

Relationship between Personality Types and Career Choices of Undergraduate Students: A Case of Moi University, Kenya

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Abstract

This study investigated the relationship between personality types and career choices of undergraduate students of Moi University. In Kenya, students are allowed to revise their career choices at various levels of education before they settle on one course of study in the University. The process of choosing careers begins in form three where students select subject that would lead them to specific career. Before the final year in high school they choose University courses they would pursue in the University. After the releases of Kenya Certificate of Secondary Education (KCSE) examination results, they are allowed to revise their choices. On admission to the University they are given another opportunity to apply for inter-faculty change. Consequently, there is a possibility that students are in career that are not in line with their personality types. The population for the study was undergraduate students admitted by the University Joint Admission Board (JAB). Multi-stage random sampling technique was used to select five schools, and a sample 399 participants. A survey research design was used because the study aimed at assessing relationships among the naturally occurring variables with the goal of identifying predictive relationships. The study was based on John Holland Personality Theory of Career Choice (Holland, 1997). The study used Questionnaires adapted from Holland's Self-Directed Search (SDS) to sort out student's personality types, and Holland's Occupational Finder checklist was used to categorize degree programmes into career choices according to Holland's Realistic, Investigative, Artistic, Social, Enterprising and Conventional (RIASEC) model. A reliability of 0.86 of the instruments was established through a pilot study in two non-sampled degree programmes. The data collected were analysed descriptively by use of frequency tables and figures. Chi-square was used to test the null hypothesis at level of significance of 0.5. Results indicated that there was a relationship between personality types, and career choice. The study also found that most of the students (73.3%) are satisfied with their course of study. Research findings will enhance the understanding of personality types on career planning, development and career guidance and counselling in both secondary school and the University. An appropriate career choice for students would enhance satisfaction and success in their course of study and future employment.

Keywords: Relationship, Personality types, Career choice, congruence, satisfaction

Introduction

A career choice that is compatible with one's personality type is believed to be reinforced and rewarded by an academic environment. According to Holland's (1997) theory, people seek environments that are aligned with their personality types and engage in activities that utilize their abilities. People with low vocational identity are more likely to make incompatible career choices and experience frequent career change than those with high vocational identity. In the context of this study, the study modelled Holland's theory of vocational personality and work environment where students' personality types were surveyed according to RIASEC model and related to career choice. The theoretical proposition being tested in this study is congruence and satisfaction. Congruence refers to personality type and course of study (environment) that has similar characteristics.

Holland stated that people resemble a combination of six personality types: Realistic, Investigative, Artistic, Social, Enterprising and Conventional (RIASEC). Personality types differ according to the activities that are related to abilities and competencies of an individual. Realistic personality types have practical, productive, and concrete values. These behaviours lead to competencies in the use of machines, tools, and materials. Investigative personality types are associated with analytical or intellectual activities aimed at the documentation of new knowledge and understanding solutions of common problems. Artistic personality type is associated with the acquisition of innovative and creative competencies such as language, art and music. Social types have a preference for activities involving working with people to train or help them. These result in competencies in

areas such as teaching and counselling. Enterprising types are often attracted to pursuits that require influencing other. These behaviours results in the development of competencies in leadership and entrepreneurship. Lastly, Conventional types are attracted to activities such as data manipulation which result in clerical and business competencies.

Studies that adopted Holland's theory have found that there is a relationship between personality types and career choice (Momberg, 2004; McPherson & Mench, 2007; Onoyase & Onoyase, 2009; and Soo, 2010). These studies have been done in other countries but the current study focused on Kenyan context. Soo (2010) suggested that there is need to investigate the role played by personality types on career choice. Mungai (2007) and Schmidt (2001) recommended that a study be done in post-secondary level of education to establish course satisfaction. It is on this note that this study was undertaken to establish the congruence between personality types and career choice as well as course satisfaction.

The process of aligning educational requirements with career choices has grown in complexity because the world is becoming a global village and the problems surrounding work such as career decision making, work adjustment and career education requires more attention than before (Feller, 2003; and Stead and Harrington, 2000). Studies done in America showed that the choosing of careers is a national problem. The studies reported that post-secondary education statistics indicated 20% to 60% of freshmen class to be undecided or uncertain of their career choice (Feller, 2003; Herr & Creamer 2000; Hayes, 1997; Orndorff & Herr, 1996). In Lebanon, University graduates undertake certain career paths that mismatch their college majors. Many enrol in Law on temporary basis until they are certain of their career paths after which they shift to more appropriate majors, resulting in overcrowding in some college majors (Abdul-Reda and Abouchedid, 2003).

