Non-Cognitive Skills as Correlates to Academic Performance among Senior High School Students

Divina O. Rulida¹, Jenny C. Cano², Glenn R. Andrin³

¹General Luna National High School, Siargao Islands, Philippines
²,³St. Paul University Surigao, Surigao City, Philippines

Abstract --- Today's teachers and students have a tremendous degree of duty for surviving in a competitive world and they have a growing level of responsibility to achieve in a highly competitive environment. Aside from cognitive skills, the non-cognitive skills are believed to play a crucial role for academic success as they can improve student motivation, engagement, and overall well-being. This study examined the correlation of non-cognitive skills to academic performance among students at General Luna National High School, Siargao Islands, Surigao del Norte, Philippines. The main tools used to gather information were an adapted research questionnaire for Grades 11 and 12 students. The study respondents were the 302 senior high school students under the general academic strand at General Luna National High School during the school year 2022 – 2023. Data gathered were analyzed using Frequency Count and Percentage, Means and Standard Deviations, Mann Whitney U-Test and Kruskal Wallis H-Test, Independent T-Test, and Spearman Rho Correlation to yield a generally significant difference and relationship based on the data outcomes from the respondents' responses. The descriptive-correlational research design was used to evaluate the non-cognitive skills in the learning of senior high school students that link to their academic achievement in which purposive sampling was done to obtain 302 respondents. Results showed that the respondents still need assistance writing high-quality research papers and more confidence especially when collaborating with teachers in doing class projects even outside the class. Majority of them (64%) got a grade point average below 85% which implies a need to demonstrate a higher degree of academic performance. With p-values of 0.0001 and 0.0120, significant differences exist in the respondents' academic performance when grouped based on sex and grade level, respectively. Furthermore, with correlation coefficient of 0.29 and p-value of 0.0001, it was revealed that there is a significant positive relationship between the respondents’ academic achievement and non-cognitive skills in terms of academic perseverance. These findings provide several implications especially in enhancing students’ academic achievement for low performing subject areas such as science and mathematics. Hence, it is recommended that teachers and school administrators may consider providing activities or programs to strengthen students’ academic perseverance to improve their performance across all subject areas, most especially in writing research.

Keywords --- non-cognitive skills, academic performance, academic mindset, academic perseverance, academic behavior, social skills

I. INTRODUCTION

1.1 Background

The world is becoming more competitive and challenging almost every day and in order to compete in this highly competitive environment, teachers and students must take on an increasing amount of responsibility. The competitive spirit may find in nearly every facet of life. They must adapt to changing circumstances, acquire new skills, and continuously improve themselves to remain relevant in the job market. The World Economic Forum (2020) anticipates that the top ten employers will experience significant demand for skills in 2025, including critical thinking, problem-solving, and creativity, which require learners to take responsibility for their learning and development. As such, learners must learn to take ownership of their education and actively seek opportunities to develop the skills to help them thrive in a competitive world. Consequently, to meet the demands of today's
competitive world, General Academic Strand students at General Luna National High School must work hard to achieve academic success.

Gogoi and Bora (2021) stated that the prosperity of any society is greatly dependent on its human capital, the quality of which is dependent on the development of cognitive and non-cognitive abilities among teenagers. Everyone is born with unique abilities that they employ in many facets of their daily lives. Non-cognitive abilities, on the other hand, impact school achievement and continue into adulthood – for better or worse. According to education, economics, and psychology research, non-cognitive abilities predict a wide range of adult outcomes, including academic success, employment, financial stability, criminal conduct, and health (Gabrieli, Ansel, & Krachman, 2015).

Regarding the assessment of academic performance at the macro level, the Philippines ranked last out of 79 nations (PISA, 2018) in reading. Approximately 80% of Filipino pupils who participated did not achieve a minimum level of reading competence (Level 2). The result is among the highest proportions of poor achievers among all PISA-participating nations (Bernardo et al., 2021). Meanwhile, the National Achievement Test (NAT) is a standardized test administered to students in the Philippines to measure their academic performance in key subjects such as mathematics, science, English, and Filipino. It is conducted annually by the Department of Education (DepEd) to provide data on the merit of learning in the public and private schools of the country. According to the DepEd Order No. 26, s. 2015, the NAT is a "comprehensive, aptitude-based, and competency-based examination that measures students' achievement and progress in the elementary and secondary levels." The designed test is o assess the student’s mastery of learning competencies based on the DepEd’s K-12 curriculum.

Moreover, in the 2017 NAT result, Caraga ranked last out of 16 areas. At the division level, the General Luna National High School was one of the four (4) secondary schools that were chosen to administer the national achievement test among senior high school students and placed second in having the lowest MPS on the report of performance profile (Siargao Division M&E, 2018).

Building good academic performance is essential for several reasons, including better career opportunities, higher income potential, and improved quality of life. Individuals with higher levels of education and better academic performance are more likely to have access to a broader array of job prospects and higher-paying jobs, a range of positive outcomes, including better health, longer life expectancy, and higher levels of civic engagement, and developing skills in critical thinking and problem-solving, which are crucial for achieving success in numerous areas of life, such as employment, personal relationships, and individual growth (Oreopoulos et al., 2013).

Aside from contributor factors of cognitive skills, Duckworth et al. (2015) emphasized that non-cognitive skills are also crucial for academic success as they can improve student motivation, engagement, and overall well-being. Nonetheless, teachers play a vital role in the skill-building and acquisition of these non-cognitive skills. They are essential in identifying the child's initial pool of talents and future skill gain.

Given the school’s ongoing efforts to develop the non-cognitive skills of senior high school students at General Luna National High School in coping with the current trends in education, first in terms of providing holistic education which goes beyond academic achievement and includes the development of non-cognitive skills such as social-emotional learning, character traits, and 21st-century skills. The recognition that success in life depends on more than just academic knowledge has led to an interest in understanding how non-cognitive skills influence academic performance. Second, there is growing recognition of the impact of student well-being on their academic performance. Linking non-cognitive skills, such as self-efficacy, resilience, and grit creates positive
mental health outcomes, reduced stress, and improved overall well-being. Third, giving emphasis on college and career readiness: Many education systems worldwide have shifted their focus to college and career readiness, aiming to prepare students for success beyond high school. Employers and higher education institutions increasingly value non-cognitive skills, including problem-solving, teamwork, adaptability, and communication. Understanding the relationship between these skills and academic performance can help us, educators, design interventions and curricula that better prepare students for future endeavors. Lastly, the recognition of diverse student needs: Schools are becoming more aware of the diverse needs and backgrounds of their students.

Hence, the researchers are prompted to investigate how non-cognitive skills can support students from different socio-economic, cultural, and linguistic backgrounds in overcoming barriers to academic success. Grasping the influence of non-cognitive skills can inform the development of inclusive and equitable educational practices.

1.2 Statement of the Problem
This study aimed to answer the following questions:
1. What is the profile of the respondents in terms of sex, grade level, and parent's highest educational attainment?
2. What is the level of non-cognitive skills as perceived by the respondents in the context of academic mindset, academic perseverance, academic behavior, and social skills?
3. Is there a significant difference in the respondent's level of non-cognitive skills when grouped according to their profile?
4. Is there a significant difference in the respondents' academic achievement based on the profile?
5. Is there a significant relationship between the respondents' non-cognitive skills and academic achievement?

1.3 Literature Review
This study was anchored on the concept of Farrington et al. (2012) in their research consortium at the Chicago School of Research, which concluded five non-cognitive skills which are associated with academic performance, and these are academic behaviors (e.g., going to class and participating), academic perseverance (e.g., grit and self-discipline), academic mindsets (e.g., feeling a sense of belonging within an academic community and believing that ability and competence can grow with effort), learning strategies (e.g., metacognitive strategies and goal-setting), and social skills (e.g., interpersonal skills and cooperation).

Non-cognitive Skills
Non-cognitive characteristics have received more attention in education as academics and educators understand the relevance of elements other than cognitive talents that lead to academic performance. Classrooms play an essential role in developing students' non-cognitive abilities. Classrooms may assist students in developing good academic mindsets, social skills, and effective learning practices, which can subsequently significantly increase students' tenacity in completing tasks and improve their academic achievement. The teacher-student connection is the most fundamental interaction in the educational process and a unique interpersonal and social relationship critical to students' intellectual, social, and emotional growth (Li-Xu & Qi Yang, 2019).

In this context, a non-cognitive talent is self-esteem, characterized by how a person assesses his or her value. Positive improvements can result from high levels or a rise in self-esteem (Hunter, 2003). Another significant non-cognitive talent is resilience, a positive adaptation that assesses how effectively one cope with adversities (Gutman & Schoon, 2003). Duckworth refers to this characteristic as grit (Duckworth, 2013), which can significantly predict success (Park et al., 2020).
Furthermore, Gogoi and Bora (2021) said that Non-cognitive Skills are the patterns of individuals' thoughts, feelings, and personality traits that can grow throughout their lives and are valuable in business, school, and society. It entails traits such as perseverance, meticulousness, self-discipline, faith, attention, self-esteem, self-efficacy, and so on that are equally as significant, if not more so, than cognitive factors such as intellect and academic ability.

