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Assessing Personality Traits and its influence on Academic Performance among Prospective Teachers of Shah Alam

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Abstract

Universities around the globe in this 21st century are facing challenges of globalization, technology and informational changes. Hence, to remain competitive and relevant, universities are required to equipped their students with new knowledge, skills and competencies so that they are able to cope with complex new roles which is in line with educational goals. Nonetheless, students have distinct personality traits which makes them perceived worldviews in a different way and behaving differently in various educational settings. Literature noted that non-cognitive constructs such as personality traits have been considered as predictors of success in learning. Thus, taking these differences into account can assist educators to recognize their students' individual differences and academic achievement. Therefore, this study was intended to investigate personality traits and its influence on academic performance among prospective teachers of shah alam. A total of 130 prospective student teachers participated in this study. Pearson's Product –Moment Correlation Coefficient (r) and multiple regression was conducted to measure the data. The finding showed that there was weak and positive relationships between conscientiousness and extroversion on academic performance. However, the finding found that the relationship between neuroticism and academic performance was significantly weak but inverse. Interesting, multiple regression analysis found that conscientiousness contribute about 11.8% of variance in academic performance. Implications and recommendation were discussed in this paper.

Keywords: Conscientiousness, Openness, Extrovert, Conscientiousness, Agreeableness.

Introduction

Academic achievement is seen as important predictors of success in our educational system and also across the globes. Furthermore, excellent academic achievement has recorded over the years to have a significant impact on the future success of students (Singh, 2014). In this sense, improvement of students' academic achievement has been the main agenda in the Malaysian

educational planning system. These students need to be equipped with new knowledge, skills and competencies so that they are able to cope with complex new roles which are in line with educational goals. Academic achievement of students can be established through educators and school leaders pedagogical and management practices (Imran, Afshari, Ghavifekr, & Abd Razak, 2013). Nonetheless, in general cases, scholar predicted that general intelligence as one of the most powerful predictors of academic achievement. On the other hands, they found that the predictive power of intelligence never exceeds 25% variance explained (Kuncel, Hezlett, & Ones, 2004). Hence, this indicates that there would be other variables that could contribute to academic achievement. Eyong, David, & Umoh (2014) felt a worrying concerned about academic performance which is not to equate with the level of competence of the students. As a result, there is a mismatched between skills and competency and academic achievement in job market.

Therefore, researchers have attempted to relate academic achievement with individual differences variables such as intelligence, self- concept motivation, emotional intelligence, creativity and positive thinking (Eyon et. al., 2014; Ciorbeaa & Pasarica, 2013). Literature noted that individual differences in term of non-cognitive constructs such as personality traits have been considered as predictors of success in learning (Lesson, Ciarrochi, & Heaven, 2008; O`Conner & Paunonen, 2007). Singh (2014) argued that students are different in term of their values, receiving and processing information and understanding. Therefore, a mixed of personality trait are essential for individual to be successful in their career. Subsequently, Chamorro-Premuzic and Furnham (2003) reported that personality traits is able to predict academic success and failure in higher learning educational programs. The Big Five traits namely extraversion, agreeableness, conscientiousness, neuroticism, and openness have been widely researched in the field of psychology and education and also have been linked to behavioural outcome (Ozer & Benet-Martinez, 2006), such as job performance, leadership, well-being academic and achievement (Fairweather, 2012; Heckman, et. al., 2006; John & Srivastava, 1999). Thus, taking these differences into account can assist educators to recognize their students' individual differences and academic achievement. The current study was intended to probe the influence of personality traits on academic achievement of prospective teachers.

Understanding the Concepts of Personality Traits

Researchers defined personality traits in many ways. Personality was referred as a stable personal feature which indicate a long term and persistent individual differences in emotional style and has common effect on emotional reaction (Warr, 1999). On the other hand, literature noted that personality traits as the differences between individual's frequency and intensity of thinking, behaving and feeling in certain manners (Fleeson & Gallagher, 2009; McAdams & Pals, 2006). While, researchers such as (McCrae & Costa, 1999; Zillig, Hemenover & Dienstbier, 2002) defined personality traits as patterns of behaviour, motivation, emotion and cognition which are relatively stable in an individual. Numerous studies of the personality research have examined the broad Big Five personality traits which is also known as the Five-Factor Model of personality. This model put forward five domains of personality traits, namely, neuroticism, extroversion, openness to experience, agreeableness, and conscientiousness (McCrae & Costa, 1999; O'Connor & Paunonen, 2007).

