

GRIT AND ACADEMIC PERFORMANCE AMID COVID-19 PANDEMIC: THE CASE OF THE HUMANITIES AND SOCIAL SCIENCES (HUMSS) STUDENTS

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ABSTRACT

Recently, a study in the Philippines claimed that grittier students are more prepared for college. Nonetheless, no study has been made on the link between grit and academic achievement among Filipino senior high school (SHS) students in the current educational setup brought by the COVID-19 pandemic. Hence, using descriptive-correlational design, the study investigated the relation between grit and academic performance among 202 HUMSS students in a public SHS in Northern Philippines. The study revealed that generally, the respondents were somewhat gritty with satisfactory academic performance. Analysis showed that the respondents' grit level significantly varies in age, sex, sibling order, grade level, parents' highest educational attainment, employment status, and monthly net family income. Lastly, it was established that grit level is not significantly associated with academic performance.

Keywords: Academic performance, COVID-19, grit, senior high school

INTRODUCTION

Even before the onset of the new normal brought by the COVID-19 pandemic, educators and researchers have viewed intelligence quotient (IQ) scores and other standardized academic measures differently. Due to the reported limits of cognitive abilities (Sternberg et al., 2012; Scott-Clayton, 2012), they have not been considered sole predictors of student performance and later success (e.g., Duckworth & Seligman, 2005; Thomas et al., 2017). For example, Hochanadel and Finamore (2015) conducted a compelling study reporting that learners having high IQ performed at lower levels than students with lower IQ. The researchers indicated that although the students involved in their study have sufficient cognitive skills, many are significantly lacking in non-cognitive ones. As a result of the hyper-focus on standardized testing and performance, most educators have inadvertently neglected the cultivation of non-cognitive skills, which are equally crucial in students' immediate and long-term success (Tough, 2012). However, ideally, teachers are accountable for cultivating sufficient levels of persistence among students and helping them overcome many non-academic challenges.

Although academic achievement has long been linked to learners' cognitive aptitude in various learning areas at different academic levels, many interplaying factors must be highlighted, especially in the new normal setting. Part of these is the non-cognitive construct of passion and perseverance or grit (Duckworth, 2016), which is closely associated with

developing one's unique character and eventually contributes to an individual's success (Reed & Jermiah, 2017). Since the education arena was compelled to resort to online distance learning and other alternative modalities due to the pandemic, grit is highly encouraged because of its significant influence on students' academics. Because academic achievement is partly based on talent and effort, it is argued that grittier students who work harder, longer, and more purposefully have a better chance of succeeding (Hogan & Wong, 2013). Moreover, grit has been identified as a significant variable associated with various academic constructs such as academic motivation (Eskreis-Winkler et al., 2014), task values, and goal orientation (Muenks et al., 2017). Anchored on previous research, educators have viewed grit as an essential determinant of students' improved academic performance.

However, despite the large number of empirical research that has looked at the connection between grit and academic performance, the underlying mechanism of this relationship remains unclear as there are still gaps in understanding. Furthermore, these variables are not yet explored in the context of education in the new normal, suggesting gaps that need to be filled to fully grasp the link between grit and academic achievement. Recently, a study on grit and college readiness in the Philippine setting confirmed that the grittier the students are, the more prepared they are for college (Paat et al., 2020). Nonetheless, no study has been made on the relationship between grit and academic achievement among Filipino senior high school (SHS) students in the current educational setup.

In a local context, as a SHS teacher handling Humanities and Social Sciences (HUMSS) students, the researcher witnessed firsthand how the lack of non-cognitive skills was a significant factor behind students' plummeting academic performance and deteriorating mental health. In the pre-Covid-19 pandemic, it has been observed that there are students who excel in class despite unfavorable socio-economic backgrounds. Meanwhile, a few students possess rich cultural and economic capital, yet they do not perform well academically. Moreover, with the sudden change in the educational landscape in the new normal, plenty of students—regardless of their prior academic standing or cognitive advantages—struggled to varied degrees. Considering these, the researcher viewed it imperative to examine how learners could overcome these challenges and how teachers could optimize their students' successful attainment of academic goals in the new normal.

Reflecting on the preceding context, the researcher hoped to demonstrate the association between grit and students' academic performance since this is lacking in the existing non-cognitive studies in the new normal literature. Moreover, insights from studies on the likely underlying processes of this grit-achievement association could serve as a solid foundation for building a grit-based intervention that improves students' long-term academic performance and success. Also, the results will be valuable in providing vital data in refining instruction or pedagogical interventions focusing on non-cognitive constructs that are relevant and contributory to the student's academic achievement.