Research carried out by Institution Policy Analysis Research in Kenya reported that there were no effective career programmes in Kenya schools because of lack of appropriate policy and acute shortage of qualified and experienced personnel (IPAR, 2003 and Maraya, 2011). Maraya (2011) shows that students in Kenya suffered indecision due to conflicting advice from various sources and concluded that students' capacity to make highly informed decision on careers had not been attained as most students had a perception of having moderate information on career choice.

The choosing of careers has remained a constant challenge for students and career counsellors as they search for a career decision making process that is both developmentally comprehensive and designed to prepare students for life-long career planning. Choosing a career from a large and challenging array of possibilities is a problem to the youth because a lot of attention is paid to academic performance with little information on the link between the subject chosen and future careers (MOEST, 2007). Career Masters have led young people to select careers because it has an attractive feature or is described as glamorous (Machio, 2007).

The researcher is of the view that the derailment in career development is due to lack of Secondary School and University plans that provide students with sound occupational information and self-awareness. On this note, students are likely to face barriers that may deter their optimal career development. It is on record that while factors such as gender, peer pressure, parents, exam grades and career status are by and large the first to be considered by students during career decision making process: Little or no consideration is given to personality types. Linda, a first class honours graduate in Architecture in University of Nairobi, Kenya aspired for medicine and wanted to be like her father and to help the helpless. But her mother, a high school teacher pointed out to her that her fingers resembled those of an architect. Her characteristics included: good listener, perfectionism and always worked for the best (Imaka and Mufambo, 2010). Rashid aspired to be a doctor and never imagined to be a mechanic. He scored good grades to be admitted to school of medicine but cars fascinated him. Out of his own effort he perfected his skills by training on car repair and discovered that he was talented in it (Makeni, 2010). From the above scenarios one may aspire for a certain career due to role model or examination grades and yet the personal internal characteristics (personality type) are pointing elsewhere.

Referring to the World Bank Position paper on professional services in Kenya, Muindi (2011) attributed the serious shortage of professional skills to failure by Universities and other tertiary institution to help students chart credible career paths. Studies conducted in Kenya showed that people get employment in areas that are neither in line with their careers or professional training nor personality traits or interests. They go for what is available rather than what is in their personal interest, value, ability or skill to re-orient their interest to the available training (Godia, 2009, Ojenge and Muchemi, 2000). When such people are employed they experience job frustration and dissatisfaction. This is characterized by low work morale and reduced productivity which has far reaching social and economic consequences. This is a manifestation of poor career choice. The question

which should be asked is how can career counsellors help students explore options to better understand the life long process of career planning and development?

This study investigated personality types and career choice because it impacts an individual's life positively. The knowledge established on the relationship between personality types and career choice may help one to understand, strategize and improve career planning, development and subsequent decision making. This is done by incorporating self-knowledge and occupational knowledge to make a career decision. The student identify and articulate their unique interests, values and skills as they search for a career that closely match their unique personal characteristics and look at career options, hence transit to the University smoothly. The career counsellor on the other hand would be able to address the student's goal of career choice

Research methodology

The study specifically investigated the relationship between personality types and career choice of undergraduate students of Moi University. It also investigated the students' course satisfaction. In order to carry out the investigation the study raised broad research questions to answer the above objective and test the null-hypothesis that states 'there is no significant relationship between personality types and career choice.

The approach for conducting this study was mixed research methodology. Quantitative approach was used to provide numerical data to test the null hypothesis that stated 'there is no significant relationship between personality type and career choice'. The qualitative approach was used to answer research question on course satisfaction. The study utilized survey research design because the investigation was in a cross-section of undergraduate students at a particular point in time.

The study investigated personality types and career choice of undergraduate students of Moi University as a case. Moi University was chosen to act as a proxy to the other public Universities in Kenya. Undergraduate students were preferred for the study because the degree programmes they are pursuing are as a result of high school career choice. The accessible population of the study was first year students because they were more likely to be faced with the problem of uncertainty. Proportionate random number sampling technique was employed to select 399 students from the sampled schools as shown in Table 1.