Management, finance, commerce, and many other sectors acknowledge the importance of non-cognitive abilities in performing well in particular vocations in the future (Otty & Milton, 2019). According to survey data from Eastern Europe, the labor market lacks employees with the non-cognitive abilities necessary for various jobs (Matsuoka & Mihail, 2016). In line with the European Centre for the Development of Vocational Training (CEDEFOP) research (Cedefop, 2014), 40% of European organizations were challenged to find people with the appropriate NCS for their positions of Up-skilling.

Non-cognitive abilities supplement cognitive abilities. They may undergo assessment separately, but they are also interconnected. Students with superior non-cognitive skills outperform their peers regarding academic accomplishment (Gabrieli, Ansel, & Krachman, 2015).

**Academic Mindset**

Mindsets develop through interactions between students and classroom environments. Classrooms can impact students' academic tenacity through direct instruction or other methods that change the environments in which students learn. Some research supports the usefulness of growth mindsets in predicting success and other critical learning-related outcomes, whereas others fail to discover evidence of the growth mindset's adaptive impacts. However, increasing data suggest that attitudes do not correspond with accomplishment (Moreau et al., 2018).

According to Corradi et al. (2019), having a growth mindset was adversely connected to academic accomplishment while favorably related to academic adjustment. Mills and Mills (2018) found no statistically significant relationship between attitudes and student retention. Similarly, Macnamara and Rupani (2017) found no evidence of a link between mentality and academic perseverance. However, Bernardo (2020) discovered that a development mindset positively predicted success mainly among students from higher-income households in another research on Filipino secondary school students.

In addition, students with a growth mindset, believing their abilities can evolve through hard work and perseverance, are more likely to have a positive academic mind-set and achieve higher academic success (Dweck, 2010). In contrast, students with a fixed mindset, who believe their abilities are immutable and cannot be altered, are more likely to have a negative academic mindset and struggle with academic success.

Moreover, research has shown that various factors, such as parental expectations, teacher feedback, and the learning environment, can influence students' academic mindsets. For example, a study by Blackwell et al. (2007) found that when teachers provided students with feedback that emphasized the ability to learn and improve, students were more likely to develop a growth mindset and achieve higher academic success.

Regarding the academic mindset of Senior High School students, a recent study by Ahmed et al. (2021) found that students who had a high level of self-assurance in their capacity to achieve academically had higher academic achievement than those who did not. The study also found that various factors, such as parental support, teacher feedback, and self-efficacy beliefs, influenced students' confidence in their ability to succeed academically.
Destin et al. (2019) discovered that attitudes explained a portion of the association between socioeconomic status and accomplishment. Children from lower-income homes exhibited more extraordinary, fixed mentality beliefs, accounting for some of their inferior accomplishments. The researchers also discovered that having a fixed mentality related to inferior success at all socioeconomic levels.

Early work on achieving goal theory gave rise to the concept of a development mindset (Dweck & Yeager, 2019). According to achievement goal theory, individual motivations have two types: mastery goals, which represent an individual's desire to do well at a task or acquire a skill, and performance goals, which include an individual's desire to exhibit proficiency relative to others. Categorize into smaller groups, performance goals along a second dimension of approach vs. avoidance: a performance-approach goal orientation is one in which individuals strive to demonstrate their competence relative to others, whereas a performance-avoidance goal orientation is one in which individuals strive to avoid appearing less competent than their peers. Learners have a growth mindset when they feel their intellect can be enhanced and grown. These kids may set goals to increase their learning and put more effort into academic assignments (Dweck & Yeager, 2019).

However, encouraging learners to adopt growth mindset ideas requires conducive educational environments. Researchers are increasingly discovering that instilling growth mindset ideas in students is less successful in producing desired motivational and performance results when the larger classroom setting is incompatible with or un-supportive of the growth mindset messaging (LaCosse et al., 2021). On the other hand, when perceived task difficulty grows, so does self-efficacy for people with a growth mentality. For example, students with a development mindset who saw an academic obstacle as applicable outperformed those who saw it as a hindrance (Oyserman et al., 2018).

Indeed, field studies in actual classroom settings show that there is relative agreement among students in the same classroom environment (taught by the same teacher) that their specific teacher endorses more fixed (or growth) mindset beliefs—and that these perceptions differ from their perceptions of other teachers in different classroom environments (Kroeper et al., 2022).

In conclusion, having a positive academic mindset is critical for students’ academic success, and various factors can influence it. Parents and educators can help Senior High School students develop a positive academic mindset and achieve their academic goals by fostering a growth mindset and providing supportive learning environments.

**Academic Perseverance**

In life, the researcher notices that some people make objectives and attain them despite failures and adversity, while others cannot pursue them and give up. Although there could be multiple reasons for this, one most likely is a lack of perseverance. Academic perseverance is essential for students as it is closely related to their academic success. Following a study by Chen et al. (2021), academic perseverance is the ability to persist in facing academic challenges and obstacles. Their study found that academic perseverance was positively associated with academic achievement among Chinese students.

Academic persistence has a variety of factors. Academic accomplishment usually predicts by intellectual capacity. However, intelligence is not a guarantee of academic success. When people are engaged in something, they feel pleasant emotions in that do-main and are drawn to interact in that area more (Rieger, 2018). As a result, if a student is conscientious but not very interested in a topic, he or she will perform well despite lacking enthusiasm. In
contrast, if a student has a strong interest in one topic, he or she will study hard even if conscientiousness is low (Song et al., 2020).

A challenging workload frequently causes academic stress, the pressure to do well, and the quantity of material an individual expects to acquire (Ye et al., 2018)—for example, individuals with a higher feeling of stress tend to have a lower sense of self-efficacy. Academic perseverance emphasizes student effort and the quality of academic behavior that results. However, the psychology literature defines numerous types of perseverance, such as grit and self-control. Grit refers to the degree to which pupils stay focused rather than distracted by challenges. Self-control, conversely, relates to whether pupils resist short-term temptations to pursue higher interests (connected to delayed gratification and self-discipline) (Gogoi & Bora, 2021).

Academic Behavior

Communication takes the shape of behavior. According to Gent (2022), bad conduct is frequently the result of a skill shortage. If a youngster cannot communicate his dissatisfaction orally, he may hurl his pencil across the room; if a child feels socially rejected, he may respond by shoving a classmate on the playground.

Furthermore, (Kayaba et al., 2021) said that sure students are more prone to struggle with controlling lifestyle habits, such as eating/skipping breakfast or sleeping late, which links to low academic performance. The only way to avoid these negative results is for instructors to recognize the underlying reasons for poor conduct and implement systems encouraging more self-awareness and self-control.

According to the study, handling students’ behavioral behaviors in the classroom is significant for many instructors, particularly those at General Luna National High School. One of the current causes is the effect of technology, such as the use of various social media programs. If they are not listening in class, the teacher’s capacity to sympathize with pupils’ optimistic viewpoint on life usually regards differently. Gent (2022) stated that when children know what is expected of them precisely, they feel more in control, so instructors should begin each new school year by establishing clear behavioral standards. The teacher begins by asking the class to assist in developing a list of rules to keep everyone’s attention focused on positively learning favorable rules to pro vide students with good behavioral objectives.

In addition, Ramos (2019) discovered in his study on "The Influence of Self-Discipline and Time Management on the Academic Performance of Senior High School Students" that students with good self-discipline and time management skills had higher academic achievement than those who did not. The recent study of Ramos (2019) lends credence to the notion that non-cognitive characteristics are significant predictors of academic performance.

Gent (2022) goes on to say that singling out students who act out might backfire and lead to other poor behavior; instead, put up a systematic behavior control framework, such as a token system that the entire class follows, so no one child believes that the teacher fixes on them. Learners may respond more effectively to a teacher after understanding why a student behaves a certain way. In addition, when teachers attempt to limit what pupils say actively or do, they are frequently left unsatisfied. A teacher can instill new behaviors that perform the same function. Many social-emotional learning programs use behavior-teaching tactics.

From another perspective, active participation can help students to develop critical thinking and problem-solving skills. By engaging with course material and participating in discussions, students can apply what they have
learned to real-world scenarios, leading to a deeper understanding of the material and tremendous success in their academic endeavors (Freeman et al., 2014).

Moreover, active participation can help create a sense of community and collaboration among students, leading to increased motivation and engagement (Johnson & Johnson, 2014). Students are more likely to when they feel connected to their peers and invest in their learning, participate actively in classroom activities, and achieve tremendous success. Active participation in classroom learning activities can positively impact academic success. By helping students to understand better and retain information, develop critical thinking and problem-solving skills, and create a sense of community and collaboration, active participation can lead to higher levels of achievement.

Social Skills

The social setting considerably impacts students’ perceptions of their abilities. Membership in major social groups impacts students’ perceptions of their strengths and potential. Students are far more likely to be orientated and perform appropriately in performing if they feel a member of a learning community that values academic effort. According to psychological and sociological research, classrooms are essential in creating an individual’s identity and self-efficacy (Hutching, 2019).

