

Grit toward Career Development: A Study among Technical Instructors in Malaysia

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ABSTRACT--- Grit describes an individual's tendency for passion and perseverance towards long-term goals and has been established as an indicator of achievement beyond talent and intelligence. A widely recognized belief is that indicators of professional and academic success extend beyond cognitive intelligence; for example, we know, anecdotally, that hard work and effort pay off. It has been established that any area of industries including teaching and learning requires the hard work of learning and practice for exacting a good result on teachers and students performances, making the need for perseverance necessary. This study quantitatively examined the relationship between grit and career development of technical instructors in Malaysia based on age, education level and years of services. The data for this research were obtained through structured questionnaire and involved 88 technical instructors from Malaysia Technical Institute. The study findings identified that grit: the power of passion and perseverance related to long lasting career development. More broadly, this study provides a qualitative and dimensional understanding of the phenomena of grit as related to career development.

Keywords: Grit, Career Development, Technical Instructor

I. INTRODUCTION

A successful, engaging, and satisfying career has numerous positive outcomes for both employer and employee [1] [2] [3]. Careers provide people with meaning and identity [4] and career success is strongly related to overall life satisfaction [5]. Life satisfaction is key to attaining psychological well-being [6]. Attaining career development and success has a number of positive outcomes such as mental and physical health [7] at the other end of the spectrum, career failure may result in hopelessness, depression, and even suicide [8]. In career development, well-being can be examined within the work environment, because work satisfaction is a key component to well-being [9].

Recent years have seen a heightened interest on grit as predictor for success in career development. Grit has defined as “perseverance and passion for long-term goals”, and they posit that these variables contribute to success in individuals [10]. Past research on understanding core traits of successful

individuals has been explored [11] [12]. In economics, management, and psychology, research has explored cognitive ability and personality traits as “powerful predictor of economic outcomes” [13].

Studies on success in careers development point to a combination of innate natural talent and effort. Authors [14] emphasize that being successful 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”. 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 [15]. As such, the Malaysian government has worked hard to realize the wish through the fourth shift, Malaysia's Education Blueprint 2013-2025 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. Grit can be an important factor in explaining the achievement and persistence in maintaining the expected quality of teacher performance [16]. Therefore this study quantitatively examined the relationship between grit and career development of technical teacher in Malaysia based on age, education level and years of services.

II. LITERATURE REVIEW

Grit as a Predictor of Success in Career Development

Proponents of grit as a predictor of performance toward success in career development have argued that between-person differences in grit can help to explain why two individuals with the same level of ability in a particular domain are often observed to perform at substantially different levels. Specifically individuals with high levels of grit are thought to be able to better utilize their capabilities because they are less distracted by short-term goals and less discouraged by the failures and setbacks that are commonly encountered in many performance domains. Indeed, the importance of grit for success had long been noted by prior research into highly accomplished individuals [10] [17]. Arguments for the importance of grit are also in line with work on the development of expertise that has highlighted

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the importance of sustained deliberative practice [18] [19]. Indeed, recent work by authors [14] has explicitly tied grit to success in spelling bees via the mediating mechanism of deliberative practice. That is, individuals who are high on grit are more likely to engage in the amount of deliberative practice that is required to achieve expertise.

Author [11] observed that, in terms of attitude towards one's own qualities, people could either have a fixed mindset (belief that one's qualities are inborn and fixed) or a growth mindset (one can improve over time). Successful people have a growth mindset and they never stop exploring and improving. Passion and perseverance in attaining long-term goals are essential elements of grit [14] [20] [21]. Individuals with high levels of grit may exhibit a drive stronger than the average person. For high achievers, the extra push that passion and flow provide are essential, no matter what field one may choose to specialize in. Positive affect results from performance of a task especially when accompanied by passion, flow, or a "high" in short bursts. However, it takes more will to persevere and persist when faced with great odds.

Recent Study on Grit

To measure grit, [14] developed and validated a self-report questionnaire based on the construct definition of grit as described above. The scale was intended to be used for adolescents and adults who pursue goals in a variety of domains, thus as a domain-general measure (e.g., not just work or school). On these grounds, the authors selected and piloted items for their measure in the US, resulting in the 12-Item Grit Scale. They identified a two-factor structure for the scale. The model fit for a two-factor solution suggested room for improvement, but the scale showed high internal consistency and predictive validity for a variety of success outcomes. In a subsequent validation study, [22] revisited the issue of model fit. The model fit improved substantially when two items were removed from each subscale, leaving eight items in total. The resulting 8-Item scale was named the Short Grit Scale (Grit-S). A second-order factor was included in the model, representing the superordinate latent construct grit. Even though they found differential associations with predicted outcomes for the two subscales, their pattern of findings supports the conceptualization of grit as a compound trait. To our knowledge, only few studies have been published on grit in a Malaysia context so far [23] [24] and a validation study for measures of grit in Malaysia do not exist. Therefore, this study takes a place to fulfill the gap.