Table 1: Population and sample distribution in terms of gender and degree programs

Degree Programme	Male population	Sampled males	Female population	Sampled females	Total student population	Total sampled population
Information Science(IS)	36	10	23	8	59	18
Bachelor of Science(BSC)	142	42	100	30	242	72
Education Science(EduSc)	89	277	32	9	121	36
Education Art(EduArt)	229	68	214	64	443	132
Bachelor of Art(BA)	220	66	187	56	407	122
Bachelor of Medicine(BMed)	35	10	30	9	65	19
Total	851	223	586	176	1337	399

SOURCE: Deans' office registers (2010)

The preferred method of collecting data was questionnaire, which comprised biographic form and the Students Personality Questionnaire (SPQ). The questions in the biographic form required the respondents to state their degree programmes and whether they were satisfied with their course of study. The Students personality Questionnaire (SPQ) was adopted from Holland's Self-Directed-Search (SDS). Holland's Self-Directed-Search (SDS) was constructed in 1973 and subsequently revised, with the latest revision done in 1997. The SPQ is in four sections activities, competencies, Occupation and self-estimates. The researcher required the respondent to select a response from the alternatives, like/dislike in the activities subsection; yes/no responses in the competencies and occupation subsections; and rate oneself on a scale of 1-7 in the self-estimate section of preferred opinion of the six personality types, RIASEC. The questionnaire was pre-tested through a pilot study in

a non-sample population to ascertain the effectiveness of the instrument to elicit information regarding career choice, course satisfaction, and personality types. A reliability coefficient index r was 0.86 was established. This was considered high enough to judge the instrument as reliable.

The researcher first sought permission from School of education, Moi University where a research permit was given. The researcher also sought for permit from the Ministry of Higher Education Science and Technology, where research authorization letter and research permit were granted. The researcher visited each school that was sampled from the population and gave an introductory letter to the Deans. Permission was granted except for the school of Medicine which had a different procedure. The researcher submitted the research proposal to the Dean of school of Medicine, to be forwarded to the department of Institutional Research and Ethics Committee (IREC) for approval. Research clearance letter was then issued after one month. The researcher worked out the logistics with the relevant lecturers of the respective schools to collect data.

The researcher explained to the respondents what the research was about and how they were going to participate. The respondents were made to understand that the information being gathered was to establish whether there was a relationship between personality types and career choice, which would in turn help career counsellors to meet the students' goal during career counselling sessions. It was made clear that the study was a survey that would clarify the status of the relationship between personality types and career choice.

Of the 399 Questionnaires, each sampled degree program received a proportionate number of questionnaires depending on the ratio of male to female students as shown in table 1. Each respondent was given a questionnaire and clarifications were made where necessary. They were requested to mark the preferred level of agreement. They were instructed to follow the direction as listed on the questionnaire especially the self-rating sub-section of the SPQ. Some respondents filled the questionnaires while other requested to be given more time to complete. On that note the researcher made arrangements with the class representatives to collect when all the respondents had filled. This created a loop hole in the study for some respondents failed to return the questionnaires. All data then collected were kept in confidence and were used for research purpose only.

Data Analysis

The researcher started with the initial data cleaning procedure to check for missing questionnaires and incomplete questionnaires. Of the 399 Questionnaires which were given out to the randomly sampled students of the selected degree programs, 360 questionnaires were collected representing a total group response rate of 90.2%. Out of the 360 Questionnaires, only 347 (86.9%) were completely filled. The career choice was coded according to Holland's RIASEC career choices by the help of the Holland's Occupational Finder. From the demographic form a respondent would state the degree program/career choice they are pursuing. The researcher with the help of Holland's Occupational Finder checklist identified the academic environment where the career choice belongs in the RIASEC environments such as: Information Science (IS)-Investigative, Bachelor of Science (BSc)-Investigative, Education Science (Edu Sci)-Social, Education Art (Edu Art)-Social, Bachelor of Art (BA)-Social and Bachelor of Medicine (BMed)-Investigative.

The respondents' personality type was determined by counting the number of times the respondent said 'like', 'yes' for each group of the activities, competencies, occupation and the number circled in the self-estimates subsections of the SPQ into Holland's three letter code. The letter in the RIASEC acronym with the three highest totals indicated the respondent personality summary code. To determine the respondents' personality type, the researcher took a sum of all the scores for corresponding personality type under the activities, competencies, occupation and the self-rating sub-section. Each personality type would score a maximum of 83 and a minimum of 56. The first letter of the personality type with the highest score was ranked first, followed by the personality type with the second highest score and third highest. The first three letters then represent the personality type of the respondent. The first letter in the code is the dominant personality characteristic, hence personality type. The variables personality types, whether the course of study was their choice, course satisfaction and career choices were coded entered into the SPSS computer programme. The SPSS programme was used to generate frequency cross tabulations, figures and the chi-square index at a level of significance of 0.05.

