

# A Look at Grit: A Study about Malaysian Technical Instructors' Performance Retention

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The improvement of instructors' professionalism and quality should be prioritised to achieve Malaysia's Education Blueprint 2013-2025 goals. Most previous studies suggest that teacher effectiveness and performance retention could be measured by the impact of instructors on student achievement, but none of the studies measure instructors' effectiveness and performance retention through grit, which can be an important factor in explaining achievement and persistence in maintaining expected quality of instructors' performance. This study investigates Malaysian Technical Instructors and the grit needed to stay in the field, especially in purifying state aspirations. The purpose of this study is to describe the 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 a structured questionnaire adapted from Grit-S survey and involved 88 technical instructors from the Malaysia Technical Institute under the Rural Development Ministry of Malaysia. The study findings identified the grit as the power of passion and perseverance not associated with long lasting job performance retention amongst 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:** *Job Performance Retention, Malaysian Technical Instructors.*

## Introduction

Recent years have seen a heightened interest in the concept of grit as a predictor for job performance retention. Duckworth, et. al. (2007) define grit as “perseverance and passion for

long-term goals,” and they posit that these variables contribute to success in individuals. Past research about understanding core traits of successful individuals in maintaining job performance retention has been explored by Dweck (2008), Borghans et al., (2008) and Ferguson, Hitt, and Tambe, (2013). Borghans et al., (2008) have explored cognitive ability and personality traits as “powerful predictors of economic outcomes,” Studies about job performance retention point to a combination of innate passion and perseverance. Duckworth and Gross, (2014) emphasise that being successful in job performance retention “can be defined either objectively or subjectively. Objective success entails doing well according to certain 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 (2015) state that education also underpins the process of innovative and highly skilled human capital development which is critical factor in supporting a country’s social, cultural and economic growth . As such, the Malaysian government has worked hard to realise the wish through the fourth shift, Malaysia's Education Blueprint 2013-2025 (Blueprint, 2013) which transforms teaching into an optional profession. The improvement of teachers' professionalism and quality should be prioritised to achieve Malaysia's Education Blueprint 2013-2025 goals 2013-2025. Bowman, et. al. (2015), Strayhorn (2014) and Mahbib et al. (2017) claim that grit can be an important factor in explaining achievement and persistence in maintaining the expected quality of teacher performance. Therefore, this research quantitatively examines the relationship between grit and job performance retention amongst technical instructors in Malaysia based on age, education level and years of service.

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## **Literature Review**

### ***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. (2007) have introduced the term ‘grit,’ which refers to a non-cognitive trait defined as passion and perseverance towards long-term goals. Duckworth and Quinn (2009) mention that it is operationally conceptualised as consistency of interest and perseverance of effort. Based on Credé, Tynan and Harms (2017) 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 challenging condition is necessary to differentiate between individuals with varying levels of grit (Duckworth et al., 2007). Lucas, et al. (2015) completed empirical testing

about whether grittier individuals only differ from their less gritty counterparts under adverse situations. It has found that grittier individuals persist in solving supposedly unsolvable problems and not succumbing to difficulties. Also, grittier individuals exert more effort despite failing at the task and without changing direction.

Duckworth and Gross (2014) propose a hierarchical goal framework to explain the underlying mechanism of grit. It entails having a dominant superordinate goal that has closely aligned lower-order goals which in turn engender effective actions that drive the person to work tenaciously towards the superordinate goal over long-term. Based on the framework, an existing lower-order goal is hindered through 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, et. al. (2015) found that grittier employees are more likely to show higher work engagement than less gritty ones. Grittier individuals also change career less frequently (Duckworth et al., 2007) and have lower intention to switch careers (Bowman et al., 2015). Furthermore, grit is associated with greater likelihood of staying in the same job (Duckworth and Quinn, 2009) Eskreis-Winkler et al., (2014); Robertson-Kraft and Duckworth(2014).

In contrast, Clark shows that grit does not significantly associate with work performance and job retention. It could be due to because separate dimensions of grit, such as passion and perseverance having different influences on outcomes. In Mooradian, et. al.'s study (2016), perseverance of effort is positively related to innovative entrepreneurial success, whereas consistency of interest, in other words passion positively influences aspect of performance. Datu, Valdez, and King (2016) also found that only perseverance of effort positively predicts adaptive well-being and academic outcomes, whereas consistency of interest seems to play a less significant role. Nevertheless, research on grit is still in its infancy and studies on grit should be replicated.

### ***Hypotheses***

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

## Methodology/Materials

The purpose of this study is to describe technical instructors' grittiness 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 service. The sample consisted of N = 88 technical instructors at the Malaysia Technical Institution under the Rural Development Ministry. The sample was selected after the process of stratified sampling was completed. The data was obtained through the distribution of questionnaires adapted from 'Short Grit Scale, Grit-S' (Duckworth and Quinn, 2009). In accordance with the original version, a 5-point Likert scale was chosen as the response format for the Malay version of Grit-S (*1 = very much like me to 5 = not at all like me*). The Grit-S instrument demonstrates acceptable reliability in our sample with Cronbach's alpha of .67 (See Table I).

**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 is to measure an individual's grittiness (Duckworth and Quinn, 2009). The Grit-S scale is a shorter version of the original validated instrument (Duckworth et al., 2007), used to determine an individual's grittiness (Duckworth and Quinn, 2009). The instrument is developed as a valid and reliable assessment in order to measure an individual's self-report of grit. It has been used in numerous studies (Duckworth and Quinn, 2009) (Datu et al., 2016) (Wolters and Hussain, 2015).

