

Is the choice of a degree program a factor of personality types and degree of congruence

Gitonga, Ciriaka (PhD)¹, Rukangu Simon Meru (PhD)² Orodho, John Aluka (PhD)³, Wang'eri Tabitha (PhD)⁴, Kigen Edward Phd⁵

¹(Career Development Association of Kenya (CDAK), Kenya)

²(School of Education Meru University of Science and Technology, Kenya)

³(School of Education, Kenyatta University, Kenya)

⁴(Department of Educational Psychology, Kenyatta University, Kenya)

⁵(Department of Educational Psychology, Kenyatta University, Kenya)

Abstract : *The purpose of this study was to examine the relationship between Holland's personality types, congruence and the choice of degree program as postulated in Holland theory of vocational choice. The theoretical framework was based on the Holland theory, which postulates that people will spend a considerable amount of time seeking academic environments that match their personality types. The independent variables were the personality types and the choice of the degree programs while the dependent variable was the degree of congruence. The Self Directed Search 4th Edition questionnaire by [1] was used for data collection. This study used measures of relationship and association techniques, Pearson's coefficient correlation and Chi-square to analyze data. The results showed a significant relationship between personality types and the choice of degree program and the degree of fit, congruence with choice of degree program was an important factor. The following conclusions were drawn; Holland typology can be used to classify students' personality types and degree programs, and that congruence is a predictor of choice of the degree program.*

Keywords : *Congruence, Choice of Degree Program, Personality type,*

I. INTRODUCTION

The process of choosing a career involves a student's ability to build blocks of a career path. For some students, the career path is clear, while others struggle to put the career blocks together. A match between a student's career aspirations characterizes a good career decision, interest, clarity of the nature of work and type of training required. Understanding the connection between one's interest and the world of work may lead a student to seek enrolment in a college or university to develop skills and competences most preferred. This is based on the student's ability to be specific and realistic about their career choices as the training received in a tertiary institution ideally prepares one for a lifelong vocation according to Holland [2]. Holland further argues that every individual has the tendency to like or dislike certain activities associated with different careers. The activities that a person likes constitute career interest and one will naturally spend considerable amount of time seeking and doing the activities preferred while avoiding those disliked. In school, student's will similarly like some subjects and dislikes others and the career choice made in most cases will be a reflection of what a student likes.

Parsons [3] stated that a student's self-understanding is crucial in aiding informed career decisions because it impacts on their life beyond college. Many scholars have reported a high correlation between the choice of a degree program and job satisfaction and stability after graduating. The ability to make a wholesome connection between career aspirations, interest, subject selection and curriculum offered in institutions of higher learning, influences a career decision. This is because a good career decision shows a match between the understanding of personal interest and the choice of a training program [2]. It determines the kind of interaction the student will have with the faculty, the development of abilities, competences, interest, values and attitudes regarding different work environments. The focal point of classifying training offered in post secondary institutions is to provide a student an opportunity to make a choice according to Feldman et al [4]. Parsons [3] states that the choice process involves applying and enrolling for training based on a student's likes and dislikes. The academic environment is organized in a way that develops different skills. Since the academic environment offers subjects that share similar characteristics with different work situations, the students should be aware of competences, skills, attitudes and abilities developed in selected academic fields according to Feldman et al [5]. They further argue that when a student is continuously exposed to academic discipline that simulates the work environment, course content and vocational experiences that match their interest, higher level of satisfaction with the degree program is achieved.

There is evidence that a fit between the personality type and the study environment is related to higher levels of educational stability, satisfaction and achievement as reported by Holland [2] and Smart et al [7]. The personal benefits of finding and enrolling in an academic environment that matches one's interest and abilities include less stress, course retention, while the institutional benefits include less absenteeism, low dropout and high academic productivity. The Holland's theory has been applied to academic disciplines to help understand the differences between academic disciplines in higher learning. This theory provides a useful method of understanding the relationship between one's vocational interest and educational environment as stated by Smart et al [6]. Other studies have found a systematic relationship between congruence and personality types. With an increased number of students enrolling in Kenyan public and private universities in the last three decades, it is important to find out if students' personality types are congruent with the degree program they choose. This will be in line with Vision 2030, the Kenyan government blue print, which recommends the need to link the skills being developed in the institutions of higher learning with demands of the job market. This study examined the relationship between personality types, congruence and the choice of degree program as postulated in the Holland's theory.

