

## **Development of Indigenous Malay Work-based Personality Inventory using the Malay Personality Taxonomy: A Preliminary Finding**

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### **ABSTRACT**

*The expression of personality in work context may differ in general context and the transportation of western-based personality measures to non-western cultures have been found problematic in terms of their psychometric soundness. This research was conducted with the aim to develop an indigenous work-based personality inventory using the indigenously explored Malay personality taxonomy (Nefarious, Emotionality, Virtues, Indulgence, eXtraversion, and Accommodative factors; abbreviated as NEVIXA). The test was developed using American Psychological Association (APA) Standards of Educational and Psychological Testing's (2014) four main phases of test development: (1) Test conceptualization, (2) Test construction, (3) Test tryout and item analysis, and (4) Test validation. This preliminary finding, however, discussed results up to Phase 3 of the test development—test tryout and item analysis phase. Item response theory (IRT) analysis using Samejima's graded response model (GRM) of IRT for polytomous items recorded a total of 286 items (143 English items and 143 Malay items) with appropriate item discrimination index and reliability values, namely, the Cronbach alphas and Equivalence coefficients. Further efforts are needed to validate the items for a full development of an indigenous work-based personality test that can be used for work-related applications.*

**Keywords:** test development, work-based personality, psycholexical approach, Malay personality taxonomy, item response theory.

### **INTRODUCTION**

It is a common practice among researchers and practitioners to adopt established personality tests such as the Minnesota Multiphasic Personality Inventory (MMPI), California Psychological Inventory (CPI), NEO PI-R, and the 16 Personality Factor (16 PF) scale mostly developed in English-speaking countries, e.g., United States to be used in their own countries (Schmit, Khim & Robie, 2000; Sue & Chang, 2003; Cheung, Cheung, Zhang & Wada, 2003). This practice known as imposed-etic strategy (Berry, 1989) is usually carried out by translation. It offers relatively good evidence that the personality test translated demonstrated similar psychometric properties across cultures in terms of validity and reliability values (see McCrae & Costa, 1997; Katigbak, Church & Akamine, 1996). This strategy, however, is not without its own limitations. Schmit et al (2000) has argued that the imposed-etic strategy by translating personality tests imposes threat to a test's construct validity because the expression of personality may differ across cultures although personality is found cross-culturally similar. The authors further added, a personality test translated into different languages may leave one uncertain of its comparability.

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A culturally-valid personality measure can be developed using the lexical method where words in a given language are used as a guide to discover personality traits and personality taxonomies—often interchangeably termed as personality model and personality factor structure (Saucier & Goldberg, 1996a; 1996b). Different lexical sources such as dictionary encompasses basic parts of speech e.g., nouns, adjectives, adverbs, verbs, as well as popular sayings like the proverbs have been a useful source of lexicon for personality descriptive terms relevant to a particular culture and language (Ashton, Lee, de Vries, Perugini, Gnisci, & Sergi, 2006; Ashton, Lee, Perugini, Szarota, de Vries, Di Blas, & De Raad, 2004; Haas, 2002). The lexical method matches the imposed-emic approach in studying personality where personality is comprehended within a culture instead of being imported from other cultures i.e., the imposed-etic approach (Berry, 1969, 1989). This derived emic approach in studying personality can then be subjected to a combined emic-etic analysis to enable the universality of the personality measure (Berry, 1989; Cheung, van de Vijver & Leong, 2011; Church & Katigbak, 1988; Davidson, Jaccard, Traindis, Morales & Diaz-Guerrero, 1976).