Grit-S consists of eight questions. The instrument utilises a five-point Likert scale that includes 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 is developed from the original Big Five Inventory to measure an individual's will to continue towards a goal (Duckworth and Duckworth, 2016). Questions 1, 3, 5, and 6 measure the sub score consistency of interest, which is also developed from the Big Five Inventory to measure an individual's will to continue towards a goal in the long-term (Duckworth and Duckworth, 2016). Table 2 shows the instrument's details o.

**Table 2:** Grit-S Subscales and Scoring

Items	Response Option and Scoring
<b><i>Consistency of Interest</i></b>	
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.*	
<b><i>Perseverance of Effort</i></b>	
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 (Duckworth and Quinn, 2009). For the purposes of this , “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 a Large Sample of American Adults (Duckworth, 2016)

Percentile	Grit Score
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 minutes. Data was analysed using PSPPIRE software based on descriptive and inferential analysis procedures.

## **Results and Finding**

### ***Sample Characteristics***

In this sample, 82.95% (n = 73) of participants are male, and 15% (n = 15) female. The average age of participants was 31 - 40 (54.55%). Most participants are diploma holders, 50.00%, (n = 44). Only 2.27% (n = 2) participants have a Malaysia Skills Certificate (SKM). The sample includes Asst. Vocational Training Officers 69.32%, (n = 61), and Vocational Training Officers 30.68%, n = 27). The average years of service was are between 11-15 (38.64%). See Table 4 for demographic information about this sample.

### ***Grit Score (Grit-S) of Participant***

For the purposes of this study, “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 use a comparative measure to determine participants to be classified as an overall “gritty population” and categorise participants into groups of “gritty” and “less gritty.” Table 5 below compares the range of 88 participant’s grit scores to the percentage of the large adult population sample provided in Table 3.

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

<b>Characteristic</b>	<b>Sample (n)</b>	<b>Percent (%)</b>
<b>Gender</b>		
Male	73	82.95
Female	15	17.05
<b>Age</b>		
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
<b>Education Level</b>		
Masters	8	9.09
Degree	29	32.95
Diploma	44	50.00
SPM	3	3.41
Certificate	2	2.27
SKM	2	2.27
<b>Position</b>		
Asst. Vocational Training Officer	61	69.32
Vocational Training Officer	27	30.68
<b>Years of Service</b>		
<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

**Table 5:** Percentile of Participant Grit Scores 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	70	82.95%	Less Gritty
	4.0	6			
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 participants have a grit score of 4.1 or higher, 70% scoring above the adult sample population, confirming the assumption that this is a less gritty population.

**Table 6:** Summary of Range of Participants' Grit 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%	-

### 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 Grit-S and career development variables (age, education level and years of service). 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 indicates a relationship between grit and job performance retention factors (age, education level and years of service).

**Table 6:** Correlation between Grit-S and Age

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

Correlation Coefficients were computed amongst variables as shown in Table 7. The result shows the 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 service ( $r = -.13$ ,  $p = 0.237 > 0.05$ ) consistently shows low correlation.

Overall, results indicate that this sample has low levels of grit and job performance retention. The average Grit-S score is 3.5 and correlation analyses also demonstrate that grit does not show a positive correlation with job performance retention.

## Conclusion

In summary, this study presents that grit doesn't effect Malaysian technical instructors to determine their job performance retention. There is no significant relationship found between grit and job performance retentions amongst technical instructors in term of age, education level and years of service. In previous studies, grit only explains a very small amount of total variance explained when age, education level and years of service were accounted for (Duckworth et al., 2007) or does not significantly predict Malaysia's technical instructors successfully in maintaining performance retentions. Furthermore, according to Duckworth and Quinn, (2009) grit varies with age. Therefore, it is likely that grit doesn't provide enough discriminant power amongst Malaysia's technical instructors, perhaps because their interests are not yet stable and the benefits of persistent effort have not yet made themselves readily apparent. From an evolutionary perspective, novelty seeking behaviour can be considered adaptive amongst young adults, many of whom are still trying to discover what they are good at and what they enjoy doing. Hence, grit may have better positive power especially amongst 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 (Hill et al., 2016) (Mohamad and Selamat, 2018) argue that those who have long served are longer interested or do not want to be burdened with problems at work. They want to focus fully on their families and await for retirement.

In terms of education level, most technical instructors are Diploma graduates who are motivated to increase their career maintain job performance retentions. This is due to the percentage shown to those who are diploma holders having a high percentage and encouraged to improve their careers in order maintain job performance retention. Their interest is also one of the driving factors for long lasting performance retentions. Compared with Masters graduates, the data shows the lowest percentage for maintaining performance retentions. Thus, it can be seen that level of education also affects grit for the purpose of performance retentions (Ahmad and Ibrahim, 2015). Therefore, each individual has his or her own grit whether consciously or not in determining successful job performance retentions.

There are limitations to this research and expectations for future research direction. The grit dimensions discussed thus far in the literature are certainly not exhaustive. Moreover, through



the nature of research samples, findings may not be applicable to other cases or serve as a basis for generalisation. Future research may be undertaken into the main ideas emerging from this research. Examining individual characteristics, organisational accounts as well as job performance and their corresponding relationship to grit, can lead to refinement of the grit's conceptualisation in a non-Western setting. Both studies are exploratory in nature. The findings show important aspects to consider such as the conceptualisation of social support in Asia and its link to grit and success and superior performance within a corporate setting.

The paper has built on existing research on grit and has shown new ways of understanding 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 author's hope that, as the discussion and studies about grit continue and conceptualisations become clearer, various dimensions of grit related to work performance and successful performance retentions can provide a better understanding of the concept.

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