This study was influenced by the fact that in Kenya, the Joint Admissions Board, the organ charged with the responsibility to admitting students into university bases, use subject cluster points, academic performance and the university capacity for specific course as the basis for admission. Even though students are required to make a choice of the degree program they intend to pursue in the universities at high school, there is no documented study to show whether these students are admitted to the course they prefer most or the Joint Admissions Board allocates them the course. While the self-sponsored students (students from families that can afford to pay) have an opportunity to select and enroll in the courses they prefer, it is not clear if the government sponsored students enroll in the course they choose as their first choice. This study therefore examined the students' personality types, congruence and choice of the degree program. These variables were examined using the widely used Holland's Self Directed Search (SDS) [1] with a sample drawn from the second largest university in Kenya.

1.1 Holland's classification of personality types

Holland's [2] theory proposes that people are classified into six distinct personality types. He states that classification is placed in a hexagon model showing the relatedness of the types. The personality types include Realistic, Investigative, Artistic, Social Enterprising, Conventional and Enterprising (R-I-A-S-E-C). The arrangements of the Holland's personality codes on the hexagon show the relatedness of the dominant characteristics. The codes on the hexagon are arranged in a manner that the distance between one code and another is the same. The closer the codes are on the hexagon, the more similar the dominant characteristic. The further the codes are on the hexagon, the more dissimilar the dominant characteristics. Holland [2], states that people possess attributes of all the six personality types with one being the dominant. The most dominant types influence one's choice of subjects at high school, degree major and consequently their vocation. He further states that the consistency of a personality pattern is positively related to choice of an educational setting, vocational stability, satisfaction and success and that personality patterns differ from one another and it is possible to differentiate people. The differentiation is considered to be the absolute difference between a people's most preferred choices as compared to the least preferred choice.

Holland's premise is that helping a young person to select a degree program that suits their personality types is the most basic foundation of career guidance. He states that person-environment fit begins early in life when a student selects subjects in high school. Feldman et al [4] reveal that the extent to which person-environment fit contributes to successful behavior in an educational setting largely depends on dominant characteristics in a person and corresponding dominant characteristics in an academic environment. This is because the personality types will be enhanced in a congruent academic environment. The interaction between the personality type and the academic environment in which a student enrolls influences the behavior pattern.

1.2 Holland classification of Academic Environment

Holland's further argues that the work environment is classified into six types, Realistic, Investigative, Artistic, Social, Conventional and Enterprising. (R-I-A-S-E-C). He states that an academic environment should simulate the work environment since this is where students develop skills required for employment. Applying Holland's principles in an academic environment implies that a student enrolls in an academic environment that will prepare them for a work environment that matches their interest. Since the academic environment simulates the work environment students seek to enroll in an academic environment where their desired interests can be developed.

1.3 Linking Personality attributes to the academic environment

The basic principle behind Holland's theory is finding a match between the person and environment. This is what he calls congruence. Holland's theory [2] is a measure of fit between a person and the environment; and the degree of compatibility or agreement. In an academic setting congruence between a student's personal interest and academic environment based on the Holland's theory has been examined in a number of studies with some results suggesting that congruence is a predictor of career choice and vocational behavior among students. Congruence means a good fit or correspondence. Tinsley [7] relates congruence to the relationship between desires and supplies. He further argues that a person's interest composes the desires and the occupational preferences.

Holland postulates that a person is most likely to flourish in the environment with the same dominant characteristics since such an environment provides opportunities, activities, tasks and roles that match the competences and interests that parallel personality type. Holland further suggests that all things being equal, the congruence of person and environment leads to higher levels of stability, satisfaction and achievement of the individual. In the same breath, incongruence of person and environment leads to instability, dissatisfaction and low performance.

The degree program a student pursues is created for the people whose personality characteristics are dominant. Such an academic environment will provide an opportunity to pursue a degree program skill for the world of work. Within a university/college setup skills possessed by the faculty are specific to the work environment. Consequently, academic degree programs will be dominated by personality types that are similar since an environment and people are inseparable i.e. social environment will have social personality types [2]. According to Feldman, Smart and Ethington [4], a model academic environment provides a socialization process for students and stimulates individual members to perform the preferred activities in the environment. Such an environment fosters respective competences, encourages the members to see themselves in ways consistent with the preferred values and rewards them when they display the preferred values. The relatedness of preferred activities, patterns of attitudes, interests, and competences of each type provides the distinctive profiles for the six personality types and the six academic environments linked together.