Furthermore, as much as a universal measure of personality for use in multiple countries is highly desirable, its application in occupational context is also highly sought after (Kroeck & Brown, 2004; Salgado, 2003). However, there is very little coverage and adaptability of personality instrument for occupational context (Schmit et al., 2000). This means, there is a need to develop a culturally-valid personality measure and also a contextually-valid personality measure i.e., a work-based personality measure. Malaysia is yet to own its own solid indigenous personality taxonomy. A pioneering study by Fauzaman (2015), however, has founded a Malay personality taxonomy. This taxonomy has been further researched using proverbs lexicon and was further refined (Taib & Fauzaman, 2018a; 2018b). The Malay personality taxonomy consists of six factors, namely, Nefarious, Emotionality, Virtues, Indulgence, eXtraversion and Accommodative. The present research, therefore, aims to develop an indigenous measure of personality, specifically a work-based personality test based on the Malay personality taxonomy.

***Research Objectives & Research Questions***

This research is driven by two primary objectives. The first aim is to develop a work-based personality inventory using indigenous Malay personality taxonomy; in English and Malay versions. Secondly, to develop and to tryout the English and Malay items of the work-based personality test. These objectives are specified in the form of the following research questions:

**Research Question 1:** Will the items written in English and Malay for the Malay work-based personality test demonstrate appropriate item discrimination index?

**Research Question 2:** Will items written in English and Malay for the Malay work-based personality test demonstrate appropriate item equivalence reliability and internal reliability?

**METHOD**

In the framework of test development, methods and results are usually reported according to the stages and standards involved in test development exercise. The indigenous Malay work-based personality inventory was developed using the standards and guidelines outlined by the *American Psychological Association (APA) Standards of Educational and Psychological Testing* (2014) and the *stages of test development* by Cohen and Swerdlik (2017). Based on these two guidelines, the development of this work-based personality was, thus, designed in four major

phases of test development, namely: (a) Phase 1: Test conceptualization, (b) Phase 2: Test construction, (c) Phase 3: Test tryout and item analysis, and (d) Phase 4: Test validation. This preliminary finding, however, presented results and discussion up to only Phase 3, i.e., Test Tryout and item analysis. Accordingly, sample, measures/materials and procedures involved in Phase 1 to Phase 3, as well as results for each phase are presented.

**Phase 1: Test Conceptualization**

The indigenous Malay work-based personality was conceptualized using personality taxonomy derived from the psycholexical studies of the Malay personality factor structure. This personality taxonomy was founded on three psycholexical studies conducted by Fauzaman (2015) and Taib and Fauzaman (2018a; 2018b). The former is a pioneering study and the very first psycholexical study conducted to explore the Malay personality factor structure using Malay adjectives lexicon and the latter studies replicated and refined the original study by replicating the use of Malay adjectives lexicon and extended the lexicon to the Malay proverbs lexicon. Malay personality taxonomy consists of six personality factors, namely; Nefarious, Emotionality, Virtues, Indulgence, eXtraversion (represented by ‘X’), and Accommodative named and abbreviated as NEVIXA, four of which are very unique to the Malays. Only Emotionality and Extraversion personality domains from the Big-5 and Big-6 models mapped quite well on the Malay personality taxonomy. They are, nevertheless, slightly different. The following Table 1 summarizes the factor structure of the Malay personality taxonomy used as the founding taxonomy for the development of Malay work-based personality inventory.

Table 1. The Malay Personality Taxonomy

Malay Personality Domains	Key Traits
<p><b>1. Nefarious (N)</b>                      The extent to which an individual considers him/herself as superior, powerful, entitled to privileges, will manipulate, flatter and betray for personal gain, inclined to break rules and will do just enough to get by.</p>	<p><b>Key traits</b> (high vs. low score):</p> <ul style="list-style-type: none"> <li>▪ <b>Insincerity</b> (being manipulative and flattery vs. unwilling to flatter nor manipulate others)</li> <li>▪ <b>Unfairness</b> (willingness to cheat and steal vs. unwillingness to cheat)</li> <li>▪ <b>Greed</b> (enjoying privileges and motivated by money and luxuries vs. uninterested with luxuries and high status)</li> <li>▪ <b>Arrogance</b> (feeling superior vs. feeling ordinary)</li> </ul>
<p><b>2. Emotionality (E)</b>                      The extent to which an individual considers him/herself as a person who always worry about things, often feel blue, panic easily, fearful, easily intimidated, emotional and easily irritated.</p>	<p><b>Key traits</b> (high vs. low score):</p> <ul style="list-style-type: none"> <li>▪ <b>Fearful</b> (being timid vs. brave and tough)</li> <li>▪ <b>Anxiety</b> (being anxious vs. feeling little stress)</li> <li>▪ <b>Temperamental</b> (being easily annoyed vs. rarely get irritated)</li> <li>▪ <b>Vulnerability</b> (being panic easily vs. remain calm under pressure)</li> </ul>
<p><b>3. Virtues (V)</b></p>	<p><b>Key traits</b> (high vs. low score):</p>

