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## Comparing Personality Types with Educational Disciplines: A Cross-Cultural Study in Iranian and American Students

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Student attrition in some Educational disciplines and their continued unwillingness to be employed in various professions has attracted the attention of professional counselors to consider people's personality types when selecting students from different educational disciplines. Considering the importance of personality types and the role of culture in educational disciplines, the current study has been carried out with the aim to compare personality types of Iranian and US students in different educational disciplines. The statistical population of this descriptive-comparative study includes the students of Ferdowsi University of Mashhad, Iran and El-Camino College, US during the 2012-2013 academic years. The participants were selected using the convenience sampling method. Using Cochran's sample size formula, 320 students (170 Iranian students and 150 American students) were selected from two universities. Data collection tools included Holland's vocational personality questionnaire. The obtained data were analyzed using multivariate analysis of variance (MANOVA). The findings showed that 1- There was a significant difference between Iranian and US students in realistic ( $p=.01$ ), investigative ( $p<.05$ ), artistic ( $p=.001$ ) and conventional ( $p<.01$ ) types (nationality impact). 2- There was significant differences among students of different educational disciplines in investigative ( $p=.001$ ) and artistic ( $p=.001$ ) types (educational discipline impact). 3- The interaction impact of nationality and educational discipline on personality types was not significant. According to the results, culture can influence the type and quality of individual personality and consequently the individual personality type in a specific culture performs a significant role in

selecting educational disciplines. In other words, cultural needs can indirectly influence the students' priority in educational discipline selection.

**Keywords:** culture, personality type, educational discipline, Holland's Theory.

Nowadays, student attrition in some majors and their continued unwillingness to be employed in various professions has attracted the attention of professional counselors to consider people's personality types when selecting students from different educational disciplines (Adib HajiBagheri & Dianati, 2004). People should be selected for university majors based on academic readiness and aptitude, as well as some personality and psychological traits compatible with their profession. Therefore, utilizing personality assessment tests is recommended to career counseling and educational systems (Sanjari Kerahroudi, 2001). It is crystal clear that those who select a profession which is compatible with their personality type are more likely to progress and be more satisfied (Alexandria, 2003).

As a credible theory concerning belief in academic and professional abilities, Holland's theory (2011) studies people in the 6 realistic, investigative, artistic, social, enterprising, and conventional areas (Lent & Brown, 2008) and indicates that individuals' career interests are related to their personality type (Deng, Armstrong & Rounds, 2007). The realistic personality type prefers engineering jobs; views himself/herself as a person with athletic and mechanical abilities and not possessing human communication skills; appreciates objective values and tangible personal characteristics (Farr & Shatkin, 2007).

An investigative person prefers investigative jobs and opportunities, and avoids enterprising jobs; appreciates science, and sees himself/herself as a rightful and intellectual person with scientific and mathematical abilities and incapable of leadership (Brown & Lent, 2005). Artistic personality leads to the acquisition and development of artistic

competencies in language, music, drama and writing and shortage of systematic administrative or business competencies. This personality type uses artistic competencies to solve the problems at work or in other environments and appreciates aesthetic qualities (Brown & Lent, 2005). Engaging with people with social personality leads to handling others in order to make them aware, teach, grow, cure or help, which results in the acquisition of human relations competencies such as interpersonal and educational competencies and shortage of technical competencies. These people also appreciate social and ethical issues and activities. People with enterprising personality are interested in managing others to achieve the goals of the organization or to earn monetary income. They consider themselves as aggressive, popular, self-confident, sociable, and capable of leading and giving speeches, and lacking academic ability, appreciating economic and political progress (Farr & Shatkin, 2007). Finally, people with conventional personality engage in tasks leading to simple and regular consequences. They view themselves as conformist and organized with administrative and accounting abilities. They also appreciate business and economic development (Rezaei, Qorbanpoor, AhmadiGhatab & Rezaei, 2012). Holland (2011) believes that an individual has the highest efficiency when he/she is engaged in an activity compatible with his/her personality.

