

Career Decision Making Process among High School Students

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Abstract

Career decision making is one of the key aspects that professionals in career guidance are interested in assessing. Career decision making process is strongly coupled with society expectations of certain chosen career paths and a strong belief that many should pursue these careers. This paper focused on how students utilize career counseling services for decision making in higher Schools in Nigeria. Thirty-four public high schools were selected. 380 students of Senior Secondary Schools (SS3A) were randomly selected. Descriptive statistics was used to find the mean and the standard deviation of the respondents. The findings show that students utilize career counseling for decision making. To a large extent utilization of career counseling is highly effective for students' career decision making process.

Keywords: Career; Decision; Counseling; Indecision; Career Choice

Introduction

Career can be considered as an expression of an individual area of interest in a particular profession and how he/she relates it to societal changes in the global demand through life. According to [1], career can be perceived as a job, or profession, in which one undergoes regulated education and training over a period of time, and which one intends to follow for the whole 1of one's life. Career is thus a chosen pursuit, life work and success in one's occupation. It is a significant aspect of an individual's path or development though life and is traditionally seen as a course of successive situations that pertain to remuneration (and sometimes to formal education). More so, career preparation in adolescence is an important precursor for successful career development across the life span and is closely related to adolescence adjustment and well-being [2].

Choosing a career is one of many important choices students will make in determining future plans. This decision is considered to be a major turning point in the life of the adolescents that will have a significant impact in them throughout their lives. According to [3], decisions about one's career are among the most significant decisions a student has to make; and the essence of his personality will revolve around what he/she wants to do with his/her life-long work. Every student carries unique traits, which in turn determine how he/she views the world. Those traits, shaped in part by the student's ability, potential, skills, and opportunity, will determine how he/she decides on a career. It then follows that, the student's perception of his/her character, gender and possible opportunity will also determine the career choices. According to [4], personality is defined as the relatively stable pattern of behaviors and consistent internal states that explain a person's behavioral tendencies. The belief that women and men have different personality traits [5-6] can be explained in their differences in the choice of decision making. These gender stereotypes are widely shared cultural beliefs about the personal attributes of the two genders [7]. The term, "gender", refers to the grouping of humans into two categories, female and male, based on the biological differences, as well as the psychological, social, and cultural features frequently associated with these categories [8].

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Background of the Study

A career choice decision may fulfill an individual's needs, values and interests and ultimately influence his or her quality of life. John Holland's theory [9-12] opines that career choice is a function of personality. Again, Career theorists have assumed that career choice and personality are inexorably intertwined [11 & 13]. Personality traits have been shown to influence performance and career directions [14-16] and Careers itself requires some kind of traits to be performed successfully [17].

Gender is clearly one of the most powerful of all influences on vocational behavior. This can be attributed to the belief that women and men have different personality traits [5-6] in their choice of decision making.

In the Third Outline Perspective Plan (OPP3), the Malaysia government estimates about 137,200 engineers and 331,700 assistant engineers to be produced in 2010 which will be employed in various fields such as civil, mechanical, electrical and electronics, chemical, and others (Economic Planning Unit, 2001). It is speculated that the country needs 4,808,400 educated employees by 2020 in order to achieve Vision 2020 that was inspired by Tun Dr. Mahathir Mohamad, the fourth Prime Minister of Malaysia (Ministry of Higher Education, 2007). Consequently, Ministry of Higher Education (MOHE) was given huge responsibilities to achieve the vision. To date, there are 20 public Higher Educational Institutes (HEIs) in Malaysia and from that, 14 institutions offer accredited engineering programs (Engineering Accreditation Council, 2011). Apart from that, some private universities and colleges are also offering first degree in engineering programs. In gender aspect, the numbers of female students who enrolled in the public universities are more than the numbers of male students, but these numbers are reducing for technical-oriented course programs [18].