Hence, the study generally aimed to determine the relationship between grit level and academic performance of the HUMSS students. Specifically, it answered the following questions:

1. What is the profile of the respondents in terms of the following:
 - a. grade level;
 - b. sex;
 - c. age;
 - d. sibling order;
 - e. father's highest educational attainment;
 - f. mother's highest educational attainment;
 - g. father's nature of employment;
 - h. mother's nature of employment;
 - i. monthly net family income; and
 - j. place of residence?
2. What is the respondents' grit level as revealed by the Grit Scale?
3. What is the respondents' academic performance reflected in the first and second semesters grades for the School Year (SY) 2019-2020?
4. Is there a significant difference in the grit level of the respondents when grouped according to profile variables?
5. Is there a significant relationship between the respondents' grit level and academic performance?

METHODOLOGY

Research Design

This study employed a descriptive-correlational design in addressing the research objectives. The design appropriately described the respondents' grit level and academic performance and examined a significant association between the variables. In essence, a descriptive-correlational design is fitting for observational research since it focuses solely on studying correlation patterns between variables rather than establishing causation (Sousa, 2007).

Locale of the Study

This study was undertaken at a comprehensive public high school in Iguig, Cagayan. It is a large-size school offering SHS programs with academic and technical-vocational tracks. For the academic track, it offers Humanities and Social Sciences (HUMSS), Accountancy, Business and Management (ABM), and General Academic Strand (GAS).

Respondents and Sampling Procedure

The 202 respondents of the study were the Grade 11 (N=150) and Grade 12 (N=51) SHS students enrolled in the HUMSS strand for the School Year 2019-2020. Complete enumeration was employed in the selection of the respondents.

Research Instrument

The questionnaire in (Google form) was the primary data gathering instrument of the study consisting of two parts. Part 1 elicited the profile of the respondents in terms of grade level, age, sex, sibling order, family size, parents' highest educational attainment, parents' employment status, gross monthly family income, and place of residence. Part II contained the 12 items adopted from the Grit Scale answerable by a five-point Likert (1= not at all like me to 5=very much like me). It was designed and validated with high internal consistency ($\alpha = 0.85$) (Duckworth et al., 2007; Duckworth & Quinn, 2009). Moreover, for the academic performance, the General Weighted Average (GWA) of the respondents in the first and second semesters of the SY 2019-2020 was obtained through the school's official records.

Data Gathering Procedure

After securing the school principal's approval, the researcher started giving the link of the survey questionnaire (Google form) to the respondents during the onset of the Enhanced Community Quarantine (ECQ) in the Philippines in March 2020. The online survey facilitated the automatic registration of the responses in Google drive for the researcher; hence, the data recording was quickly done. The researcher was assisted by the class advisers of Grades 11 and 12 in giving the survey link to the respondents. Furthermore, following the minimum health protocol, the researcher personally went to the class advisers to obtain the GWA of the respondents for the first and second semesters of the SY 2019-2020.

Ethical Considerations

The researcher strictly observed the research protocol for the conduct of the study. First, all school authorities were informed of the study, seeking their approval. Afterward, the respondents' consent was obtained before conducting the survey. They were informed of the study intent and design and assured confidentiality in their responses and identities. The researcher emphasized that the respondents' engagement was voluntary. In accessing the GWA of the respondents, the respondents' consent was again sought for this purpose, complying with the provisions of the Data Privacy Act in handling confidential information.

Analysis of Data

To describe the profile variables, frequency count, percentages, and mean were used. On the other hand, the mean was used to examine the grit level of the respondents. It was analyzed using the following scale, as shown below.

Range	Arbitrary Scale	Interpretation
1.00 - 1.80	Not Like Me at All	Not at All Gritty
1.81 - 2.60	Not Much Like Me	Not Much Gritty
2.61 - 3.40	Somewhat Like Me	Somewhat Gritty
3.41 - 4.20	Mostly Like Me	Mostly Gritty
4.21 - 5.00	Very Much Like Me	Extremely Gritty

Meanwhile, mean, frequency, and percent were used to ascertain the respondents' academic performance. The following grading scale based on the Department of Education (DepEd) was employed to describe the academic performance of the respondents: Outstanding (90-100); Very Satisfactory (85-89); Satisfactory (80-84); Fairly Satisfactory (75-79); and Did Not Meet Expectations (below 75).

For hypothesis testing, T-test and ANOVA were used to analyze the difference in the grit level of the respondents when grouped according to their profile variables. In addition, Tukey's Honest Significant Difference (HSD) test was used to test the difference among sample means for significance. On the one hand, Pearson r was employed to determine the association between the respondents' grit level and academic performance.