Research literature also suggests that in many cases, there is compatibility between students' personality and their educational discipline. In other words, some individuals select their majors consciously and on the bases of their personality traits but in some cases, due to unawareness of their personality traits and the wrong system of educational discipline selection based on the scores of a test, there is not any compatibility between personality and major. For example, Martin, Vila & Capellas (2000) suggested that many students do not have enough motivation during educating, individuals' tendency to be employed in some professions has decreased and it seems that the quality of services in

some careers has decreased despite an increase in the number of MS and Ph.D. students. Different factors such as a defect in student selection and individuals' unawareness of their personality traits are involved in this problem.

Bahonar, Chalabi, Mostafavi & Yazdi (2011) by examining the compatibility between personality types and educational disciplines of veterinary students in the country conducted a survey study by using Holland's vocational personality questionnaire and descriptively from 250 newly arrived doctorate students at veterinary colleges of the State Universities of Tehran, Shiraz and Shahrekord and Azad Universities of Shahrekord, Karaj and Kazeroon. The results showed that the dominant personality types of veterinary are "investigative, realistic, and social". The compatibility of the studied students' personality type was 59.09 percent complete compatibility, 17.36 percent medium compatibility, 12.81 percent low compatibility and 10.74 percent incompatible with veterinary, respectively. They point out that considering that in about a fourth of studied veterinary students, regarding personality type, either there was a low compatibility or it was completely incompatible with the field, it is recommended to use tests like Holland's to guide students educationally for entrance in this field in the student selection in the future years such that both the individual himself/herself feels satisfied with education and activity in this environment and the veterinary environment of the country promotes in the future years having such students.

Also, Adib HajiBagheri & Dianati (2004) with the aim to determine personality characteristics of newly arrived nursing students and examining its compatibility to educate and work in this profession, examined 52 newly arrived students in 2001-2002 academic calendar by using Holland's vocational personality questionnaire. On the base of the obtained results, regarding personality, 44.2 percent of the students did not possess the appropriate characteristics for nursing profession. 77 percent of the students stated that they have had little information about the field

when selecting it. About one half of the nursing students, regarding the most prominent personality characteristics, were not compatible with the required characteristics for nursing profession. It is suggested to use personality tests and tendency assessment tests to select the best students out of the individuals who manifested good scientific competences and educational talents to educate in nursing field.

Hamidi's study (1999) was conducted to examine the relationship between the artistic personality type and the artistic traits of art students at the universities of Tehran. 100 art students were examined in this study. The results suggested that the artistic type is associated with the art students artistic characteristics. It was also indicated that females possessing the artistic type were more than males. In Alhoseini's study (1996) the highest personality types for the students of mathematics, experimental sciences, humanities, and technical and vocational were "investigative, artistic, realistic", "investigative, artistic, social", "social, artistic, realistic" and "realistic, enterprising, artistic", respectively. The frequency of realistic type in males and artistic type in females were significant. Additionally, the students whose educational disciplines had a higher compatibility with their personality type possessed the higher averages than those had a lower compatibility.

Hosseinian (1999) administered Holland's vocational personality questionnaire on 300 university students of psychology, mathematics and art. The results indicated that personality type of students interested in their major was in compatibility with the environments or their major in the university. It means that the students interested in art, psychology and mathematics possessed artistic, social and investigative types, respectively. Barati (1995) in a study with the title of examining the relationship between personality traits of first and forth year students in civil engineering at Sharif and Science & Technology Universities concluded that the dominant personality type among civil engineering students at these two universities was investigative. And there was a complete

compatibility between the major selection and the students' personality type according to Holland's theory.

Reed, Skaar & Parson (2009) also conducted a study with the aim to decrease students' education failing in different cultures. In this study, 115 students were evaluated. At the end, their findings suggested that enhancing students in career decision making skills results in the improvement of career self-efficacy and decrease educational failings.