1.4 Personality types, congruence and the choice of degree program

Several studies have found personality types to be predictive of students' choice of a degree program as presented by Holland's typology according Porter & Umbach [8]. They established that the choice of an academic major is influenced by a student's pattern of interests. They concluded that assisting student's make informed career decisions on the selection of degree program promotes greater student satisfaction and success in their undergraduate experience. Tracey & Robbins [7] noted that interest, choice of college major and college success were related to high rates of retention. Feldman et al [4] found that the likelihood of students increasing their initially prominent characteristics over a four-year period of study is largely a function of whether or not they choose an academic environment that is consistent with their dominant personality type at the time they entered college. They also concluded that an academic environment prevailing has an influence on the personality types. Holland further suggests that all things being equal, congruence of person and environment leads to higher levels of stability, satisfaction and achievement of the person. In same breath, incongruence of person and environment leads to instability, dissatisfaction and low performance.

In an academic setting, a student classified as a social type in a social academic environment is a clear case of perfect fit. Such a student is provided with the opportunities to engage in social activities, use their social skills/competences, to perform services he/she values, to see him/her as understanding and helpful and to exhibit personality traits of generosity, friendliness and sociability. In turn, the social environment reinforces the self-image the social person brings to the environment and rewards him/her for social values and social personality traits such as generosity, friendliness, and sociability. On the other side of the coin, social students in a social academic environment are able to avoid the activities they dislike and demand for competences they lack. The context and structure of incongruent interactions can be explained in the same way Holland [2]. For instance a conventional type in an artistic environment will find oppositions or incongruities. A conventional person likes structured activities while an artistic environment provides an unstructured environment. The competences possessed are concerned with numbers, things or machines, while the artistic environment looks at the world unconventionally. A conventional person prefers order while the artistic environment is disorderly and impulsive. Put together the negative interactions will result in gross dissatisfaction, ineffective coping behavior and probably leaving the environment.

There are several studies that show strong evidence that congruence predict individual choices Betz [10] and Spokane & Cruza-Guet [11]. They found that the academic environment that is compatible with students' personality type rewards different patterns of students' abilities and interests. They argue that a student will select an educational setting that will provide activities, roles, competences and interest that match their personality type and avoid that environment which is incongruent. They further state that in different

schools/faculties, students will select academic lines that match their career interest and that students will enroll for courses in which they demonstrate strong abilities and interest for their majors. The argument is that students will select academic programs in the hope that they will fit and excel because they expect to develop their abilities and competences to fit in the world of work. In an academic environment the extent to which a person-environment fit contributes to successful vocational behavior in an educational setting largely depends on prominent characteristics of a person and the corresponding prominent characteristics of the academic environment.

Olitsky, Robbin & Neymann [12] found that congruence of interest and planned college major has a positive relationship with post-collegiate earnings and the students seek academic environments that enhance college success. Gender differences in the SDS scores were evident as well as the degree of choice congruence. Congruence has been found to predict individual choices as reported by Betz and Spokane et al [10,11]. They argue that the academic environment that is compatible with students' personality type rewards different patterns of students' abilities and interests. They further state that a student will select an educational setting that will provide activities, roles, competences and interest that match their personality type and avoid that environment which is incongruent. They further state that in different schools/faculties, students will select academic lines

The purpose of this study was to examine the degree of congruence between student personality types and the choice of degree program. Since congruence has been reported to predict the choice of a degree program as defined in Holland's theory [2] in numerous studies in the western world, this study used participants drawn from a Kenyan population. The hypothesis tested was that there is significant relationship between congruence and the choice of degree program.

