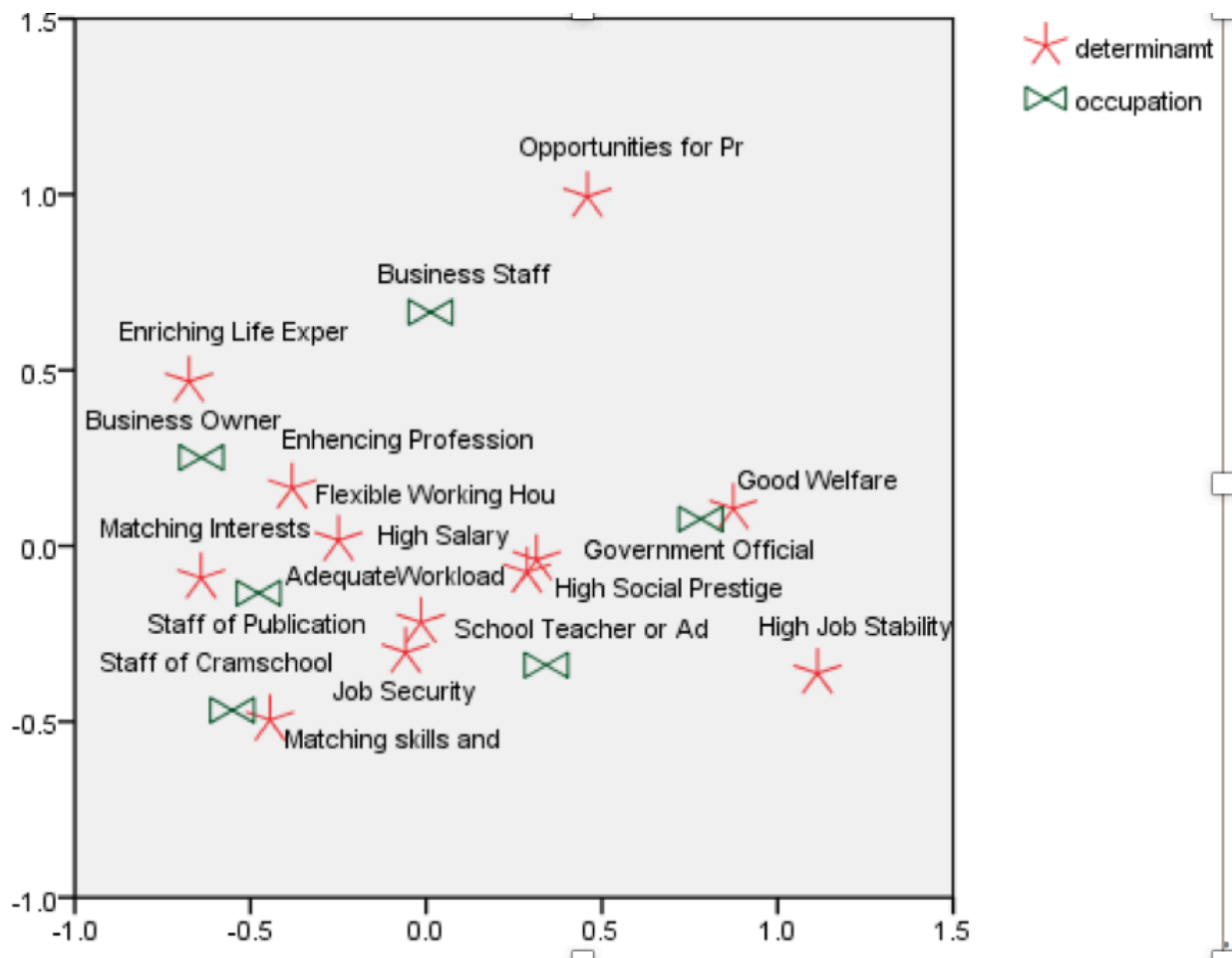
Figure 2. Perceptual map

Table 5 indicates that a school teacher or administrator (3.08) is considered an ideal job by education majors, followed by a government official (2.78) and business owner (2.38).

