

A Look at Grit: A Study towards Malaysian Technical Instructors Performance Retention

Badaruddin Bin Ibrahim*, Nurul Haerani Binti Mohamad,
Azlihan Bin Abd Aziz, Mahadi Bin Kadir and
Zulisham Bin Abd Hamid

Abstract--- *Provide Abstract Maximum 200 words, One paragraph (Italic) The improvement of teachers' professionalism and quality should be prioritized to achieve Malaysia's Education Blueprint 2013-2025 goals. Grit can be an important factor in explaining the achievement and persistence in maintaining the expected quality of teacher performance. This study investigated Malaysian Technical Instructors and the grit needed to stay in the field especially in purifying the state's aspirations. The purpose of this study was to describe grittiness of technical instructors and determine if grit is associated with job performance retention based on age, education level and years of services. The data for this research was obtained through structured questionnaire adapted from Grit-S survey and involved 88 technical instructors from Malaysia Technical Institute under Rural Development Ministry of Malaysia. The study findings identified that grit: the power of passion and perseverance not associated for long lasting job performance retention among Malaysian Technical Instructors. More broadly, this study provides a qualitative and dimensional understanding of the phenomena of grit as related to job performance retention.*

Keywords--- *Grit, Job Performance Retention, Malaysian Technical Instructors.*

I. INTRODUCTION

Paragraph text/ Tables Figures etc. Recent years have seen a heightened interest on grit as predictor for job performance retention. Duckworth, Peterson, Matthews, Kelly [1] define grit as “perseverance and passion for long-term goals”, and they posit that these variables contribute to success in individuals. Past research on understanding core traits of successful individuals in maintaining job performance retention has been explored by Dweck [2], Borghans et al., [3] and Ferguson, Hitt, and Tambe, [4]. In economics, management, and psychology, research has explored by Borghans et al., [3] regarding cognitive ability and personality traits as “powerful predictor of economic outcomes” Studies on job performance retention point to a combination of innate passion and perseverance. Duckworth et al. [5] emphasize that being successful in job performance retention and thriving “can be defined either objectively or subjectively. Objective success entails doing well according to some common metric uniformly applied to all individuals in a society, whereas subjective success concerns an individual’s personal assessment of his or her life situation”.

Bujang and Yusof [6] stated that education also underpins the process of innovative and highly skilled human capital development which is a critical factor in supporting the social, cultural and economic growth of a country. As

Badaruddin Bin Ibrahim, Faculty of Technical and Vocational Education, Universiti Tun Hussein Onn Malaysia, Parit Raja, Batu Pahat, Johor, Malaysia. E-mail: badar@uthm.edu.my*

Nurul Haerani Binti Mohamad, Faculty of Technical and Vocational Education, Universiti Tun Hussein Onn Malaysia, Parit Raja, Batu Pahat, Johor, Malaysia.

Azlihan Bin Abd Aziz, Institut Kemahiran MARA Kuala Lumpur, Jalan Belangkas, Kampung Pandan, Kuala Lumpur, Malaysia.

Mahadi Bin Kadir, Institut Kemahiran MARA Kuala Lumpur, Jalan Belangkas, Kampung Pandan, Kuala Lumpur, Malaysia.
Zulisham Bin Abd Hamid, Institut Kemahiran MARA Kuala Lumpur, Jalan Belangkas, Kampung Pandan, Kuala Lumpur, Malaysia.

such, the Malaysian government has worked hard to realize the wish through the fourth shift, Malaysia's Education Blueprint 2013-2025 [7] which transforms the teaching into an optional profession. The improvement of teachers' professionalism and quality should be prioritized to achieve Malaysia's Education Blueprint 2013-2025 goals 2013-2025. Bowman, Hill, Denson & Bronkema [8], Strayhorn [9] and Mahbib et al. [10] claims that grit can be an important factor in explaining the achievement and persistence in maintaining the expected quality of teacher performance. Therefore this study quantitatively examined the relationship between grit and job performance retention among technical instructors in Malaysia based on age, education level and years of services.

II. LITERATURE REVIEW

2.1 Grit as a Theoretically Relevant Predictor of Work Performance Retention

This portion of the literature review will examine research regarding grit's prediction of job performance and retention. Duckworth et al. [1] introduced the term 'grit,' refers to a non-cognitive trait defined as passion and perseverance towards long-term goals. Duckworth and Quinn [11] mention that it is operationally conceptualized as consistency of interest and perseverance of effort. Based on Credé, Tynan and Harms [12] the consistency of interest refers to sticking to the same goal and interest in a particular domain whereas perseverance of effort is the tendency to work strenuously in spite of setbacks along the way.