II. Material and Method

This study was an ex-post facto design using the Self Directed Search (SDS) [1] based on Holland's theory. A total of 389 students were drawn from six different schools in the selected during the 2010/2011 academic year one public university in Kenya. Students voluntarily participated in the study. The average age of the participants was 22.7 years and the most reported age was 22 years. There were 53.2% males and 46.8% females in the schools selected. Table 1 shows the distribution of respondents by gender in the six schools

2.1 The research instrument, procedure and data analysis

The Self Directed Search vocational exploration, planning and assessment tool based on the Holland's theory was used. Using the respondent's answers the summary code was calculated which represents a person's resemblance to the six personality types (RIASEC) and the academic environment resemblance to the six work environment (RIASEC). The participants completed the Self-Directed Search [1], during a regular lecture session. The participants were given 45 minutes to complete all items. The summary scores determined the student's personality type. The occupational finder [2] was used to determine the corresponding academic environment. The schools selected were classified using the Holland's work environment and the first letter was determined in each school. For instance the school of engineering's first letter was "R" and therefore classified as Realistic environment. Congruence was determined using the "C" index by Brown & Gore, [13] which takes into consideration a codes position on the Holland's [2] hexagon.

III. Results and discussions

3.1 Personality type distribution in schools

The results in Table 2 reveal the distribution of personality types distribution within schools. As postulated by Holland [2], the personality types that dominated various academic environment was well differentiated. The School of Engineering had 32.1% Realistic personality types, School of Education 61.9% social personality types, School of Sciences 63% Investigative types, School of Creative and Performing Arts had 57.7% Artistic personality types, School of Business had 34.8% and School of Economics had 48.7% Conventional personality types. These results show that majority of the students were in congruent academic environments personality, with a significant number being incongruent. It is notable that the School of Education registered the highest number of congruent cases implying that the students enrolled in Education were social personality types in a social academic environment. Similar results were noted in the School of Engineering (Realistic) academic environment with a high number of students classified as realistic personality types.

3.2 Distribution of congruent and incongruent cases within schools

The results in table 3 reveal the distribution of congruent and incongruent with schools. These results suggested that more than two-thirds of the third-year students were congruent (79.2%), while incongruent (20.8%) in their choice of the degree program implying that students personality types matched that the

academic environment they were enrolled in. The schools such as Education (86.3%), Business (93.5%) and Creative & Performing Arts (88.5%) had the highest cases of congruent cases while the Schools of Engineering and Economics highest cases of incongruent (35.7%) and (35.5%) respectively. These results supports Holland's assertion that people will seek an academic environment that matches their personality types.

There was a significant relationship between personality types and choice of degree program as shown (1). The results imply that the personality types influenced the choice of degree programs in the university. Several studies have supported this finding revealing that students will seek academic environments that match their personality type and avoid environments which do not match their interest Smart et al [6] and Porter & Umbach [8]. Most studies carried out in the western world were found to have high correlation between personality type and academic achievement, as well as increased levels of stability, satisfaction and achievement Feldman et al [4], found similar results, but also argued that a student who was not congruent can through socialization learn from the interactions with the faculty and develop skills, attitudes and values that would in turn help them fit in the academic environment. These results suggest that the choice of degree program at university is influenced by other factors. The researcher further examined if the relationship between congruence and the choice of degree program using Pearson's coefficient correlation results to determine the strength of the relationship. The results (2) show that indicate a weak correlation between congruence and choice of degree program.

IV. Equations

- (1) ($X^2 = 457.811$, $df 30$, $p = .000$)
- (2) ($r = .004$, $n = 389$, $p = .433$),

V. Tables

Table 4.1 Gender distribution in schools of the respondents

	Male		Female		Total	
	N	%	N	%	N	%
Engineering	49	85.5	7	14.5	56	100
Sciences	29	63	17	37	46	100
Education	46	33.1	93	66.9	139	100
Creative & Performing Arts	13	50	13	50	26	100
Business	26	56.6	20	42.4	46	100
Economics	44	57.9	32	42.1	76	100
Total	207	53.2	182	46.8	389	100

Table 2: Distribution of Personality types in Schools

Schools	Personality types													
	R		I		A		S		E		C		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Engineering	18	32.1	8	14.3	1	1.8	3	5.4	19	33.9	7	12.5	56	100
Education	1	.7	11	7.9	15	10.8	86	61.9	20	14.4	6	4.3	139	100
Sciences	4	8.7	29	63	2	4.3	4	8.7	6	13	1	2.2	46	100
C/Performi	2	7.7	2	7.7	15	57.7	3	11.5	2	7.7	2	7.7	26	100
Business	0	0	5	10.9	16	34.8	5	10.9	8	17.4	12	26.1	46	100
Economics	1	1.3	2	2.6	3	3.9	11	14.5	22	28.9	37	48.7	76	100
Total	26	6.7	57	14.7	52	13.4	112	28.8	77	19.8	65	16.7	389	100