Female students are more concerned with the uncertainty, doubts and the dynamism of the decision. They assess the risk of the decision and always put their emotion first. It is essential to understand the conditions at that particular level in making decisions such as the correlation between personality and the choice of career interests [19]. Mastor [20] discovered that introvert trait in Malay students' personality also affect their decisions. Female students who were more introvert than male students went through a tough process and were not always satisfied with their decisions. The students also claimed that they had such difficulties due to lack of encouragement or support from family members, friends, teachers and the environment [21]. Consequently, it is important to the students to choose the right study programs that suit with their personalities because the chosen programs are closely correlated to their career paths in the future. Based on the Holland career theory (Noah, 2008), he suggested that individual personality traits should be matched with the environment characteristics. For example, individuals who were in the engineering or technical fields should have realistic characters such as stable, natural, masculine, practical, independent and materialistic [18].

One major variable that affects the people's choice of occupations is personality traits. Holland [12] argued that the choice of an occupation is an expression of personality, and the members of an occupation share similar personality characteristics. Many students rightly chose careers that are congruent with their personality type. However, a good number of them choose careers that do not match their personality type, thereby having a mismatch identity in their personality regarding choice of career. Conversely, the realities and mismatch of personality do not only affect their academic career, but might also contribute to such problems as increased job dissatisfaction and work stress, a decline in the organizational commitment and economic growth. Whether personalities have various types of objective or not, the arising issue is that, certain personality traits in a client may make him/her more or less likely to pursue a particular major. For example, extroverted clients may be seen as more likely to pursue business careers, while neurotic clients may be viewed as more likely to be interested in artistic pursuits. Similarly, John Holland [12] noted that the choice of occupation, and by extension, choice of educational major, is also an expression of personality.

There have been a number of articles that have focused on characterizing the career decision-making process. Some of them have focused on describing the factors that influence it and others on characterizing the different sequential phases that are involved in the decision-making process [22]. Studies conducted on personality traits have also been shown to influence the level of education completed [23], educational achievement [24], choice of occupation [25], on income, person's work satisfaction and on information competency [26]. However, there are no specific studies known that relate the influence of personality traits and career decision making process among female university student in Malaysia. In this research, we will focus on the study of personality traits as one of the many psychological factors that influence career decision-making process among students. University female students often faces problems in choosing career. These problems are associated with the inability to make decision due to lack of information about self and career and the pressure from parents and peers. According to [10], students' personality may affect their choices of career.



It has to be recognized that individual's personality traits are significant construct in students' choices of career. Hence, the professionals involved in students' career planning and development processes must recognize that career decision making process may be related to these five personality traits, and the model could therefore be employed accordingly for modifying their approaches. Administrators of a big personality measure prior to career guidance, counseling, or planning program or services, could help inform the service provider and allow more differentiated approach to service delivery. Students who are engaged in career planning and choice process will surely find such information on the effects of personality on decision making useful. The counselor also has to understand the factors that influence students in making decision; and how best to assist them in identifying those inherent traits that presuppose matches their choice of career. The results so obtained could be adopted as an appropriate assessment tool when counseling the clients. The tool will greatly assist the counsellors to diagnose the problems of inappropriate career plans and career failure. In addition, the study will help the counsellors to understand the relevant personality traits for predicting the specific criteria in career decision making among female students.

Career Decision Making Process

The high stake of career decisions is perhaps matched by the inherent difficulty of making informed decisions. Truly informed career choices require a sense of one's current preferences that actually contribute to a sense of satisfaction; a clear sense of one's aptitudes and capabilities; accurate prediction of such preferences or abilities that will continue over the course of their life, those that will diminish, and those that will develop; and adequate knowledge of vocations that number in the thousands. Yet, most individuals are faced with these weighty decisions during the transition to adulthood when they must invest in a specific area of education and training, prior to having knowledge of the world of work or any actual work experience from which to draw, and in the midst of developing one's sense of identity [27]. Further complicating these tasks is the growing turbulence of the job market caused by rapid advances in technology and by globalization of business operations. Thus, not only are career decisions limited by self-understanding and knowledge of current occupations, but also by the ability to forecast job market changes and by the expectation that one will likely incur involuntary transitions over the course of one's career.

