
Personality and Gender as Predictors of Academic Choices: A Comparative Study of Business and Non-Business Students

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ABSTRACT: *The impact of personal factors on academic and professional preferences has been the topic of a number of researches. But there is a dearth of studies on comparative analysis of such traits with reference to academic choices of business and non-business students. This study aims to identify if gender and personality explain difference in business and non-business students' academic programs choices. 254 undergraduate students from schools of business and economics (business) and schools of engineering and technology (non-business) responded to this survey. Results revealed the significant impact of big five personality traits on students' selection of business or non-business degree programs. Students from business major scored high for extroversion and emotional stability, but they scored low on agreeableness, conscientiousness, and openness. The difference in business and non-business academic preferences in terms of gender was also found significant*

Keywords: Personality Traits, Big Five Model. Gender differences, Business majors, Non-Business Majors

The aspirations of this study come from the phenomenon that “one never observes that all people like same objects” i.e. students like same subjects, employees like same job, workers love same task. This phenomenon leads toward the question that why people differ in their preferences? One of the vital factors that accounts for this difference is personality. Scott and Kraimer (2001); investigated the possible relationship between personality and career success using Big Five Personality Inventory and various measures of career success. They hypothesized that personality plays a vital role in people’s preferences especially in career related selections, and the results validated most part of this hypothesis. Indeed, it is a matter of common observation that people differ in preferences due to difference in their personalities. Literature on personality embodies different relationships between personality and preferences & behaviors of people.

To investigate these personality differences an ample amount of endeavors have been taken by the researchers. Various personality assessment tools have been used in this regard i.e. BFI (Big Five Inventory) model, MBTI (Myers Briggs Type Indicator) etc. The relationship of personality with its various domains have been examined by many researchers in general i.e. personality and job performance (Salgado, 1997), personality and life satisfaction (DeNeve and Cooper, 1998), personality and career success (Judge, Higgins, Thoresen and Barrick 1999), personality and job satisfaction (Judge, Heller and Mount, 2002), and personality and academic performance (Lounsbury, Sundstrom, Loveland and Gibson 2003), but less intentions have been given to the relationship of personality with academic choices in particular. This study therefore aims to find out the relationship of personality dimensions with students’ choices of academic majors (Business & Non-business majors) by using the Big Five Inventory Model (BFI). Study also intends to examine the personality-academic choices relationship in relation to the gender differences. In this regard the Holland’s Vocational Theory serves as a podium to develop a theoretical understanding of personality-academic choice relationship. According to Holland (1973) there are six different vocational interests i.e. realistic, investigative, artistic, social, enterprising and conventional (RIASEC) and these vocational interests are strong reflections of individual’s personality traits . Holland (1985) in his Vocational Theory proposes that the job related outcomes are strongly associated with the personality and environment. Theory further explains that when people work in an environment that best matches with their personalities, their satisfaction level with work goes higher that further breeds higher productivity (Holland, 1985), and vice versa.

Seaman and Crooker (1999) have also witnessed that students decide to major in a particular academic area because that area goes with their personality. In another attempt to understand the behavior that leads to selection of a study major, Myer and McCaully (1985) examined that creative individuals are generally not interested in business majors; rather they are attracted towards other majors that help them to represent themselves in creative manner. In an attempt to link the relationship between personality and behavioral choices for selecting a study major, Noel, Michael, and Levas (2003) found that students with business major exhibit personality traits that are consistent with their area of specialization. This study found that business students specializing in three different areas i.e. accounting, management information and marketing were different from each other on many dimensions of personality. Their differences evident the creativeness, sociability, abstract thinking, passion, self-monitoring behavior, venturesomeness, stress and emotional stability.

Booth & Winzer (1993) found that students selecting accounting as a major are different from those who select other majors on various dimensions of personality i.e. sensing, thinking, and judging. In another study, Fortin and Amernic (1994) developed a descriptive profile for accounting students, the insight to their study indicated that accounting majors obtained low scores on various measures like, span of likings and disliking, complexity, innovation, self-esteem and social contribution. Similarly, Filbeck and Smith’s (1996) study concluded that students majoring in finance obtained significantly higher MBTI scores on dimensions of sensing, thinking, and judging.

Therefore this study aims to answer following questions;

RQ. 1: Is there any difference between personalities of undergraduate business and non-business students as measured by Big Five Personality Inventory?

RQ. 2: Is there any difference between personality traits of undergraduate business and non-business majors in relation to gender differences?

RQ. 3: Is gender a significant determinant for choosing academic majors?