Table 3 Congruence distribution in Schools

School	Congruence				Total	
	Congruent		Incongruent		Total	
	N	%	N	%	N	%
Engineering	36	64.3	20	35.7	56	100
Education	120	86.3	19	13.7	139	100
Sciences	37	80.4	9	19.6	46	100
Creative & Performing Art	23	88.5	3	11.5	26	100
Business	43	93.5	3	6.5	46	100
Economic	49	64.5	27	35.5	76	100
Total	308	79.2	81	20.8	389	100

VI. Conclusion

In conclusion person-environment fit in the choice of the academic environment among university students. This means that when students make applications to join the university, they have a degree program of choice in mind. Personality type was therefore found to be a predictor of choice of degree program and it is important to consider the different personality types when enrolling students in an academic program. This study concluded that more than two-thirds of the third-year students were enrolled in academic environments that matched their personality types. Even though congruence and choice of degree program were correlated, other factors that influence choice of degree program needs to be investigated. This result implies that students will seek an academic environment that will provide them an opportunity to do the activities they prefer most. This study implies that the assumptions of the Holland's theory are supported. Based on these conclusions, the study recommends an in depth study on the applicability of Since Holland's theory which has gained global attention in the practice of career guidance and counseling among many countries,

REFERENCES

Journal Papers:

- [1]. Feldman, K. A., Smart, J.C., & Ethington, C.A., (2006). What do college students have to lose? Exploring outcomes of differences in person-environment fit. *Journal of Higher Education*.
- [2]. Feldman, K.A., Ethington, C. A., & Smart, J.C. (2001). A further investigation of major fields and person-environment fit: Sociological Vs. psychological interpretations of Holland. *Journal of Higher Education* 72: 670-698.
- [3]. Tinsley, H. E. A., (2000). The congruency myth; An analysis of the efficacy of the person-environment model. *Journal of Vocational Behaviour*, 56-147-149.
- [4]. Porter, S. R., & Umbach, P.D. (2006). College major choice-An analysis of person-environment fit. *A Research in Higher Education* Vol 47, No 4.
- [5]. Tracey, T. J. G., & Robbins, S. B. (2006). The interest-major congruence and college success relation: A longitudinal study. *Journal of Vocational Behavior*, 69, 64-89.
- [6]. Brown, S. D., & Gore, P. A., Jr. (1994). An evaluation of interest congruence indices: Distribution characteristics and measurement properties. *Journal of Vocational Behavior*, 45, 310-327
- [7]. Spokane, M. R., Meir, E. I., & Catalano, M. (2000). Person-environment congruence and Holland's theory: A review and reconsideration. *Journal of Vocational Behavior*, 57, 137-187.

Books:

- [8]. Rosen, D., Holmberg, K., & Holland, J. L. (1997). *The educational opportunities finder*. Odessa, FL: Psychological Assessment Resources, Inc.
- [9]. Holland J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments* (3rd ed.). Odessa, FL: Psychological Assessment Resources, Inc.
- [10]. Parson Parsons, F. (1909). *Choosing a vocation*. Boston: Houghton Mifflin.
- [11]. Smart, J.C., Feldman, K.A., & Ethington, A.E. (2000). *Academic disciplines: Holland's Theory and the study of College Students and Faculty*, Vanderbilt, University Press, Nashville
- [12]. Olitsky, N., Robbins, S., & Neumann, G., (2007). *Job congruence, academic achievement and earnings*. Iowa City, IA: ACT Inc.

Chapters in Books:

- [13]. Spokane, A. R., & Cruza-Guet, M. C. (2005). Holland's theory of vocational personalities in work environments. In S. D. Brown & R. W. Lent(Eds.), *Career development and counselling: Putting theory and research to work* (pp. 24-41). Hoboken, NJ: Wiley.
- [14]. Betz, N. E. (2008). Advances in vocational theories. In S. D. Brown & R. W. Lent (Eds.), *Handbook of counselling psychology* (4th ed., pp.357-374). New York, NY: Wiley.