Empirical research has offered compelling evidence to support the belief that career decisions are pivotal developmental tasks determining experiences that either greatly enhance or detract from one's psychological and physical well-being. To assist individuals with the inherent difficulty of CDM, counselors can direct one's exploratory bearings toward suitable work environments through collaborative and sophisticated assessment of one's interests [28], personality characteristics, work values, and abilities. In addition, counselors can support the CDM of individuals by assessing one's ability to effectively engage in the tasks of CDM. Indeed, psychology has long recognized individual differences in the resources and barriers that determine success in adaptively responding to developmental tasks and challenges such as CDM [29]. From this point of view, assessment and interventions that augment client skills and insight relevant to the process of CDM have been highlighted as necessary interventions for many clients. With the ultimate goal of supporting this practice, psychologists studying CDM behavior have made progress over the last century in developing influential theoretical models, constructs, and assessment instruments.

Theoretical Models of Career Decision Making

Frank Parsons proposed in 1909 that one's ability to wisely choose a vocation depends on one's self-knowledge, one's knowledge of the world of work, and —true reasoning||. Since Parsons formulated this elegant model, a vast number of theoretical perspectives addressing CDM have been put forth in the literature [30-41]. CDM models predominately describe a sequential process involving a series of phases or tasks that typically include recognizing the need for a decision, gathering information, generating alternatives, evaluating alternatives, and committing to an alternative [42-43]. Researchers often distinguish between models that emphasize a rational, scientific, and analytical approach (i.e., rational models) and those that emphasize an intuitive, experiential, and emotional approach (i.e., alternative models) [33], [42] and [44]. Although purely rational CDM has been historically presumed to be most adaptive [31-32 & 41], studies comparing rational and intuitive decision making styles have not consistently supported this assumption [45-46]. Furthermore, compelling explanations of the limitations of purely rational approaches and arguments for the incorporation of non-rational decision making methods have been put forth by CDM theorists [33], [38], [40] and [47] as well as prominent decision making scholars, including the Nobel laureate Herbert Simon. These perspectives parallel two dominant viewpoints in the larger decision making literature that emphasize either the limitations of intuition by highlighting the prevalence of cognitive biases (i.e., Heuristics and Biases perspective) or the virtues of intuition by pointing out the use of intuition by experts to make effective decisions (i.e., naturalistic decision making view)[48].



Career indecision/decision making difficulties.

Like career maturity, career indecision has been identified as a central construct in the study of CDM [49-50]. However, investigations of indecision have been hampered by conceptual and methodological problems [50-52]. These problems commonly have been attributed to narrowly focusing on measurement and empirical relations and not adequately attending to conceptual definitions and frameworks [51-53]. In a striking example, Slaney [54] highlighted that researchers often have not distinguished individuals who are undecided while effectively engaging in CDM from those who exhibit trait-like indecisiveness.

Research Question:

How do students utilize Career Counseling service for decision making?

Methodology

Thirty four (34) public High schools were selected in Enugu State Nigeria. 380 students of Senior Secondary School (SS3A) were selected randomly. Four Likert scale questionnaire were used to obtain data for the study. Descriptive statistics was used to find the mean and the standard deviations of the respondents. Fourteen statement were responded to and the results of six are presented on bar charts.

Table 1: Summary of the students' response to research question

	I utilise career counselling services to	SA 4	3	D 2	SD 1	R	Mean	SD
1	Gather information regarding career option	222	115	10	3	350	3.59	0.786
		58.4%	30.3%	2.6%	0.8%			
2	Set a career goal for my future	98	201	50	31	380	2.96	0.846
		25.8%	52.9%	13.2%	8.2%	ĺ		
3	Adjust to career options I decide to pursue	68	109	160	43	380	2.53	0.914
		17.9%	28.7%	42.1%	11.3%			
4	Select subjects that match my career	78	221	75	6	380	2.98	0.683
	interest	20.5%	58.2%	19.7%	1.6%			
5	Take major courses in my area of	112	97	80	91	380	2.61	1.14:
	interest	29.5%	25.5%	21.1%	23.9%			
6	Make a vocational decision	101	135	10	134	380	2.53	1.220
		26.6%	35.5%	2.6%	35.3%			
7	Discover my career interest	120	200	60	0	380	3.16	0.67
		31.6%	52.6%	15.8%	0			
8	Make a career aspiration	215	101	60	4	380	3.39	0.593
		56.6%	26.6%	15.8%	1.1%			
9	Learn more about a specific career and	105	185	65	25	380	2.97	0.84
	its requirements	27.6%	48.7%	17.1%	6.6%			
10	Discuss employment opportunities	45	104	195	36	380	2.42	0.81
	with my peers	11.8%	27,4%	51.3%	9.5%			
11	Help discuss my career prospects with	70	75	125	110	380	2.28	1.07
	my parents	18.4%	19.7%	32.9%	28.9%			
12	Discuss career challenges with other	6	82	261	31	380	2.17	0.578
	students	1.6%	21.6%	68.7%	8.2%			
13	Set plans to achieve my career goal	71	63	195	51	380	2.41	0.941
		18.7%	16.6%	51.3%	13.4%			
14	Decide on my career choices	212	101	45	22	380	3.32	0.897
	200	55.8%	26.6%	11.8%	5.8%			
Averages		108.8	127.8	99.4	41.9	377.9	2.81	0.858
		28.6%	33.6%	26.1%	11.0%			

