PREPRINT: Grit and Academic Performance of Costa Rican University Students

PREPRINT: La Perseverancia y el Desempeño Académico de Estudiantes Universitarios en Costa Rica

PREPRINT: A Perseverança e o Desenvolvimento Acadêmico dos Estudantes Universitários na Costa Rica

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Abstract: This qualitative, exploratory study inquired how students' grit, the ability to persevere and to have passion for long-term goals, helps them achieve their main objectives in the field of EFL. The participants were 62 students from the Universidad Nacional whose grit level based on (Duckworth, 2016) was measured in a 1-5 point Likert-scale and in an introspective questionnaire. The study revealed that students excelled having both a high GPA and high level of grit which was analyzed along with other traits displayed by this population: learners' being focused and motivated toward school work and career goals.

Key words: academic achievement, EFL, grit, learning environment, long-term goals, strategies.

Resumen: Este estudio cualitativo y exploratorio investigó de qué manera la perseverancia (grit en inglés) y la constancia hacia metas a largo plazo ayudan a los estudiantes a lograr sus objetivos en el campo del aprendizaje del inglés como lengua extranjera (ILE). Los participantes del estudio fueron 62 estudiantes de la Universidad Nacional cuyo nivel de grit basado en (Duckworth, 2016) se midió con una escala Likert de 1-5 puntos y en un cuestionario introspectivo. El estudio reveló que los estudiantes sobresaliendo en ambos: un...
alto promedio de calificaciones y un alto nivel de *grit*, lo que se analizó junto con otros rasgos de esta población: concentración y motivación en su trabajo escolar y en sus metas profesionales.

**Palabras claves:** logros académicos; ILE; perseverancia; ambiente de aprendizaje; metas a largo plazo; estrategias.

**Resumo:** Esta pesquisa qualitativa e exploratória procurou a maneira em que a perseverança (*grit* em inglês) e a constância por as metas em longo prazo ajudam aos estudantes atingir seus objetivos no campo de aprendizagem do inglês como língua estrangeira (ILE). Os participantes desta pesquisa foram 62 estudantes da *Universidad Nacional*, seu nível de *grit* baseado em (Duckworth, 2016) foi medido com uma escala Likert de 1-5 pontos e com um questionário introspectivo. Os resultados revelaram que os estudantes destacaram-se nas ambas variáveis: eles reportaram um alto promédio nas suas notas de aprovação e um alto nível de *grit*, ditos resultados também foram analisados junto com outras qualidades deste grupo de participantes; concentração e motivação em sua vida escolar e profissional.

**Palavras chaves:** desenvolvimento académico; ILE; perseverança; contexto de aprendizagem; metas em largo prazo; estratégias.

**Introduction**

Educators have always been concerned about their students’ character qualities such as grit, self-regulation and a growth mindset as ascertained by Duckworth, Peterson, Matthews and Kelly (2007). Being non-cognitive attributes, these traits help students reach their true potentials and have the commitment to remain constant to their goals. The ability to persevere and to have passion for long-term goals helps them see obstacles as challenges to meet. As a result, professors see the necessity to cultivate learners’ mindset and behaviors to maintain their passion for learning even in difficult times. Duckworth et al. (2007) claimed that both cognitive and non-cognitive traits play an important role in a person’s performance.
Due to the fact that the contributions by Duckworth et al. (2007) have been applied successfully in a great number of study fields, the researchers of this current study consider that it is particularly significant to replicate findings on grit in a Costa Rican educational EFL context. Educators therefore will help students cultivate both cognitive and emotional skills in order to accomplish their goals over a long term.

