Relationship Between Trainees' Personality and Training Achievement

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A B S T R A C T

Nowadays, most organizations are giving high attention on employee training and development. Therefore, training achievement is important to evaluate the effectiveness of training. The purpose of this paper is to investigate the relationship between trainees' personality (Extraversion, Agreeableness, Conscientiousness, Openness to experience, and Neuroticism) and training achievement. The total number of 202 polices who attend selected police driving training (Vehicle B2 and E2) was chosen as respondent in this study. Trainees' personality was assessed by Big Five Inventory, while training achievement was measured by asking respondent to self-assess their knowledge in a pre and post-test of driving knowledge. The result showed that Extraversion, Conscientiousness, Openness to experience, and Agreeableness have positive correlation with training achievement. Neuroticism showed a negative significant correlation with training achievement. In addition, only extraversion contributed a statistically significant share of explained variance of the training achievement. In conclusion, the result indicated that all of Big five personality has significant relationship with training achievement. The study also had shown that extraversion influence training achievement. It can be concluded that people with sociability, talkative and assertiveness can affect their training achievement.

INTRODUCTION

Nowadays, the workplace has become a competitive environment full of global and domestic competitions, rapid changes in technology and computerization and greater demand for time management. These changes necessitate the compulsion to regularly learn new skills, acquire new information and understand different processes (A. Furnham, 2005). Therefore, the role of training is important to facilitate employee's learning of job-related competencies such as knowledge, skill or behaviors(Noe, 2002). In modern knowledge-based economies, it is essential to understand which factors contribute to an employee's training and how differences in individual training achievement can be explained.

It has been well established that individual characteristics such as ability, motivation and self-efficacy are the best predictors for training achievement. For example, Tziner(2007) has indicated that self-efficacy has a positive and significant correlation with training grades. Besides that, Tao(2006) stated that both self-efficacy and training motivation are significant predictors for all training outcomes. A study by Scaduto, Lindsay, &Chiaburu(2008) also showed that motivation is positively related with training effectiveness. However, personality traits such as the Big Five personality did not get any attention in previous research. According to previous studies, some studies only selected certain trainee's characteristic variables extracted from the Big Five taxonomy of traits or some unstable individual characteristics such as self-efficacy, locus of control and ability(Chiaburu & Tekleab, 2005; Lievens, Harris, Keer, & Bisqueret, 2003). These studies chose to examine a limited number of dispositional variables, which were either relatively unstable individual characteristics (self-efficacy) or extracted from the Big Five taxonomy of traits. For instance, Huang (2012) only selected openness to experience, conscientiousness and extroversion as independent variables in her study. Studer-Luethi, Jaeggi, Buschkuehl, &Perrig(2012)also only assessed neuroticism and conscientiousness as personality traits with training outcome.

Various studies showed that Big Five personality is related to academic or training achievement. Academic achievement refers to the level of actual accomplishment or proficiency that one has achieved in an academic area, as opposed to one's potential in the educational goals measured by examinations (Lawrence, 2013). On the other hand, training achievement refers to the extent to which knowledge and skill have been imparted on an

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individual under training. As for the academic achievement, several studies showed that conscientiousness was significantly related to the achievement (Chamorro-Premuzic & Furnham, 2003; Komarraju, Karau, Schmeck, & Avdic, 2011; Rosander, Bäckström, & Stenberg, 2011). The results from other studies reported significant correlation between combination of the Big Five personality traits such as agreeableness and openness to experience (Komarraju *et al.*, 2011); neuroticism and conscientiousness (Chamorro-Premuzic & Furnham, 2003); openness and conscientiousness (Laidra, Pullmann, & Allik, 2007) and conscientiousness and emotional stability (Vasilopoulos, Cucina, & Hunter, 2007) with academic/training achievement. On the other hand, one study reported neuroticism to have a negative correlation with grade point average GPA throughout all grades, which refer to education stage from Grade 1 to Grade 12 (Laidra *et al.*, 2007). These findings proved that Big Five personality traits have significant relationship with academic/training achievement.

However, several studies have also shown inconsistent findings in terms of the association between the Big Five personality traits and academic/training achievement. For example, extroversion had a negative relationship with academic achievement (Rosander *et al.*, 2011), but another study stated that extroversion was not significantly correlated with academic achievement (Chamorro-Premuzic & Furnham, 2003; Komarraju *et al.*, 2011). This was also true in the case of neuroticism, where it was positively associated with academic achievement (Rosander *et al.*, 2011). A study by Dean, Conte, &Blankenhorn(2006) indicated that none of the Big Five personality trait was significantly related to training achievement.