Response on How Students Utilize Career Counseling Services for decision making



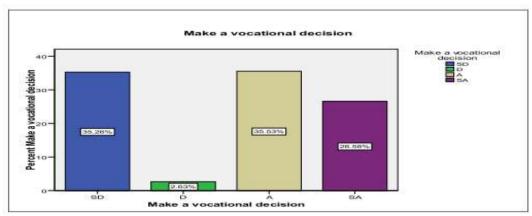


Figure1: Bar chart of making a vocational decision

Figure .1, of item 6 on table 1,student respondent showed that (26.58 %) strongly agreed and (36.53%) agreed (n=236) that they make vocational decision through career counseling services. While (2.63%) disagreed and (35.26%) strongly disagreed (n=54) respondents disagreed with the opinion. With the statistic (mean=2.53, SD=1.22). Getting knowledge about a career is important but making a vocational decision is necessary for the students to be able to decide on a vocation that has future prospect.

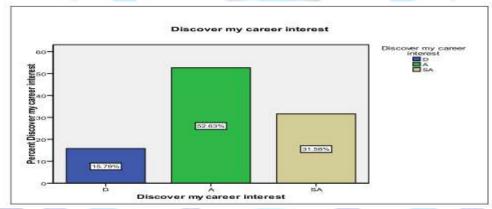


Figure 2: Bar chart of discovering my career interest

Figure 2, on item 7 on table 1,student respondents showed that (31.58%) strongly agreed and (52.63%) agreed (n=321) majority of respondents are positive on how they utilize career counseling services to discover their career interest While (15.79%) disagreed (n=60) are not in support of the opinion (mean=3.16, SD=0.67) from the number of participant, it showed that student are interested in discovering their potential, skills and abilities in their career interest.

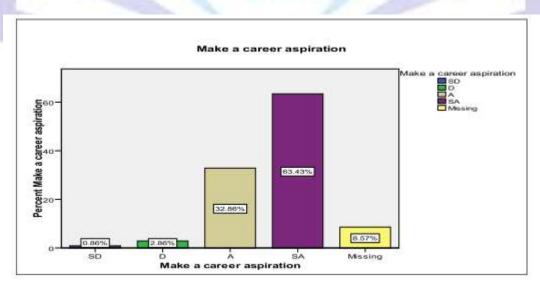


Figure 3: Bar chart of making a career aspiration



Figure 3, above on item8 student respondent showed that (63.53%) strongly agreed and (32.88%) agreed(n=337) were of the opinion that making a career aspiration is of significant on how they utilize career counseling services while (2.86%) disagreed and (0.86%) strongly disagreed (n=13) respondents are negative in these opinion (mean=3.39. SD.0.59). Career is one aspect of an individual life time. A good knowledge of one's aspired career assists the individual in making a career aspiration.