Therefore, as the researches indicate conscious seeking information about academic educational disciplines before educational discipline selection and awareness of their compatibility with personality type can influence on students' satisfaction of education and achievement and on the other hand, it can set the ground for the commitment to their educational discipline-related profession which they will hold in future (Beheshteh Abdi, 2007). Considering the importance of correct selection out of the applicants for different majors and the lack of studies on different education disciplines in this field, the current study aims to examine the application of Holland's theory and personality types for the Iranian society considering cultural traditional influences and it is a comparative and cross-cultural examination with American society. In other words, considering the importance of personality types and the role of culture in educational discipline selection and consequently, its influence on job selection, the present paper aims to conduct a cross-cultural study of personality types in Iranian and American students and their compatibility with their educational disciplines. We hope that the results of this study prove fruitful in promoting the services of different occupations and increasing the professional satisfaction of employees in various occupations.

## Method

The statistical population of this descriptive-comparative study includes students of Ferdowsi University of Mashhad, Iran, as well as El-Camino College, US during the 2012-2013 academic year. Using Cochran's sample size formula, 170 and 150 questionnaires were distributed among Iranian and American students, respectively. After arranging with the students of the two Iranian and American Universities and asking for their consents for participation in the research, they were familiarized with the research objectives, the questionnaire and how to fill it in, 122 questionnaires (81%) from the American society and 141 questionnaires (83%) from the Iranian society were finally collected.

## Research Tools

Holland's vocational personality questionnaire was used for datacollection. The first part is dedicated to job classification, including a list of 500 jobs compatible with personality types divided into 6 social, artistic, conventional, realistic, enterprising, and investigative classes. The second part includes the 6 classes of career aspirations, activities, competencies, occupations, self-assessment, organization, and responses. So far, more than 400 studies have been conducted in different countries using Holland's questionnaire and its validity has been confirmed (Hoseinian & Yazdi, 2004). In Holland's study (2011), its reliability has been obtained between .75 and .78 by retesting after 4 years (since entrance to graduation time). In Iran, its reliability by Cronbach' Alpha has been reported .99 (Farah Shirazi, 1998). In the current study, the reliability of this questionnaire by Cronbach's Alpha has been obtained .87. In the study of Hoseinian and Yazdi (2004), two methods of concurrent validity and subscale intercorrelations were used to confirm the validity of the questionnaire. Correlation of Holland's questionnaire with career aspirations has been obtained 0.45, indicating acceptable concurrent validity. Also, correlation between the subscales and the total

score suggested the confirmation of Holland's Hexagon Model Theory. And the gathered data were analyzed using descriptive statistical indices, multi-way and one-way ANOVA, and Levene's, Box's, and Tukey's tests.

## Findings

### A. Descriptive Findings

First, it should be noted that the Iranian student group included 65 male respondents, 74 female respondents, and 2 respondents with unspecified gender, while the American student group included 66 male respondents, 50 female respondents, and 6 respondents with unspecified gender. Table 1 shows the frequency and percentage of the respondents in both groups based on their educational disciplines.

**Table 1**  
**Frequency and Percentage of Respondents in both Groups Based on Educational Disciplines**

Educational Disciplines	Iranian Students		American Students	
	Frequency	Percentage	Frequency	Percentage
Basic Sciences	18	12.8	9	7.4
Humanities	42	29.8	26	21.3
Engineering	55	39	10	8.2
Medicine	2	1.4	9	7.4
Arts	0	0	13	10.7
College	0	0	55	45.1
Unspecified	24	17	0	0
Total	141	100	122	100

According to the inserted results in Table 1, the group of Iranian students includes 18 basic sciences students, 42 humanities, 55 technical-engineering students, 2 medical sciences students and 24 unspecified



students. Also, the group of American students includes 9 basic sciences students, 26 humanities students, 10 technical-engineering students, 9 medical sciences students, 13 art students and 55 college students who have not selected their educational discipline yet.

Table 2 shows the descriptive indicators of the scores of each personality type for the respondents of both groups separately.