Researchers such as Gerber, Huber, Doherty, Dowling, & Panagopoulus, (2011) and John, Nauman, & Soto (2008) have reviewed the dimensions of Five-Factor Model and conceptualized them as the following: extraversion personality traits is referred to individual differences in social

engagement, assertiveness, and energy level. A highly extraverted individuals tend to enjoy and socialized with others, they are comfortable expressing themselves in group situations, and experience positive emotions such as enthusiasm and excitement. In contrast, introverted individuals tend to be socially and emotionally reserved. Meanwhile, agreeableness is reflected in differences in compassion, respectfulness, and acceptance of others. Agreeable individuals tend to experience emotional concern for others' well-being, treat others with respects, and hold generally positive beliefs about others. On the other hand, disagreeable individuals tend to have less regard for others. Conscientiousness refers that an individual is reliable, cautious, well order, accountable, prepare, hardworking and mindfulness. It is also strong- mindedness, determined, and associated with performance in the workplace and the context of education and learning (McCrae & Costa, 1997). Conversely, neuroticism refers to individual that has a tendency to experience negative effects such as anxiety, depress, shame, annoy, guilt, and doubtful. While, openness to Experience is reflected in a person who is creative, imaginative and curious as opposed to concrete minded and narrow thinking.

The Relationship between Personality Traits and Academic Achievement

Previous studies evident that there were associations between Personality traits and academic achievement, however, the findings were inconsistent. For example, Tomsik (2018) in his study found that conscientiousness was positively related to academic performance. The result showed that conscientiousness significant predict academic performance among university students but explained only 2.7% of the variance in grade point average. Parallel, studies showed that conscientiousness personality trait has significant linked with studies done by Komarraju, Karau & Schmeck (2009). Apart from that, personality traits such as openness to experience has been positively related with post-secondary outcomes including GPA (Farsides & Woodfield, 2003). Ambreen & Jan (2015) have carried out a study on 930 students in public and private sector schools in district Mianwali and the results showed that all the 5 personality traits namely openness personality trait conscientiousness, agreeableness, neuroticism correlated positively with academic achievement. Laidra, Pullman & Allik (2007) conducted a study in a large sample of Estonian school children from elementary to secondary school. The result indicated that personality traits such as openness, agreeableness, and conscientiousness were positively correlated.

Conversely, studies noted that there were conflicting results in terms of the relationship between the remaining four personality traits and academic performance. For example, (Chamorro-Premuzic & Furnham, 2003) reported that neuroticism was found to be negatively correlated to academic achievement but this association was not shown as significant in certain studies (Duff, Boyle, Dunleavy & Ferguson, 2004). On the same note, Rosander, Bäckström & Stenberg (2011) said that their studies showed a positive relationship between neuroticism and academic performance, however, O'Connor & Paunonen (2007) reported that extraversion trait has a negative relation with GPA. Alkış & Temizel (2018) did a study on the impact of students' motivation and personality traits on their academic performance in online and blended learning environments among university in Turkey. The Bayesian Structural Equation Modelling was used to analyse the data. The results depicted that the conscientiousness trait was significantly related to Learning management systems(LMS) used, whereas, there were no significant relations found between personality traits and LMS. They also found that conscientiousness and LMS use were significantly related to course grades in both learning environments.

Much has been said about personality traits and its influence on academic achievement of students, nevertheless, Farsides and Woodfield (2003) urged that there were some inconsistency in the literature with regards to personality traits constructs and their relationship with academic success. They claimed that different studies used different factors to measure academic success, such as GPA, final examination scores, course program evaluation and other scales. Furthermore, students were also being assessed differently by educators based on their interactions, observation, behaviour, attitude and other quality assessment which are all pertinent for students' success. Nonetheless, studies on personality traits is still scanty especially, among prospective teachers in a local context. Hence, this study was intended to further investigate whether individual differences variables such as personality trait may has an impact of academic achievement. This study shall provides a platform to evaluate personality traits of the trainee teachers in a higher learning institution. More importantly, the findings of this study can assists educators and leaders to identify both successful and at risk potential students teachers during their admissions process, and hence, further intervention can be carried out to ensure academic success.

Objectives of the Study

1. To identify the nature of personality traits display by the prospective teachers of UiTM
2. To examine the relationship between personality traits and academic performance among the prospective teachers of UiTM, Shah Alam.
3. To examine which predictors variables contribute to the variance towards the criterion of academic performance