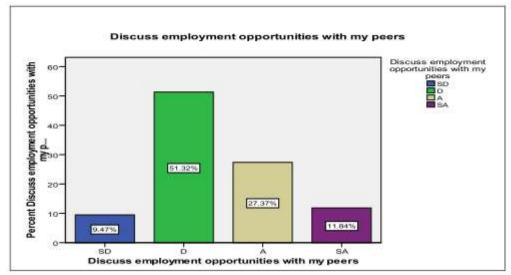


Figure 4: Bar chart of discussing employment with peers

Figure 4, above, of item 10 student respondent showed that (18.84%) strongly agreed and (27.37%) agreed (n=149) discuss employment opportunities with their peers. While (32.89%) disagreed and (28.95%) strongly disagreed (n=231) this indicated that most of the student do not utilize career counseling to discuss employment opportunities with their peers (mean=2.42, SD=0.82). It could mean that they do not have relevant information to discuss in terms of employment opportunity in the field of study and probable the required skills needed in such profession.

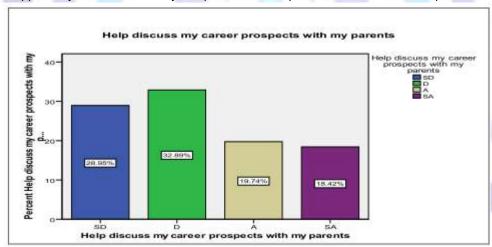


Figure 5: Bar chart to help discussion of my career prospect

Figure 5, of item 11 on table 1,students respondent showed that (18.42%) strongly agreed and (19.74%) agreed (n=145) that helping discuss my career prospects with my parents how they utilize career counseling service While (32.89%) disagreed and (28.95%) strongly disagreed (n=235) This indicated that most students were against the opinion of utilizing career counseling to discuss their career prospect with their parents. (Mean=2.28, SD, = 1.07). It implied that parent should also be involved in encouraging them in their choice of career.



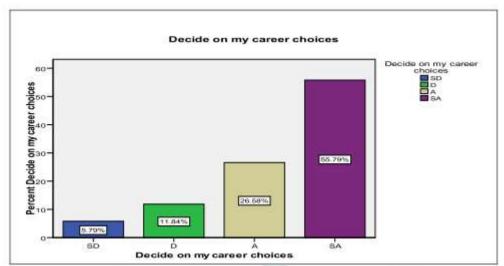


Figure 6: Bar chart of deciding on my career choices

Figure 6, on item 14 on table 1,student respondents showed that 55.79% strongly agreed and (26.58%) agreed (n=313) they decide on their career choices by utilize career counseling services while (11.84%) disagreed and (5.79%) strongly disagreed (n=67) were against the opinion. (Mean=3.32, SD=0.89). Deciding on a career is very important, student need to be assisted in deciding on a particular choice of career.

Discussion on: How do students utilize career counseling for decision making?

In the analysis, the statistics of the respondent are used in an attempt to provide answer to this question. The students' responses to the questions are summarized in Table 1: From the table, it showed that most students are positive about setting a career goal. The result obtained is similar to that conducted by [55] that Finnish high school students consider work related goals to be important and that the greater the importance they place on these goals and the higher the level of success previously experienced, the more likely they are to achieve these goals. This finding was also consistent with [56] findings that junior high students are concerned about preparing themselves appropriately for their future career. It appears that secondary school students are prepared for their future career at the early stage of their career development [57]. This will make them to have a clear direction and are positive about their field of study. About 76.31% of the total percentage agreeableness responses to learning more about a specific career and its requirements are positively utilizes by the student. This result was related to [58] finding about career decision making which they conducted in 1,400 Portuguese high school students and found that students became more interested in specific career-related information and were more likely to engage in career exploration as they moved from junior high to senior high.

Total percentage of 55 responses rate were of the opinion that they utilize career counseling to take major course in my area of interest and 45 percentage were against the opinion. The students showed positive responses deciding on my career choice with a high percentage of 85.5% and a negative opinion of 17.6%. Students are also positive about selecting subjects that matches their career interest and with mean 2.98. it implied that taking major course in my area of interest and selecting subjects that matches their career interest is very important to student for career development. Counselors should ensure that students are properly guided at the early stage so that they can decide on courses in time to study prerequisite subjects in school [59]. The student also utilize career counseling to discover their career interest with mean 3.16 and make a career aspiration with a mean of 3.39. Of all, adjusting to career options they choose to pursue and make a vocational decision are of the same mean 2.53. This indicates that the opinions of the respondents are very close to each other regarding career counseling. Gathering information regarding career counseling for students is considered the most positively utilize career counseling services with (Mean=, 3.59).