<b>Malay Personality Domains</b>	<b>Key Traits</b>
<p>The extent to which a person considers him/herself as a discipline and ethical individual with principles, respect and follow rules, get chores done right away, committed, cautious, diligent, patient, easily resist temptations, remain calm under pressure and always keep things in order.</p>	<ul style="list-style-type: none"> <li>▪ <b>Achievement-striving</b> (working hard vs. doing just enough to get by)</li> <li>▪ <b>Self-discipline</b> (getting chores done right away vs. waste my time)</li> <li>▪ <b>Dutifulness</b> (following the rules vs. breaking rules)</li> <li>▪ <b>Orderliness</b> (like order vs. leave a mess)</li> <li>▪ <b>Cautiousness</b> (avoiding mistakes vs. rushing into things)</li> <li>▪ <b>Competence</b> (completing tasks successfully vs. misjudging situations)</li> </ul>
<p><b>4. Indulgence (I)</b> The extent to which a person considers him/herself to have likeable qualities, generally satisfied with him/herself, and feel positively about his/her physical appearance, public image, intellectuality, performance and achievements.</p>	<p><b>Key traits</b> (high vs. low score):</p> <ul style="list-style-type: none"> <li>▪ <b>Social self-esteem</b> (feeling popular and likeable vs. feeling unpopular)</li> </ul>
<p><b>5. eXtraversion (X)</b> The extent to which an individual considers him/herself as an active, energetic, and creative person, usually experience a sense of optimism, enthusiasm and high spirits, and very determined and persistent to achieve his/her dreams.</p>	<p><b>Key traits</b> (high vs. low score):</p> <ul style="list-style-type: none"> <li>▪ <b>Liveliness</b> (being energetic and enthusiastic vs. not especially cheerful)</li> <li>▪ <b>Creativity</b> (being innovative vs. little inclination to innovation)</li> <li>▪ <b>Assertiveness</b> (taking charge vs. waiting for others to lead the way)</li> <li>▪ <b>Active</b> (always making him/herself busy vs. like to take it easy)</li> </ul>
<p><b>6. Accommodative (A)</b> The extent to which a person considers him/herself as cooperative to others, approachable, able to make people feel welcome, avoid causing harm and always react with generosity, able to sympathize and empathize, flexible and able to compromise to accommodate others' suggestions.</p>	<p><b>Key traits</b> (high vs. low score)</p> <ul style="list-style-type: none"> <li>▪ <b>Altruism</b> (being kind-hearted and make people feel welcome vs. hard-hearted)</li> <li>▪ <b>Flexibility</b> (being accommodative vs. stubborn)</li> <li>▪ <b>Cooperative</b> (being easy to satisfy vs. having a sharp tongue)</li> <li>▪ <b>Tender-mindedness</b> (being sympathetic and emphatic vs. unfeeling)</li> <li>▪ <b>Friendliness</b> (making friends easily vs. am hard to get to know)</li> </ul>

## **Phase 2: Test Construction**

The construction of the indigenous Malay work-based personality inventory involved the following test construction process or stages, namely: (a) item writing, (b) item calibration, (c) content validation, (d) item randomization, and finally (e) editorial review.