Methodology

This study utilized a survey method using cross sectional research approach. Hence, to gather information about the respondents' personality traits and its influence on academic achievement, a self-report questionnaire was employed. This study was based on a conceptual framework that combines part of the adapted theory of individual differences and Five-Factor model developed by McCrae & Costa (1999). An instrument which was termed as Big five inventory (BFI) developed by John, Donahue & Kentle (1991) was employed. The BFI contained 44 items and are divided into five dimensions namely extraversion, agreeableness, conscientiousness, neuroticism, and openness. The questionnaires with a response format anchor on a seven point scale of one (1) with strongly disagree to six (7) with strongly agree was utilized. Extraversion is reflected in individual differences such as social engagement, assertiveness, and energy level. There were 8 items used to measure the dimension of extraversion. For example, "I see myself as someone who is full of energy". Neuroticism is referred to individual differences in the frequency and intensity of negative emotions. Highly neurotic individuals are inclined to experiencing anxiety, sadness, and mood swings. There are 8 items measuring neuroticism and for example, "I see myself as someone who worries alot". Meanwhile, agreeableness are describes as individual differences in compassion, respectfulness, and acceptance of others. There were 9 items measuring agreeableness such as "I see myself as someone who is helpful and help others". Conscientiousness personality traits can be captured in individual differences in organization, productiveness, and responsibility. There were 9 items measuring conscientiousness such as "I see myself as someone who is a reliable worker". Finally, Openness to Experience is reflected in individual differences traits such as intellectual curiosity, aesthetic sensitivity, and imagination. There were 10 items measuring openness such as "I see myself

as someone who is original and comes up with many ideas". On the other hand, academic achievement was evaluated based on the overall grade of the last academic year. There were approximately about 200 prospective teachers were asked to complete the questionnaire. These respondents were undertaken Bachelor Degree from the faculty of Education, came from various field of studies such as TESL, Arts, Sciences and Health Science programs in a higher learning institution. Nevertheless about 130 of them responded and returned the completed questionnaire. Hence the response rate was 65%. These trainee teachers consist of 11.5% male and 88.5% females. Pearson's Product –Moment Correlation Coefficient (r) was used to analyze the strength and magnitude of the relationship. Multiple regression analysis was used as a tool to examine the contribution of each dimensions of personality traits variables towards the variance of academic achievement.

Findings

Research objective 1: Analysis on the nature of personality traits displayed by the prospective teachers of UiTM

Table 1: The nature of personality traits displayed by the prospective teachers of UiTM

Personality traits	Mean	Standard deviation
extraversion	4.3202	.72937
agreeableness	5.0188	.73925
conscientiousness	4.4034	.65627
neuroticism	3.7654	.80575
openness	4.6853	.61226

Mean indicator low = less than 2.99, moderate- 3.00- 4.99, high= more than 5.00

In table 1, the result depicts the nature of personality traits displayed by the prospective teachers of the faculty of Education, UiTM. The mean scores were organized in descending manner from 5.0188 to 3.7654, implying that the mean scores were between high to low. The result evident that the respondents felt that were more inclined to display high personality traits of agreeableness where the mean score (m= 5.0188, SD= 0.73925). The result also indicated that these prospective teachers also displayed moderate personality of openness (m=4.6853, SD= 0.61226), conscientiousness (m=4.4034, SD=0.65627), extraversion (m= 4.3202, SD= 0.72937). Interestingly, the result also indicated that the respondents displayed moderate neuroticism personality traits (m= 3.7654, SD= 0.80575).

Research objective 2: Analysis on the relationship between personality traits and academic performance among the prospective teachers of UiTM, Shah Alam.

Table 2: Correlation matrix analysis of personality traits and academic achievement

Variables	1	2	3	4	5
CGPA	1.00				
extraversion	.238**	1.00			
agreeableness	.090	.013	1.00		
conscientiousness	.347**	.262	.332	1.00	
neuroticism	-.245**	-.176	-.554	-.477	1.00
openness	.011	.326	.129	.022	

Table 2 showed the result attained from bivariate analysis. Based on the Davis's (1997) rule of thumb, the result implied that there was a moderate and positive relationship between conscientiousness and academic achievement where $r = 0.347$, $p = 0.00$. Nevertheless, the result indicated the relationship between extraversion and academic achievement was weak but positive where $r = 0.238$, $p = 0.00$. On the other hand, the result depicts that the relationship between neuroticism and academic achievement were weak and inverse where $r = -0.245$, $p = 0.00$. In this sense, this result implied that to increase academic achievement, respondents need to reduced their neuroticism personality traits. The finding in this study also showed that there were significant no relationship between agreeableness and openness on academic achievement where $r = 0.090$, $p = 0.327$; $r = 0.011$, $p = 0.906$ respectively). This finding supported the study done by Ambreen & Jan (2015).

Research objective 3: Analysis on the contribution of each of the significant predictors' variables towards the variance of the criterion variables.