The summary of table 1, also showed that except for setting plans to achieve my career goal, help discuss my career prospects with other students, discuss career challenges with other students and discuss employment opportunity with my pears; all measured factors reported a less mean perception 2.50. This shows that for most students, career counseling is not been really utilize for decision making. Looking at table 4.9, it is clear that gathering information regarding my career by students obtained the highest mean 3.59 among the utilization of career counseling services in school. Of the 380 students respondents, making a career aspirations (Mean=3.39) was found to be the most important perceived career counseling pivotal to secondary school students closely followed by deciding on my career choices (Mean=3.32) as shown in Table 4.9. This shows that to a very large extent, students are of the view that utilization of career counseling is highly effective since such services assist their improved instructions and career developments.



Conclusion

The study revealed that the students of public secondary school in Nigeria use career counseling services more effectively to make career decisions. The study also showed that student's expectations in career counseling services were high in getting career information and subject combination, support and encouragement, personal attention, counselor's respect and understanding, explore career options, learn about job search skills and meeting friendly counselors. The findings revealed that secondary school teachers utilized career counseling services to encourage students more in guiding them to make appropriate subject choice that match their career interest and plans, and helping them with career challenges and plans. The study recommended that students should be truthful in discussing their career matter; set plans to achieve their career goal. They are expected to learn career decision making skills and have opportunities to express their needs, hopes and fears in career counseling services. The teachers should intensify their career help to students, classify them based on their career interest and create students awareness on transition from secondary school to workplace. Career choice is an important decision a person needs to make in his life time. Unfortunately, many young people find it uneasy to make appropriate career choice.

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References

- [1] Popoola, S.O. (2004) Career Commitment of Records Management Personnel in Ondo State Civil Service. INFOLIB: Abuja Journal of Library and Information Science. 1 (1).
- [2] Skorikov, V. B. (2007). Adolescent career development and adjustment. In V. B. Skorikov & W. Patton (Eds.), Career development in childhood and adolescence (pp. 237-254). Rotterdam, The Netherlands: Sense Publishers
- [3] Gati, I., & Asher, I. (2001). The PIC model for career decision making: prescreening, in-depth exploration, and choice. In T. L. Leong & A. Barak (Eds.), Contemporary models in vocational psychology: A volume in honor of Samuel H. Osipow (pp. 6–54). Mahwah, NJ: Lawrence Erlbaum Associates
- [4] McMahon, M. & Watson, M. (2005) Occupational Information. What Children Want to Know? Journal of Career Development. 31, 239-249.
- [5] BEM, S. L. (1974). Sex-role adaptability: One consequence of psychological androgyny. Journal of Personality and Social Psychology, , in press.
- [6] Spence, Janet T.; Helmreich, Robert; Stapp, Joy. (1975). Ratings of self and peers on sex role attributes and their relation to self-esteem and conceptions of masculinity and femininity:

 Journal of Personality and Social Psychology, Vol 32(1), Jul, 29-39.
- [7] Deaux, K., & Kite, M. (1993). Gender stereotypes. In F. L. Denmark & M. A. Paludi (Eds.), Psychology of women: A handbook of issues and theories (pp. 107-139). Westport, CT: Greenwood Press
- [8] Riger, S. (2000). Transforming psychology: Gender in theory and practice. New York: Oxford University Press
- [9] Holland, J.L. (1966). The psychology of vocational choice: A theory of personality types and model environments. Waltham, BLaisdell
- [10] Holland, J. L. (1973). Making vocational choices. Englewood Cliffs, NJ: Prentice-Hall
- [11] Holland, J.L. (1985). Making vocational choices: A theory of vocational personalities and work environments (2nd. ed.). Englewood Cliffs, NJ: Prentice-Hall.
- [12] Holland, J. L. (1997). Making vocational choices: A theory of vocational personalities and work environments. Odessa, FL: Psychological Assessment Resources, Inc.
- [13] Krumboltz, J.D.J.O,(1986), A social learning theory of career decision making. In A.M.Michell, G.B. Jones, and J.D. Krumboltz (Eds) Social learning &career decision making. Cranston,RI: Carroll press.
- [14] Mount, M. K., Barrick, M. R., & Strauss, J. P. (1994). Validity of observer ratings of the Big Five personality factors. Journal of Applied Psychology, 79, 272–280.



