

Effects personality disparities: A look at academic knowledge acquisition activities in Malaysia

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Received Date: 01 / 04 / 2018

Accepted Date: 29 / 06 / 2018

Abstract

Potential effects of the Big Five personality traits of openness, conscientiousness, emotional stability, agreeableness and extraversion on academic Knowledge Acquisition activities and productivity were investigated in this study by utilizing a large sample of academics from a Malaysian Public University. It contributes theoretically and empirically by demonstrating several effects of the Big Five on academic outcomes related to Knowledge Acquisition activities. The study also has practical significance based on its implications for university faculty members, providing suggestions for better understanding of how they might increase their success at Knowledge Acquisition activities. A quantitative method was used, resulting in useable data from N = 985 respondents. Following descriptive analysis, hypotheses testing was conducted using a structural equation modelling approach. When all five personality traits were considered together, only openness, extraversion and agreeableness significantly predicted KA. Further recommendations were made for this study by adding different theory such as Theory of Planned Behaviour, motivation or user satisfaction components relationships for expanding further research.

Keywords: Knowledge Acquisition, Big Five Personality trait, Academic scholarly activities.

1. Introduction to Knowledge Transfer Behavior (KTB)

Higher education institutions (HEIs) are a core medium for managing knowledge creation and dissemination in society. In the HEI context, the knowledge productivity of academic faculty is extremely important. Academics are expected to create, transform, translate and apply new and existing knowledge (knowledge activities) at a level that enhances competitive advantages and performance. To begin to think about what factors might be possible predictors of academic knowledge productivity, it is helpful to think about the sorts of knowledge activities that must be undertaken in order for an academic to be productive. Hence, this activity could be seen in Knowledge Acquisition activities. Concisely, knowledge acquisition capability alludes to the capacity to recognize and gain new knowledge from outside sources (Zahra & George, 2002).

In this study, Knowledge Acquisition activities in academic settings referring to an individual's capability to identify, obtain, and accumulate important new information, especially from sources external to the organisation (Cohen & Levinthal, 1990, Cui, Griffith, & Cavusgil, 2005; Zahra & George, 2002). Thus in academic settings, knowledge acquisition occurs when faculty currently ability to bring new ideas, information or knowledge externally into the organization (Rogers, 2000).

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2. Literature review

Personality is depicted as “individual differences in characteristic patterns of thinking, feeling and behaving” (American Psychological Association, 2015). Agnieszka (2013) indicates that personality is a set of traits that form a foundation for the stability and consistency of an individual’s behavior. All the more specifically, personality characteristics are thought of as persisting propensities or routine examples of behavior, thoughts, and feelings (McCrae & Costa, 2003). Phares (1991) notes that there are two main foci in personality study; the first is understanding differences across individuals in specific personality attributes. The second is understanding how the different aspects of an individual come together as a whole to create a pattern of traits of considerations, emotions, and practices that recognizes one individual from another and that continues after some time and circumstance.

This study adopts the Big Five personality traits model (Goldberg, 1990) Big Five (B5) as a theoretical basis for predicting the extent to which academic staff engage in Knowledge Acquisition activities. In the course of recent decades, the Big Five personality traits model (B5) has been successfully applied across multiple personality study contexts (Josefsson et al., 2013; Klimstra, Bleidorn, Asendorpf, van Aken, & Denissen, 2013; Bleidorn, 2012; Löckenhoff, Terracciano, Patriciu, Eaton, & Costa, 2009; De Fruyt et al., 2006;). In addition, considering personality as an antecedent of academic performance, Paunonen, Rush, and King (1994), it has been suggested that behavioural tendencies mirrored inside character features (personality) have an effect on particular habits that may offer an effect on academic achievement.

Openness reflects individual characteristic of curiosity and are willing to embrace new ideas as well as criticism and suggestions from others (Costa & McCrae, 1992). Emotional stability was described as capability to handle pressure able to adapt strength and confidence when looked with difficulties, change, and vulnerability (Avey et al., 2008, 2011). Extraversion is described by optimistic emotions and encounters and it is thus observed as having a optimistic effect (Clark & Watson, 1991). Meanwhile agreeableness has been demonstrated to impact work execution, particularly when coordinated effort and collaboration among peers is imperative (e.g., Mount, Barrick, and Stewart, 1998; Judge et al., 1999; Witt et al., 2002). Conscientiousness individual is expected to be known for commitment to their tasks and cooperating (Barry & Stewart, 1997).

The model proposes the Big Five personality traits have direct effects on Knowledge Acquisition, as shown in Figure 1 below.