**Table 2**  
**Descriptive Indicators of Respondents' Scores in both Groups Based on Six Personality Types**

Nationality	Iranian (n=141)		American (n=122)	
	Mean	Standard Deviation	Mean	Standard Deviation
Realistic	19.19	10.70	15.82	11.59
Investigative	25.16	8.99	20.31	11.76
Artistic	21.53	11.37	17.46	11.62
Social	28.58	10.38	28.51	10.50
Enterprising	23.93	10.42	22.39	11.22
Conventional	18.16	10.16	22.97	11.01

According to the inserted results in Table 2, means and standard deviations for the students of Iranian group are as follow: For realistic type 19.19 and 10.70, investigative type 25.16 and 8.99, artistic type 21.53 and 11.37, social type 28.58 and 10.38, enterprising type 23.93 and 10.42 and conventional type 18.16 and 10.16, respectively. Also, for the group of American students average and standard deviation are as follow: For realistic type 15.82 and 11.59, investigative type 20.31 and 11.76, artistic type 17.46 and 11.62, social type 28.51 and 10.50, enterprising type 22.39 and 11.22 and conventional type 22.97 and 11.01, respectively. Table 3

shows the descriptive indicators of the scores of the 6 personality types for the Iranian and American students based on educational disciplines.

**Table 3**  
**Descriptive Indicators of the Iranian and American Respondents' Scores in the 6 Personality Types based on Educational Disciplines**

Variable	Educational discipline	Nationality			
		Iranian		American	
		Mean	SD	Mean	SD
Realistic	Basic Sciences	23	10.78	15.11	11.40
	Humanities	14.90	8.72	10.84	8.04
	Technical-Engineering	21.58	10.50	20.30	15.44
	Medical Sciences	18	24.04	13.11	10.75
	Unspecified	18.45	11.50	-	-
	Art	-	-	15.23	12.37
	College	-	-	18.11	11.78
Investigative	Basic Sciences	31.22	8.49	31.44	7.10
	Humanities	21.71	7.41	10.53	5.06
	Technical-Engineering	25.92	8.78	24.20	16.67
	Medical Sciences	32.50	13.43	29.44	8.30
	Unspecified	24.29	9.76	-	-
	Art	-	-	14.61	11.07
	College	-	-	22.29	10.55
Artistic	Basic Sciences	25.55	13.72	18.33	10
	Humanities	22.83	9.78	11.57	9.41
	Technical-Engineering	19.09	10.42	12.30	3.71
	Medical Sciences	28.50	13.43	11.88	6.17
	Unspecified	21.25	13.44	-	-
	Art	-	-	29.15	13.93
	College	-	-	19.22	11.53
Social	Basic Sciences	27.27	10.69	32.11	8.93

	Humanities	34.07	7.82	27.34	9.94
	Technical-Engineering	25.16	9.77	26.20	11.66
	Medical Sciences	31.50	16.26	27.44	11.30
	Unspecified	27.54	11.83	-	-
	Art	-	-	27.30	10.45
	College	-	-	29.37	10.91
Enterprising	Basic Sciences	23.94	9.81	26.66	13.54
	Humanities	24.66	10.82	19.50	10.16
	Technical-Engineering	23.18	9.67	24.30	14.04
	Medical Sciences	27	15.55	23.55	9.01
	Unspecified	24.12	12.15	-	-
	Art	-	-	23.76	11.93
	College	-	-	22.20	11.04
Conventional	Basic Sciences	18	9.41	24.88	9.10
	Humanities	20.38	11.68	23.15	11.96
	Technical-Engineering	16.38	9	22.70	12.19
	Medical Sciences	15.50	17.67	22.33	8.58
	Unspecified	18.70	9.95	-	-
	Art	-	-	18	10.33
	College	-	-	23.92	11.25

According to the inserted results in Table 3, for realistic type, students of basic sciences possessed average and standard deviation of 23 and 10.87, for investigative type, students of medical sciences average and standard deviation of 32.50 and 13.43, for artistic type, students of medical sciences average and standard deviation of 28.50 and 13.43, for enterprising type, students of humanities average and standard deviation of 24.66 and 10.82, and for conventional type, students of humanities the highest average and standard deviation of 20.38 and 11.68, respectively. According to the

inserted results in this table, for realistic type, students in technical-engineering group possessed average and standard deviation of 20.30 and 15.44, for investigative type, students in the group of basic sciences averages and standard deviation of 31.44 and 7.10, for artistic type, students in art group average and standard deviation of 29.15 and 13.93, for enterprising type, students in the group of basic sciences average and standard deviation of 26.66 and 13.54 and for conventional type, students in basic sciences average and standard deviation of 24.88 and 9.10, respectively.