- [15] Furnham A 2002, 'Remember to manage upwards five traits are important when assessing the personality of the boss and maintaining a good working relationship', Financial Times, May 14, pp.17.
- [16] Schneider, R. J., & Hough, L. M. (1995). Personality and industrial/organizational psychology. In C. L.Cooper & I. T. Robertson (Eds.), International review of industrial and organizational psychology(pp. 75–129). Chichester, England: Wiley
- [17] Gottfredson GD, John LHo, and Linda SG (1975). The relation of vocational aspirations and Assesments to employment reality. J. Vocational Behav., 7: 135-148.
- [18] Mustapha, R., & Long, N. L. (2010). Career decision process among women in technical fields. Paper presented at the 1st International Conference on Technical and Vocational Education and Training, 10-11 November, in Bandung.
- [19] Albion, M. J., & Fogarty, G. J. (2011). Factors influencing career decision making in adolescents and adults. Journal of Career Assessment, 10(1), 91-126. Retrieved from http://www.jca.sagepub.com; http://dx.doi.org/10.1177/1069072702010001006
- [20] Mastor, K. A. (2006). Introvert personality and decision making psychology among Malay students. Journal of General Studies, 7, 67-80
- [21] Mustapha, R., & Long, N. L. (2009). Education for diverse learners. Serdang: Universiti Putra Malaysia Publisher
- [22] González, M. C., Álvarez, P., Cabrera, L. & Bethencourt, J. T. (2002). La toma de decisiones académicas del estudiantado de la Universidad de La Laguna en la elección de créditos de libre configuración. Contextos Educativos, 5, 123-139
- [23] van Eijck, K., & De Graaf, P. M. (2001). De invloed van persoonlijkheidskenmerken op het bereikte opleidingsniveau. Mens en Maatschappij, 76(4), 285–302
- [24] De Fruyt, F., & Mervielde, I. (1996). Personality and interests as predictors of educational streaming and achievement. European Journal of Personality, 10(5), 405–425.
- [25] van den Berg, P. T., & Feij, J. A. (1993). Personality traits and job characteristics as predictors of job experiences. European Journal of Personality, 7(5), 337–357
- [26] Nahyun Kwon1 and Hana Song (2011): Personality traits, gender, and information competency among college students. Malaysian Journal of Library & Information Science, Vol. 16, no. 1, April 2011: 87-107
- [27] Grotevant, H.D., & Durrett, M.E. (1980). Occupational knowledge and career development in adolescence. Journal of Vocational Behavior, 17, 171-182
- [28] Harmon, L.W., Hansen, J.C., Borgen, F.H., & Hammer, A.L. (1994). Strong interest inventory: Applications and technical guide. Palo Alto, CA: Consulting Psychologists Press
- [29] Loevinger, J. (1976). Ego development. San Francisco: Jossey-Bass.
- [30] Bordin, E.S., Nachmann, B., & Segal, S.J. (1963). An articulated framework for vocational development. Journal of Counseling Psychology, 10, 107-I 16
- [31] Gati, I. (1986). Making career decisions: A sequential elimination approach. Journal of Vocational Psychology, 33, 408-417.
- [32] Gelatt, H.B. (1962). Decision-making: A conceptual frame of reference for counseling. Journal of Counseling Psychology, 36, 252-256.
- [33] Gelatt, H.B. (1989). Positive uncertainty: A new decision-making framework for counseling. Journal of Counseling Psychology, 36, 252-256
- [34] Hilton, T.L. (1962). Career decision-making. Journal of Counseling Psychology, 19, 291-298.
- [35] Hsu, C.C. (1970). A conceptual model of vocational decision-making. Experimental Publication System, 8, 270-276.
- [36] Janis, I.L., & Mann, L. (1977). Decision making. New York: Free Press.
- [37] Krieshok, T.S. (1998). An anti-introspectivist view of career decision making. Career Development Quarterly, 46, 210-229



