



MEASUREMENT OF GRIT AND CORRELATION TO ACADEMIC PERFORMANCE

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ABSTRACT: *21st century education is faced with worldwide challenges that may call for a paradigm-shift. To respond to the various challenges, teachers should provide opportunities that develop growth mindset and not a fixed mindset among the learners. A person with a growth mindset is said to have grit. According to Park, D., et.al. (2020) grit and growth mindset are distinct but mutually reinforcing. Teachers should model grit and growth mindset to their learners to prepare them for the demands of the 21st century. This study was then undertaken to determine the grittiness of teacher education students and its relation to their academic performance. This study employed quantitative descriptive method with correlational design through analysis of the measurement of grit of the teacher education students and how it influences their academic performance. This study employed quantitative descriptive method with correlational design through analysis of the measurement of grit of the teacher education students and how it influences their academic performance. The respondents of the study were the teacher education students enrolled during the second semester of school year 2022-2023. Excluded in the study were the fourth year students, those who have incomplete grades, students who are earning units and irregular students. Stratified sampling was employed to determine the number of respondents per year level. Mean was utilized to interpret the grittiness of the respondents and their academic performance. Pearson -r was utilized to test the significant relationship between the grittiness of the respondents and their academic performance. Findings of the study show that the grittiness of the respondents, with an overall mean of 3.08, is interpreted as “somewhat like me”. This shows that the students view themselves as somewhat gritty. Furthermore, they have performed at an average level in their academics. There is a significant positive relationship between the grit level and the academic performance of the students. This*



indicates that, as the teacher education students' grit level increases their academic performance tends to increase as well. It is therefore concluded that grittiness of students may positively influence their academic performance. Future researches may look into the relationship of growth mindset and grittiness of teacher education students and correlate it with academic performance.

Keywords: *grittiness, academic performance, growth mindset*

INTRODUCTION

Globalization has opened many opportunities to all peoples in the world and has paved the way for countries to engage in activities that resulted to progress and development. This phenomenon has challenged many institutions to look into their educational policies and practices if these meet the demands of the global world. Does the offering of quality education an assurance for graduates to be successful in life and who are able to face all adversities that come along their way?

Angela Duckworth (2017) in her book *Grit: The Power of Passion and Perseverance*, said that there are people who succeed through hardships and who are able to transform these to opportunities for growth. She further said that these people are those who possess grit and who are able to move toward their future day by day for years. According to her, talent and intelligence alone may not be a dominant factor in attaining success. However, grit should include both perseverance and passion. (Duckworth, 2017). According to Shirk (2020), grit is one's ability to hurdle difficulty, to get over and learn from whatever failures, and to "keep on keeping on". In the 21st century, more and more researches had been conducted to find out what important aspect in one's personality plays a prime role in achieving one's long-term goals. In the study conducted by Ofra Halperin and Orit Eldar Regey (2021), they said that qualities that may be associated with health professionals are passion and perseverance while D Brock Herwitt, et al., (2021), concluded that lower likelihood of burnout, thoughts of attrition and suicidal thoughts may be due to higher grit scores among general surgery patients. More and more researchers became interested in conducting studies about grit. Miller, K.D., and Park, D., et.al., (2020) explained the relationship of growth mindset and grit. Park said that grit may predict increases in growth mindset and growth mindset may predict increases in grit. Duckworth as cited by Miller on the other hand said that grit can be



developed through the person's day to day experiences. When a person's orientation is from fixed to growth mindset, then grit can be developed. Admin (2020) in his article further said that growth mindset can bring about greater effort to attain one's goal.

In the field of education, do perseverance and passion matter? Christopoulou, M. et.al. (2018) conducted a systematic review on the role of grit in education. Main result of the study showed that there is weak to moderate correlations with educational variables. They also said that perseverance may be a stronger factor that can affect academic performance. Correlations to academic success were also carried out (Datu, J.D., Li, J. & Li, Y., 2021, Pate, A. N., et al., 2017) wherein they found out that grit may be associated with the academic performance of the students. However, in the study of Jachimowicz, J.M., et al., (2018), they asserted that to attain a satisfactory result in one's endeavor, both perseverance and passion must be present. In the field of engineering research, Ines, D. et.al., (2021) conducted a systematic literature review on grit. The study showed that engineering education research, both the conceptualization of grit and research reporting procedures have been inconsistent. Such inconsistency hinders interpretation of the impact of grit in engineering education. There should their further studies to be conducted along this area. Bibon, M.B. (2021), carried out a grit assessment among learners in the Philippines who are probable dropouts. His study revealed that privileges in life, age, and gender have nothing to do with the extent of grit. While causes for possibly dropping out showed moderate relationship to grit, grade level denoted a high relationship with levels of grit.