RESULTS

Respondents' Profile

Table 1. Distribution of respondents according to profile variables

Profile Variables	Frequency (N=202)	Percent
Grade Level		
Grade 11	151	74.80
Grade 12	51	25.20
Age		
16	63	31.20
17	38	18.80
18	61	30.20
19	33	16.30
20	7	3.50
Mean Age= 17.42 years		

Sex		
Male	82	40.60
Female	120	59.40
Sibling Order		
First-born	31	15.30
Middle-born	162	80.20
Last-born	9	4.50
Parents' Highest Educational Attainment		
Father		
Elementary Graduate	99	49.00
High School Graduate	68	33.70
College Graduate	35	17.30
Mother		
Elementary Graduate	78	38.60
High School Graduate	114	56.40
College Graduate	10	5.00
Parents' Nature of Employment		
Father		
Government Employee	36	17.80
Private Employee	45	22.30
Self-Employed	69	34.20
OFW	52	25.70
Mother		
Government Employee	35	17.30
Private Employee	25	12.40
Self-Employed	45	22.30
Housewife	88	43.60
OFW	9	4.50
Monthly Net Family Income		
20,001 and above	15	7.40
15, 0001-20,000	11	5.40
10,001-15,000	50	24.80
5,001-10,000	90	44.60
5,000 and below	36	17.80
Place of Residence		
Town Proper	118	58.40
Outside Town Proper	84	41.60

Table 1 shows that the majority of the respondents were female (59.40%), enrolled in Grade 11 (74.80%), and middle-born (80.20%) with a mean age of 17.42 years. Furthermore, most of them had fathers who were elementary graduates (49.00%) and self-employed (34.20%) and had mothers who were high school graduates (56.40%) and housewives (43.60%). Also, most of them stayed in the town proper (58.40%) and with a monthly net

family income of Php. 5,001-10,000 (44.60%), which implies that most of them lived below the Philippine poverty threshold of Php 12, 082.

Respondents' Grit Level

Table 2. Distribution of respondents in terms of their grit level

Scale	Grit Level	Frequency (N=202)	Percent
1.00 - 1.80	Not at All Gritty	28	13.86
1.81 - 2.60	Not Much Gritty	9	4.46
2.61 - 3.40	Somewhat Gritty	82	40.59
3.41 - 4.20	Mostly Gritty	80	39.60
4.21 - 5.00	Extremely Gritty	3	1.49
Overall Weighted Mean = 3.15	Somewhat Gritty	-	-

Table 2 presents that 82 or 40.59 percent of the respondents are *somewhat gritty*, 80 or 39.60 are *mostly gritty*, and 28 or 13.86 percent are *not at all gritty*. Furthermore, nine or 4.46 of the respondents are *not much gritty*, and three or 1.49 percent are *extremely gritty*. As reflected in the overall weighted mean of 3.15, the respondents are generally *somewhat gritty*, implying that only on a moderate scale are the respondents' persistence in effort and consistency in interest. To put it another way, the respondents' ability to maintain their interest and concentrate while persevering in the pursuit of long-term goals is just average. They have a moderate propensity for working persistently toward challenges and sustaining effort and interest over time.

Respondents' Academic Performance

Table 3. Distribution of the respondents in terms of their academic performance

Scale	Description	Frequency (202)	Percentage
90-100	Outstanding	11	5.45
85-89	Very Satisfactory	69	34.16
80-84	Satisfactory	91	45.05
75-79	Fairly Satisfactory	30	14.85
Below 75	Did Not Meet Expectations	1	0.50
Mean Grade=83.55	Satisfactory	-	-

As reflected in Table 3, 91 or 45.05 percent obtained a grade range of 80-84 or *satisfactory*, while 69 or 34.16 percent achieved 85-89 or *very satisfactory*. In addition, 30 or 14.85 percent earned a grade range of 75-79 or *fairly satisfactory*, while 11 or 5.45 percent have registered a grade of 90-100 or *outstanding*. Only one or 0.50 percent achieved a grade range of below 75 or *did not meet expectations*. Overall, the mean grade is 83.55, implying that most of the respondents have *satisfactory* academic performance. Simply put, the respondents

fulfilled the acceptable standards set by DepEd, but the finding also suggests that there still is a need for the respondents to improve further academically.