Research Methodology

Given the positivist philosophical paradigm and the intended quantitative strategy, this study used cross-sectional survey method to collect data from large scale private universities. The respondents were classified into two groups. Business students were selected from business schools pursuing BBA and MBA degrees, whereas non-business students were earning technical degrees i.e. engineering, medical etc. The sample size

consisted of 254 undergraduate students enrolled in their respective programs. At the time of research students were enrolled in 2nd semester of their 1st year of respective degree programs. Self-administered structured questionnaires were distributed to respondents during the class in the presence of resource person. Before distributing the questionnaires to the students, resource person was informed and well briefed. The presence of resource person helped a lot to ensure the reliable and accurate responses from students, as students took it very seriously and with keen interest. The data were analyzed by using SPSS-16 version. Mean values of five dimensions of personality traits were compared across two groups of students. Independent sample T-test was used to validate the proposed differences in personality traits between students of two programs.

Measures: The questionnaire used in this study was in sourced as it was developed by Goldberg (1999). This questionnaire measures Big Five Personality traits through ten questions about each trait. These personality traits are Extroversion, Agreeableness, Conscientiousness, Neuroticism, and Openness.

Goldberg (1999) describes Big Five Personality traits as followings (with minor amendments);

1. **Extroversion:** This dimension captures one’s comfort level with relationship. Extraverts tend to be gregarious, assertive, and sociable. Introverts tend to be reserved, timid, and quiet.
2. **Agreeableness:** This dimension refers to an individual’s propensity to differ to others. Highly agreeable people are co-operative, warm and trusting. People who score low on agreeableness are cold, disagreeable, and antagonistic.
3. **Conscientiousness:** This dimension is a measure of reliability. A highly conscientious person is responsible, organized, dependable, and persistent. Those who score on this dimension are easily distracted, disorganized, and unreliable.
4. **Neuroticism:** This dimension taps a person’s ability to withstand stress. People with the negative Neuroticism tend to be calm, self-confident, and secure. Those with high positive scores tend to be nervous, anxious, depressed, and insecure.
5. **Openness:** This dimension addresses one’s range of interests and fascination with novelty. Extremely open people are creative, curious, and artistically sensitive. Those at the other end of openness

category are conventional and find comfort in the familiar.

Research Findings

Sample encompassed 81.5% male and 18.5% female respondents out of which 60% belonged to business education and 40% were from non-business education.

Results given in Tables are based on the mean values of data. To validate the differences in personality traits of respondents with respect to their academic majors and gender differences T-test statistics was used. The P-value ($p < 0.05$) confirmed the significance of all results.

Table 1 indicates the descriptive statistics of Big Five Personality traits of business (SBE) and non-business (SST) majors. Results represent the mean values of five personality’s dimensions of business and non-business major students. Results show that the students from business major scored high on extraversion and emotional stability dimension of Big Five personality traits whereas students from non-business majors scored high on agreeableness, conscientiousness, and openness.

Table- 1
T-Test

Program		Test Value = 0					
		T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
						Lower	Upper
SBE	Extroversion	58.875	112	.000	30.035	29.02	31.05
	Agreeableness	60.470	112	.000	33.858	32.75	34.97
	conscientiousness	73.872	112	.000	30.761	29.94	31.59
	Emotional Stability	58.339	112	.000	27.611	26.67	28.55
	Openness	67.634	112	.000	32.212	31.27	33.16
SST	Extroversion	63.494	140	.000	29.567	28.65	30.49
	Agreeableness	73.842	140	.000	35.511	34.56	36.46
	conscientiousness	76.798	140	.000	31.865	31.04	32.69
	Emotional Stability	62.611	140	.000	27.348	26.48	28.21
	Openness	74.810	140	.000	33.149	32.27	34.02

Table 2 addresses the gender wise differences of the personality traits “within and across” the business and non-business majors. Mean values show that male and female students in both business and non-business majors are different in their personality makeup.

Within the business major category females scored relatively high on agreeableness, conscientiousness and openness compared with their males counterparts. Whereas male students in the same category demonstrated higher level of extraversion and emotional stability compared with their females counterparts. On the other hand within the non-business major category females obtained high scores on agreeableness and openness as compared to males, while males in same category scored high on extraversion, conscientiousness, and emotional stability. Comparison across the business and non-business majors revealed that females of business major differ from females of non-business major on all five personality traits. Business major’s females scored high on extraversion and emotional stability, whereas non-business major females scored high on agreeableness, conscientiousness, and openness. Comparing personality differences of males across business and non-business majors results show that they significantly differ on all five personality dimensions with each other. Males of business major are more extroverts and emotionally stable whereas males of non-business majors are more agreeable, conscientious and open to novelty.