- [38] Krieshok, T.S., Black, M.D., & McKay, R.A. (2009). Career decision making: The limits of rationality and the abundance of non-conscious presses. Journal of Vocational Behavior, 75, 275-290
- [39] Krumboltz, J.D., & Hamel, D.A. (1977). Guide to career decision making skills. New York: College Entrance Examination Board
- [40] Mitchell, K.E., Levin, A.S., & Krumboltz, J.D. (1999). Planned happenstance. Constructing unexpected career opportunities. Journal of Counseling and Development, 77, 115-124.
- [41] Pitz, G.F., & Harren, V.A. (1980). An analysis of career decision making from the point of view of information processing and decision theory. Journal of Vocational Behavior, 16, 320-346
- [42] Phillips, S.D., & Pazienza, N.J. (1988). History and theory of the assessment of career development and decision making. Career decision making. In B.W Walsh & S.H. Osipow (Eds). Career decision making. Contemporary topics in vocational psychology. (pp. 1-31). Hillsdale, NJ, England: Lawrence Erlbaum Associates.
- [43] Jepsen, D.A., & Dilley, J.S. (1974). Vocational decision making models: A review and comparative analysis. Review of Educational Research, 44, 331-349.
- [44] Hartung, P.J., & Blustein, D.L. (2002). Reason, intuition, and social justice. Elaborating on Parson's career decision making model. Journal of Counseling and Development, 80, 41-47
- [45] Phillips, S.D., Pazienza, N.J., & Walsh, D.J. (1984). Decision-making styles and progress in occupational decision making. Journal of Vocational Behavior, 25, 96-105.
- [46] Phillips, S.D., & Strohmer, D.C. (1982). Decision-making style and vocational maturity. Journal of Vocational Behavior, 20, 215-222.
- [47] Phillips, S.D. (1997). Toward an expanded definition of adaptive decision making. The Career Development Quarterly, 45, 275-28.
- [48] Kahneman, D. & Klein, G. (2009). Conditions for intuitive expertise: A failure to disagree. American Psychologist, 64, 515-526
- [49] Dickinson, J., & Tokar, D.M. (2004). Structural and discriminant validity of the career factors inventory. Journal of Vocational Behavior, 65, 239-254.
- [50] Osipow, S. H. (1999). Assessing career indecision. Journal of Vocational Behavior, 55, 147-154
- [51] Hall, D.T. (1992). Career indecision research: Conceptual and methodological problems. Journal of Vocational Behavior, 41, 245-250.
- [52] Tinsely, H.E.A. (1992). Career decision making and career indecision. Journal of Vocational Behavior, 41, 209-211...
- [53] Gati, I., Krausz, M., & Osipow, S. H. (1996). A taxonomy of difficulties in career decision making. Journal of Counseling Psychology, 43, 510-526.
- [54] Slaney, R. B. (1988). The assessment of career decision-making. In W. B. Walsh & S. H. Osipow (Eds.), Career decision making (pp. 33-76). Hillsdale, NJ: Lawrence Erlbaum.
- [55] Nurmi, J., Salmela-Aro, K., & Koivisto, P. (2002). Goal Importance and Related Achievement Beliefs and Emotions during the Transition from Vocational School to Work: Antecedents and consequences. Journal of Vocational Behavior, 60, 241-261
- [56] Hiebert, B., Kemeny, K., & Kurchak, W. (1998). Guidance-related needs of junior high school students. Guidance and Counselling, 14(1), 3-9
- [57] McShane, SL and Von Glinow, MA 2008, Organizational Behaviour, McGraw-Hill Irwin, Boston.
- [58] Taviera, M. D. C., Silva, M. C., Rodriguez, M. L., & Maia, J. (1998). Individual Characteristics and Career Exploration in Adolescence. British Journal of Guidance and Counselling, 26(1), 89-104
- [59] Rothman, S. & Hillman, K. (2008). Career Advice in Australian Secondary Schools: Use and usefulness. LSAY Research Report No. 53. Melbourne: Australian Council for Educational Research