### ***Stage 1: Item writing***

**Sample.** Item writers (n=10, including the authors) were recruited for the item writing exercise. Three item writers were hired from the *Behavioural Science Research Unit of the Malaysia Institute of Road Safety (MIROS)*, five were academics with psychology and/or psychometrics background and two item writers were academics with linguistics background from the *International Islamic University Malaysia (IIUM)*. The item writers were merited with monetary reward.

**Materials.** Each item writer was provided with conceptual definition, description and factor loadings of adjectival Malay personality factor structure and proverbial Malay personality factor structure, and job performance model by Campbell and colleagues (1993; 1996) for use in item contextualization, as well as, an item writing sheet.

**Procedure.** All item writers were briefed on the research project, their role in the research and their main tasks. Each item writer was tasked to write 30 Malay items and 30 English items for each of the Malay personality domain with a total target of 3,600 items (1,800 for Malay and 1,800 for English items, respectively).

**Results.** The final number of items received from all the item writers was less than the targeted number of items, with a total of 1,440 Malay items and 1,440 English items, i.e., 20% lesser than the initial targeted number of items. In total, there were 480 items for each of the personality domain in Malay personality taxonomy (240 English items and 240 Malay items for each personality factor).

### ***Stage 2: Item calibration***

**Sample.** Author and supervisor who were well-versed with the Malay personality taxonomy were regarded as the subject matter expert for the item calibration exercise.

**Materials.** Items written by item writers in item writing exercise consisted of 1,440 English items and 1,440 Malay items (n=2,880)

**Procedure.** Subject matter experts sat for several meetings to check on items redundancies, sensitivity and relevancy. Guided by procedure outlined in Schmit et al (2000), items were dropped, if they were (a) redundant with one another—only the one with clear wording was kept, (b) related to more than one of the factors/scales, (c) culturally bound, (d) bias towards certain gender, (e) contextually problematic items, i.e., not related to work context, (f) inappropriate for any levels of job, and (g) if the items were not related to job performance.

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**Results.** Seven hundred and four items were dropped upon completion of the item calibration exercise. The final number of items after the item calibration exercise was 1,312 items (656 English items and 656 Malay items).

***Stage 3: Content validation***

**Sample.** Eleven panellists were hired for the content validation exercise. The panellists were selected with a consideration of their psychometrics and psychology background. They were psychology postgraduate students registered for advanced psychometrics course at the *International Islamic University Malaysia* (IIUM). All panellists for the content validation exercise were merited with monetary reward.

**Materials.** The panellists were provided with calibrated items (n=1,312; 656 Malay items and 656 English items) finalized in Stage 2.

**Procedure.** The panellists for the content validation exercise were briefed on the research project, their role in the research project and their main task, i.e., to rate on the essentiality (content validity) of each item to the personality taxonomy quantitatively and qualitatively. For quantitative evaluation, the panellists rated the essentiality of the items in measuring the personality construct by rating whether the item is *essential*, *useful but not essential* or *not necessary*. The essentiality of the items was analyzed using Lawshe (as cited in Cohen & Swerdlik, 2017) content validity ratio (CVR) formula:  $CVR = [(E - (N/2)) / (N/2)]$ . E = number of panellists indicating the item is essential and N = total number of panelists.

Given the total number of panellists of 11, the items with  $CVR < 0.59$  was deleted. This is done in accordance with the rationale outlined by Lawshe, that: "... if more than half the panellists indicate that an item is essential, that item has at least some content validity. Greater levels of content validity exist as larger numbers of panellists agree that a particular item is essential" (Cohen & Swerdlik, 2017, p. 190). The panellists were also asked to qualitatively evaluate the items in terms of item's clarity in measuring the construct and to provide suggestions on the wording in order to improve the item's clarity and readability should the items appear unclear.

**Results.** Total items with  $CVR \geq 0.59$  and improved clarity in terms of wording and readability were 1,076 items (538 English items and 538 Malay items).