Theoretically, a difficult condition is necessary to differentiate between individuals with varying levels of grit [1]. Lucas, Gratch, Cheng, and Marsella [13] tested empirically whether grittier individuals differ from their less gritty counterparts only under adverse situations. It was found that grittier individuals persisted on solving supposedly unsolvable problems and not succumbing to difficulties. Also, grittier individuals exerted more effort despite failing at the task and without changing their direction.

Duckworth and Gross [14] proposed a hierarchical goal framework to explain the underlying mechanism of grit. Grit entails having a dominant superordinate goal that has lower-order goals closely aligned with it that in turn, engender effective actions that drive the person working tenaciously toward the superordinate goal over long-term. Based on the framework, an existing lower-order goal is hindered in the encounter of setbacks. Therefore, grit functions in a way that the superordinate goal drives the gritty individual to generate alternate lower-order goals or actions in the same domain of interest while suppressing rival superordinate goals, thus staying on the same course. In the occupational domain, Suzuki, Tamesue, Asahi, and Ishikawa [15] found that grittier employees were more likely to show higher work engagement than less gritty colleagues. Grittier individuals also change career less frequently [1] and have lower intention to switch careers [16].

Furthermore, grit was associated with greater likelihood of staying in the same job [11] [17] [18]. In contrast, Clark [19] showed that grit did not significantly associate with work performance and job retention. It could be because separate dimensions of grit, such as passion and perseverance have different influences on the outcomes. In the study of Mooradian, Matzler, Uzelac, and Bauer [20], perseverance of effort was positively related to innovation entrepreneurial success, whereas consistency of interest, in other words passion positively influenced aspect of performance.

Datu, Valdez, and King [21] also found that only perseverance of effort positively predicted adaptive well-being and academic outcomes, whereas consistency of interest seemed to play a less significant role. Nevertheless, the research on grit is still at its infancy stage and studies on grit should be replicated.

III. NULL HYPOTHESES

- There is a significant relationship between age and level of grit toward job performance retention among technical instructors.
- There is a significant relationship between education level and level of grit toward job performance retention among technical instructors.
- There is a significant relationship between years of services and level of grit toward job performance retention among technical instructors.

IV. METHODOLOGY/MATERIALS

The purpose of this study was describe grittiness of technical instructors in Malaysia from Malaysian public technical institutions and determine if grit is associated with job performance retention based on age, education level and years of services. The sample consisted of N = 88 technical instructors at public Malaysia Technical Institution under Rural Development Ministry.

The data were obtained through the distribution of questionnaires adapted from 'Short Grit Scale, Grit-S' [11]. In accordance with the original version, a 5-point Likert scale was chosen as the response format for the Malay version of the Grit-S (*1 = very much like me to 5 = not at all like me*).

The Grit-S instrument demonstrated acceptable reliability in our sample with Cronbach's alpha of .67 (See Table 1).

Table 1: Reliability Statistic of Grit-Score (Grit-S)

<i>Cronbach's Alpha</i>	<i>N of Items</i>
.67	8

The purpose of this instrument was to measure an individual's grittiness [11]. The Grit-S scale is a shorter version of the original validated instrument [1], used to determine an individual's grittiness [11]. The instrument was developed as a valid and reliable assessment in order to measure an individual's self-report of grit.

The instrument has been used in numerous studies [11] [21] [22]. The Grit-S consists of eight questions. The instrument utilizes a five-point Likert scale that includes a range of five responses: very much like me, mostly like me, somewhat like me, not much like me, and not like me at all.

Questions 2, 4, 7, and 8 measure the sub score perseverance of effort, which was developed from the original Big Five Inventory to measure an individual's will to continue toward a goal [23]. Questions 1, 3, 5, and 6 measure the sub score consistency of interest, which was also developed from the Big Five Inventory to measure an individual's will to continue toward a goal for the long term [23]. Table 2 shows the detail of the instrument.

Table 2: Grit-S Subscales and Scoring

<i>Items</i>	<i>Response Option and Scoring</i>
<i>Consistency of Interest</i>	
1- New ideas and projects sometimes distract me from previous ones.	1=Very much like me; 2=Mostly like me; 3=Somewhat like me; 4=Not Much like me; 5=Not like me at all
3- I have been obsessed with a certain idea or project for a short time but later lost interest.	
5- I often set a goal but later choose to pursue a different one.*	
6- I have difficulty maintaining my focus on projects that take more than a few months to complete.*	
<i>Perseverance of Effort</i>	
2- Setbacks don't discourage me.	5=Very much like me; 4=Mostly like me; 3=Somewhat like me; 2=Not Much like me; 1=Not like me at all
4- I am a hard worker.	
7- I finish whatever I begin.	
8- I am diligent.	