Seeing grit as the strength to achieve completion, Duckworth and Eskreis-Winkler discussed, “Because gritty people push themselves continuously along the bumpy road of deliberate practice [the one that requires focused attention and is conducted with the specific goal of improving performance], they can achieve their long-term goals” (as cited in Lee & Sohn, 2017, p. 1631). Moreover, Muenks, Yang and Wigfield (2018) stated that gritty students possess goal orientations toward the mastery of skill. In this regard, the aim of this proposal is to explore how students’ learning strategies and qualities help them achieve their goals in the field of EFL in a university context. Researchers posed the following questions for this study:

- RQ1. What kind of personal qualities are more relevant to determine the level of grit our students have?
- RQ2. How does grit help students succeed academically?
- RQ3. What kind of self-regulated learning strategies do students use to develop grit?
- RQ4. What are some of the students’ long-term goals based on their current major?
- RQ5. What kinds of school environment help students develop grit?

Within a humanistic curriculum, teaching focuses on students’ capacities to succeed academically. Certainly, educators always strive to know more about their students’ learning experiences and academic background.
Review of Literature

Great research has been conducted on issues related to student academic success. As indicated by Duckor (2017), “Today’s student dispositions movement is such a trend. It’s called by many names: socio-emotional learning outcomes, noncognitive indicators, affective factors, behavioral objectives and skills. The constructs that currently animate it are grit and growth mindset” (p. 61). As this author pointed out, success is predicted by grit—being the core of this research study. In this light, Duckworth (2016) claimed that high standards in academic performance are driven by a unique combination of passion and long-term perseverance by maintaining effort and interest over years despite failures, adversity, or difficulties. Therefore, when effort is enhanced along with skills, high achievement can be attained. Students with high levels of grit are the ones who value or feel connected to the future or see how present activities connect to their future goals.

Indeed, Wolters and Hussain (2015) concluded that college students who display more grit qualities pursue their goals even though they face challenges in their attempt to reach them. Hence, these students must resort to strategies to cope with setbacks in their learning process. The way by which they adopt such strategies can be directly related with their perseverance and consistency in goal orientation, as further claimed by Muenks, Yang and Wigfield (2018):

How students approach goals could be related to their grit. Specifically, students with ‘approach’ goal orientations toward mastery and skill development or toward high performance are probably going to be grittier when they encounter challenges, compared to those with ‘avoidance’ goal orientations (p.161).

Additionally, these authors concluded that the perseverance of effort component of grit was strongly associated with self-efficacy and task value.

Grit has also been related to the tendency of students succeeding academically; thus, academic achievement is better enhanced when achieving self-
regulated learning (SRL), which is the ability of monitoring one’s goals for academic purposes. Indeed, a study carried out by Wigfield and Cambria along with the another one by Pintrich and Zusho revealed that “(...) students who perceive the materials or skills they are learning as useful, interesting, important or enjoyable are more likely to engage the regulatory strategies necessary for SRL and evidence higher academic achievement” (as cited in Wolters & Hussain, 2015, p. 296). Moreover, Bogin’s (2017) findings portrayed gritty college students as those learners whose study habits were more intense, self-directed, efficient or time-consuming.

A study conducted by Lee and Sohn (2017) demonstrated that Korean students’ grit was associated with higher grades mediated by deliberate practice. Consequently, it is advisable that professors lead students toward cultivating both cognitive and emotional skills. How might educators encourage pupils to be gritty? Or how can educators keep learners engaged in learning? In order to help students enhance their grit and growth mindsets, Fitzgerald and Laurian-Fitzgerald (2016) recommended three steps: setting the environment, helping students both find their interests and develop their passions, and giving students opportunities to develop their skills. Therefore, when professors’ actions and teaching contribute to raise the level of grit, students feel more encouraged to keep sustained goal commitment in spite of those setbacks in life. They remain more focused on classwork, team and peer work, collaborative activities and the sense of enjoyment of school work. These authors also emphasized that the personal qualities such as grit, growth mindset, self-discipline, dedication to work, and cooperative learning made students more successful.