Arteaga (2019) and López (2018) remarked in this regard that, in addition to imparting their information, children should be encouraged in school to acquire social skills that allow them to grow as integrated persons. Teachers must train children to speak effectively and assertively to enhance their social skills and enjoy relating to their classmates (Cabrera, 2019). Indeed, speaking requires clear communication and the ability to listen to others.

Social skills are essential for navigating social situations inside and outside school. Students who have developed strong social skills are better equipped to handle conflict and build positive relationships, resulting in heightened emotions of satisfaction and well-being (Hymel et al., 2006). Hutching (2019) classifies social skills as a component of social competence. Social skills combine interpersonal abilities and attitudes that enable individuals to function socially in any social environment. Hutching adds that the ability to create communication is at the heart of the teacher’s social skills. Social competency may develop through observing and copying it from them. Practice, examples, and criticism help to improve social skills.

On the other hand, student-related issues undoubtedly play a significant role in developing social skills. Furthermore, teachers’ teaching obligations, responsibilities, and intense and face-to-face connections with other individuals in schools produce great stress. The approach is one of the primary differences between teaching and other professional group members. Teaching requires people-oriented, constant, balanced, and healthy connections (Engin & Pek, 2020).

Stress is a scenario that occurs around an individual and has a detrimental impact on his life by pushing his mental, bodily, and spiritual limitations (Engin & Pek, 2020, p. 185). Nowadays, education in the globe is undergoing significant changes, both technical and social, and the forces behind this transformation, according to Martnez-Usarralde et al. (2019), favor academic accomplishment over social success. Brilliant people frequently notice in the social and professional worlds who admit to not having participated in activities that would have helped them to strengthen their social skills at the institutional level (Hasanah & Mailk, 2020).

In the contemporary setting, students exhibit varying degrees of the stress connected to academic, health, and family difficulties, with the inability to manage owing to a lack of understanding of coping techniques
Teamwork competence enables students to achieve more extraordinary achievements collectively and individually while enhancing their character and leadership (Garca-Martn et al., 2020). Not all team members perform equally in many instances, but the student's social life improves in all circumstances.

Self-esteem is defined by one's appraisal of oneself, directly related to the accurate self-knowledge and healthy self-acceptance required to connect successfully with others (Konstanze et al., 2019). Conversely, if it is not developing adequately, it will lead to a lack of social competencies and, in severe situations, poor self-esteem, which may lead to suicide.

As a result, Luca Lourdes De La Cruz-Urrutia 1794 when social skills are not developing, the link with people will be inadequately articulated, resulting in various bad experiences and social isolation (Bolsoni-Silva & Loureiro, 2017; Vargas&Paternina, 2017). Poor interaction with peers in and out of the classroom is symptomatic of a behavior characterized by low self-esteem and severely diminished self-confidence, as perceived by the group.

Following this, the emergence of personality disorders links to a lack of social skills. The lack of social connection impedes proper identity formation and is closely associated with university dropout (Tacca et al., 2020). A collaborative effort across educational entities is essential to enhance social skills and allow pupils to express themselves without discrimination.

Discrimination identifies as one of the significant social problems. It makes used to judge if social conduct is good for reinforcing people's self-concept or may cause irreversible harm to their socio-emotional development (Estrada, 2019). According to the findings, numerous chances exist for pupils to participate in extracurricular activities, but their increasing worries hamper them.

As a result, the recommendation is to have a healthy lifestyle, participate in sports, avoid harmful sexual practices, and promote positive attitudes that will benefit society (Felgueras-Custodio et al., 2020). The absence of these necessities in students' life produces severe sadness; hence, the necessity of providing social activities in educational institutions.

**Academic Performance**

Azizi et al. (2019) discovered that students who used digital media excessively had lower academic achievement than those who did not. The behavior is consistent with prior research findings. Students may need more time to focus on their academic courses and endure sleep difficulties due to late-night online activities. Insufficient sleep and daytime drowsiness have also been linked to low academic performance in the literature (Marta et al., 2020).

Academic performance fluctuates according to the introduction of new technology to facilitate learning. Depending on the benefits it provides, there are incalculable aspects that might make one technology more advantageous than another. Surveys of pupils on their usage of technology revealed a good trend. Regarding technological access and simplicity, the consequence is that technology in teaching facilitates academic self-efficacy, which is positively associated with student's academic performance (Han-ham et al., 2021).

Experiments carried out in the classroom of a public tenth-grade high school in Punjab (Shabnam & Nawas, 2020) attempted to demonstrate how incorporating emerging technologies can affect teaching in schools by using two groups, one with traditional teaching and the other with emerging technology. The outcomes of using new technologies, such as statistics and computer animation software, revealed a substantial contrast in academic performance. 
performance between both groups of pupils. According to the findings, rising technology in youth education increases academic achievement on a big scale.

In contrast, Badilla et al. (2020) found that incorporating technology into classroom learning increases academic achievement in their study of 365 participants to determine the influence of augmented reality. The use of technology in the instructional setting has a beneficial influence on student performance, regardless of whether the kids have special educational needs. According to research done in 202 schools (Bet, 2021), shared computer access affects the advancement of students' technical abilities.

**Grade Point Average**

Poropat (2009) Grade Point Average (GPA) is a commonly used measure of academic performance calculated by averaging the grades received in all classes a student takes. Educational institutions widely use GPA to assess a student's academic progress and potential for success. One of the advantages of using GPA as a basis for evaluating academic performance is that it provides a standardized measure of achievement that can compare conveniently across different courses and institutions. It also considers the number of courses taken and the difficulty level of those courses, providing a more comprehensive picture of a student's academic ability than a single grade in a particular class (Poropat, 2009).

Research has shown that GPA strongly predicts various outcomes, including college admission, graduation rates, and future earnings. An instance of this is a research paper released in the Journal of Education and Work in 2019 that found that high school GPA was Standardized test scores, such as the SAT or ACT serve as not as reliable in predicting college achievement as non-cognitive factors. Moreover, a research paper released in the Journal of Applied Psychology in 2018 found that high school GPA was a better predictor of job performance than college GPA or standardized test scores. The study found that individuals with higher GPAs were more likely to perform well on the job and to receive promotions (Richardson et al., 2012).

However, Stinebrickner (2012) it is essential to recognize that GPA is not a perfect measure of academic performance, and it has its limitations. For example, it may only partially capture other vital skills and qualities directly related to academic performance, such as creativity, leadership, and interpersonal skills. Additionally, GPA can affect by a variety of factors outside of a student's control, such as the difficulty of the courses offered at their school or their access to educational resources. In conclusion, GPA is a widely used and generally effective measure of academic performance. While it has limitations, research has shown that it is a strong predictor of future college and workforce success. Therefore, it can be a helpful tool for evaluating a student's academic potential and progress.

**Parents’ Educational Attainment**

Parental educational attainment is an essential predictor of a child's academic performance. Research studies have consistently found a strong positive correlation between parents' education levels and their children's educational outcomes. One study published in Social Science Research in 2016 examined the relationship between parental education and children's academic performance across 68 countries. The study found that parents' education was positively associated with children's academic performance in all countries, and the degree of the correlation was more muscular in countries with higher levels of income inequality.

Another study published in Educational Research and Reviews in 2019 analyzed data from a sample of 254 primary school students in Nigeria. The study found that parental education was a significant predictor of children's academic performance, with children of more educated parents scoring higher on tests of English and mathematics.
The contribution of parental educational attainment to a child's academic performance is likely due to various factors. Parents who have attained higher levels of education may have more excellent knowledge and resources to support their children's learning and academic success. In addition, they may be more predisposed to participate in educational activities with their children, such as reading and helping with homework. Additionally, parents with higher levels of education may have higher expectations for their children's academic achievement, which can motivate children to strive for higher academic performance (Plass, 2005).

Moreover, fathers' education had a positive direct effect on their children's academic performance, partially mediated by parental involvement in their children's education. Fathers' economic capital also positively affects their children's academic performance, partially mediated by parental educational investment (Baoyan & Minggang, 2015). According to a meta-analysis conducted by Plass (2005b), parental education is considered one of the most significant factors in predicting children's academic success. The analysis found that children whose parents have achieved higher levels of education are typically inclined to possess higher grades, test scores, and higher rates of graduating high school and enrolling in college.

There are several reasons why parents' educational attainment can impact their children's academic performance. Firstly, parents with higher levels of education are more likely to have higher income and socioeconomic status, which can provide children with better access to educational resources such as books, tutoring, and extracurricular activities. Secondly, educated parents are more likely to have higher knowledge and skills, which they can pass on to their children through informal learning and home environments that encourage academic success. Finally, parents with higher levels of education typically have high educational expectations for their children, which can positively influence their children's motivation and academic goals.

Nonetheless, it is fundamental to note that the relationship between parental education and children's academic performance can be complicated. For example, children may face academic challenges if their parents are highly educated but not actively involved in their education or if their parents have unrealistic expectations. Additionally, children of highly educated parents may face social and psychological pressures to perform academically, which can lead to adverse outcomes such as anxiety and burnout.