Findings and Discussion

The six personality types, Realistic, Investigative, Artistic, Social, Enterprising and Conventional (RIASEC) were identified in the various degree programmes. The five sampled degree programmes were analysed by the help of Holland's Occupational Finder and two main career choices were established, investigative career choice and social career choice. The degree programmes categorized under investigative career were Bachelor of

Information Science (IS), Bachelor of Science (BSc.) and Bachelor of Medicine (MED), while those that were social career include Bachelor of Education Science (EDU SC), Bachelor of Education Art (EDU Art) and Bachelor of Arts (BA).

The six personality types: Realistic (R), Investigative (I), Artistic (A), Social(S), Enterprising (E) and Conventional(C) (RIASEC), were identified in the two career choices. The number of students in each personality type in the related career choice for the total sample (n=347) were as follows: in investigative career choice, the dominant personality type was investigative 54 (32.1%), followed by conventional 33(19.6%), enterprising 29(17.3%) and social 29(17.3%), artistic 14(8.3%), and realistic 9(5.4%). In social career choice, the dominant personality types was social 55(30.7%), followed by conventional 42(23.5%), investigative 32(17.9%), enterprising 29(16.2%), artistic 14(7.8%) and realistic 7(3.9%). This information is clearly compared in figure 1.

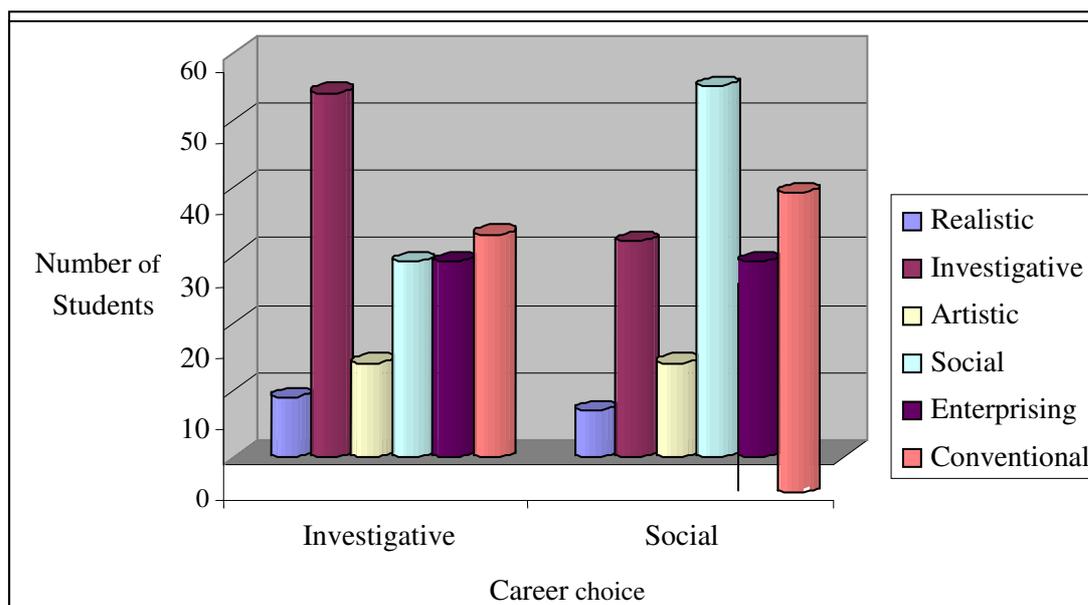


Figure 1: Distribution of personality types in investigative and social career choices

Figure 1 shows the distribution of personality types in the two career choices. In the investigative career choice the dominant personality type is investigative followed by conventional and then social. This shows that there is congruency between investigative personality types and investigative career choice. There was also congruency between social personality types and social career choice. This compatibility is because the high school curriculum is tailored toward science and humanity oriented subjects. The study observed that the least represented personality types are realistic personality types followed by Artistic personality types figure 1. The reason for this low representation is that the sampled degree programmes were not linked to machines, tools and materials which demands for practical, productive and concrete values. Another reason is because the subjects that would have enhanced the development of realistic and artistic personality types were made optional in the high school curriculum (Otunga, 2010); hence students have developed little or no skills on these areas and thus have no personality attributes that show an artistic or realistic personality. However there were those who had a clear miss of their career choice altogether.

Chi-square statistics was used to test the null hypothesis which stated that there is no significant relationship between personality types and career choice. The measure of association between the personality types and career choice was as follows: $\chi^2 (5, N = 347) = 14.672, p = 0.012$. The research study found that the Chi-square index, $p = 0.012 < 0.05$ prompting the rejection of the null hypothesis. The study concludes that there is significant relationship between personality types and career choices of undergraduates of Moi University. The finding of this study is consistent with prior researches involving personality types and career choice, (Soo, 2010; Onayase and Onayase, 2009; McPherson, 2007; Momberg, 2004; Paige, 2001; Miller and Cawger, 1999; Chacko, 1991; Fred, 1985; and Holland and Holland, 1977).