Future teachers are entrusted the great responsibility of nurturing the young to prepare them for the roles they have to play in the society. Their professional and personal attributes contribute a lot to the kind of instructional leaders that they will become. They are the role models and students look up to them as persons who possess qualities that they can also develop among their learners. One of these qualities is GRIT. They should possess grit to become successful teachers in the future. Grit may also be connected to a positive well-being as seen in the studies conducted by Datu, J.A.D.(2021) and Disabato, D.J. et al., (2018). The importance of grit to attain success and improve one's personality may not then be discounted especially to prospective teachers who are supposed to be the hope in producing young people who will soon become the future leaders in the society.

One of the higher education institutions in Region 02 offering teacher education is the University of Cagayan Valley. The institution was the first to offer teacher education in



Region 02. Today, it is still one of the flagship programs of the university. Being an institution producing hundreds of teacher education graduates every year, the researchers are then interested to measure the grittiness of teacher education students and if this has a relation to their academic performance.

RESEARCH QUESTIONS:

1. What is the level of grittiness of the teacher education students?
2. What is the academic performance of the respondents for the second semester of school year 2022-2023?
3. Is there a relationship between grit measurement and academic performance?

RESEARCH METHODOLOGY

This study employed quantitative descriptive method with correlational design through analysis of the measurement of grit of the teacher education students and how it influences their academic performance. Descriptive method was used to determine the measurement of grit of the respondents and the academic performance of the respondents as reflected in their general weighted average for the second semester of school year 2022-2023. Correlational design was used to see if there is a relationship between the level of grit and the academic performance of the respondents.

The respondents of the study were the teacher education students enrolled during the second semester of school year 2022-2023. Excluded in the study were the fourth year students, those who have incomplete grades, students earning units in education and irregular students. Stratified sampling was employed to determine the number of respondents per year level.

Table 1. Respondents of the Study

YEAR LEVEL	POPULATION	SAMPLE
First Year	142	103
Second Year	105	83
Third Year	105	83
TOTAL	352	269

Permission to conduct the study was sought from the Office of the President through the office of the Vice-President for Academics. Ethical clearance was sought from the Institutional Review Board Office . Upon issuance, gathering of data commenced



through the administration of the questionnaire on Grit. Request was made from the office of the University Registrar to avail of the academic performance of the respondents for the second semester of school year 2022-2023..

The study made use of the 12-item grit scale which was adopted from the study of Duckworth, A.A., et.al. (2007) entitled “Grit: Perseverance and passion for long- term goals. Descriptive statistics and test of relationships were used. Specifically, mean was used to describe the grittiness of the teacher education students. To further interpret the grittiness of the respondents, arbitrary scale was used as shown below:

NUMERICAL SCALE	MEAN RANGE	DESCRIPTIVE INTERPRETATION
5	4.20-5.00	Very much like me
4	3.40-4.19	Mostly like me
3	2.60-3.39	Somewhat like me
2	1.80-2.59	Not much like me
1	1.00-1.79	Not like me at all

Mean was also used to interpret the academic performance. Pearson -r was utilized to test the significant relationship between the grittiness of the respondents and their academic performance.