Therefore, the impact of parental educational attainment on children's academic performance is a complex issue. While research has shown a strong positive correlation between the two, other factors such as parental involvement, expectations, and socioeconomic status can also play a significant role. Nonetheless, parents with higher levels of education can positively impact their children's academic success by supplying them with increased availability of educational resources and fostering an environment that values learning and academic achievement.

Sex

Numerous factors influence academic performance. According to Dayıog˘lu and Tunali (2002), the sex of the student may also be a factor in determining student performance. Sex differences refer to the variations in behavior, preferences, abilities, and characteristics between males and females, typically associated with biological, social, and cultural factors (Wood & Eagly, 2010). These differences can manifest in various domains, including academic performance, cognitive abilities, personality traits, and social behavior. While some sex differences are slight and have minimal practical significance, others can have significant implications for individual and societal outcomes. Therefore, understanding the nature and causes of sex differences is an important area of research that has implications for education, health, and social policy. In addition, regarding educational attainment, Dayıog˘lu and Tunali (2002) found that female students had higher GPAs than male students in almost all departments.
On the contrary, Montolio and Taberner (2021) found that female students performed worse than male students overall. Female students were more likely to experience test anxiety and engage in maladaptive test-taking behaviors, such as checking their work excessively, while male students were more likely to engage in adaptive test-taking behaviors, such as skipping difficult questions. Kingdon et al. (2017) posited that girls have greater resilience and adaptability, as well as high levels of motivation and engagement in school. Conversely, boys are one and a half times more likely than girls to experience grade retention, remedial services, expulsion, and school dropout (Entwisle, Alexander, & Olson, 2007; OECD, 2015, p. 54).

This cultural reversal is present to develop through socialization from a young age (Andersen et al., 2013), and competitive experience was positively associated with both male and female students' academic performance (Lu et al., 2018). Spinath (2014) concluded that, although sex differences in school achievement cannot expand by differences in intelligence, personality, and motivation, girls can adapt better to today's school environment, primarily because of their higher verbal intelligence and more vital self-discipline.

II. METHODS

This study used a descriptive-correlational research design to evaluate the non-cognitive skills in the learning of senior high school students that link to their academic achievement. Dornyei (2007) implied that this method is appropriate when researchers want to investigate the extent to which variables are related but do not manipulate them. The technique helped the researcher plan and carry out the analysis. The chosen research design is appropriate because it determined the non-cognitive skills of General Academic strand students at General Luna National High School and its correlation to their academic performance.

Universal-purposive sampling was used in determining the respondents of the study who are the 302 Senior High School students under the General Academic Strand school year 2022 – 2023 of General Luna National High School, General Luna, Surigao del Norte, Philippines. These respondents were chosen based on specific characteristics or criteria to gain valuable insights or represent certain perspectives relevant to the study.

The study utilized an adapted questionnaire from the study of Huang (2011) with slight modification to suit in the study’s nature and purpose. This instrument developed by Sui Huang accomplished both reliability and validity and could utilize in the subsequent analysis. In gathering the relevant data, the researchers carefully followed ethical procedures during the distribution and retrieval phases.

Frequency count, percentage, mean, and standard deviation were used for the descriptive analysis of the data. Before the inferential analysis, normality test was carefully observed. Independent t-test, Mann Whitney test, and Kruskal Wallis test were used to test the significant difference and Spearman rho correlation was used to test the significant relationship. All hypotheses were tested at 0.05 level of significance.
III. RESULTS AND DISCUSSION

Table 1. Demographic Profile of the Respondents

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<th>Variables</th>
<th>Frequency (N=302)</th>
<th>Percentage (%)</th>
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<tbody>
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<td><strong>Grade Level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade 11</td>
<td>137</td>
<td>45.36</td>
</tr>
<tr>
<td>Grade 12</td>
<td>165</td>
<td>54.64</td>
</tr>
<tr>
<td><strong>Parents' Highest Educational Attainment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary Level</td>
<td>17</td>
<td>5.63</td>
</tr>
<tr>
<td>Elementary Graduate</td>
<td>26</td>
<td>8.61</td>
</tr>
<tr>
<td>High School Level</td>
<td>111</td>
<td>36.75</td>
</tr>
<tr>
<td>High School Graduate</td>
<td>89</td>
<td>29.47</td>
</tr>
<tr>
<td>College Level</td>
<td>23</td>
<td>7.62</td>
</tr>
<tr>
<td>College Graduate</td>
<td>34</td>
<td>11.26</td>
</tr>
<tr>
<td>With Master’s Units</td>
<td>1</td>
<td>0.33</td>
</tr>
<tr>
<td>Master’s Degree</td>
<td>1</td>
<td>0.33</td>
</tr>
</tbody>
</table>

Table 1 shows the respondents' frequency and percentage on their sex, grade level, and parents' highest education degree for each group. 124 (58.94%) men and 178 (41.06%) women made up the 302 participants. KINGDON et al. (2017) emphasized that girls have greater resilience, adaptability, and high levels of motivation and engagement in school. In addition, Dayıog’lu and Tunali (2002) claimed that female students had higher GPAs than male students in almost all departments. Thus, Spinath (2014) concluded that although gender differences in school achievement cannot explain fully by differences in intelligence, personality, and motivation, girls adapt better to today's school environment, primarily because of their higher verbal intelligence and more vital self-discipline.

In current years, there has been a rise in number of female students enrolling in schools than male students. According to the UNESCO Institute for Statistics (2019), more girls than boys were enrolled globally in primary, secondary, and tertiary education. This trend has important implications for education policy and practice. First, the gender gap in education enrollment is cultural and societal attitudes toward gender roles. In many societies, girls prioritize their education and career aspirations less than boys, and society expects them to take on domestic and caregiving responsibilities at home (BRUNS et al., 2003). The gathered data can make girls less likely to attend school or intentionally force them to drop out early to take care of family responsibilities. Second, the gender gap in education exists because of inadequate design in educational systems to address male students' requirements and learning styles. According to a report by the OECD (2017), boys are more likely to struggle with traditional academic subjects, such as reading and writing, indicating a higher likelihood of students dropping out of school. The report may be due partly to teaching methods and curricula geared toward female students or a need for more male role models in the education system.

Regardless of the reasons for the gender gap, education policymakers and practitioners need to address this issue to ensure that all students have equal opportunities for education and success. The intervention may involve developing strategies to encourage boys to stay in school, providing targeted support for male students who are struggling academically, and addressing societal attitudes towards gender roles that may discourage boys from pursuing education.
Regarding grade level, 137 students (45.36%) were in Grade 11, and 165 (54.64%) were in Grade 12. In parents’ highest educational attainment, high school level received the most significant proportion of 111 (36.75%), followed by high school graduates with 89 (29.47%). Conversely, there were just 34 (11.26%) college graduates. The percentages for the remaining categories, which included elementary level, with master’s units, and master’s degree, ranged from 1 (0.33%) to 17 (5.63%). The distribution of percentages shows that most parents in the General Academic strand only have a high school diploma, which is not the highest level of education. Contrarily, only some of the parents could finish their college degrees.

In fact, in some cases, parents may face financial constraints that impede their ability to pursue higher education. Long et al. (1999) provide a detailed discussion of the possible reasons for the educational disadvantage apparent in rural areas, including the difficulties and costs imposed by distance, the higher opportunity costs in attending school, college, or university for young people whose parents have farms or rural businesses, and the possible cumulative generational effects associated with lower overall levels of educational attainment. Distance from a university campus (and the associated cost) is the dominant causal variable in the lower participation rates of rural and isolated people. Thus, the tendency to live and work at home and on farms while at university is likely to happen.

Meanwhile, Baoyan and Minggang (2015) analyzed that parents’ education positively affected their children’s academic performance. For instance, fathers’ economic capital positively affected their children’s academic performance, partially mediated by parental investment in their children’s education. That is, the positive effect of fathers’ education on their children’s academic performance was more assertive when they had higher economic capital, and the positive effect of economic capital was more substantial when fathers had higher levels of education.

According to a meta-analysis conducted by Plass (2005b), parental education is one of the most important predictors of children’s academic success. The study found that children of parents with high education levels are likelier to have higher grades, test scores, and higher rates of high school graduation and college enrollment.

There are several reasons why parents’ educational attainment can impact their children’s academic performance. Firstly, parents with higher levels of education are more likely to have higher income and socioeconomic status, which can provide children with better access to educational resources such as books, tutoring, and extracurricular activities. Secondly, educated parents are more likely to have higher knowledge and skills, which they can pass on to their children through informal learning and home environments that encourage academic success. Finally, parents with higher levels of education are more likely to have high educational expectations for their children, which can positively influence their children’s motivation and academic goals. Parents with high education levels are more likely to provide their children with the support and resources they need to succeed in school. They may also have higher expectations for their children’s academic achievement. These factors can exert on children’s academic outcomes.