The Difference in the Respondents' Grit Level when Grouped according to their Profile Variables

Table 4. Comparisons of respondents' grit level based on their profile variables

Profile Variables	F-value/ T value	p-value
Grade Level	-4.261	.000**
Age	5.794	.000**
Sex	-6.960	.000**
Sibling Order	23.311	.000**
Father's Highest Educational Attainment	8.754	.000**
Mother's Highest Educational Attainment	22.810	.000**
Father's Nature of Employment	18.302	.000**
Mother's Nature of Employment	8.404	.000**
Monthly Net Family Income	17.302	.000**
Place of Residence	-1.075	.284

*Significant at 0.05; **Significant at 0.01

The data in Table 4 show that the respondents' grit level differs in grade level, age, sex, sibling order, father's highest educational attainment, mother's highest educational attainment, father's nature of employment, mother's nature of employment, and monthly net family income. Post hoc test revealed that the respondents who are enrolled in Grade 12, female, middle-born, 19 years old, whose fathers are college graduates and OFWs, and whose mothers are high school graduates and private employees with a monthly net family income of below 5,000 pesos are grittier than their counterparts.

Relationship between Grit and Academic Performance

Table 5. Correlation between the Grit Level and Academic Performance of the Respondents

Correlation		GWA
Grit Level	Pearson Correlation	.059
	Sig. (2-tailed)	.402
	N	202

Table 5 reveals that the respondents' grit level is not significantly related to their academic performance. The p-value of 0.402 was greater than 0.05; hence, the null hypothesis was not rejected. The finding implies that grit level does not influence the respondents' academic performance.

DISCUSSION

The present study examined the relation between grit and academic performance among HUMSS students amid the COVID-19 pandemic. It has been noted that HUMSS students are somewhat gritty only. This grit level may be ascribed to the scenario that students transitioned from face-to-face instruction to alternative learning delivery modality (ALDM) during the pandemic. With this, the students had made great adjustments, and this might have affected their perseverance and consistency of efforts, particularly in their academic undertakings. Furthermore, the finding shows a different picture of Filipino grittiness since the recent study by Paat et al. (2020) claimed that Filipino first-year college students in a state university are mostly gritty. The divergent results may be ascribed to the differing expectations, experiences, and standards in the educational landscapes where the present and previous studies were conducted.

With regard to academic performance, the study has found that HUMSS students performed satisfactorily. This result affirms the claim of Almerino et al. (2020) that HUMSS students have an average academic performance. Simply put, the respondents fulfilled the acceptable standards set by the DepEd, but the finding also suggests that there still is a need for the respondents to improve further academically. Furthermore, as noted by previous studies, a higher GWA in high school may lead to better college readiness and success (Tamayao et al., 2020; Vecaldo, 2017; Vecaldo, 2020; Vecaldo et al., 2020). Moreover, it should be noted that a portion of the grades of the respondents was taken during the pandemic. Hence, it could be surmised that the level of academic performance pictured in the study may be attributed to the learning challenges and adjustments because of the sudden move from traditional face-to-face instruction to ALDM.

Interestingly, this study's analysis showed that the respondents' grit level significantly differs in age. The result implies that Grade 12 students are more diligent in their studies than their counterparts. As graduating students in senior high school, they exemplify the sense of responsibility of accomplishing the academic goals that took them years to reach. This finding is attributed to the fact that those in Grade 12 tend to be more focused and persistent in all their endeavors since they are preparing for their successful exit in their senior high school educational pursuit, whether to enter tertiary education, seek employment, engage in entrepreneurship or enhance their middle-skills development. Their goal is to finish their studies (Bleed, 2019), so their grittiness becomes more evident than those in the lower grade level.

Moreover, those aged 19 years are grittiest among the age groups. Stewart's (2013) theory on youth development could explain this result. As posited, 19-year-old youths are characterized by their need for acknowledgment of larger-than-life accomplishments and the expectation that others will treat them as if they are fully matured. In order to establish a community of consciousness, they lean towards demonstrating grit in their activities, particularly in making their own decisions in life, be it in the academic, personal, or social aspects.

Remarkably, the present study shows that female students are grittier than males. Therefore, it implies that female HUMSS students are more hard-working in their academic pursuits than male students. This finding backs up the previous studies by Christensen and (2014) and Kannangara et al. (2018). Generally, women are often better at pacing themselves, recalibrating their behavior, and modifying their goals and expectations to continue working, the same characteristics necessary for grit to exist (Litwin, 2018).

In addition, those middle-born are grittier than the first-born or last-born children. This result supports the study of Miller and Sugarman (2017), revealing that middle-born children scored somewhat higher than first- or last-born children on the grit survey. This scenario may be attributed to what psychologists claim as middle-child characteristics. Voo (2020) avowed that middleborns are competitive and go-with-the-flow types who must learn to continually negotiate and compromise to fit in with everyone after a younger sibling arrives. Essentially, they are more agreeable than their elder and younger siblings and have more significant ties with peers, serving as their psycho-social resource in persevering in life.