The highest possible combined overall score on the Grit-S is 5 (extremely gritty), and the lowest score is 1 (not at all gritty). The instrument is scored by collecting the initial highest possible score (between 8 and 40 points) and dividing it by the total number of questions, which is eight [11]. For this study's purpose, "grittiest" refers to those participants whose grit score falls within the 70th percentile and above according to data drawn from Duckworth's analysis of a large sample of adult Americans; "less gritty" refers to those who fall below the 70th percentile (See Table 3).

Table 3: Percentile Grit Scores of Large Sample of American Adults (Duckworth, 2016)

<i>Percentile</i>	<i>Grit Score</i>
10%	2.5
20%	3.0
30%	3.3
40%	3.5
50%	3.8
60%	3.9
70%	4.1
80%	4.3
90%	4.5
95%	4.7
99%	4.9

The administration of the questionnaire took approximately 15 min. The data were analyzed using the PSPPIRE software based on descriptive and inferential analysis procedures.

V. RESULTS AND FINDINGS

4.1 Sample Characteristics

In this sample, 82.95% (n = 73) of participants were male, and 15% (n = 15) were female. The average age of participants was 31 - 40 (54.55%). Mostly participants was diploma holders, 50.00%, (n = 44). Only 2.27% (n = 2) participant having Malaysia Skills Certificate (SKM). The sample was primarily from position of Asst. Vocational Training Officer 69.32%, (n = 61), and Vocational Training Officer was 30.68%, n = 27). The average year of services participant had been working was 11-15 (38.64%). See Table 4 for demographic information about this sample.

Table 4: Demographic Characteristics of Sample (N = 88)

<i>Characteristic</i>	<i>Sample (n)</i>	<i>Percent (%)</i>
Gender		
Male	73	82.95
Female	15	17.05
Age		
20-30 years old	2	1.14
31-40 years old	48	54.55
41-50 years old	29	34.09
51-60 years old	9	10.23
Education Level		
Master	8	9.09
Degree	29	32.95
Diploma	44	50.00
SPM	3	3.41
Certificate	2	2.27
SKM	2	2.27
Position		
Asst. Vocational Training Officer	61	69.32
Vocational Training Officer	27	30.68
Years of Services		
<5 years	5	5.68
6-10 years	13	14.77
11-15 years	34	38.64
16-20 years	19	21.64
21-25 years	12	13.64
>26 years	5	5.68

4.2 Grit Score (Grit-S) of Participant

For this study’s purpose, “grittiest” refers to those participants whose grit score falls within the 70th percentile and above according to data drawn from Duckworth’s analysis of a large sample of adult Americans; “less gritty” refers to those who fall below the 70th percentile. The participants grit scores ranged from 2.25 to 4.9 out of 5.000 with M of 3.68, SD = 0.91. Researchers used a comparative measure to determine the participants to be an overall “gritty population” and categorize the participants into groups of “gritty” and “less gritty.” Table 5, below, compares the range of the 88 participant’s grit scores to the percentage of the large adult population sample in Table 3.

Table 5: Percentile of Grit Scores of Participant as Compared to Large Sample of American Adults

<i>Adult Sample Percentile</i>	<i>Grit Score</i>	<i>Participants Grit Score</i>	<i>Total Participants</i>	<i>% Participants</i>	<i>Operational Definition</i>
99%	4.9	2	18	17.05%	Grittiest
	4.8	0			
95%	4.7	1			
90%	4.5	2			
	4.4	5			
80%	4.3	3			
70%	4.1	5			
	4.0	6	70	82.95%	Less Gritty
60%	3.9	9			
50%	3.8	10			
	3.6	10			
40%	3.5	12			
	3.4	2			
30%	3.3	8			
20%	3.0	9			
	2.8	1			
	2.6	1			
10%	2.5	2			
Total Participants		88			

Table 6 shows that only 18 (17.05%) out of 88 of the participants have a grit score of 4.1 or higher, 70% scoring above the adult sample population, confirming the assumption that this is clearly a less gritty population.