Table 2 shows the results of the Level of Non-Cognitive Skills in terms of Academic Mindset, the indicator (10) I am confident that I can succeed academically in Senior High School got the highest mean of 3.42 with a standard deviation of 2.31, wherein interpreted as moderately agree and qualitatively described as moderately high. The academic mindset of students played a critical role in their academic success. A positive academic mindset, which involves beliefs and attitudes that support academic success, strongly predicts academic achievement.
As a result, Destin et al. (2019) discovered that attitudes explained a portion of the association between socioeconomic status and accomplishment. Children from lower-income homes exhibited more extraordinary, fixed mentality beliefs, accounting for some of their inferior accomplishments. The researchers also discovered that having a fixed mentality related to inferior success at all socioeconomic levels. Thus, the study shows the highest portion of participants coming from the high school level 111 (36.75%) of the total population of the participants. Furthermore, learners have a growth mindset when they feel their intellect can be enhanced and grown. These students may set goals to increase their learning and put more effort into academic assignments (Dweck & Yeager, 2019).

Bernardo (2020) also discovered that a development mindset positively predict-ed success mainly among students from higher-income households in another research on Filipino secondary school students. According to Dweck (2010), students with a growth mindset, believing their abilities can develop through hard work and perseverance, are more likely to have a positive academic mindset and achieve higher academic success. In contrast, students with a fixed mindset, who believe that their abilities are fixed and cannot be changed, are more likely to have a negative academic mindset and struggle with academic success.

### Table 2. Level of Non-Cognitive Skills in Terms of Academic Mindset

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicators</th>
<th>M</th>
<th>SD</th>
<th>Verbal Interpretation</th>
<th>Qualitative Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I can manage my time effectively.</td>
<td>2.90</td>
<td>0.51</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>2</td>
<td>I can take good class notes.</td>
<td>2.97</td>
<td>0.46</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>3</td>
<td>I can perform well in exams.</td>
<td>2.84</td>
<td>0.58</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>4</td>
<td>I can write high-quality research papers.</td>
<td>2.38</td>
<td>0.68</td>
<td>Slightly Agree</td>
<td>Slightly High</td>
</tr>
<tr>
<td>5</td>
<td>I can participate effectively in class discussions and answer questions.</td>
<td>2.82</td>
<td>0.62</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>6</td>
<td>I can understand most ideas in the texts.</td>
<td>2.91</td>
<td>0.52</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>7</td>
<td>I can be up to date with my schoolwork.</td>
<td>2.80</td>
<td>0.54</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>8</td>
<td>I can overcome most of the challenges in homework.</td>
<td>2.95</td>
<td>0.50</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>9</td>
<td>I am confident when talking to a teacher.</td>
<td>2.77</td>
<td>0.69</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>10</td>
<td>I am confident that I can succeed academically in Senior High School.</td>
<td>3.42</td>
<td>2.31</td>
<td>Strongly Agree</td>
<td>Very High</td>
</tr>
</tbody>
</table>

**Average**: 2.88  **SD**: 0.94  **Verbal Interpretation**: Moderately Agree  **Qualitative Description**: Moderately High

Legend:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Verbal Interpretation</th>
<th>Qualitative Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.25 - 4.00</td>
<td>Strongly Agree</td>
<td>Very High</td>
</tr>
<tr>
<td>2.50 - 3.24</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>1.75 - 2.49</td>
<td>Slightly Agree</td>
<td>Slightly High</td>
</tr>
<tr>
<td>1.00 - 1.74</td>
<td>Disagree</td>
<td>Low</td>
</tr>
</tbody>
</table>

Research has also shown that parental expectations, teacher feedback, and the learning environment can influence students' academic mindsets. For example, a study by Blackwell et al. (2007) found that when teachers provided students with feedback that emphasized the ability to learn and improve, students were more likely to develop a growth mindset and achieve higher academic success.

Regarding the academic mindset of Senior High School students, a recent study by Ahmed et al. (2021) found that students who demonstrated a strong belief in their capability to succeed academically had higher academic achievement than those who did not. Additionally, the study discovered that parental support, teacher feedback, and self-efficacy influenced students' confidence in their academic success. Hence, having a positive...
academic mindset is critical for students' academic success, and various factors can influence it. Parents and educators can help Senior High School students develop a positive academic mindset and achieve their academic goals by fostering a growth mindset and providing supportive learning environments.

In contrast, indicator (4), I can write high-quality research papers, got the lowest mean of 2.38 with a standard deviation of 0.68, wherein interpreted as Slightly Agree and qualitatively described as Slightly High. In the field of research, the quality of writing is considered an essential aspect that can significantly impact the effectiveness and credibility of a study. However, it is common to find that writing quality often receives the lowest mean and standard deviation scores in research studies.

For instance, writing quality is often seen as a subjective measure, making it difficult to quantify and evaluate objectively. According to Kallestinova (2011), writing quality is a complex construct that involves multiple dimensions, such as clarity, organization, coherence, and grammar. These dimensions are subjective and can be interpreted differently by different evaluators, making it challenging to establish a consistent standard for evaluating writing quality.

Moreover, researchers frequently focused on the content of their research, which can lead to neglecting the importance of the quality of writing. As noted by Obeidat and Abualoush (2021), researchers may prioritize the results and findings of their study over the writing quality, leading to a need for more attention and effort dedicated to improving the quality of writing. To address this issue, researchers must recognize the importance of writing quality in research and continually strive to improve their writing skills. The activity can involve seeking feedback from peers and mentors, attending workshops or training sessions, and dedicating time and effort to improving writing skills.

One promising approach to improving writing quality is using technology-based writing interventions. For example, a recent study by Kahriman-Ozturk and Oktay (2020) found that a structured writing program that provided feedback on writing significantly improved graduate students' writing quality. The study suggests that technology-based interventions can effectively improve writing quality and be helpful tools for researchers.

According to LaCosse et al. (2021), encouraging learners to adopt growth mindset ideas requires conducive educational environments. Researchers are increasingly discovering that instilling growth mindset ideas in students is less successful in producing desired motivational and performance results when the larger classroom setting is incompatible with or unsupportive of the growth mindset messaging. The cause might be why some General Academic Strand students need help writing qualitative research. Moreover, other reasons might be the number of students in one class (50 plus students is to 1 practical research teacher) to which the quality of teaching research is affected.

Azizi et al. (2019) discovered that students who used digital media excessively had lower academic achievement than those who are not. The habit is consistent with prior research findings. Students may need more time to focus on their academic courses and endure sleep difficulties due to late-night online activities. Insufficient sleep and daytime drowsiness have also been linked to low academic performance in the literature (Marta et al., 2020).

Writing quality is an essential aspect of research that shall consider. While it is common for writing quality to receive the lowest mean and standard deviation scores in research studies, researchers must recognize its importance.
and continually strive to improve their writing skills. Using technology-based interventions can be a practical approach to improving writing quality and shall consider by researchers.

Hence, as shown in Table 2, the respondents got an average mean of 2.88 with a standard deviation of 0.94, wherein they interpreted it as Moderately Agree and qualitatively described it as Moderately High. According to Moreau et al. (2018), mindsets develop through student interactions and classroom environments. Classrooms can impact students’ academic persistence through direct instruction or other methods that change the environments in which students learn. The method demonstrates that students only learn whatever is taught or provided for them in their surroundings. The demonstration indicates that the school must find further initiatives to improve students' mindsets.

In terms of Academic Perseverance as shown in Table 3, the indicator (10) I always want to be the best I can be got the highest mean of 3.37 with a standard deviation of 0.56, was verbally interpreted as Strongly Agree and qualitatively described as Moderately High. Academic perseverance emphasizes student effort and the quality of academic behavior that results. It is an essential quality for students, closely related to their academic success.

According to a study by Chen et al. (2015), academic perseverance is the ability to persist in facing academic challenges and obstacles. Their study found that academic perseverance was positively associated with academic achievement among Chinese students. However, the psychology literature defines numerous types of perseverance, such as grit and self-control. Grit refers to the degree to which students stay focused rather than distracted by challenges. Self-control, conversely, relates to whether students resist short-term temptations to pursue higher interests (connected to delayed gratification and self-discipline) (Gogoi & Bora, 2021).

In contrast, indicator (7) I am comfortable doing this even if I am not sure of succeeding got the lowest mean of 2.75 with a standard deviation of 0.67 and was verbally interpreted as Moderately Agree and qualitatively described as Moderately High. Expression of fear of failure. Individuals afraid of failing may avoid taking risks and shy away from challenges, ultimately hindering their ability to succeed. Research has shown that fear of failure can lead to lower academic achievement and decreased motivation (Elliot & Dweck, 2005).