The study established that students' personality types had a significant relationship with career choice. The students who are of investigative personality types in an investigative career choice are more than students who are of other personalities. Despite this congruency of personality types and career choices, the researcher is perplexed by the number of students (114 out of 168) who are of other personality types and are in the investigative career choice. Similarly, the numbers of students (124 out of 179) who are of other personality types are in the social career choice. Basically, majority of the students in the University are in courses that are not in line with their personality types. This finding concurs with Godia (2009) who reported that people are in employment or professional training that are not in line with their personality types. In other words they are in fields which are not in their interest, values and ability and subsequently they are likely to experience frustration and dissatisfaction in their course of study.

The finding unsettles the researcher because these students' education is sponsored by the Government. It beats logic that the Government is spending a lot of money training people who will have low work morale and reduced productivity in future. It is on this note that Muindi (2011) attributed to the serious shortage of professional skills to failure by Universities and other tertiary institutions to help students chart credible career paths. The current primary and secondary level curriculums are also to blame for they do not cater adequately for all career choices equally. This specifically influences the development of interest, values and abilities in students, personality types. The current curriculum emphasizes subjects that lead to the development of traits in investigative, social, enterprising and conventional with little emphasis on subjects that lead to realistic and artistic careers.

Figure 2, displays the students course satisfaction in the respective degree programmes for the total sample (n=347). The students who were satisfied (yes) in each degree program were as follows: MED (94.7%), IS (87.5%), BSC (83.6%), Edu sc (71.4%), Edu art (68.3%), and BA (67.2%). Where as those who are not satisfied in each degree program are: BA (32.8%), Edu art (31.7%), Edu sc (28.6%), BSC (16.4%), IS (12.5%), and MED (5.3%). The respondents who were satisfied with their course of study were 73.3% while those who were not satisfied were 26.8%. The probable reason for the findings may be that JAB select majority of the students according to the career they choose, while those who are in the course of study which are not of their choice might be those who missed their first choice because they did not qualify. This is a group that may have lacked professional guidance and counselling; where they could access information about courses offered at the University.

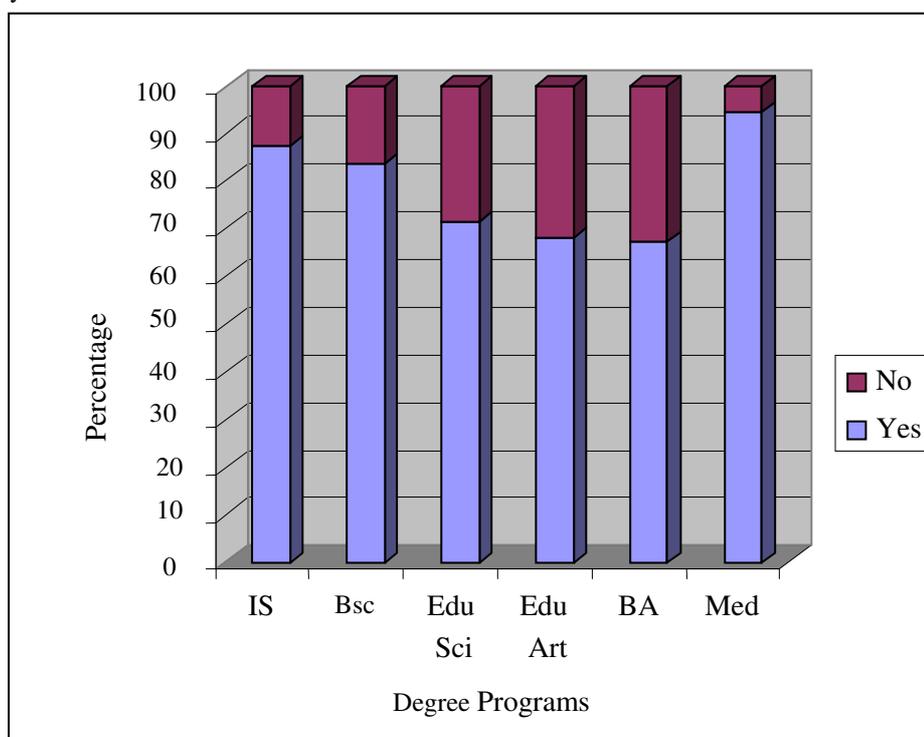


Figure 2. Students' course satisfaction

From table 2 below shows a cross tabulation of ‘was the career your choice’ and course satisfaction, 203 agree that the course of study was their choice and they were satisfied. Those who did not agree and were not satisfied were 74 where as those who did not agree that it was their choice and were satisfied were 51. Those who agreed it was their choice and were no satisfied were 19. Apart from 58.5% who agreed and were satisfied, 41.5% appear not to be sure of their choices. The respondents who agreed that the course they were pursuing was their choice were 64%, while 36% indicated that they were not in a course of study of their choice.