**B: Inferential Findings**

**1-** There is a significant difference among personality types in Iranian and American students with different educational disciplines. Table 4 shows the results of two-factor multivariate analysis of variance to compare personality types in Iranian and American students with different educational disciplines.

**Table4**  
**Results of Two-Factor Multivariate Analysis of Variance to Compare Personality Types in Iranian and American Students with Different Educational Disciplines**

Variable	Value	df Hypothesis	df Error	F Value	Significance Value
Nationality	.17	6	238	8.11	.001
Educational Discipline	.51	30	1210	4.62	.001
Interaction of Nationality and Educational Discipline	.10	24	964	1.06	.37

Prior to providing the results of multivariate analysis of variance (MANOVA), it should be noted that the results of Box's test in examining the premise of the homogeneity of variance-covariance was statistically significant ( $p < .05$ ) and it means disobeying the premise of the homogeneity of covariance matrix. Thus, Pillai's Trace test was used to examine the significance of multivariable influences. The results of this analysis in Table 4 in the new variable derived from the linear combination of dependent variables indicated a significant difference between the two groups of Iranian and American students ( $F(6,238)=8.11=p, 0.001$ , Pillai's Trace=.17). Also, analysis results on educational disciplines in the new variable derived from the linear combination of dependent variables (personality types) indicated a significant difference among students of different educational disciplines ( $F(30,1210)=4.62=p, .05$ , Pillai's Trace=.51). While these results in the new variable derived from the linear combination of dependent variables (personality types) did not indicate any significant interaction between nationality and educational disciplines ( $E(24,964)=1.06 < p, .05$ , Pillai's Trace=.10). Table 5 shows the results of the tests of influences among respondents to compare personality types in Iranian and American students with different educational disciplines.

In order to compare Iranian and American students regarding each of the personality types, the results of the test of influences among respondents in Table 5 indicate that nationality impact on the scores of realistic ( $p=.01$ ), investigative ( $p < .05$ ), artistic ( $p=.001$ ) and conventional ( $p < .01$ ) types is significant. This difference is such that Iranian student's means in realistic, investigative and artistic types are significantly higher than American student's ones; while for conventional type, American student's scores are significantly higher than Iranian student's ones. Also, educational disciplines impact on investigative ( $p=.001$ ), and artistic ( $p=.001$ ) types is significant.

**Table 5**  
**Results of the Tests of Influences among Respondents to Compare Personality Types in Iranian and American Students with Different Educational Disciplines**

Statistical Indicator Variable	Sum of Squares	Degree of Freedom	Mean of Squares	F Value	Significance Value	
Nationality	Realistic	933.12	1	933.12	5.73	.01
	Investigative	664.19	1	664.19	5.52	.02
	Artistic	3436.51	1	3436.51	19.63	.001
	Social	5.86	1	5.86	0.03	.84
	Enterprising	91.19	1	91.19	0.50	.47
	Conventional	1321.10	1	1321.10	7.77	.006
Educational discipline	Realistic	1679.86	5	335.97	2.06	.07
	Investigative	8728.38	5	1745.67	14.53	.001
	Artistic	5486.33	5	1097.26	6.27	.001
	Social	873.57	5	174.71	1.13	.34
	Enterprising	612.61	5	122.52	.68	.63
	Conventional	995.99	5	199.19	1.17	.32
Interaction of Nationality and Educational Group	Realistic	562.16	4	140.54	0.86	.48
	Investigative	1739.52	4	434.88	3.62	.007
	Artistic	1105.65	4	276.41	1.57	.18
	Social	755.74	4	188.93	1.22	.29
	Enterprising	254.91	4	63.72	.35	.84
	Conventional	112.15	4	28.03	.16	.95