In terms of parents' educational attainment, the respondents whose fathers are college graduates are the grittiest among their counterparts. This finding confirms the assertion of previous research on family process models that the level of parental education significantly influences children's behavioral outcomes (Davis-Kean, 2005; Pagulayan et al., 2021). Furthermore, since in the Philippines, fathers play a valuable role in their children's lives (Harper, 2010), the children regard their fathers as role models. As a result, they become more persevering and consistent in academic endeavors to complete their education as their fathers did. On the one hand, those whose mothers are high school graduates are the grittiest among their counterparts. This result may be explained by the possibility that, even in the case where the mothers are merely high school graduates, they may have socialized their kids toward grit beliefs and behaviors, which has helped them develop a more realistic understanding of the persistence of efforts and consistency of interests. This may be the case because, according to Alampay and Jocson (2012), mothers from the Philippines, regardless of educational level, are more likely to support progressive ideas like fostering children's self-expression and granting them more agency, which are strongly related to the idea of grit.

Regarding parents' employment nature, HUMSS students whose fathers are OFW are grittier than any of those whose fathers are government employees, private employees, and self-employed. This finding presents that children with fathers working abroad have developed a growth mindset necessary to maintain perseverance and passion. In this scenario, the absence of a father figure might have been a significant social factor pushing the children to be grittier in their studies than those whose fathers work locally. On the one hand, respondents whose mothers are private employees are grittier than their counterparts. Previous studies have shown that private employees generally have high organizational commitment (Aguiar do Monte, 2017), level of effort, self-development, and responsibility (Buelens & Van den Broeck, 2007). In a careful inspection, these traits are closely knitted to grit. Since in the Philippines, mothers are viewed to be the main custodians of children; with their physical presence and nurturing

role in the household being crucial (Keizer et al., 2019), mothers working in the private sector might have successfully passed on these traits to their children; hence, creating an enabling social environment for the development of grit.

Furthermore, the study revealed that HUMSS students with lower family incomes have more persistence of efforts and consistency of interests. Despite being poor, they had developed more hard work and determination to complete their school requirements. They are less distracted by new ideas and projects than their counterparts. Instead, they remain focused on their present activities, hoping they will contribute to attaining their educational goals (Asuncion et al., 2021). Notably, this result negates the findings of Mandelbaum (2018), citing that low-income high school students were less gritty. This could be explicated by the notion that grit is developed since it is a flexible quality (Duckworth et al., 2007). Children who grow up in poverty have a lot of grit since they have to persevere in order to survive financially (Strauss, 2016).

Lastly, contrary to expectation, the present study showed that grit does not significantly influence academic performance. Psychologists have noted that some people may demonstrate high grit but only engage in positive fantasies (Duckworth, 2016; Kappes & Oettingen, 2011). They may have a long-term objective in mind, but lack the knowledge or skills to carry out the necessary tasks to get there. They essentially see a bright future without considering realistically how to take the necessary steps to make it a reality. As a result, they are unable to turn their grit into real-world results, both short-term and long-term (Duckworth, 2016).

CONCLUSION

During the Covid-19 pandemic, the HUMSS students exude moderate grittiness and satisfactory academic performance. Indeed, their grit level has become a beneficial psychological resource reflecting their perseverance of efforts coupled with a powerful determination to attain their long-term objectives. Academically, they satisfactorily met the acceptable standards defined in their track and strand based on the K-12 senior high school curriculum. Remarkably, the student's age, sex, sibling order, grade level, parents' highest educational attainment, parents' employment status, and monthly net family income spell differences in their grit level. However, students' grit level does not influence their academic performance, thereby pushing further the continuing discourse on the purpose of grit in the student's educational success. Lastly, the study illustrates that academic performance is influenced by other multifaceted cognitive and non-cognitive factors and not necessarily by grit.

RECOMMENDATIONS

1. Considering that the respondents are only somewhat gritty, the teachers and guidance advocates may enhance further the grit of the HUMSS students by intentionally helping them understand how to set and achieve their goals, assisting in regulating their attention, emotions, and behavior, and empowering them to pursue goals that are most important to them.

2. Since the academic performance of the respondents is only at a satisfactory level, an enhancement may be done by reinforcing the alignment of instructions to learning standards, with emphasis on students' characteristics, contextual factors, and those that may relate to one's self-belief and understanding of self and the environment.
3. Given the context of the Covid-19 pandemic, the teachers and administrators of basic education may focus on the constructs of grit and academic performance in using alternative learning modalities to improve learning outcomes further.
4. A similar study may be conducted using a longitudinal design considering a bigger sample size.

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