***Stage 4 & Stage 5: Item randomization and item editorial review***

**Sample.** Three subject matter experts (including the authors) who were well-versed with the Malay personality taxonomy were hired for the item randomization exercise. For item editorial review exercise, two proofreaders; both were Malay native speakers with one an expert in Malay and another one an expert in English were hired to proofread the items upon completion of the item randomization exercise.

**Materials.** List of items that were content validated from Stage 3 (n=1,076 items; 538 Malay items and 538 English items).

**Procedure.** The items were randomized and subject matter experts were tasked to sort back the items into their respective personality domain. Items that were placed to different personality domain from its initial personality domain and items that were placed into two or more personality domain were deleted. The sorted items were then sent to language proofreaders (they were English and Malay lecturers), for proofreading.

**Results.** A total of 276 items (138 English items and 138 Malay items) were wrongly placed from their initial personality domain and/or placed at two or more personality domain from the list of items for that have been content validated. The final number of items sent for proofreading and accordingly made up the items for the test blueprint was 800 items (400 English items and 400 English items). These final 800 items were included in the test prototype ready for a tryout.

### **Phase 3: Test Tryout and Item Analysis**

**Sample.** Psychology undergraduates were hired as enumerators (n=21) tasked to recruit the participants for this test tryout phase and participants were sampled using snowball sampling technique. The final number of participants was 777.

**Materials.** Items that were developed, calibrated, edited, randomized and proofread from Phase 2 (n=800; 400 Malay items and 400 English items) were tried-out using a 5-point Likert scale where 1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neutral*, 4 = *Agree* and 5 = *Strongly Agree*.

**Procedure.** All 800 items for the Malay work-based personality test blueprint were tried out using online survey. The enumerators were first briefed on how to approach potential participants and they were instructed to specifically sample working adults who are currently employed for the tryout of the Malay work-based personality test. The enumerators were provided with link to the online survey, to be e-mailed to potential participants. Both enumerators and participants were merited with monetary rewards. Items were analyzed using item response theory (IRT) modelling. Specifically, in view of the rating scale used, the items were analyzed using Samejima's graded response model (GRM) of IRT modelling for polytomous items in order to obtain item discrimination index.

**Results.** Results showed that out of 800 items, only 286 items (143 English items and 143 Malay items) recorded appropriate discrimination index (DI), i.e., the DI must be  $\geq 1.0$  (An & Yung, 2014) for both English and Malay items (see Appendix A). Items with  $DI < 1.0$  for both the Malay and English version of the items were deleted. In terms of equivalence reliability, the items demonstrated acceptable equivalent between Malay and English items with correlations ranging from  $r = .67$  to  $r = 1.0$ . Internal reliability across all scales were excellent with Cronbach alphas of .89 and above (see Table 2 below)

Table 2. No. items with  $DI \geq 1.0$  and the Cronbach Alpha for Each Scale

<b>Personality Domain</b>	<b>No. of Items</b>	<b><math>\alpha</math> for English</b>	<b><math>\alpha</math> for Malay</b>
1. Nefarious	23	.89	.90

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<b>Personality Domain</b>	<b>No. of Items</b>	<b><math>\alpha</math> for English</b>	<b><math>\alpha</math> for Malay</b>
2. Emotionality	29	.91	.94
3. Virtues	37	.93	.95
4. Indulgence	21	.90	.91
5. eXtraversion	11	.96	.97
6. Accommodative	22	.92	.98

*Note.* DI=Item Discrimination Index,  $\alpha$ =Cronbach alpha

### **DISCUSSION**

The overall aim of this test development project is to produce a culturally valid measure of work-based personality. This preliminary study was set in motion for a full test development of a work-based personality test founded on indigenous Malay personality factor structure. The test will have two unique features that will makes it unique compared to the existing and previously developed personality tests. Firstly, this personality is neither developed based on items or factor structure of personality tests that have been developed from another country nor did it based on transportation and translation of English-based personality tests into Malay. Rather, this personality test is developed form a ground zero, with items constructed in Malay as well as English based on empirically and indigenously founded Malay personality factor structure. Secondly, the test was developed specifically for work-related applications (e.g., personnel selection, training, development and coaching). To meet this feature, job performance model was used in the item writing process, hence, work context was implied in the items developed. Additionally, at this stage, the test has demonstrated acceptable equivalence reliability and appropriate internal consistency.