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicators</th>
<th>M</th>
<th>SD</th>
<th>Verbal Interpretation</th>
<th>Qualitative Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I have high goals and expectations for myself.</td>
<td>3.29</td>
<td>0.56</td>
<td>Strongly Agree</td>
<td>Very High</td>
</tr>
<tr>
<td>2</td>
<td>I enjoy situations in which I can find out how capable I am.</td>
<td>3.03</td>
<td>0.56</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>3</td>
<td>I will put forth the necessary effort to reach my goal.</td>
<td>3.14</td>
<td>0.56</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>4</td>
<td>I desire to perform better in school than others.</td>
<td>2.86</td>
<td>0.65</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>5</td>
<td>I am attracted by situations/tasks where I can improve my ability.</td>
<td>3.01</td>
<td>0.57</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>6</td>
<td>I am afraid of failing.</td>
<td>3.18</td>
<td>0.73</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>7</td>
<td>I am comfortable doing this even if I need to figure out how to succeed.</td>
<td>2.75</td>
<td>0.67</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>8</td>
<td>I am willing to walk the mile to succeed.</td>
<td>3.17</td>
<td>0.57</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>9</td>
<td>I only do fun things</td>
<td>2.80</td>
<td>0.67</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>10</td>
<td>I always want to be the best I can be.</td>
<td>3.37</td>
<td>0.56</td>
<td>Strongly Agree</td>
<td>Very High</td>
</tr>
<tr>
<td></td>
<td><strong>Average</strong></td>
<td><strong>3.06</strong></td>
<td><strong>0.64</strong></td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
</tbody>
</table>
External factors such as lack of support or resources can also contribute to lower levels of academic achievement. For example, students who need access to academic resources such as tutoring or mentorship may need help to succeed academically (Deil-Amen & Tevis, 2014). Another possible factor is self-doubt. Individuals who doubt their abilities may not have the confidence to take risks and may be more likely to give up when faced with obstacles. Research has shown that self-doubt can lead to decreased academic achievement and lower self-esteem (Bandura, 1999).

However, when people are engaged in something, they feel pleasant emotions in that domain and are drawn to interact in that area more (Rieger, 2018). As a result, if a student is conscientious but not very interested in a topic, he or she will perform well despite lacking enthusiasm. In contrast, if a student has a strong interest in one topic, he or she will study hard even if conscientiousness is low (Song et al., 2020). Hence, the respondents got an average mean of 3.06 with a standard deviation of 0.64, interpreted as Moderately Agree and Qualitatively described as Moderately High. The result only shows that in terms of Academic Perseverance, the General Academic Strand students persevere to finish their schoolwork and, most specifically, their studies to achieve their goals in life.

As shown in Table 4, in terms of Academic Behavior, the indicator (1) I participate actively in most class learning activities (i.e., presentations, discussions) got the highest mean of 2.99 with a standard deviation of 0.66 interpreted as Moderately Agree and qualitatively described as Moderately High. According to Ramos (2019), in his study on “The Influence of Self-Discipline and Time Management on the Academic Performance of Senior High School Students,” students with good self-discipline and time management skills had higher academic achievement than those without these skills. The consequence lends credence to the notion that non-cognitive characteristics significantly predict academic performance. The researcher believed this is one of the keys to why the General Luna National High School GAS students actively participate in class activities.

In addition, active participation can help students to develop critical thinking and problem-solving skills. By engaging with course material and participating in discussions, students can apply what they have learned to real-world scenarios, leading to a deeper understanding of the material and tremendous success in their academic endeavors (Freeman et al., 2014).

Moreover, active participation can help create a sense of community and collaboration among students, leading to increased motivation and engagement (Johnson & Johnson, 2014). When students feel connected to their peers and invested in their learning, they are more likely to participate actively in classroom activities and achieve tremendous success. General Luna National High School provides students with school activities like doing group projects, collaborating with their peers, sharing their ideas, and taking ownership of their learning. When students work together, they can support, share their strengths, and learn from one another. Another is by engaging them to do role-playing activities which help them develop their communication and problem-solving skills. The last one is through competitions. The intervention motivates students to work harder and exhibit enhanced creativity in their projects and assignments.

In contrast, indicator (9), I work with a teacher on research projects outside of class, got the lowest mean of 2.31 with a standard deviation of 0.68, was verbally interpreted as Slightly Agree and qualitatively described as Slightly High. This result is significant because of seldom implemented in public schools in the Philippines, wherein the teacher will still work with the student outside the class. However, the students have advisers to rely work on their research projects, which can be evident in some private institutions like St. Paul University Surigao, where the student can afford to pay for an adviser. On the other hand, General Luna National High School students needed more educational technologies in doing research. Thus, only a few teachers are actively engaged and mastered the art of research.
Table 4. Level of Non-Cognitive Skills in Terms of Academic Behavior

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicators</th>
<th>M</th>
<th>SD</th>
<th>Verbal Interpretation</th>
<th>Qualitative Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I participate actively in most class learning activities (i.e., presentations and discussions)</td>
<td>2.99</td>
<td>0.59</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>2</td>
<td>I often work with other students on class projects and assignments.</td>
<td>2.98</td>
<td>0.50</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>3</td>
<td>I often discuss ideas from class with a teacher.</td>
<td>2.69</td>
<td>0.60</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>4</td>
<td>I often ask for feedback on my work from the teacher.</td>
<td>2.81</td>
<td>0.57</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>5</td>
<td>I often explore topics independently, even when it is not required.</td>
<td>2.65</td>
<td>0.64</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>6</td>
<td>I look up scientific research articles and resources in addition to learning materials.</td>
<td>2.72</td>
<td>0.62</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>7</td>
<td>I often discuss ideas from class with other students.</td>
<td>2.69</td>
<td>0.62</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>8</td>
<td>Most of the time, I come to class without doing my school paper works.</td>
<td>2.80</td>
<td>0.54</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>9</td>
<td>I work with a teacher on research projects outside of class.</td>
<td>2.31</td>
<td>0.68</td>
<td>Slightly Agree</td>
<td>Slightly High</td>
</tr>
<tr>
<td>10</td>
<td>I usually prepare drafts of a paper or an assignment before turning it in.</td>
<td>2.80</td>
<td>0.59</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
</tbody>
</table>

Average 2.74 ± 0.63 Moderately Agree Moderately High

Hence, the respondents got an average mean of 2.74 with a standard deviation of 0.63, interpreted as Moderately Agree and Qualitatively described as Moderately High. The result only shows that in terms of Academic Behavior, the General Academic Strand students still need guidance in doing research projects and more to improve their academic learning behavior.

Table 5 shows the results in the level of non-cognitive skills in terms of social skills; the indicator (10) I am satisfied with my social life in high school, got the highest mean of 3.21, with a standard deviation of 0.66, interpreted as Moderately Agree and qualitatively described as Moderately High. Social skills are essential for navigating social situations inside and outside school. Students who have developed strong social skills are better equipped to handle conflict and build positive relationships, which can lead to increased feelings of satisfaction and well-being (Hymel et al., 2006).

Hutching (2019) classified social skills as a component of social competence. Social skill combines interpersonal abilities and attitudes that enable an individual-al to function socially in any social environment. Hutching adds that the ability to create communication is at the heart of the teacher's social skills. Social competency may develop through observing and copying it from them. Practice, examples, and criticism help to improve social skills.

Table 5. Level of Non-Cognitive Skills in Terms of Social Skills

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicators</th>
<th>M</th>
<th>SD</th>
<th>Verbal Interpretation</th>
<th>Qualitative Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I have developed positive relationships with other students.</td>
<td>2.96</td>
<td>0.65</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>2</td>
<td>My relationship with teachers is friendly and supportive.</td>
<td>2.98</td>
<td>0.57</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>3</td>
<td>I have good relationships with administrative personnel and offices.</td>
<td>2.58</td>
<td>0.63</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
</tbody>
</table>

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Moreover, teamwork competence enables students to achieve more extraordinary achievements collectively and individually while enhancing their character and leadership (Garca-Martín et al., 2020). Students with strong social skills can build positive relationships with peers and teachers, leading to greater motivation and engagement in school (Wentzel, 2016). Students who feel connected to their school community are more likely to engage in extracurricular activities and develop positive attitudes toward learning.

In contrast, indicator (3), I feel isolated from other students in school, got the lowest mean of 2.46 with a standard deviation of 0.60, interpreted as Moderately Agree and qualitatively described as Moderately High. Feeling isolated from other students at school can be a significant challenge for many students, particularly those who may feel different from their peers or struggle to connect with others. Factors such as a lack of diversity, representation, and mental health concerns can all contribute to feelings of isolation. First is a lack of diversity and representation within the school community. Students who lack representation or visibility in the student body or the curriculum may feel disconnected from the school community and struggle to find peers who share their experiences (Goodman & Chenoweth, 2017): second, social anxiety or other mental health concerns. Students who struggle with social anxiety or other mental health concerns may find connecting with their peers challenging and avoid social situations (Masia-Warner et al., 2005). Furthermore, another possible factor is that students do not have likely meaningful conversations with some students.

However, schools that prioritize diversity and inclusion, mental health, and provide opportunities, support, and resources for students from different backgrounds to connect and learn from one another may equip better to support students who feel isolated.

Hence, the respondents got an average mean of 2.80 with a standard deviation of 0.64, interpreted as Moderately Agree and qualitatively described as Moderately High. The result only tells the researcher that when it comes to social skills, they still need to develop their social skills, especially talking with the teacher and other parents.

Teamwork competence enables students to achieve more extraordinary achievements collectively and individually while enhancing their character and leadership (Garca-Martín et al., 2020). Not all team members perform equally in many in-stances, but the student's social life improves in all circumstances. Teamwork is crucial in achieving success in many areas, including education, business, and sports. The impor-tance of teamwork lies in its ability to bring together a group of individuals with diverse skills and talents to achieve a common goal.