Inconsistent findings in the literature warrant researchers to further examine the relationship between Big five personality and training achievement. Most studies on academic achievement were conducted among students, but this research was interested to identify the relationship between Big Five personality traits and training achievement. Therefore, the purpose of the present study is to investigate the relationship between Big Five personality traits and training achievement.

Method:
Participants and setting:
    The respondents for this study consisted of 203 police officers who attended police driving training for Vehicle class B and Vehicle E2. Each police driving training was designed to develop a foundation for drivers to make sound decisions and to ensure safe and effective vehicle operation under all conditions.Each training consisted of two parts: theory and practical sessions. The duration for each training was between three to four weeks.

Procedures:
    Data collection was done through guided self-administered questionnaire. Each participant was given an ID for tracing and maintaining anonymity for the purpose of the study. Instructions and information about the study were provided to the participants. Participants were clearly informed that the results of this study would not have any influence on their training performance. Baseline measure for pre- training achievement test was collected before the training commenced. The first set of questionnaire, which contained demographic information, the Big Five inventory and training achievement was distributed and collected from the trainees. At the end of the training session, trainees were asked to complete post-training achievement test.

Instruments:
    The questionnaire consisted of demographic profile such as gender, age, race, educational level, and service duration. Trainees' personalities were assessed using the Big Five Inventory (BFI consisted of 44-items (John & Srivastava, 1999). The researchers used BFI as a measurement tool to avoid problems associated with lengthy survey in data collection as excessive survey questionnaire length is viewed as an inhibitor to response (Porter, 2004). The five construct consisted of openness to experience, conscientiousness, agreeableness, extroversion and neuroticism. Each construct was measured with eight to ten items. The items have a 5-point response scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Each construct consisted positive and negative items. In the present study, the Cronbach alpha values for each subscale's internal consistency were as follows: .82 (neuroticism), .72 (extroversion), .72 (openness to experience), .84 (agreeableness) and .79 (conscientiousness).

    Training achievement was examined using a knowledge test. This questionnaire was modified based on the content of the driving training materials module (*Driving Knowledge*, 1989) and it was reviewed by trainers to ensure content validity. A total of 25 questions were developed related to driving knowledge, which includes rules and regulation of the road, vehicle manoeuvring, collision avoidance, driver attitude, hazard avoidance and role as police driver. The mode of answering was either Yes/No; fill in the blank and multiple answers questions. The range of possible score was from 0 to 80. Higher score indicated higher level of understanding of the training module.

Results:

A total of 203 subjects participated in the study, and a response rate of 99% yielded 202 usable responses. Of the subjects who responded to the study, 93% were male, 83% Malay, 0.5% Chinese, 4% Indian, 6.4% others races such as kadazan, 68.3% were married and they possessed an average tenure of 8.61 years with the organization. The mean age was 30.2 years old.

Table1: Result of t-test and Descriptive Statistic for Training Achievement

	Pre-test		Post-test			95% CI for Mean Difference			
Outcome	M	SD	M	SD	n		r	t	df
	45.09	7.86	56.62	6.55	202	-12.63 to -10.42	.40*	-20.57*	201

*p<.01

Table 1 indicated the result of t-test and descriptive statistic for training achievement. The result showed that there was a statistically significant difference between pre and post-test (t= -20.57, p<0.01). It can be concluded that training achievement of respondents increased significantly after training.

The descriptive statistics and correlations among the variables in this study are presented in Table 2. Correlation analyses were conducted to examine the relationships between Big Five personality traits and training achievement. Result of the correlation analyses showed that the relationship between Big Five personality traits and training achievement were statistically significant. Among the personality traits, neuroticism (r =-.38, p < .01) has the strongest negative correlation with training achievement while extroversion (r = .55, p < .01) has the strongest positive correlation with training achievement.

Table 2: Descriptive Statistics And Correlations among The Studied Variables (N = 202).

	Mean	SD	1	2	3	4	5	6
1.Openness	3.46	.38	1					
2.Extroversion	3.58	.43	.47**	1				
3. Agreeableness	4.08	.47	.40**	.51**	1			
4. Conscientiousness	3.85	.47	.51**	.62**	.73**	1		
5. Neuroticism	2.46	.51	-.31**	-.55**	-.61**	-.75**	1	
6. Training Achievement	11.4	7.88	.25**	.55**	.27**	.40**	-.38**	1

**. Correlation is significant at 0.01 level (2-tailed).

*. Correlation is significant at 0.05 level (2-tailed).

The results of the multiple regression analysis indicate that the five predictors accounted for a proportion of the variance in training achievement, $R^2 = .31$, p< .01. The finding showed that only extroversion (b = .49, p<.01) has an effect on training achievement. However, agreeableness, conscientiousness, openness to experience and neuroticism has no significant effect on training achievement. Table 3 showed the result for variables predicting training achievement.