The total number of items with appropriate discrimination index however, is a concern, especially when they are scrutinized by scale/personality factor. The items that have demonstrated adequate discrimination index were only 286 items. Two-hundred and eighty-six items with some of the scales consisted of less than 20 items may not be sufficient for use in the next stage of test development, that is, test validation. Considering the idea of having at least 20 items for each scale representing each factor in Malay personality taxonomy, at least 40 items per scale will be needed for the test validation exercise. Thus, several considerations need to be taken into account. First, items with either Malay or English items with discrimination index <1.0 shall be re-considered. Second, these re-considered items need to be improved on its wordings by hiring subject matter expert(s) to assist in reviewing the wording of these items in order to make sure that the meaning between the Malay version and the English version of the items were similar.

The test development effort thus far by no means mark a finalized version of the personality test. This study needs to be continued with test validation and test revision phase—the final phase of test development process in order to have a finalized and valid version of a work-based



personality test. As noted earlier, the items tried out in this study need to be further improved on its wording before the items can be validated. There is also a need to validate the items beyond item discrimination index (e.g., item difficulty and guessing parameter) in order for the personality test to be considered valid at the item-level (Baker, 2001; Lord, 2012). Future study, thus, shall also examine the items' guessing parameter and difficulty indices, using for example Samejima's (1969; 2016) three-parameter IRT modelling for polytomous items. There is also a need to examine the validity of the Malay work-based personality test at a test-level e.g., construct validity (Cohen & Swerdlik, 2017). Construct validity can be established by correlating each personality factor with constructs measuring job performance and organizational outcomes such as organizational citizenship behaviour, counterproductive work behaviour, job satisfaction, work motivation and organizational commitment. This construct validation will establish the extent to which the personality constructs theoretically link with similar constructs vital in work context.

In conclusion, this initial effort has taken place with the primary aim of having a culturally valid and work context valid personality test. This effort shall not stop here and shall be continued in order to have a work-based personality test that possess sound psychometric properties at both item- and test-levels. With items constructed in Malay and English, the test can be administered in either Malay or English, for use in human resource and organizational functions such as for prediction of future job performance in hiring process.

## **REFERENCES**

- American Psychological Association (2014). *Standards for educational and psychological testing*. Amer Educational Research.
- An, X., & Yung, Y. F. (2014). Item response theory: What it is and how you can use the IRT procedure to apply it. *SAS Institute Inc. SAS364-2014*.
- Ashton, M. C., Lee, K., de Vries, R. E., Perugini, M., Gnisci, A., & Sergi, I. (2006). The HEXACO model of personality structure and indigenous lexical personality dimensions in Italian, Dutch, and English. *Journal of Research in Personality, 40*(6), 851-875.
- Ashton, M. C., Lee, K., Perugini, M., Szarota, P., de Vries, R. E., Di Blas, L., & De Raad, B. (2004). A six-factor structure of personality-descriptive adjectives: Solutions from psycholexical studies in seven languages. *Journal of Personality and Social Psychology, 86*(2), 356–366.
- Baker, F. B. (2001). *The basics of item response theory*. Washington, DC: ERIC Publications.
- Berry, J. W. (1969). On cross-cultural comparability. *International Journal of Psychology, 4*(2), 199-128.
- Berry, J. W. (1989). Imposed etics-emics-derived etics: The operationalization of a compelling idea. *International Journal of Psychology, 24*(6), 721-735.