From the preceding discussions this study has formulated hypotheses which proposed the relationship of the variables of the Big Five with Knowledge Acquisition Activities, more specifically:

H1: The Big Five Model traits predict academics’ effects on Knowledge Acquisition Activities (KAA).

H1. Openness has a positive relationship with Knowledge Acquisition Activities

H2 Conscientiousness has a positive relationship with Knowledge Acquisition Activities.

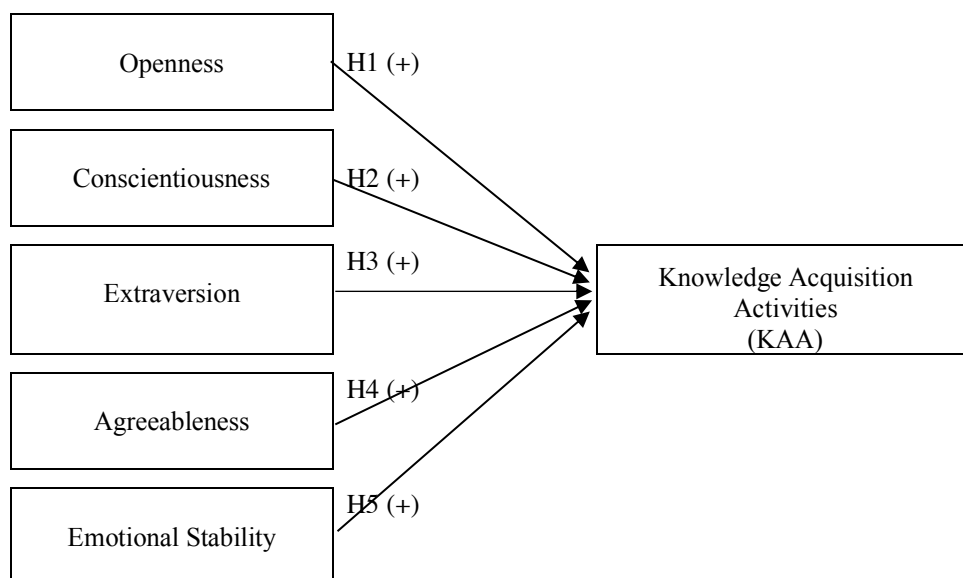
H3. Extraversion has a positive relationship with Knowledge Acquisition Activities.

H4. Agreeableness has a positive relationship with Knowledge Acquisition Activities.

H5. Emotional Stability has a positive relationship with Knowledge Acquisition Activities.

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Figure 1. Model 1 of Knowledge Acquisition Activities (KAA)



3. Methodology and results

3.1. Methods

A quantitative survey methodology was used. The questionnaire was sent to a working academic sample from Malaysia Public University. Potential respondents were individually emailed a link to an online survey administered by SmartSurvey. A total of one thousand and eleven (1011) volunteer respondents completed the questionnaire. However, this sample size was reduced in the data cleaning process, resulting in useable data from a total 985 respondents.

Each of the Big Five variables used to evaluate each one of the personality traits develops utilizing the 50-item International Personality Item Pool-Big Five instrument was pilot tested. Responses to the items will be made using 5-point Likert scales with response anchors range from 'very inaccurate' to 'very accurate.' This measure has been found as legitimate and solid as measures in light of numerous studies looks into (Aghababaei & Arji, 2014; Briley & Tucker-Drob, 2014; Clark, Lelchook & Taylor, 2010; Dahlen & White, 2006; Darviri & Woods, 2006; Demir & Tan, 2018; DeYoung, Weisberg & Peterson, 2013; Donnellan, et al., 2006; Erdle & Aghababaei, 2012). For example, "I have difficulty understanding abstract ideas" 1. Very Inaccurate, 2. Moderately Inaccurate, 3. Neither Accurate nor Inaccurate, 4. Moderately Accurate, or 5. Very Accurate.

Four Knowledge Acquisition (KA) items were developed by the researcher after consulting conceptually similar measures used in existing research (Bok & Kim, 2002; Huang, 2014; Dahari, et al, 2014; Hsu, et. al, 2001), then modifying them as needed to fit the academic context of the current study. The resulting items were then pilot tested. Responses to the items were made using a 5-point Likert-style response format indicating the frequency with which specific Knowledge Acquisition was engaged in. An example of an item developed to measure Knowledge Transfer is, "I read professional journals and similar sources to acquaint myself with new ideas that might be relevant to my research interest". The response anchors ranged from '1 =not at all; 2= 1-2

times this past 12 months; 3= 1-2 times per semester; 4= 1-2 times most months and 5=1-2 times most weeks.'