Due to the significance of educational disciplines impact and determining that the difference in the scores of these two types is between which educational disciplines, the results of Scheffe's test were examined. There was a significant difference in the scores of investigative type among the students of basic sciences and humanities ( $p < .001$ ), basic sciences and art ( $p < .001$ ), basic sciences and unspecified group ( $p < .05$ ), humanities and engineering ( $p < .001$ ), humanities and medical sciences

( $p < .01$ ), humanities and unspecified group ( $p < .05$ ), engineering and art ( $p < .05$ ), medical sciences and art ( $p < .05$ ). These differences are such that the students of basic sciences had the highest scores in investigative type than the other groups. The results of Scheffe's test indicated that there was a significant difference in the scores of artistic type among the students of humanities and art ( $p < .05$ ), engineering and art ( $p = .01$ ), medical sciences and art ( $p < .05$ ). This difference is such that the students of art group had the highest scores in artistic type than the students of the other educational disciplines. The inserted results in Table 5 indicates interaction impact of nationality and educational disciplines only is significant in investigative type ( $p < .01$ ).

### **Discussion and Conclusions**

Educational discipline selection is one of the main concerns of the youth, families and societies in today's world. Every culture and family likes a particular educational discipline, therefore, what is certain is that culture in general and family in particular are involved in educational discipline selection. For example, Japanese and American families emphasize the educational disciplines related to "management" and "business" careers. In fact, cultural necessities in every society have different degrees which different educational systems and institutions should embark on educational counselling (Weininger & Lareau, 2007). Thus, beside learners' readiness and inherent talent in learning, culture may also be decisive in their future situations (Bourdieu, Passeron & Martin, 1996). But, in recent years, researchers have emphasized that it is needed that individuals should be selected to be educated in different fields in such a way that they have some degree of personality and psychological traits compatible with their fields beside readiness and educational talent and cultural necessities. Therefore, using personality assessment tests has been suggested to occupational counselling and educational systems (Sanjari Kerahroudi, 2001). The studies have

indicated that individuals who select a field or profession compatible with their personality type are more likely to progress and be satisfied (Alexandria, 2003).

Therefore, considering the importance of personality types and the role of culture in educational discipline selection, the current study was conducted with the aim to compare personality types of Iranian and American students in different educational disciplines. The results showed that there is a significant difference between the two groups of Iranian and American students in acquiring the personality types. In other words, nationality impact on the scores of realistic, investigative, artistic and conventional types is significant. This difference is such that the Iranian students' means are significantly higher than the American students' ones in realistic, investigative and artistic types while scores of the American students are significantly higher than the one of the Iranian students in conventional type.

Results are consistent with Mohammad Esmaeel (2005) results in comparing the type of Iranian and Indian students. This study also indicated that Iranian and Indian students significantly are different in personality dimensions of intuitive, sensory, mental, and emotional. Iranian students' personality types often are sensory, mental, and external while Indian students often are external and sensory, emotional and intuitive, and emotional. In explaining these results, it can be said that as also referred in this study, environmental factors such as family, social class and geographical condition are effective on an individual's personality type. In Bloom's opinion in the process of socialization as the family's most important performance, parents have the main role. Their training influences on an individual's personality development are perceptible.

Since family culture, social class, geographical condition and parents' values and purposes are different in Iran and America; naturally, there is a significant difference between prominent personality type of Iranian and



American students. Since in America, following regulations and rules and being disciplined are one of the most important civic duties and they are considered as a main part of the culture and social rules, naturally, the traits of being cautious, dutifulness, efficacy, flexibility, being a man of principle and persistently develop more in them and eventually, American students' prominent personality type is conventional. It can be said that since society and culture of Iran are developing in all technological, economical, scientific, ... fields, realistic and investigative personality type are more dominant among Iranian students than American students. In fact, Iran is a developing country and this society feels the need to progress. In addition, in Iran, in general public's view technical engineering fields and basic sciences are more acceptable and those who select these majors are accepted with a high social prestige. In fact, the culture of Iran, environmental pressures, providing educational conditions and value engineering fields and basic sciences bring about that students tend to these educational disciplines more and some traits such as analytic, conscious, critic, curious, independent, meticulous and logical with mechanical and technical skills, practical, mathematical and logical thinking and physical power are developed in them and finally, realistic and investigative personality types are dominant among them.