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- Cheung, F. M., Cheung, S. F., Wada, S., Zhang, J. (2003). Indigenous measure of personality assessment in Asian countries: A review. *Psychological Assessment, 15*(3), 280-289.
- Cheung, F. M., Leung, K., Zhang, J. X., Sun, H. F., Gan, Y. Q., Song, W. Z., & Xie, D. (2001). Indigenous Chinese personality constructs: Is the five-factor model complete?. *Journal of cross-cultural psychology, 32*(4), 407-433.
- Church, A. T., & Katigbak, M. S. (1988). The emic strategy in the identification and assessment of personality dimensions in a non-Western culture: Rationale, steps, and a Philippine illustration. *Journal of Cross-Cultural Psychology, 19*(2), 140-163.
- Cohen, R. J., & Swerdlik, M. E. (2017). *Psychological testing and assessment: An introduction to tests and measurement*. Mountain View, CA: Mayfield Publishing Company
- Davidson, A. R., Jaccard, J. J., Triandis, H. C., Morales, M. L., & Diaz-Guerrero, R. (1976). Cross-cultural model testing: Toward a solution of the etic-emic dilemma. *International Journal of Psychology, 11*(1), 1-13.
- Fauzaman (2015). *Exploring Malay personality structure using a combined emic-etic approach* (Unpublished Doctoral Thesis). International Islamic University Malaysia, Kuala Lumpur, Malaysia.
- Haas, H. A. (2002). Extending the search for folk personality constructs: The dimensionality of the personality-relevant proverb domain. *Journal of Personality and Social Psychology, 82*(4), 594-609.
- Katigbak, M. S., Church, A. T., & Akamine, T. X. (1996). Cross-cultural generalizability of personality dimensions: Relating indigenous and imported dimensions in two cultures. *Journal of Personality and Social Psychology, 70*(1), 99-114.
- Kroeck, K. G., & Brown, K. W. (2004). Work applications of the big five model of personality. In J. C. Thomas & H. Michael (Eds.) *Comprehensive handbook of psychological assessment. (Volume 4: Industrial and Organizational Assessment)* (pp. 109-130). Hoboken, NJ: John Wiley.
- Lord, F. M. (2012). *Applications of item response theory to practical testing problems*. Routledge.
- McCrae, R. R., & Costa, P. T. (1997). Personality Trait Structure as a Human Universal. *American Psychologist, 52*(5), 509-516.
- Salgado, J. F. (2003). Predicting job performance using FFM and non-FFM personality measures. *Journal of Occupational and Organizational Psychology, 76*(3), 323-346.
- Samejima, F. (1969). Estimation of latent ability using a response pattern of graded scores. *Psychometrika, 34*(1), 1-97.

- Samejima, F. (2016). Graded response models. In *Handbook of Item Response Theory, Volume One* (pp. 123-136). Chapman and Hall/CRC.
- Saucier, G., & Goldberg, L. R. (1996a). Evidence for the Big Five in analyses of familiar English personality adjectives. *European Journal of Personality, 10*(1), 61-77.
- Saucier, G., & Goldberg, L. R. (1996b). The Language of Personality: Lexical Perspectives. *The five-factor model of personality: Theoretical perspectives (1996)*, 21-50.
- Schmit, M. J., Ryan, A. M., Stierwalt, S. L., & Powell, A. B. (1995). Frame-of-reference effects on personality scale scores and criterion-related validity. *Journal of Applied Psychology, 80*(5), 607.
- Sue, S., & Chang, J. (2003). The state of psychological assessment in Asia. *Psychological Assessment, 15*(3), 306-310.
- Taib, M. M., & Fauzaman, J. (July, 2018). *Development and validation of the Malay personality adjectives checklist (MPAC): Re-analysis and refinement of adjectival Malay personality factor*. Paper presented at Asian Association of Indigenous and Cultural Psychology 2018 (AAICP 2018) on 25<sup>th</sup> to 27<sup>th</sup> July 2018 at Kota Kinabalu, Sabah, Malaysia.
- Taib, M. M., & Fauzaman, J. (October, 2018). *Exploring Malay personality factor structure using Malay proverbs: A psycholexical approach*. Paper presented at 15th International Postgraduate Colloquium 2018 (IPRC 2018) on 3rd to 4th October at Kuala Lumpur, Malaysia.