Table 6: Summary of Range of Participants' Grit as Compared to Adult Sample Percentile

<i>Grit-S Score</i>	<i>Participants</i>	<i>% of Participants</i>	<i>Percentile</i>
4.1-4.9	18	17.05%	70 and above
2.5-4.0	70	82.95%	20 to 70
Total	88	100%	-

4.3 Correlation between Grit and Successful Career Development

To confirm the conclusion drawn from previous data, researchers conducted Pearson's r correlation analyses between the predictor and each outcome variable for the Grit-S and the career development variables (age, education level and years of services). See Table 7 below for Pearson's r results. The results of the Pearson's correlation analyses were contrary to the predicted relationship based on past research that indicated a relationship between grit and job performance retention factors (age, education level and years of services).

Correlation Coefficients were computed among the variables as shown in Table 7. The result shows that low correlation between Grit-S and job performance retention variables of age ($r = -.12, p = 0.268 > 0.05$). Next, a negative significant correlation also found between Grit-S and job performance retention variables of education level ($r = -.14, p = 0.192 > 0.05$). Grit-S and job performance retention variables of years of services ($r = -.13, p = 0.237 > 0.05$) consistently shows low correlation. Overall, results indicated that this sample have low levels of grit and job performance retentions. The average Grit-S score was 3.5 and there were also the correlation analyses demonstrated that grit did not show a positive correlation with job performance retention.

Table 7: Correlation between Grit-S and Age

		<i>Age</i>	<i>Grit-Score (Grit-S)</i>
Age	Pearson Correlation	1.00	-.12
	Sig. (2-tailed)		.268
	N	88	88
Grit-Score (Grit-S)	Pearson Correlation	-.12	1.00
	Sig. (2-tailed)	2.68	
	N	88	88
		Education Level	Grit-Score (Grit-S)
Education Level	Pearson Correlation	1.00	-.14
	Sig. (2-tailed)		.192
	N	88	88
Grit-Score (Grit-S)	Pearson Correlation	-.14	1.00
	Sig. (2-tailed)	.192	
	N	88	88
		Years of Services	Grit-Score (Grit-S)
Years of Services	Pearson Correlation	1.00	-.13
	Sig. (2-tailed)		.237
	N	88	88
Grit-Score (Grit-S)	Pearson Correlation	-.13	1.00
	Sig. (2-tailed)	2.37	
	N	88	88

VI. CONCLUSION

In summary, this study presents that grit didn't effects Malaysian technical instructors to determine their job performance retention. There was no significant relationship found between grit and job performance retentions among the technical instructor in term of age, education level and years of services. In previous studies, grit only explained a very small amount of total variance explained when age, education level and years of services were accounted for [1] or did not significantly predict Malaysia technical instructors successful in maintaining performance retentions. Further, authors [11] found that grit varied with age. Therefore, it is likely that grit doesn't provide enough discriminant power among Malaysia technical instructors, perhaps because their interests are not stable yet and the benefits of persistent effort had not yet made themselves readily apparent. From an evolutionary perspective, novelty seeking behavior can be considered adaptive among young adults, who many are still trying to discover what they are good at and what they enjoy doing. Hence, grit may have better postdictive power especially among older populations. This can be seen in terms of those who have served for 15 years and have low percentage value compared to those who work for 10 to 13 years. Authors [24] [25] justified that those who have long served is no longer interested or do not want to be burdened with problems at work. They just want to focus fully on families as well as waiting for retirement.

In terms of education level factor, most of technical instructors are graduating from diploma and are motivated to increase their career level for maintaining job performance retentions. This is because the percentage shows those who are diploma holders have a high percentage and are encouraged to improve their careers in order maintaining job performance retentions. Their interest is also one of the driving factors for their long lasting performance retentions. Compared with Master holder, the data shows the lowest percentage for them in maintaining performance retentions. Thus, it can be seen that the level of education also affects grit for the purpose of their performance retentions [26]. Therefore, each individual has its own grit whether consciously or not in determining successful job performance retentions.

There are limitations to this research and hope for future research direction. Grit dimensions discussed thus far in the literature are certainly not exhaustive. Moreover, with the nature of research samples utilized, findings may not be applicable to other cases and could not serve as bases for generalization. Future research may be done into the main ideas that emerged from this research. Examining individual characteristics, organizational accounts, as well as job performance and their corresponding relationship to grit, can lead to refinement of the conceptualization of grit in a non-Western setting. Both studies are exploratory in nature.

The findings show important aspects to consider such as the conceptualization of social support in Asia and its links to grit and success and superior performance in a corporate setting.

The paper has built on existing research on grit and has shown new ways of seeing grit in a specific non-Western setting. The availability of potential research areas and the need for new approaches – both conceptual and empirical – to study grit are important considerations. It is the authors' hope that, as the discussion and studies on grit continue and conceptualizations become clearer, the different dimensions of grit related to work performance and successful performance retentions would provide a better understanding of the concept.

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