Methodology

This action research project is an exploratory and qualitative study intended to identify how grit helps students succeed in their academic work in a public university. For data collection, the first instrument was an online survey informing on demographic information: age, gender, major, school year, and the general point average—commonly referred as GPA. A second tool included ten statements about
grit qualities such as consistency, resilience, task value, self-efficacy, goal orientation, future time perspective, consciousness, courage, motivation and creativity; these traits were measured in a 1-5 point Likert-scale. This instrument was based on Duckworth’s (2016) grit scale; unlike the original scale on grit, all the statements embedded a positive plan action reflecting the aforementioned grit qualities. Being completed within class schedule, the researchers’ own scale reported the level of grit upon scoring and interpreting results (see Appendix A). And the third instrument consisted of six open-ended questions submitted online to evaluate students’ opinions and reactions on more challenging situations in their academic life (see Appendix B). In order to elicit straightforward, truthful answers, the respondents were assured that their responses would remain anonymous. It is also important to point out that the researchers were the professors of the three different groups of students since they had knowledge of the students’ qualities, language skills, and personalities. Therefore, their observations and validation of data were taken into account for the interpretation of the results and the conclusions.

Participants

All of the instruments were completed by 62 university students from Universidad Nacional: 29 from the Bachelor in the Teaching of English (BTE), 18 from the Bachelor of English (BE), and 15 from other majors (OM). Unlike BTE and BE students, who were coursing their university first year at the moment of the study, the OM participants were either in their bachelor’s program or even in their licenciatura graduate program, a degree above a bachelor’s but below a master’s. OM students in this research study belonged to one of the following majors: business administration, arts and visual communication, economics, psychology, agronomy, teaching of sciences, library science, and topography. As displayed in Table 1, 26 BTE students and 17 BE range between 17 to 21 years old. On the other hand, varied and balanced age ranges conformed the OM group.
Table 1. Number of students per age range. Source: General Information Survey, August 2018.

<table>
<thead>
<tr>
<th>Age Range</th>
<th>OM</th>
<th>BE</th>
<th>BTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>17-21</td>
<td>5</td>
<td>17</td>
<td>26</td>
</tr>
<tr>
<td>22-26</td>
<td>5</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>27-older</td>
<td>5</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Own elaboration.

Analysis of Results

Students’ GPA

Participants were requested to report their GPA credited up to the first term of 2018. As detailed in Figure 1 below, most students’ GPA scored 8.0 to 8.9 and a 9.0 to 10. A few students’ GPA ranged from 7.0 to 7.9: two from OM, three from BE and one from the BTE; and one BE student ranged below 7.0.

Figure 1. Students’ general point average per major. Source: General Information Survey, August 2018. Own elaboration.

Students’ Grit Level

The measurement obtained from the grit scale was scored and coded by each student, being 5 averaged points the highest score for a student showing an outstanding level of grit. The complete distribution of the grit levels has been displayed in the following Figure 2.
As can be analyzed, none of the students scored the minimum grit level. On the contrary, most of them (60%) showed having most the traits that exemplify them as being grit students.

The scale designed for this particular study evokes grit for academic success in a higher education context: consistency, resilience, task value, self-efficacy, goal orientation, future time perspective, consciousness, courage, motivation and creativity. As displayed in Table 2 below, the three most salient traits were *I care about my school duties* (i.e. consciousness), *I feel quite motivated to accomplish my goals* (i.e. motivation), and *I start and complete school projects and ideas* (i.e. task value). Participants, nonetheless, ranked lower the following three statements: *I complete my tasks within schedule to avoid procrastination* (i.e. future time perspective), *I consider myself a hard working student* (i.e. self-efficacy), and *I find innovative ways to do school tasks* (i.e. creativity).