Also, analysis of results on educational disciplines indicated a significant difference among students in different educational disciplines based on personality types. Educational disciplines impact on investigative and artistic types is significant. These differences are such that students in the discipline of basic sciences had the highest score in investigative type than other disciplines and students of art discipline had the highest scores in artistic type than students in other educational disciplines. This result is consistent with Hamidi's (1999) study results which indicated that there is a relationship between artistic type and art students' artistic characteristics; the study results of Bahonar, Chalabi, Mostafavi & Yazdi (2011) indicate that there is about three-fourth compatibility between veterinary students'

personality type and their educational disciplin. The study results of Hoseinian (1999) indicated that students' personality type is compatible with their educational group. It means that students interested in the fields of art, psychology and mathematics are possessing artistic, social and investigative types, respectively. And study results of Barati (1995) concluded that prominent personality type among civil engineering students at Sharif and Science & technology Universities is investigative and there is a complete compatibility between student's personality type and their educational discipline in accordance with Holland's theory. This finding of the study can be explained by considering the nature, needed traits and skills in the educational disciplines that result in the prominence of a specific personality type. In fact, in educational discipline selection of universities, the general background of the tendency is clear to some extent. For example, humanities and mathematics are differentiated to some extent that an individual perceive which group of these majors he/she tends to study although individuals' occupational tendency cannot be determined clearly. For example, the difference between the tendency to dentistry and pharmacology and also the difference between the tendency to some orientations of engineering cannot be determined. One of the reasons that students of basic sciences often possess investigative type is that the nature of these fields is dealing with natural, physical and therapeutic phenomena requiring individuals to possess analytic, conscious, critic, curious, independent, meticulous and logical traits.

As a result, prominent personality type of students in basic sciences naturally is investigative. It can be explained about the compatibility between the art group and the artistic type that artist individuals usually are fantasizing and they use all of their forces to create a new thing. They are spontaneous, innovative, idealistic, independent, sensitive and liberal and communicate with others well. Thus, they involve their personality traits in their selections particularly in major selection.

Among the limitations of this study is its sampling method (convenience sampling). Since the sampling method is non-accidental, the obtained results cannot be generalized.

Although accidental sampling is a good sampling method and the sample can be generalized to the population, it was expensive and time-consuming for the researchers. Thus, one of the limitations of the current study is that the sample cannot be generalized to the population. Therefore, it is recommended that probability sampling methods be used to obtain more reliable results.

### **Practical Suggestions**

A questionnaire of personality types can be used in educational discipline selection. Since educational discipline selection is an important factor influencing individuals' life and society, a questionnaire of personality types can be used in major selection.

Students' recognition of their personality type, interest and professional and educational nature and its consequences is effective in their professional and educational achievements, because individuals who have more self-discovery make better selections than those have less self-discovery. And it can be resulted in more appropriate decisions in educational discipline selection.

### **Suggestions for Future Studies**

It desirable to conduct a cross-cultural study to compare personality types of Iranian students and students of other countries and examine their compatibility with their major.

A comparative study can be conducted with this title at different universities of State, Azad,... all over the higher education system in Iran as a national plan in order to examine this relationship differently considering the environments of education and research.

It is desirable to provide a test compatible with the culture of Iran, business opportunities and age groups of adolescents, youth and adults based on gender to evaluate individuals' personality traits to use in major selection and eventually in selecting the appropriate job observing the framework of the theory and using the scales of Holland's questionnaire.

Also, it is desirable to conduct a qualitative study to identify other components effective on educational and professional planning.

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