Research has shown that teamwork can increase productivity, improve decision-making, and greater creativity and innovation (Salas et al., 2015). When working in a team, individuals can pool their knowledge, skills, and expertise to generate new ideas and approaches to problem-solving, leading to more effective and efficient outcomes. In addition to the practical benefits, teamwork can also have a positive impact on individual well-being. Working in a team can provide a sense of belonging and social support, reducing stress and increasing job
satisfaction (Huang et al., 2016). Teamwork also provides opportunities for individuals to learn from one another and develop new skills, which can enhance personal and professional growth.

Table 6 shows that among the four non-cognitive skills, Academic Perseverance got the highest mean of 3.06, interpreted as Moderately Agree and qualitatively described as Moderately High. However, Academic Behavior got the lowest mean with a mean of 2.74 with an SD of 0.64. The result only shows that the GAS students persevere to finish their studies even if it is hard. As per a study by Liu et al. (2021), academic behavior such as attendance, participation, and homework completion significantly correlate with academic performance among Chinese college students. Those who exhibited good academic behavior had better academic performance than those who did not. In addition, Pekrun and Elliot (2017) found that students who engage in self-regulated learning behaviors, such as setting goals and monitoring their progress, have higher academic performance.

Nevertheless, it is crucial to acknowledge that the relationship between academic behavior and academic performance may vary depending on the cultural and educational context. For example, a study by Wang and Eccles (2013) found that academic behaviors highly valued in Chinese cultures, such as studying for long hours, may not necessarily lead to better academic performance in the United States.

The gap between academic behavior and performance is the role of internal factors, such as motivation and self-regulation. Research has found that highly motivated students with strong self-regulation skills are likelier to exhibit positive academic behaviors and achieve higher academic performance (Zimmerman, 2000). However, not all students may possess these internal factors, which can lead to a gap between their academic behavior and academic performance.

Table 6. Summary Table of the Level of Non-Cognitive Skills

<table>
<thead>
<tr>
<th>Non-cognitive Skills</th>
<th>M</th>
<th>SD</th>
<th>Verbal Interpretation</th>
<th>Qualitative Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Mindset</td>
<td>2.88</td>
<td>0.94</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>Academic Perseverance</td>
<td>3.06</td>
<td>0.64</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>Academic Behavior</td>
<td>2.74</td>
<td>0.63</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td>Social skills</td>
<td>2.80</td>
<td>0.64</td>
<td>Moderately Agree</td>
<td>Moderately High</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>2.87</strong></td>
<td><strong>0.71</strong></td>
<td><strong>Moderately Agree</strong></td>
<td><strong>Moderately High</strong></td>
</tr>
</tbody>
</table>

On the other hand, a non-cognitive talent is self-esteem, characterized by how a person assesses his or her value. Positive improvements can result from high levels or a rise in self-esteem (Hunter, 2003). Another significant non-cognitive talent is resilience, which is positive adaptation and assesses how effectively one cope with adversities (Gutman & Schoon, 2003).

Furthermore, Gogoi and Bora (2021) said that non-cognitive skills are the patterns of individuals' thoughts, feelings, and personality traits that can grow throughout their lives and are significant in business, school, and society. It entails traits such as perseverance, meticulousness, self-discipline, faith, attention, self-esteem, self-efficacy, and so on that are equally significant, if not more paramount, than cognitive factors such as intellect and academic ability. Non-cognitive abilities supplement cognitive abilities. They assess separately, but they are also interconnected. Students with superior non-cognitive skills outperform their peers regarding academic accomplishment (Gabrieli, Ansel, & Krachman, 2015).

In Table 7, all p-values are greater than the 0.05 significance level. So, the null hypothesis H01 was not rejected implying no significant difference in the respondents' level of non-cognitive attributes when grouped based on gender, grade level, and highest educational attainment of their parents. As a result, gender is irrelevant in non-
cognitive skills such as academic mindset, perseverance, behavior, and social skills because biological or physiological differences between males and females do not determine these skills. A complex interplay of individual, social, and environmental factors shape non-cognitive skills. Academic mindset, for example, is influenced by factors such as motivation, self-belief, and learning strategies factors, including family background, cultural context, and educational experiences (Dweck, 2006). These factors have no association with gender but with various individual and environmental factors.

Likewise, various factors such as self-regulation, goal setting, and social support influenced perseverance and behavior (Duckworth & Seligman, 2005). These factors are not determinants of gender but various individual and environmental factors. Social competencies, including effective communication, collaborative abilities, and empathy, are also influenced by various individual and environmental factors. While there may be some gender-based differences in socialization and cultural expectations around gender roles, these differences are not universal and may vary across cultural and social contexts.

In addition, grade level also has no relevance in non-cognitive skills such as academic mindset, perseverance, behavior, and social skills because these skills are not determinants of age or grade level. Instead, a complex interplay of individual, social, and environmental factors shaped the non-cognitive skills, which can vary across different contexts and stages of development. For example, academic mindset, which refers to an individual’s beliefs about their intelligence and ability to learn, is influenced by various factors such as past experiences, social support, and cultural values (Dweck, 2006). These factors are not solely determined by grade level but rather by a range of individual and environmental factors that can change over time.

Similarly, various factors influence perseverance and behavior, including self-regulation, goal-setting, and social support (Duckworth & Seligman, 2005). These factors are not solely determined by grade level but rather by a range of individual and environmental factors that can vary across different stages of development. Social competencies, including effective communication, collaborative abilities, and empathy, are also influenced by various factors not solely determined by grade level. While socialization and cultural expectations may vary across different age groups, social skills formed within various individual and environmental factors can vary across different contexts and stages of development.

Moreover, parents’ educational attainment has little to no direct impact on non-cognitive skills (Sirin, 2005). For example, parental education may influence a child’s access to educational resources, such as books and educational programs, which can, in turn, impact their academic mindset and perseverance. However, the extent to which parental education affects these skills may vary depending on the child’s characteristics, such as their learning style, personality, and motivation. Parental education may impact a child’s behavior and social skills through factors such as parenting practices and socialization (Duncan & Magnuson, 2012). However, the strength and direction of these effects may depend on a range of individual and environmental factors, such as the child’s temperament, social context, and peer relationships.

Overall, non-cognitive skills are complex and multifaceted, compromised by a range of factors that are independent of gender, grade level, and the educational attainment of parents. While some gender-based differences in specific non-cognitive skills may exist, these differences are not universal. They should not be used to make assumptions about individuals or limit their potential. Furthermore, Mills and Mills (2018) found no statistically significant relationship between attitudes and student retention. Similarly, Macnamara and Rupani (2017) found no evidence of a link between mentality and academic perseverance. To put differently, the failure to reject the null hypothesis does not mean it is true, only that I do not have enough evidence to reject it.
Table 8 provides information on the distribution of GPA (Grade Point Average) scores and their interpretation based on specific criteria. It shows the frequency and percentage of students in a specific interval of GPA scores. There are six GPA intervals presented in the table. The first interval, which ranges from 98 to 100, has no frequency, meaning no student has obtained a GPA score within this range. Interpret as "With Highest Honor" or "Excellent" performance, demonstrating outstanding academic performance with excellent judgment. The second interval, ranging from 95 to 97, also has no frequency, meaning no student has obtained a GPA score within this range. It is interpreted as "With High Honor" or "Very Good" performance, demonstrating high academic performance. The third interval, ranging from 90 to 94, has a frequency of 31 or 10.26% of the total number of students. Interpret as "With Honor" or "Good" performance, demonstrating exemplary performance in most areas with an excellent academic performance in the most critical areas. The fourth interval, ranging from 85 to 89, has a frequency of 77 or 25.49% of students. Interpret as "Satisfactory" performance, demonstrating exemplary performance in most areas with a reasonable degree of judgment and independent thinking in the most critical areas. The fifth interval, ranging from 80 to 84, has a frequency of 142 or 47.01% of the total number of students. It is interpreted as "Sufficient" performance, demonstrating a satisfactory performance but with significant shortcomings and a limited degree of academic performance. The sixth and last interval, ranging from 75 to 79, has a frequency of 52 or 17.21% of the total number of students. It is interpreted as a "Pass," which means a performance that meets the minimum criteria without exceeding it, demonstrating a limited degree of academic performance.