**Table 2.** Grit traits for academic success. Source: Self-Reported Scale, August 2018.

<table>
<thead>
<tr>
<th>Likeness for Academic Activities</th>
<th>Not like me at all</th>
<th>Not much like me</th>
<th>Somewhat like me</th>
<th>Mostly like me</th>
<th>Very much like me</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I keep focused on finishing current projects to continue with future projects.</td>
<td>1</td>
<td>3</td>
<td>17</td>
<td>19</td>
<td>22</td>
</tr>
<tr>
<td>2. When I have problems in my studies, I make an effort to continue.</td>
<td>0</td>
<td>3</td>
<td>6</td>
<td>30</td>
<td>23</td>
</tr>
</tbody>
</table>
3. I start and complete school projects and ideas. 
4. I consider myself a hard working student. 
5. I set an academic goal and achieve it until the end. 
6. I complete my tasks within schedule to avoid procrastination. 
7. I care about my school duties. 
8. Every time I experience any difficulties at school, I attempt to overcome them. 
9. I feel quite motivated to accomplish my goals. 
10. I find innovative ways to do school tasks.

Source: Own elaboration.

Relationship between GPA and Grit Level

Even though there might be a strong relation between a high level of grit and academic achievement, a recent study by Muenks, Yang, Wigfield and O’Neal (2017) revealed otherwise; these scholars stated, “Other constructs in the self-regulation, engagement, and personality literatures highly overlap with grit and predict students’ grades more strongly than does grit” (p.617). The results obtained in this current study displayed both stands. On the one hand, most of the participants whose level of grit scored average (level 3) or above average (levels 4 and 5) reported a high GPA from 8.0 to 10. On the other hand, one participant from the BE program held a passing grade (7.0 or above at UNA) with a grit level 2; similarly, two other OM students had a passing grade with an average grit level of 3. In reference to the BTE program, most of the students reported both a high level of grit and a high GPA (9.0 to 10); however, only one student reported a GPA of 9.0 but scored a grit level 2, being this score a lack of grit. From the point of view obtained as professors of these three different groups of students, it can be further explained that BTE and OM students—unlike their BE counterparts—complied with the profile of gritty students discovered by Lee and Sohn (2017): “Our findings demonstrate that gritty students not only attain higher grades, but also bring a mature attitude to their choice of career and preparation for it” (p. 1639). In this respect BTE and OM students had successfully chosen their majors whereas BE students showed other interests in other majors rather than English; hence, they had not defined their career goals yet.
Strategies for Academic Success

As supported by Laursen (2015), grit is part of the competencies that contemporary learners should have to succeed in their academic endeavors. In order to deeply understand how to reach a higher level of grit, it was imperative to inquire to what extent participants faced academic responsibilities, what kind of strategies they implemented for learning, and how they would accomplish their career goals. The results of the questionnaire from the introspection to grit level revealed first that the students completed challenging academic work by having a schedule, organizing their responsibilities, studying hard, and asking for guidance from their professors. One of the students felt that it was important to believe in themselves since they have the capacity and effort to succeed. When being asked about time management for school work, some of the participants agreed that keeping track of their duties on an agenda, planner or even a mobile app were the most useful strategies. Similarly, participants mentioned that they kept focused on school work by avoiding distractions, developing healthy habits, and prioritizing activities in their daily life.

Furthermore, motivational factors lead students to attain future goals. Most of the students valued the fact that they would become professionals in the field of study, which is contained in the following quote: “I will be a person with capacity to do many good jobs or if I cannot do it, I will try it because in the journey of my life I can help people who need me[sic].” In order to achieve these professional goals, some traits were listed by the students: responsibility, interest, perseverance, dedication, discipline, concentration, and excellence.

Classroom environment was also measured as a key factor that contributed to develop students’ perseverance when learning EFL. Some of the elements that participants alluded as prominent in their learning in relation to class context are summarized and represented in the following Figure 3:
As illustrated, students acknowledged the fact of learning within a safe, supportive, and cooperative environment, where they feel involved to keep their effort and perseverance toward their studies.

**Conclusion**

Having grit can be measured when learners’ traits are deeply analyzed. As this study confirmed, students showed high levels of grit, which is not exclusively directed to their academic achievement but to their learning context. First, students who were more committed, conscious, and self-motivated were more likely to show perseverance for accomplishing their future long-term academic goals. On the contrary, their attempt to achieve these goals may be hindered since participants lacked other major grit traits: future time perspective, self-efficacy, and creativity. To illustrate, students mentioned they would procrastinate at school; they would not find innovative ways to complete academic tasks; and surprisingly, they would underestimate their effort by reporting not being hard working.