**APPENDIX A: SAMPLE OF ITEMS WITH APPROPRIATE DISCRIMINATION INDEX**

<b>F</b>	<b>English Items</b>	<b><i>a</i></b>	<b>Malay Items</b>	<b><i>a</i></b>
N	I am willing to betray my colleagues for my job promotion.	1.55	<i>Saya sanggup mengkhianati rakan sekerja untuk mendapat kenaikan pangkat</i>	2.88
N	I believe political connections are more powerful than efforts for career success	2.41	<i>Saya percaya hubungan politik adalah lebih berkuasa daripada usaha dan kerja keras untuk berjaya dalam kerjaya</i>	2.25
N	I believe that it is acceptable to eliminate my competitors in the workplace through cheating.	1.72	<i>Saya percaya menyingkirkan pesaing di tempat kerja dengan cara menipu adalah dibolehkan.</i>	1.97
E	I am quick to be irritated with the weakness of my colleagues	1.22	<i>Saya mudah berasa jengkel dengan kelemahan rakan sekerja</i>	3.02
E	I am unable to think straight under stressful work-related situations	1.53	<i>Saya tidak dapat berfikir dengan baik dalam situasi kerja yang tertekan</i>	2.10
E	I am in constant fear of physical danger while completing work	1.52	<i>Saya sentiasa takut dengan bahaya yang berbentuk fizikal ketika menyelesaikan kerja</i>	1.89
V	I am uneasy with work tasks done hastily	1.92	<i>Saya kurang senang dengan hasil kerja yang diselesaikan dengan tergesa-gesa.</i>	2.47
V	I am used to set work targets for the day.	2.04	<i>Saya biasa menetapkan sasaran kerja setiap hari.</i>	2.75
V	I believe that rules and regulations at the workplace are meant to be followed and respected	1.41	<i>Saya percaya bahawa peraturan di tempat kerja perlu dipatuhi dan dihormati</i>	2.7
I	I believe that my current work achievements worth attention from others in my workplace.	2.32	<i>Saya percaya pencapaian semasa saya layak mendapat perhatian oleh orang lain ditempat kerja.</i>	1.80
I	I believe that my intellectuality worth to be utilised for attaining organisational goals	1.50	<i>Saya percaya bahawa kebijaksanaan saya berbaloi digunakan untuk mencapai matlamat organisasi</i>	3.11

<b>F</b>	<b>English Items</b>	<b><i>a</i></b>	<b>Malay Items</b>	<b><i>a</i></b>
I	I can captivate any audiences whenever I do work related presentation.	1.87	<i>Saya mampu membuatkan sesiapa sahaja dikalangan hadirin terpegun dengan pembentangan kerja saya</i>	2.30
X	I do not mind being chosen to lead my team.	2.55	<i>Saya tidak kisah jika dipilih sebagai ketua pasukan.</i>	2.06
X	I find satisfaction in bringing creative elements into my work-related tasks.	1.70	<i>Saya berpuas hati sekiranya dapat memasukkan elemen kreatif dalam tugasan kerja.</i>	4.61
X	I always find ways to make any office tool multifunctional	2.08	<i>Saya sentiasa mencari cara untuk mempelbagaikan fungsi sesuatu alat di pejabat</i>	2.47
A	I am very concerned with my colleagues' wellbeing.	2.62	<i>Saya sangat ambil berat akan kebajikan rakan sejawat.</i>	2.57
A	I am willing to coach any newbie.	2.07	<i>Saya sanggup membimbing pekerja-pekerja baharu</i>	2.14
A	I am willing to make time for my colleagues should they need my assistance.	2.10	<i>Saya sanggup memperuntukkan masa untuk rakan sekerja sekiranya mereka perlukan bantuan saya.</i>	2.10

*Note.* F=Personality Factor, N=Nefarious, E=Emotionality, V=Virtues, I=Indulgence, X=eXtraversion, A=Accommodative, and *a*=Item Discrimination Index