SPSS version 20 was used to perform descriptive analysis. In addition, this study also used Mplus v. 6.12 (Muthén & Muthén, 1998-2017) was used to estimate a latent variable path model used to test the specific hypotheses. A further detail of the findings is being discuss in the following tables.

3.2. Descriptive analyses

Table 3.2, represent overall descriptive results of the analyses which comprised of descriptive statistics, correlations, and reliabilities. All focal variables had adequate to good reliability, with alphas ranging from .67 to .80. Furthermore, the results show statistically significant positive correlations between each of the Big Five and KAA. The effect sizes of these relationships are small to moderate, with Pearson correlations ranging from .07 to .37.

Table 1. Descriptive statistics, correlations, and reliabilities for study variables

	M	SD	1	2	3	4	5	6
1 Knowledge Acquisition	2.80	.73	.76	.21*	.09**	.13**	.07*	.37**
2 Extraversion	3.10	.57		.76	.34**	.16**	.20**	.31**
3 Agreeableness	3.80	.46			.67	.42**	.32**	.38**
4 Conscientiousness	3.72	.53				.74	.35**	.42**
5 Emotional stability	3.21	.64					.74	.23**
6 Openness	3.53	.48						.80

Note. Values of Cronbach's alpha are reported on the matrix diagonal.

3.3. Hypotheses testing

To test the research hypotheses, a model (Model 1) containing the full set of Big Five variables as predictors of Knowledge Acquisition was estimated. Model 1 includes all five of the personality predictors for each of the three outcome variables. In Model 1, three traits had statistically significant path coefficients for the prediction of KA: Extraversion, $\beta = .200$, $p = .002$; Agreeableness, $\beta = -.218$, $p = .019$, and Openness $\beta = .458$, $p < .001$. Emotional Stability and Conscientiousness had non-significant path coefficients.

Next, a model (Model 2) fixing the two paths from Emotional Stability and Conscientiousness to zero but leaving the paths from Extraversion, Agreeableness and Openness was estimated. Extraversion and Agreeableness traits is needed to adequately capture effects for KA.

In Model 2, several paths from the Big Five to KA constructs that were not statistically significant were trimmed. As results, three effect shows statistically significant for KA with a very strong effects as all p-values of Openness, Extraversion are $< .001$ and Agreeableness $< .004$ and leaving the remaining traits statistically non-significant. Overall in Model 2 implies that only three predictors Openness

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Table 2. Hypothesized and Trimmed Models of Effects of Big Five on Knowledge Acquisition Behaviours.

Model	Unstandardized Coefficients			Standardized Coefficients
	B	se	ρ	β
Model 1: Predicting KA from all Big 5 Predictors				
Extraversion	.319	.102	.002	.200
Agreeableness	-.284	.121	.019	-.218
Conscientiousness	-.022	.154	.887	-.013
Emotional stability	.035	.047	.461	.036
Openness	.573	.105	<.001	.458
R ² = .234				
Model 2: Predicting KA from Extraversion and Openness only				
Extraversion	.316	.093	<.001	.204
Agreeableness	-.276	.097	.004	-.219
Openness	.571	.095	<.001	.456
R ² = .211				

3.4. Summary of results

Table 3 shows the conclusions with respect to hypothesis testing based on the estimation of Model 1 and 2 again indicating that all except H1 were supported in this model.

Table 3. Summary of hypothesis testing

	Statement of hypotheses	Significant Value	Results
H1	<i>Openness has a positive relationship with Knowledge Acquisition</i>	.446	<i>Supported</i>
H2	<i>Conscientiousness has a positive relationship with Knowledge Acquisition</i>	---	<i>Not supported</i>
H3	<i>Extraversion has a positive relationship with Knowledge Acquisition</i>	.204	<i>Supported</i>
H4	<i>Agreeableness has a positive relationship with Knowledge Acquisition</i>	---	<i>Not Supported</i>
H5	<i>Emotional Stability has a positive relationship with Knowledge Acquisition Activities.</i>	---	<i>Not supported</i>

4. Conclusion and recommendation

Overall in this study, all possible relationships among the set of five personalities; openness, conscientiousness, extraversion, agreeableness and emotional stability variables and knowledge acquisition were estimated. These results support the preliminary hypotheses, however for the main study only openness and extraversion were reported significant with KA. The hypothesis for conscientiousness and emotional stability reported no correlations and not statistically significant with KA. As the conclusion, from the discussion of the result, it is hoped that this study can bring insight by adding our knowledge on the big five personality traits. In addition, through this

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study, academics in Malaysia public university can take the opportunities to be more productive in knowledge acquisition activities. Other than that, this research also can add other theories such as by looking at the concept of the motivation for expanding further research and increase more precise and details results on the academics knowledge acquisition activities.

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