Table 2 Course Satisfaction and if the career choice was their option

Was career their choice?	Satisfied	Not Satisfied	Total
Agree	203 (58.5%)	19(5.5%)	222(64%)
Do not Agree	51 (14.7%)	74(21.3%)	125(36%)
Total	254 (73.2%)	93(26.8%)	347 (100%)

This is a clear indication of lack of career guidance and counselling in secondary level of education. Consequently, relating personality types and choosing of careers also seems to be done with minimal consideration. From the findings, 203 students agree they are in the course study of their choice and are satisfied. The rest of the respondents either agree that they are in the course of study of their choice but are not satisfied, do not agree that they are in the course of study of their choice but are satisfied or do not agree they are in the course of study of their choice but are not satisfied. Students who are satisfied with their courses (73.2%) are more likely to develop in their initial characteristic that leads to the development of interest, values and abilities; this may lead to the development of professional skills. Such students succeed in their course of study and future employment. However those who are not satisfied (26.3%) may develop minimally on their initial characteristic which may deter the development of interest, values and abilities. Subsequently this will dampen the development of professional skills and hence reduced productivity.

Conclusions

The study investigated the relationship between personality types and career choice of undergraduate students in Moi University. The study was prompted by the fact that some students make several changes in the choosing of courses of study before they are admitted to the University. Therefore, there is a possibility that they could be in career choices that are not in line with their personality types and there was need to establish the status of the relationship between personality types and career choice among undergraduate students in the Kenya. The study revealed that there is a significant relationship between personality types and career choices among undergraduate students. In view of this finding, the study concluded that personality is related to career choice. However many students are still in courses that are not in line with their personality types. Such students do not develop in interest values and ability.

The study also investigated the satisfaction of students’ course of study and found that 73.2% were satisfied while 26.8% were not satisfied. In view of this finding, the study concluded that majority of the students are satisfied with their course of study. However a few of the students are unsatisfied with their course of study and subsequently future employment.

Recommendation

The study found out that there is a significant relationship between personality type and career choice. Therefore, the study recommends that career planning put into consideration aspects of personality type and vocational fields as early as they join Secondary school education level. Career planning can be organized in such a way that special instruments are developed to seek and sought out students’ personality types. Career planning, guidance and vocational fields should be explored to create occupational awareness. Counsellors should put their efforts to assist students in their initial selection and also check on their subsequent performance in the varied academic environments; then it becomes easy for students to maximize their study. This will then result in the likelihood of their subsequent success in chosen areas of study. The study recommends that the primary and secondary curriculum be developed in a way that all career options are catered for evenly. This would enhance the development of personality types and subsequent appropriate career decision.

The study also found out that majority of the students is satisfied with their course of study. The study recommends that career guidance be enhanced to boost self-awareness and self-understanding for those who are not satisfied. This can be done through motivational talks from specialists of various vocations or careers. Career

counselling is recommended for those students who have split personality. These are students who have abilities in almost all career choices or those who are not able to identify their abilities. Counselling would help them make appropriate career decision.