Table- 2
Descriptive Statistics

PROG	SEX		N	Minimum	Maximum	Mean	St. Deviation
SBE	Female	E_VERSC	34	20	44	29.47	5.94
		AGRE_AB	34	14	45	34.35	6.86
		CONSCIE	34	20	41	30.79	4.58
		ES	34	18	34	24.44	4.69
		OPENNES	34	26	41	32.35	3.40
		Valid N (listwise)	34				
	Male	E_VERSC	79	18	45	30.28	5.21
		AGRE_AB	79	21	50	33.65	5.55
		CONSCIE	79	18	41	30.75	4.39
		ES	79	18	38	28.97	4.56
		OPENNES	79	18	45	32.15	5.65
Valid N (listwise)		79					
SST	Female	E_VERSC	13	24	38	28.54	4.22
		AGRE_AB	13	31	43	37.31	3.97
		CONSCIE	13	23	39	31.85	5.68
		ES	13	18	34	24.38	4.39
		OPENNES	13	29	41	33.54	4.31
		Valid N (listwise)	13				
	Male	E_VERSC	128	17	47	29.67	5.65
		AGRE_AB	128	17	47	35.33	5.84
		CONSCIE	128	15	43	31.87	4.87
		ES	128	12	40	27.65	5.18
		OPENNES	128	14	45	33.11	5.36
Valid N (listwise)		128					

Table 3 represents the number of students who had registered in business and non-business majors relating to their gender differences. According to the data there is a significant difference between the males and females with respect to their enrollment in both business and non-business majors. On the whole males enrollment ratio in both majors are significantly higher than females i.e. males 81% and females 19%. Within the business major the ratio of males and females is 70% & 30% respectively. Across majors the ratio of female’s enrollment in business majors is much high i.e. 30% as compare to female’s enrollment in non-business major i.e. 9%. On the other hand within the non-business major the ratio of males and females is 91% and 9% respectively. And across the major unlikely the females, the males’ enrollment is higher in non-business majors 91% as compare to males in business majors i.e. 70%.

Table- 3

Program	Frequency	Percent	Significance	
SBE	Valid Female	34	30.1	.000
	Male	79	69.9	
	Total	113	100.0	
SST	Valid Female	13	9.2	.000
	Male	128	90.8	
	Total	141	100.0	

*Significance level is obtained through T-Test

Discussion

The main objective of this study was to see if personality differences as explained by Big Five model exist among students who have chosen business and non-business degrees as their academic majors. Study also intended to identify if gender could be explored as determinant of academic choices. Results related to the personality differences of the students with respect to their academic major selection show that undergraduate students enrolled in business majors are significantly different from undergraduate students of non-business majors on extraversion, agreeableness, conscientiousness, emotional stability and openness. This difference in personality traits of business and non-business majors is consistent with finding of Lounsbury et. al., (2009), who revealed the same difference in their research.

Business majors scored higher on extroversion as compare to non-business majors. This difference is understandable as the nature of business major exactly goes with extroversion style. People high on

extroversion tend to be more sociable, talkative, and moving around. They like occupations having high social interaction i.e. managerial and sales positions. Extraversion is strongly related to social matters (Costa & McCrae, 1988). In another attempt Gough (1990) has marked dominance and sociability as the major facets of extraversion. It has already been observed that extroverts in business occupations are more in numbers than extroverts in non-business occupations. (Lounsbury, Loveland. et al. 2003). Other researchers have also explored the relationship between jobs in various fields, and the personality characteristics. Myers and McCaulley (1985) found 80% extroversion type of jobs in business occupations.

Looking at the emotional stability this study reported higher scores of business majors compared to non-business majors. Today's business world is confronting intense competition and severe challenges that imposes immense stress over employees. Literature defines three major components of stress. One, uncertainty in situation's outcomes leads individuals toward stress (McGrath 1976, Lazarus 1966). Second, role ambiguity in situations imposes stress over others. Third, the less control that people have over situations also creates stress (Lazarus 1996, Schuler 1980). These three components of stress highly exist for those in business occupation than for those in non-business occupation. So to cope with increasing stress one has to hold high level of emotional stability. Due to ever increasing and intense global competition, world's changing scenarios, uncertainty, and requirement of continues changes, emotional stability has become a vital and inevitable skill for the success of people in business occupations. One develops hopes and emotions for one's career, emotional stability can significantly affect one's career choice. Emotional stability is strongly and positively related to career and job satisfaction (Lounsbury, et al. 2003) in business related occupations.

Moreover, business majors scored lower for Conscientiousness, Agreeableness, and Openness than did non-business majors. The low score of business majors for conscientiousness in this study is not consistent with the work of Lounsbury et. al. (2009). Therefore, the low score of business majors on this dimension is readily justified and interpretable. People high on conscientiousness are highly organized, straight thinkers, less risky and persistent. The interrelationship of five personality traits with each other finds that high conscientiousness is not consistent with extroversion and openness, innovation, risk taking, creativity and change. This personality difference of business and non-business majors is due to the difference in nature and focus of the business and non-business fields (i.e. manager & engineer), and due to the content of courses

in each of the two curricula. To survive or excel in today's turbulent environment the focus of business related disciplines has gradually been shifted from avoiding chaos, developing certainty and control; to flexibility, innovation, risk taking, change and live with chaos. Whereas, non-business occupations are seeking for more discipline, organizing, paying attention to details, clarification in goal setting, avoiding risks and developing tight control.