RESULTS AND DISCUSSIONS

Table 2. Mean and descriptive interpretation on the level of grittiness of teacher education students

Statements	Mean	Descriptive interpretation
1. I have overcome setbacks to conquer an important challenge	2.96	Somewhat like me
2. New ideas and projects sometimes distract me from the previous one	3.04	Somewhat like me
3. My interest change from year to year	2.89	Somewhat like me
4. setbacks don't discourage me	2.94	Somewhat like me
5. I have been obsessed with a certain idea or project for	2.99	Somewhat like me



a short time but later on lost interest		
6. I am a hard worker	3.24	Somewhat like me
7. I often set a goal but later choose to pursue a different one	3.06	Somewhat like me
8. I have difficulty maintaining my focus on projects that take more than a few months to complete	3.12	Somewhat like me
9. I finish whatever I begin	3.29	Somewhat like me
10. I have achieved a goal that took a year of work	3.14	Somewhat like me
11. I became interested in new pursuits every few months	2.89	Somewhat like me
12. I am diligent. I never give up	3.42	Mostly like me
Overall mean	3.08	Somewhat like me

Table 2 presents the mean and descriptive interpretation of the level of grittiness of teacher education students. The table shows that statement 12 “I am diligent. I never give up” got the highest mean of 3.42 or “mostly like me”. This indicates that students perceive themselves as diligent individuals who persist in their academic tasks even in the face of challenges. The study of Duckworth, et. al., (2007) demonstrates the significance of perseverance and passion for long-term goals in predicting academic and professional success.

On the other hand, statement 3 which says “My interest changes from year to year” got the lowest mean of 2.89 or “Somewhat like me” which indicates that the students at some point may have the tendency to vary their interests over time. According to O’Keefe, P. A., et al., (2018), mindsets might affect how open people are to new or different interests.

The overall mean is 3.08 interpreted as “somewhat like me” which shows that the teacher education students view themselves as somewhat gritty. This is just an average level of grittiness. University of Cagayan Valley is known as a school for the masses. There is diversity on the kind of students who enrol and most of them belong to the average level of economic status. McKinney, Trudy D. (2023) said that there had been studies to see if there is a relationship between socio economic status and grit. Findings showed a remarkable significance of economic status and the development of grit. If a person comes from the lower bracket of economic status, the challenges and trials they face may either have a positive or negative effect on their ability to persevere toward the attainment of their goals.



Table 3. Frequency, Percentage and Descriptive Interpretation on the Academic Performance of Respondents

Academic Performance			
	Frequency	Percentage	Descriptive Interpretation
79-81	10	3.72	Emerging
82-84	36	13.38	Accomplished
85-87	87	32.34	Accomplished
88-90	76	28.25	Proficient
91-93	58	21.56	Proficient
94-96	2	0.74	Exemplary
Total	269	100.00	

Mean=87.60

Table 3 shows that the teacher education students got an over-all mean of 87.60 in terms of their academic performance for the second semester of school year 2022-2023. This is interpreted as “Accomplished”. The teacher education students performed at the average level in their academics. As stated earlier, most of the respondents belong to average income families. A systematic review on socio-economic status and academic performance in higher education was carried out by Hernandez, C.F.R., et.al.,(2020). The meta-analysis showed a positive yet weak relationship between SES and academic performance in higher education.

Table 4. Correlation Between the Grittiness of Respondents and their Academic Performance

Correlation Pairs	r-value	p-value	Statistical Decision
Grit Level and Academic Performance	+0.213	0.000	Reject Ho.

The table below shows that there is a significant positive relationship between the grit level and the academic performance of the students. The result of the study showed only a slight effect of grittiness to the academic performance of the respondents. This may be due to the average level of grittiness of the respondents. This indicates that, as the teacher education students’ grit level increases their academic performance tends to increase as well. This finding is aligned with the study of Duckworth et al. (2007) which showed that students with higher levels of grit had better academic performance over time. Studies of Datu, Jeus



Alfonso D. (2021) and Pate, A.N., et.al., (2018) also showed a positive effect of grit on academic performance. Overall, the grit level of the students has a vital role in their academic success.

CONCLUSION AND RECOMMENDATIONS

It is therefore concluded that grittiness of students may positively influence academic performance. The higher the grit level, the greater is its effect to academic performance. A lower level of grittiness may just have a slight effect on the academic success of the teacher education students.

The results of the study may be the basis for curriculum enhancement that may develop a higher level of grittiness of the students. Activities like seminars and group sessions may be provided that can enhance the growth mindset of students which may eventually raise the level of grit. Further studies may be conducted on growth mindset and grittiness in relation to academic performance.

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