Social Cognitive Career Theory

Social cognitive career theory was used to frame the career success element of this study. Social cognitive career theory was developed in order to integrate various career theories with social cognitive theory [25]. Within the realm of counseling psychology, well-being is considered changeable [26]. It is possible, therefore, to consider that change in levels of well-being may occur through working toward an engaging and satisfying career and by flourishing in one's career. Social cognitive career theory was developed to address developmental changes in both educational and vocational settings [27].

In career development, well-being can be examined within the work environment, because work satisfaction is a key component to well-being [28]. Social cognitive career theory intends to predict how people make career choices and also how they achieve varying levels of success in their jobs [16]. The rationale for meshing social cognitive theory with career theories was to apply the influences of cognitive, personal, and environmental elements with a holistic approach to career development that included diverse influences and central pathways by which they impacted career behavior [25]. Social cognitive career theory focuses on the level of success people attain in their work and how well they persevere at a specific career path despite obstacles [29] [30]. Because grit is defined as passion and perseverance in working toward long-term goals despite setbacks [10] and these elements are cognitive, social cognitive career theory was an especially strong choice for examining the relationship between grit and career success

III. METHODOLOGY

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 successful career development 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' [32]. 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)

Cronbach's Alpha	N of Items
.67	8

The purpose of this instrument was to measure an individual's grittiness. The Grit-S scale is a shorter version of the original validated instrument, used to determine an individual's grittiness [32]. The instrument was developed as a valid and reliable assessment in order to measure an individual's self-report of grit [10]. The instrument has been used in numerous studies [31] [32] [33].

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 [35]. 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. Table 2 shows the detail of the instrument.

Table 2: Grit-S Subscales and Scoring

Items	Response and Scoring	Option
Consistency of Interest		
1- New ideas and projects sometimes distract me from previous ones.		
3- I have been obsessed with a certain idea or project for a short time but later lost interest.	1=Very much like me; 2=Mostly like me; 3=Somewhat like me; 4=Not Much like me; 5=Not like me at all	
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.*		
Perseverance of Effort		
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. 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 [34]. 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 [33]

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 min. The data were analyzed using the

PSPPIRE software based on descriptive and inferential analysis procedures.

IV. RESULTS AND FINDINGS

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)

Characteristic	Sample (n)	Percent (%)
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

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

Adult Sample Percentile	Grit Score	Participants	Total Participants	% Participants	Operational Definition
99%	4.9	2	18	17.05%	Gritties
	4.8	0			
95%	4.7	1	70	82.95%	Less Gritty
90%	4.5	2			
	4.4	5			
80%	4.3	3			
70%	4.1	5			
	4.0	6			
60%	3.9	9			
	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		88			

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

Grit-S Score	Participants	% of Participants	Percentile
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 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 successful career development 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 career development variables of age ($r = -.12, p = 0.268 > 0.05$). Next, a negative significant correlation also found between Grit-S and career development variables of education level ($r = -.14, p = 0.192 > 0.05$). Grit-S and career development 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 career success. 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 career success.

Table 7: Correlation between Grit-S and Age

		AGE	Grit-Score (Grit-S)
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	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	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



V. DISCUSSION AND CONCLUSION

The In sum, this study presents that grit didn't encourages Malaysian technical instructors to determine their success in career development. There was no significant relationship found between grit and career development variables (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 [10] or did not significantly predict Malaysia technical instructors successful in career development. Further, authors [36] 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 [37] [38] 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. This is because the percentage shows those who are diploma holders have a high percentage and are encouraged to improve their careers. Their interest is also one of the driving factors for their career development. Compared with Master holder, the data shows the lowest percentage for them to improve their careers. Thus, it can be seen that the level of education also affects grit for the purpose of their career development. Therefore, each individual has its own grit whether consciously or not in determining the development of their respective successful career development.

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 work 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 career development would provide a better understanding of the concept.

VI. CONCLUSION

A conclusion section is not required. Although a conclusion may review the main points of the paper, do not replicate the abstract as the conclusion. A conclusion might elaborate on the importance of the work or suggest applications and extensions.

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