More introspective findings detailed that the level of grit of most of the students is enhanced when students complete challenging academic tasks and are
focused and motivated toward school work and career goals. Notwithstanding the demands of this current society, students still excelled having both a high GPA and high level of grit. Such students’ success depends on a variety of factors; one of them is the role educators have committed themselves to facilitate an environment conducive to learning. The study overall revealed that students possessed a certain level of grit needed to succeed at school; nonetheless, it is recommended to support students in their pursuits for building stronger passion and perseverance for long-life learning.

References


**Appendices**

**Appendix A: Self-Reported Scale**

*Description:*

This survey is part of a research paper aimed at collecting data on the traits of grit, commonly defined as the perseverance and passion for long term goals. This scale has been created by the researchers based on the scales for determining the level grit, included in the studies by Duckworth (2016). Your collaboration and accuracy in completing the following anonymous survey will be appreciated by the researchers.

*Scale:*

- Attached you will find a set of statements to be checked in a 1-5 point Likert scale.
• Please select the box that best describes the level of personal likeness for each statement.
• Remember that there is no right or wrong answer.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I keep focused on finishing current projects to continue with future</td>
<td>Not like me at all</td>
</tr>
<tr>
<td>projects.</td>
<td>☐ ☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>2. When I have problems in my studies, I make an effort to continue.</td>
<td>☐ ☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>3. I start and complete school projects and ideas.</td>
<td>☐ ☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>4. I consider myself a hard working student.</td>
<td>☐ ☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>5. I set an academic goal and achieve it until the end.</td>
<td>☐ ☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>6. I complete my tasks within schedule to avoid procrastination.</td>
<td>☐ ☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>7. I care about my school duties.</td>
<td>☐ ☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>8. Every time I experience any difficulties at school, I attempt to</td>
<td>☐ ☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>overcome them.</td>
<td></td>
</tr>
<tr>
<td>9. I feel quite motivated to accomplish my goals.</td>
<td>☐ ☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>10. I find innovative ways to do school tasks.</td>
<td>☐ ☐ ☐ ☐ ☐</td>
</tr>
</tbody>
</table>

**Scoring**
For each statement, assign the following points:
- 5 points for *Very much like me*
- 4 points for *Mostly like me*
- 3 points for *Somewhat like me*
- 2 points for *Not much like me*
- 1 point for *Not like me at all*
Add up all the points and divide them by 10.

**Interpretation**
Check your level of grit based on the scoring:
- 5 = You are an extremely gritty student.
- 4 = You have most traits of a gritty student.
- 3 = You have some traits of a gritty student.
- 2 = You lack traits of a gritty student.
- 1 = You are not a gritty student at all.

**Variable Relationship:**

- Complete the chart with the information requested.

<table>
<thead>
<tr>
<th>My age is ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>My GPA up to Cycle I, 2018 is ...</td>
</tr>
<tr>
<td>My Grit Level (after taking the scale below) is ...</td>
</tr>
</tbody>
</table>
Appendix B: Instrospection to Grit Questionnaire

Universidad Nacional
Escuela de Literatura y Ciencias del Lenguaje
Cycle II, 2018

Description:

This questionnaire is part of a research paper aimed at collecting data on the traits of grit, commonly defined as the perseverance and passion for long term goals. Your collaboration and accuracy in completing the following anonymous questionnaire will be appreciated by the researchers.

1. What do you generally do to complete challenging academic projects or tasks?
2. How do you manage your time to complete academic work successfully?
3. What should you do to be always focused on school work?
4. What should you do to always feel motivated towards class work?
5.1. Based on your current major, mention your main career goal.
5.2. Explain how you will reach your main career goal.
6. Mention the classroom environment that contributes to develop perseverance in English learning.