Table 8. Level of the Respondents’ Academic Performance based on their Grade Point Average (GPA)

<table>
<thead>
<tr>
<th>GPA Interval</th>
<th>Frequency (n=302)</th>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>98 – 100</td>
<td>0</td>
<td>0</td>
<td>With Highest Honor (Excellent)</td>
</tr>
<tr>
<td>95 – 97</td>
<td>0</td>
<td>0</td>
<td>With High Honor (Very Good)</td>
</tr>
<tr>
<td>90 – 94</td>
<td>31</td>
<td>10.26</td>
<td>With Honor (Good)</td>
</tr>
<tr>
<td>85 – 89</td>
<td>77</td>
<td>25.49</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>80 – 84</td>
<td>142</td>
<td>47.01</td>
<td>Sufficient</td>
</tr>
<tr>
<td>75 – 79</td>
<td>52</td>
<td>17.21</td>
<td>Pass</td>
</tr>
</tbody>
</table>

Legend:

<table>
<thead>
<tr>
<th>GPA Interval</th>
<th>Description</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>98 – 100</td>
<td>With Highest Honor (Excellent)</td>
<td>An excellent performance, clearly outstanding. It demonstrates excellent judgment and a very high degree of academic performance.</td>
</tr>
<tr>
<td>90 – 94</td>
<td>With Honor (Good)</td>
<td>A good performance in most areas. It demonstrates a reasonable degree of academic performance in the most critical areas.</td>
</tr>
<tr>
<td>85 – 89</td>
<td>Satisfactory</td>
<td>A good performance in most areas. It demonstrates reasonable judgment and independent thinking in the most critical areas.</td>
</tr>
<tr>
<td>80 – 84</td>
<td>Sufficient</td>
<td>A satisfactory performance, but with significant shortcomings. It needs to demonstrate a higher degree of academic performance.</td>
</tr>
<tr>
<td>75 – 79</td>
<td>Pass</td>
<td>A performance that meets the minimum criteria without exceeding it in any way. It needs to demonstrate a higher degree of academic performance.</td>
</tr>
</tbody>
</table>

Poropat (2009) emphasized that the Grade Point Average (GPA) is a commonly used measure of academic performance calculated by computing the average grades obtained in all classes a student takes. Educational institutions widely use GPA to assess a student’s academic progress and potential for success. Use as a basis for evaluating academic performance because it provides a standardized measure of achievement that can compare easily across different courses and institutions. It also considers the number of courses taken and the difficulty level.
of those courses, providing a more comprehensive picture of a student's academic ability than a single grade in a particular class.

According to a recent study by Gao et al. (2021), GPA finds to be a strong predictor of academic success, particularly in terms of graduation rates and future career outcomes. The study found that students with higher GPAs were more likely to complete their degrees on time, secure higher-paying jobs, and have better overall career outcomes compared to students with lower GPAs. Furthermore, GPA predicts academic achievement across different subject areas and grade levels. A study by Lounsbury et al. (2021) found that GPA strongly predicted academic achievement in both STEM and non-STEM fields and across grade levels from middle school to college.

Table 9 shows the result of the significant test of differences in the respondents' academic performance based on their profiles. With a p-value of 0.099, more remarkable than the 0.05 significance level, the null hypothesis HO2 was rejected based on the variable parents' highest educational attainment. The result implies no significant difference in the respondents' grade point average (GPA) when grouped based on their parents' highest educational attainment. The GPA of the respondents does not vary according to their parents' educational backgrounds. On the other hand, with p-values of 0.0001 and 0.012, which are less than the 0.05 significance level, the null hypothesis HO2 based on the variables gender and grade level was rejected. The result means a significant difference in the respondents' grade point average (GPA) when grouped based on gender and grade level.

Various factors, including gender, grade level, and parents' educational attainment, influence students' academic performance. While these factors are not the only predictors of academic performance, they are essential in shaping a student's educational outcomes. Studies have consistently found gender differences in academic performance, with girls generally performing better than boys (Else-Quest et al., 2010). A study published in the Journal of Educational Psychology in 2019 analyzed data from a large sample of 15-year-old students in 38 countries and found that girls outperformed boys in reading and writing, while boys tend to outperform girls in math and science.

Table 9. Significant Difference in the Respondents’ Academic Performance Based on Their Profile

<table>
<thead>
<tr>
<th>Variables</th>
<th>p-value</th>
<th>Decision</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>0.0001</td>
<td>Reject HO2</td>
<td>Significant</td>
</tr>
<tr>
<td>Grade Level</td>
<td>0.0120</td>
<td>Reject HO2</td>
<td>Significant</td>
</tr>
<tr>
<td>Parents' Highest Educational Attainment</td>
<td>0.0990</td>
<td>Do not reject HO2</td>
<td>Not Significant</td>
</tr>
</tbody>
</table>

However, these differences often arise from socio-cultural factors such as gender stereotypes and expectations rather than inherent differences in ability. Furthermore, individual differences between genders are often more significant than differences between genders. In other words, there is more variation in academic performance within a gender group than between gender groups. The study also found that the gender gap in academic performance was more prominent in more developed countries, as research has consistently shown that gender is unrelated to academic performance. The finding means that being male or female does not inherently make one better or worse academically than the other.

A meta-analysis by Hyde et al. (2019) examined the relationship between gender and academic achievement across multiple studies. The study found that while there were some gender differences in academic achievement, the effect size was minimal and not meaningful in terms of practical significance.

In addition, Plucker et al. (2015) academic performance tends to vary by grade level, with students typically performing better as they progress through school. A study published in the Journal of Educational Psychology in 2015 analyzed data from a longitudinal study of over 5,000 students in the United States and found that academic performance increased from grade 1 to grade 8. Moreover, a student's academic performance is also strongly influenced by their parents' educational attainment (Yeung et al., 2018); children of parents with higher levels of education had higher academic achievement than children of parents with lower levels of education. One reason for this is that parents with higher levels of education often have more resources and knowledge to support their children's academic success. They may be more likely to provide their children with educational materials and
resources, such as books, computers, and tutoring services. They may also be more familiar with the educational system and better equipped to navigate it to help their children succeed.

Table 10 shows the correlation’s results between the academic performance and non-cognitive skills of the respondents. The positive correlation coefficients imply a positive relationship between the respondents’ non-cognitive skills and academic achievement. However, p-values of 0.129, 0.727, and 0.654, all greater than the 0.05 significance level, reject the null hypothesis HO3. That is, the positive relationships between the respondents’ academic achievement and the non-cognitive skills in terms of academic mindset, academic behavior, and social skills engagement are not statistically significant. On the other hand, with a p-value of 0.0001, which is less than the 0.05 significance level, there is a significant positive relationship between the respondents’ academic achievement and non-cognitive skills regarding academic perseverance. The finding implies that when the respondents’ academic perseverance increases, their academic achievement also increases.

According to Dweck et al. (2014), academic mindset refers to a student’s attitudes and beliefs about learning, such as their willingness to take on challenges, their confidence in their abilities, and their understanding that intelligence is not fixed but can develop through effort and practice. On the other hand, academic perseverance refers to a student’s capacity to persevere in the presence of challenges and setbacks and maintain motivation and effort over time. Academic behavior encompasses a range of habits and practices related to learning, such as study habits, time management, and organization. Finally, social skills refer to students’ ability to interact effectively, communicate clearly, and work collaboratively.

Research has shown that these non-cognitive skills are strongly related to academic performance. Dweck et al. (2011) found that students who had a growth mindset (i.e., believed that intelligence could develop) performed better academically than those with a fixed mindset (i.e., believed that intelligence is innate). Similarly, a study by Duckworth et al. (2007) found that academic perseverance better predicted academic success than IQ. Furthermore, research has also shown that these non-cognitive skills are interrelated. For instance, students with a growth mindset demonstrate an increased likelihood of persisting in facing challenges and setbacks. They are more likely to use effective study habits and time management practices. Similarly, students with strong social skills are more likely to work collaboratively with others, communicate effectively with teachers and peers, and seek out academic support when needed. Hence, non-cognitive skills such as academic mindset, perseverance, behavior, and social skills are essential indicators of academic performance. These skills are interrelated, and research has shown that they can be developed and strengthened over time through targeted interventions and support.

**IV. CONCLUSION AND RECOMMENDATION**

Based on the results of the study, the General Academic Strand students at General Luna National High School still need assistance writing high-quality research and more encouragement to boost their confidence. They have difficulty in working with teachers on research projects and have that feeling of isolation. With the significant results in sex, grade level, and academic perseverance as important factors to students’ academic performance, more attention and careful consideration should be given by the teachers and school administrator to address these concerns making the learning journey of the students more meaningful and productive.
In addition, the Department of Education (DepEd) may provide educational training and seminars by collaborating with the school administrators on what they can help the teachers learn how to write high-quality research writing so that these teachers can teach their students effectively. School Administrators may also provide instructional leadership by providing teachers with professional development opportunities focused on research writing, such as workshops or training sessions. The findings of this study can help teachers improve their skills and knowledge, benefiting their students.

Moreover, community organizations may engage in interdisciplinary collaborations with schools, supporting research projects. Community members with experience in research writing may provide mentorship opportunities for students, helping them develop their skills and providing guidance and feedback on their research papers. That brings together students and community members from different fields and subject areas and provides funding and resources for schools to support research writing, such as providing access to academic journals or sponsoring research projects. Parents may also encourage their children to read widely and write regularly, which can help them develop their vocabulary, grammar, and writing skills. Senior High School Students may seek guidance and support from their teachers or other resources, such as academic writing centers or online writing communities, to develop their research writing skills and attend workshops and training sessions focused on research writing, which can provide valuable insights, tips, and techniques for developing robust research papers. Lastly, future researchers may stay up to date with the latest trends and best practices in research writing and emphasize the importance of research and its impact on society, promoting the value of research writing and encouraging others to pursue academic research.

ACKNOWLEDGMENT

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