Table 3: Summary of Simple Regression Analyses for Variables Predicting training achievement (N = 202).

Big Five Personality Traits	Training Achievement				Sig
	B	SE B	β	t	
Neuroticism	-1.63	1.42	-0.10	-1.15	0.25
Extroversion	8.85	1.44	0.49*	6.15	0.00
Openness	-0.39	1.67	-0.02	-0.23	0.82
Agreeableness	-1.85	1.50	-0.11	-1.23	0.22
Conscientiousness	1.67	1.90	0.10	0.87	0.38
R^2	.312				
F	17.78*				

*p<0.01

Discussion:

The purpose of this study is to investigate the relationship between trainees' personality and training achievement. The finding showed that there is a significant difference between pre and post- test of driving achievement. The findings reported that participants have improved their driving knowledge level at the end of the training. This may be the results of a clear instructional designs developed by the trainers. The researchers however did not measure trainees' reaction towards the content, material, trainer, environment and presentation in this study. It is suggested that future study to investigate trainees' reaction in training to further improve the content, strategy and delivery of the training.

The findings indicated that all the Big Five personality traits (extroversion, neuroticism, openness to experience, conscientiousness and agreeableness) are significantly associated with training achievement. As expected, Extroversion has significant positive relation with training achievement, which shows that people who are sociable and assertive will have better training achievement. This is consistent with previous research suggested that characteristics of extroversion which is sociable, talkative and energetic benefit them in discussion and interactive learning (Babakhani, 2014; Barthelemy & Lounsbury, 2009; Komarraju, Karau, & Schmeck, 2009).

Consistent with the previous studies, conscientiousness was found to be correlated with training achievement(Chamorro-Premuzic & Furnham, 2003; Laidra *et al.*, 2007;Vasilopoulos *et al.*, 2007). This finding suggest that characteristics of conscientiousness who are high self-discipline, organized, and achievement orientated is hardworking and aiming to get highest score in training achievement. In addition, this study reported a significant positive relationship between openness to experience and training achievement. This is consistent with previous study which stated that openness to experience is significantly correlated with training achievement(Diseth, 2003; Adrian Furnham, Monsen, & Ahmetoglu, 2009; Komarraju *et al.*, 2011;Laidra *et al.*, 2007). It suggested that trainees who are high in openness to experience are those who are curious, imaginative and intelligent and hunger for new information. Thus, trainees who are high in openness to experience may perform better in training achievement test. The findings also reported the significant positive correlation between agreeableness and training achievement and it was consistent with previous study (Chamorro-Premuzic & Furnham, 2003; Komarraju *et al.*, 2009; Komarraju *et al.*, 2011). Based on Major, Turner, & Fletcher (2006), those who has agreeableness trait has a tendency to be altruistic, cooperative and trusting. These characteristics enhance interpersonal relationship with others and encourage them to share and exchange information in training. This will lead to better understanding and performance. Neuroticism is found to be negatively correlated with training achievement. This finding is consistent with other studies done by Barthelemy and Lounsbury (2009); Chamorro-Premuzic and Furnham (2003) ; and Vasilopoulos *et al.* (2007) .

However, the findings of this study were inconsistent with previous research that indicated only certain dimensions of Big Five personality were significantly related with training achievement (Chamorro-Premuzic & Furnham, 2003; Komarraju *et al.*, 2011; Rosander *et al.*, 2011). Our study indicated that all five dimensions of Big Five personality were significantly correlated with training achievement. The different finding of the present study compared to others will encourage other researchers to further explore and justify the relationship between Big five personality and training performance.

All the Big Five traits are correlated with training achievement, however only extroversion significantly influences training achievement. Other dimensions such as agreeableness, openness to experience, neuroticism and conscientiousness did not significantly affect training achievement. It is postulated that trainees who are high in extroversion are full of energy, assertive and active by nature and would enjoy learning that are related to driving skill.

Conclusion:

The finding of the study showed that all Big Five personality traits are correlated with training achievement. The study extends our understanding of the important role of personality and training achievement. Given the important of the effects of personality in learning, trainer should use appropriate training strategies to cater different learning styles in relation to trainees' different personalities.

This study has a limitation in its sampling method. The present study used purposive sampling procedure, which decreased the generalizability of the research findings. Therefore, it is suggested for future studies to use random sampling method to increase the generalizability of the study. Also, the analyses in this study were limited to only one training program; thus, using data from several training programs may provide different findings. Finally, the authors recommend for future research to explore wider range of training and development issues involving more diverse range of organizations and across all types of industries.

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