Table 5. Advantage Levels of 6 Education-Related Occupations

Determinant	W.	School Teacher or Administrator		Business Owner		Staff of Cram School		Staff of Publication Company		Business Staff		Government Official	
		M.	W.M. (%)	M.	W.M. (%)	M.	W.M. (%)	M.	W.M. (%)	M.	W.M. (%)	M.	W.M. (%)
Professional Competence	6.5%	3.14	0.20	3.12	0.20	2.54	0.16	2.68	0.17	2.81	0.18	2.38	0.15
Matching Competence	4.4%	3.29	0.15	2.67	0.12	2.77	0.12	2.52	0.11	2.33	0.10	2.20	0.10
Matching Interests	10.7%	2.82	0.30	3.10	0.33	2.46	0.26	2.46	0.26	2.32	0.25	1.96	0.21
Life Experiences	5.3%	2.52	0.13	3.29	0.17	2.42	0.13	2.50	0.13	2.81	0.15	2.14	0.11
High Salary	14.3%	3.09	0.44	2.26	0.32	2.39	0.34	2.02	0.29	2.49	0.35	2.94	0.42
Good Welfare	10.1%	3.17	0.32	1.97	0.20	1.87	0.19	1.94	0.20	2.38	0.24	3.07	0.31
Promotion	4.9%	2.44	0.12	2.15	0.11	1.82	0.09	2.02	0.10	2.68	0.13	2.80	0.14
High Job Stability	20.2%	3.46	0.70	1.71	0.35	1.82	0.37	1.98	0.40	2.12	0.43	3.35	0.68
High Social Prestige	3.7%	3.33	0.12	2.46	0.09	2.17	0.08	2.16	0.08	2.34	0.09	3.13	0.12
Job Security	8.3%	3.45	0.29	2.55	0.21	2.75	0.23	2.86	0.24	2.49	0.21	3.17	0.26
Adequate Workload	6.0%	2.67	0.16	2.20	0.13	2.15	0.13	2.18	0.13	2.16	0.13	2.51	0.15
Flexible Working Hours	5.6%	2.53	0.14	2.60	0.15	2.06	0.12	2.18	0.12	2.10	0.12	2.33	0.13
Weighted Score	100%		3.08		2.38		2.22		2.24		2.38		2.78

CONCLUSIONS

Recognizing the ideal job perceived by students majoring in education is a prerequisite for guiding them to obtain a career that matches their capabilities and expectations. Thus, this research sought to identify the main determinants for selecting jobs and the relative importance of these determinants. Furthermore, we analyzed the level of advantages of six education-related occupations (Figure 2). The results guide students majoring in education while searching for and selecting jobs. The information can also be used as a reference for improving career counseling systems in higher education institutions.

The research results showed that high job stability (.082) was regarded as the most important determinant by the participants, followed by matching interests (.043), and high salary (.041). It is noteworthy that, although a high salary is emphasized by the general public as the most important factor, the result of this study indicated that students stress job security more than a high salary. The possible causes of this phenomenon may be the recent economic depression in Taiwan, which resulted in difficulties when hunting for a job. As a result, job security has been perceived as more crucial than a high salary.

The research results indicated that male participants considered high job stability (.193) to be the most important job selection determinant whereas female participants emphasized opportunities for promotion (.440) more. These were followed by high salary (.142) for males and high job stability (.203) for females. Matching interests (.126) ranked

third among male participants whereas female participants ranked high salary (.141) third. The statistical data divided by gender can help career counseling systems give more appropriate counseling for male and female students.

The perceptual map gave information about different jobs and their advantages, which can be utilized to help students find their ideal jobs and enhance their job engagement and satisfaction. Figure 2 demonstrated that a school teacher or administrator to have the most bearing on high social prestige, adequate workload, and job security. A business owner has the most bearing on enriching life experiences and enhancing professional competence. The staff at a cram school has the most bearing on matching skills and knowledge. The staff at a publication company has the most bearing on matching interests and high salary. The business staff has the most bearing on opportunities for promotion and enriching life experiences. Finally, government officials have the most bearing on good welfare and high salary.

Finally, a school teacher or administrator (3.08) is considered an ideal job by students majoring in education, followed by a government official (2.78) and business owner (2.38). Although it is clear that students are most interested in occupations in the public sector, they usually fail to be placed in such jobs as the acceptance rate is rather low. As a result, students are forced to find jobs that do not match their interests and, thus, substantially reduce their job satisfaction. Based on this situation, higher education institutions should strengthen their career counseling systems to relieve students' anxiety about job hunting and cultivate students' capabilities for job requirements.

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