In the areas of agreeableness and openness business majors scored low as compare to non-business majors. This result does not go with the nature of business occupations as openness to novelty correlates with divergent thinking (McCrae, 1987) and is strongly related to both personality-based procedures of creativity (Feist, 1998; McCrae & Costa, 1997). Business and non-business schools differ due to their focus in areas like competition, grades, methodology, curricula, individual's learning, and development etc. The lower scores may possibly be a result of specific environment of most business schools e.g. stimulating individual competition, grades, individual achievement, emphasize on core competencies, and endeavors for early employment. It is also noticed that the focus of business courses i.e. Sales, Marketing etc. is on developing the competitive edge to get through the competition. This approach in its core purely promotes individualism rather than collectivism. This "do or die" approach might have an effect on individual's self-concept. Self-concept, like other dimensions of personality, is a function of biological, developmental, and social processes across the life course (Demo, 1992). The change in self-concept might affect others being not generous, supporting, and humble to others. People with high level of agreeableness face difficulties while putting their own plans into action, when faced resistance from others (Zhao and Seibert, 2006). High level of agreeableness also does not go well in making hard decisions by manager that might clash employees' interests.

The low score of business majors for openness is difficult to digest as the academic focus of business majors is on innovation, change, continuous improvement and other openness oriented areas. The possible interpretation of this difference could be the practical and experimental nature of both majors i.e. the span of experimenting the new things/ideas in business occupations/academia is relatively small as compare to non-business occupations/academia. Due to the practical and experimental nature of studies in non-business majors i.e. engineering, science and technology etc., the span of experimenting new things is fairly large.

As for as personality differences of business and non-business majors in relation to gender differences are concerned, results showed that academic major selection patterns of undergraduate students vary across gender. Regarding the enrollment pattern of undergraduates with gender difference, study revealed a significant difference between enrollment ratio of males and females. The difference of males and females enrollment in both majors is significantly higher as males are 81% of the total sample size. Within the academic majors category the difference on the basis of gender is also there. The females ratio in business major (30%) is considerably higher than the females ratio in non-business major (9%). On the other hand the ratio of male students across the majors differ as well i.e. male students in non-business major are 91% as compare to male students in business major 70%. This difference on the basis of gender is consistent with the literature. People select their majors on the basis of knowledge, information, and exposure to surroundings. However, research has witnessed the role of gender in making such choices. Both sex differ each other largely because of the difference in their self-concept. Females prefer to join feminine type of occupations (Adams and Walkerdine, 1986; Best, 1983; Spender, 1982). Betz and Hackett (1981) also found that males like realistic and investigative type of work whereas; females prefer social type of occupations. Women get socialized to possess feminine traits such as warmth, kindness, selflessness, sympathetic whereas, men do it to possess traits like aggressive, forceful, competitive, strong, self-confident and independent (Schien, 1973). Tomlinson and Evans (1991) concluded female's preference in social, artistic, and conventional type of occupations.

The difference across gender on the big five personality traits is also vivid in this study. Within and across academic majors females are different on all five personality traits than their male counterparts. Males scored higher for Extraversion and Emotional stability in both majors than did females, whereas females reported higher scores for Agreeableness and Openness in both majors comparing with males in same majors. This difference is consistent in literature as extraversion that includes dominance is more related to males, whereas agreeableness that includes nurturing and affiliation might be more related to females (Block and Robins, 1993; Robins et. al., 2001). The tendency of women to get more interdependence and men to get more independence could further explain these gender differences. (Cross and Madson, 1997).

Conclusion

Personality has been viewed as a strong predictor of career preferences. People differ in their preferences due to difference in their personality traits. This study was conducted with the aim to figure out the personality difference of students in relation to their academic majors and gender differences, if any. The results declared a significant difference in personality traits of business and non-business majors on Big Five Personality traits. Study also found a considerable difference across genders within and across academic majors. The Holland's vocational theory served us as a base to build the theoretical understanding that people prefer those areas that match with their personalities. The results of this study are consistent with the work of Lounsbury et.al. (2009) on four dimensions, therefore findings for Conscientiousness in this study could not validate Lounsbury's work. From the practical point of view findings of this study can help students, educational counselors, parents and teachers to select, or advice the academic major's selection in relation to personality-majors congruence. This work will also add to the body of knowledge for upcoming scholarly endeavors.

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