References

- Abdul-Reda, S. A. and Abouchedid, K. (2003). Functions of Higher Education: Individual development and service to society. In Abdul-Reda, S. (Coordinator). *Higher Education and labor market in Lebanon: A tracer study. Beirut, Lebanese Association for Educational studies.*
- Abouchedid, K. and Goff-Kfourri, C. (2008). *Attribution of students' choice of Academic majors: Evidence from Lebanon.* Available 4/2/2012 from: <File://E:\AttributionofAcademic choicew.htm>.
- American college Testing Inc. (2003). *Discover (Windows) (computer software).* Iowa city: I.A. Author.
- American Counselors Association, (1998). *Career Development in the high school: Decision making.* Retrieved July 2009 from: [www.http://counseling.org/enews.volume-1/0119a.htm](http://www.counseling.org/enews.volume-1/0119a.htm)
- American Heritage dictionary. Retrieved on 3/9/2009 from: <http://Educationyahoo.com/refrence/dictionary/entry/career>
- Alrulmani, G. S. and Alrulmani, S. N. (2004). *Career counselling.* New Delhi: McGraw Hill Publishing Company limited
- Brown, D and Brooks, L. (1996). Introduction to theory of career choice and origins Evolution and current efforts. In Brown & Brooks (EDs) *career choice and development* (pp513- 525) San Francisco: Jossey- Bass. Inc.
- Career Scope (march-April, (2007). Youth Ministry's agenda on school on career fairs. *All about training jobs and professions* 3 (4) 12-13.
- Catano, V. M., Wiesner, W. M H., Hacket, R. D., and Methot, L. L. (2004). *Recruitment And selection in Canada.* 3rd ed. Toronto: Nelson
- Chacko, H. E. (1991). Can you pick out the accountant? Students' interest and career Choice. *Journal of Education for Business* 66 (3), 151-154.
- Chamberlain, T. C., Catano, V. M. and Cuningham, D. P. (2005). Personality as a Predictor of Professional Behavior in dental School: Comparison with Dental Practitioners. *Journal of Dental Education* 69 (11) 1222-1237.
- Commission of Higher Education. (CHE, 2003). *Re-Engineering University for National development: A report of symposium on University Education,* Nairobi: CHE
- Ethington, C., Smart, J. and Zeltmaun. (1989). Institution and development satisfaction of women. *Faculty in the British journal of Guidance and counselling,* London: Hebsons publishers PLC.
- Feldman, K., Smart, J. C. and Ethington, C. A. (2001). A further investigation of major Field and person-environment fit: sociological verses psychological Interpretation of Holland's theory. *Journal of Higher Education,* 72 670-695.
- Feller, W. R (2003). *Aligning school counselling, the changing workplace and career development assumption special issue, career development and the changing*

- workplace Professional school counselling*. Retrieved on 20/4/2009 from:
<E:\schoolcounselingalignment.htm>.
- Fred, F. D. (1985). *Personality characteristic and vocational choice. A test of Holland's Theory*. Unpublished M.ED Project Ibadan: Ibadan University
- Gary, R.C. (2006). *Christian counselling comprehensive guide*. Revised edition, USA
- Ginsberg, E., Ginsberg, S. W., Axelrad, S. and Herman, J. L.(1951). *Occupational choice: An approach to general theory*. New York NY: Columbia University Press
- Godia, G. I. (2009). *Ministry of Education Career Guide Book for schools*. Online www.Education.go.ke Available 10/8 /09
- Gray, K., and Herr, E (1995). *Other ways to win: Creating alternatives for high school graduates*. Thousand oaks, CA: Corwin Press,Inc.
- Hartung, P. J. (1995). *Assessing career certainty and choice status* (ERIC) Document reproduction No. EDO CG 95 19)
- Hayes, L. (1997). *The undecided college students. Counseling Today online*. Retrieved on February 15 2010 from :
www.counseling.org/ctonline/archives/ct1097/ct1097a3.htm
- Herr, E. L. and Cramer, S. H. (1996). *Career Guidance and counselling through the life-span*. New York: Longman
- Holland, J. L. (1959). A theory of vocational choice. *Journal of counselling Psychology* 6, 35-45.
- Holland, J. L. (1997). *Making Vocational choice: A theory of personality and Work environment* (3rd ed.) Odessa FL: Psychological Assessment Resource
- Holland, J. L. (2000). *Self-Directed Search SDS Form*, 4th ed. Odessa FL: Psychological assessment Resource inc.
- Holland, J. L. and Holland, J.E. (1977). Distributions of personalities within Occupation fields of study. *The vocational guidance quarterly* 25 (3) 226-231.
- IPAR. (2008), *Public and private investment in primary Education in Kenya: An Agenda for Action*.
- Joint Admission Board (JAB), (2003). *A report by the JAB sub-committee on the Sharing procedure of Application amongst similar Degree programs*. Nairobi: University of Nairobi
- Ministry of education and technology (2005/6). *Kenya career Guide*, Premie ed. Nairobi: Express communication Limited
- Kerlinger, F. N. (2004). *Foundations of behavioral Research*. 2nd ed. New Delhi: Subject publications
- Kipnusu, A.C. (2001). *Proposal for training secondary Guidance and counselling teachers: A case of Uasin Gishu District*. Unpublished M. Phil. Thesis. Eldoret Moi University, School of Education.
- Kothari, C. R. (2005). *Research Methodology, methods and techniques*, 2nd ed. New Delhi: Wishwa Prekashan.
- Koul, L. (1984). *Methodology of Educational Research*, New Delhi: Vikas