Table 3: Multiple Regression analysis on academic achievement

Variables	Un-std Coefficient β	Std Coefficient β	t	P
(constant)	3.101		9.499	.00
extraversion	.047	.151	1.569	.119
agreeableness	-.022	-.073	-.673	.502
conscientiousness	.093	.285	2.803	.005
neuroticism	.028	.102	.869	.387
openness	-.012	-.304	.361	.719

F Statistic = 4.178, sig. < 0.05 Adjusted R-squared = .118, R2 = .155

Table 3 displays the result of multiple regression analysis based on Enter method. The finding showed that out of five variables that were regressed, only one predictor was found to be significant, i.e. conscientiousness with t value- 2.803, $p = 0.005$. However, extraversion, agreeableness, neuroticism and openness with $t = 1.569$, $p = 0.119$, $t = -0.673$, $p = 0.502$; $t = 0.869$, $p = 0.387$; $t = 0.361$, $p = 0.719$ respectively were excluded because those variables did not contribute in significance to the variance of academic achievement. Apart from that, the finding indicated that the total amount of variance of the criterion variable that was predictable from one predictor variable was 15.5% and the

adjusted R square change was 11.8%. Both values indicates the coefficient of determination where they describe the percentage of total variation of the dependent variable explained by the independent variables. Nevertheless, since adjusted R square could provide a better estimation of the true population value, hence in this study, the contribution of the predictor variables towards the variance in the criterion variable was reported based on the adjusted R-square value. In sum, the multiple regression model has accounted for about 11.8% of the adjusted variance in academic achievement. This study is in line with done by Nye, Orel & Kochergina (2013); Poropat, (2009); Trapmann et al., (2007).

Discussions and Conclusions

The main objective of the study was to investigate personality traits of the prospective teachers and its influence of their academic achievement. The finding suggests that the respondents tend to portray a mixed of all the 5 big personality traits. These prospective teachers tend to display more of agreeableness personality traits which reflects as sympathy, humanity, honesty and teamwork (Mc Crae & John, 1992). With regards to openness traits, indicated that they have the elements of exploration, discover and enjoy abstract and sensory information (John, Naumann & Soto(2008). While, the personality traits of conscientiousness represents responsibility, persistence and ability to organize information (Bratko, Chamoro & Saks, 2006). The finding also showed these prospective teachers tend to manifest moderate extrovert personality which indicated that they tend to seek connection with the environment and are warmth, active, and sociable (Klinkozs, Sekowski, & Brambring, 2006). Conversely, finding showed that the respondents tend to have moderate neurotic personality traits which reflects temperament characteristics such as threatening, disturbing or problematic. The importance of these individual differences and trying to recognize each traits in relations to educational demands.

It is interesting to note, there was a moderate and positive relationship between conscientiousness and academic achievement but a weak relationship between extraversion and academic achievement. According to scholars such as Costa & McCrae (1992) and Saucier & Goldberg (1992) the concept of conscientiousness is the higher order trait that include features such as accomplishment, self-efficacy, organization, orderliness, and self-discipline. Hence, students who has such personality traits are likely to meet deadlines for assignments, finishing tasks on time, put more effort into a given tasks, and work independently and thus have higher grades and achievement. Nevertheless, the result also showed a weak and inverse relationship between neuroticism and academic achievement. Studies have established a negative relationship between neuroticism and academic performance outcomes (Chamorro-Premuzic & Furnham, 2008; O'Connor & Paunonen, 2007). These studies suggest that students with higher inclination to display neuroticism may have the tendency to have higher levels of anxiety and stress that in turn result in lower performance. Hence, reducing neuroticism behaviour could improve performance. More importantly, when multiple regression was conducted, the result depicts that conscientiousness has accounted for about 11.8% of the adjusted variance in academic achievement. This study support research done by McAbee & Oswald (2013). The finding indicated that the students that showed high conscientious have the tendency to performed better than their counterparts who are low on the trait. Perhaps, result could be due to the fact hard work and discipline people deliberately plan for success to achieve it. In this sense, Duckworth and Seligman (2005) found that self-discipline, persistence and determination could predict GPA to a greater extent than IQ. Komarraju et al. (2009) supports the

notion that IQ is not the only thing predicting academic achievement as stated by Duckworth et al. (2007).

Given this juncture, this study has several practical implications to school leaders, educators and parents to consider to understand their students' personality traits in order to enhance their academic performance. For examples, parents and educators need to understand every child/student are different in their traits. In fact, it is a dire need to focus on learning that meet definite learners' characteristic. These traits can be polished and improved over time.

Therefore parents and educators should encourage their children or students to set clear goals, directions and purposes in their life. This is to ensure that they are disciplined and careful to consistently achieve them. Hence, instilling the traits of conscientiousness such as hard work, diligence and consistency will always be rewarded in the long run. Besides, by understanding personality traits, educators and instructors can improve on educational delivery as well as to assist the individual needs of their learners. Nonetheless, this study has few limitations which focused only on prospective teachers in a higher learning institutions. Thus, further study need to be conducted which includes larger samples that can provide better perspectives. Besides, future research would expand our knowledge on nature of personality traits and academic performance by exploring other non-cognitive variables such brain waves, neurobiology as predictors of academic performance.

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