Publishing House Put limited

- Kur career Ventures, (2005). *The comprehensive guide of career*. Nairobi: Shrend publisher
- Lancaster, S., Colaredi, S.M., King, D. W., and Beechr, T. A. (1994). Job applicant similar on cognitive ability, occasional interests and personality characteristics. Do similar persons choose similar jobs? *Educational and psychological measurements*, 54 (2), 299-316.
- Machio, J. (2007, March-April). Youth Ministry Agenda on School career Fairs. *Career scope: All about training, jobs and profession* 4.
- Maraya, F. M. (2011). *The role of career guidance in the choice of careers among Students in public schools in Kenya: a case of Nakuru Municipality*. Unpublished M.Phil Thesis. Eldoret: Moi University, School of Education.
- McPherson, B. and Mench, S. (2007). Student personality type and choice of Major. *Academy of information and management Science Journal*
- Mellor, S. (1989). How do only children differ from other children? *Journal of Genetic psychology* 151 (2), 221-230.
- Miller, M. J. and Cowger, E. L. (1999). Similarity between anticipated career selection & SDS scores using the Ichan index, *College student*, 33 (1) 109-116.
- Moi University Admission Register (2009). Moi University.
- Momberg, C. (2004). *The relationship between personality traits and Vocational interest in a south African context*. Pretoria: University of Pretoria
- Muigai, P. K (2007). *Students' perception of the influence of degree on career aspirations: A case of Moi University*. Kenya. Unpublished M.Phil. Thesis. Eldoret: Moi University, School of Education.
- Mugenda, O. M. and Mugenda, A. G. (2012). *Research methods dictionary*. Nairobi: Applied research and training services.
- Mugenda, A. G. (2008). *Social Sciences Research: Theory and Principles*. Nairobi: Applied research and training services.
- Mugenda, O. M and Mugenda, A.G. (2003). *Research Methods, Quantitative and Qualitative approaches*, Nairobi: Act press.
- Mutie, E. K. & Ndambuki, P. (1999). *Guidance and counselling for schools and Colleges Kenya: Nairobi, Oxford University Press*.
- Ojenge, W. and Muchemi, L (2000). *Career Guidance using Expert system approach*. Retrieved on 10th October 2011 from:
<http://eit.mak.ac.ug/lecdownload/iccro8/ojenge%20winston%20and%20muchemi%20lowlenceo8pdf>
- Onoyase, D. and Onoyase, A. (2009). *The relationship between personality and career Choice of secondary students in Federal government colleges in Nigeria*. Nabraska: Delta State University Nigeria
- Orndoff, R. M. and Herr, E. L. (1996). A comparative study of declared and undeclared college students on career uncertainty and involvement in career and development activities. *Journal of counselling and development*, 74 63-638.
- Otunga, R. N. (2010). *The dilemma of curriculum relevance in Kenya*. Eldoret:

Institute University press

- Paige, B. E. (2000). Psychological types of dental hygiene students. *Journal of psychological Type* 52 32-35.
- Pullock, M. (2001). *The relationship between personality type and college major*. A thesis, Master of Arts Degree, Rowan University
- Rao, S. N. (1991). *Counseling and Guidance*. 2nd ed. New Delhi: Tata McGraw hill: Publishers Company limited
- Schmidt, L. M. (2001). *Factors that influence career uncertainty in high school students*, University of Winsconsin- Stout
- Shatkin, L. (2008). *Best college Major* edited by JIST in. Retrieved on 6/5/2009
<http://www.jist.com/shop/product.php?product.d=162578ea+=0.8page=1>
- Smart, J. C. (June, 2003). *An Alternative Application of Holland's theory and its implication for career counselling in college setting*. A paper presented at the Annual meeting of the National Career development Association, Denver
- Smart, J.C., Elton C. F. and McLaugh G. W. (1986). Person environment congruence and job satisfaction. *Journal of Vocational Behavior*. 24 (1), 216-225.
- Smart, J. C., Feldman, K. A. and Ethington, C. A. (2000). *Academic disciplines: Holland's theory and typology*. Online: <File://E:\johnHolland2html> Available on 30/5/2009
- Smith, E. (2000). Career choices & Decision making style: What's the connection? Ohio-State: columbusmith4227@OSU.edu.
- Soo, P. C. (2010). The relationship between students' personality type and career Aspiration among secondary school students in Eldoret West District. Unpublished thesis. Eldoret: Moi University, School of Education.