

Non-cognitive skills of senior high school students as predicted by teacher sense of efficacy and academic motivation

Allan H. Palma Gil Jr*

allan.palmagil@deped.gov.ph

Master Teacher I – Department of Education, Davao Oriental 8203, Philippines

Abstract

Lack of non-cognitive skills is alarming. The strength to forecast non-cognitive skills using teacher sense of efficacy and academic motivation as predictors was verified. Predictive research design, simple random sampling, online survey approach, and multiple-linear regression analysis were applied. The data from 264 senior high school students revealed that non-cognitive skills were very strongly (63.2%) and significantly predicted. Thus, the Social Cognitive Theory was affirmed. School leaders may strengthen teacher effectiveness by integrating life skills, social skills, and values into curriculum planning to improve student participation, academic performance, and non-cognitive abilities.

Keywords: Non-cognitive skills; senior high school students; teacher sense of efficacy; academic motivation

1. Introduction

1.1 The Problem and Its Scope

Lack of non-cognitive skills has emerged as a critical global concern (Avanesian & Rozhkova, 2025). While the persistent skills gap in Africa poses a significant barrier, non-cognitive skills have received less attention (Nunoo et al., 2024). As the fourth industrial revolution creates new jobs and demands more skilled workers, people need the flexibility to develop non-cognitive skills. (World Bank, 2017). Unlike standardized tests, non-cognitive skills are challenging to measure (Zhou, 2017).

In recent years, the focus on non-cognitive skills has been evident not only in developed countries but also in various developing countries (Yamazaki, 2026; Choi & Min, 2025). Indonesia recently implemented an education model focused on non-cognitive skills as part of broader education reforms, but a critical challenge remains: determining how best to deliver this approach in the classroom (Kattan, 2017). Meanwhile, the African context presents a range of unique challenges (World Bank, 2018; Adomako et al., 2024), with a significant gap in non-cognitive skills remaining. In North America, despite impressive empirical advances in research on the relationship between non-cognitive skills and life outcomes, several limitations remain (Rammstedt et al., 2024).

The challenge of access to quality education has been a problem in the Philippines, particularly the crisis in the development of non-cognitive skills among senior high school graduates (Capili & Bauyot, 2024). A landmark study by the World Bank (2017), titled *Developing Socioemotional Skills for the Philippines' Better Jobs*, found that Filipino workers often lack the foundational non-cognitive skills needed to secure and maintain stable employment in a service-oriented economy. This is further exacerbated by the country's performance in the Program for International Student Assessment (PISA, 2018), which found that Filipino students not only struggle with cognitive subjects but also reported some of the lowest levels of non-cognitive indicators (OECD, 2019). Locally, research by Almerino et al. (2020) emphasized that the Philippines' mismatch between graduate output and industry needs is largely due to the neglect of non-cognitive competencies in the curriculum.

Studies have shown that non-cognitive skills are essential factors in achieving higher levels of education and in increasing income and labor market participation (Yamazaki, 2026). Given the limited number of studies and the lack of emerging issues, conducting this research is essential to develop an understanding and awareness of non-cognitive skills (Jones, 2024). Understanding how non-cognitive skills can be developed, assessed, and integrated into education and training systems is essential for promoting individual well-being and sustainable global development, as well as for developing targeted interventions and knowledge-based policies to improve student outcomes. Thus, this research was pursued.

1.2 Significance of the Study

Enhancing the academic performance of Senior High School students directly advances Sustainable Development Goal 4 (Quality Education) by promoting inclusive, equitable, and high-quality learning. By investigating the combined effects of teacher sense of efficacy and student motivation, the study provides evidence to inform Department of Education (DepEd) policies and programs aimed at producing holistically developed students. Furthermore, the findings offer guidance for Senior High School (SHS) educators to strengthen instructional practices and foster meaningful engagement in teaching, enabling students to cultivate strong determination in their studies.

1.3 Statement of the Problem

The general purpose of the study is to determine the strength of the prediction model of teacher sense of efficacy and student motivation to predict the non-cognitive skills of Senior High School students. Specifically, it sought to answer the following:

1. To determine the levels of teacher sense of efficacy in terms of student engagement, instructional strategies, and classroom management; academic motivation in terms of intrinsic motivation, extrinsic motivation, and amotivation; non-cognitive skills in terms of academic mindset, academic performance, academic behavior, and social skills;
2. To determine the significance of the correlation between teacher sense of efficacy, academic motivation, and the non-cognitive skills of Senior High School students.
3. To determine the strength of the prediction model of teacher sense of efficacy and academic motivation as predictors of the non-cognitive skills of Senior High School students.

1.4 Null Hypotheses

The null hypotheses that were tested at the 0.05 level of significance are as follows:

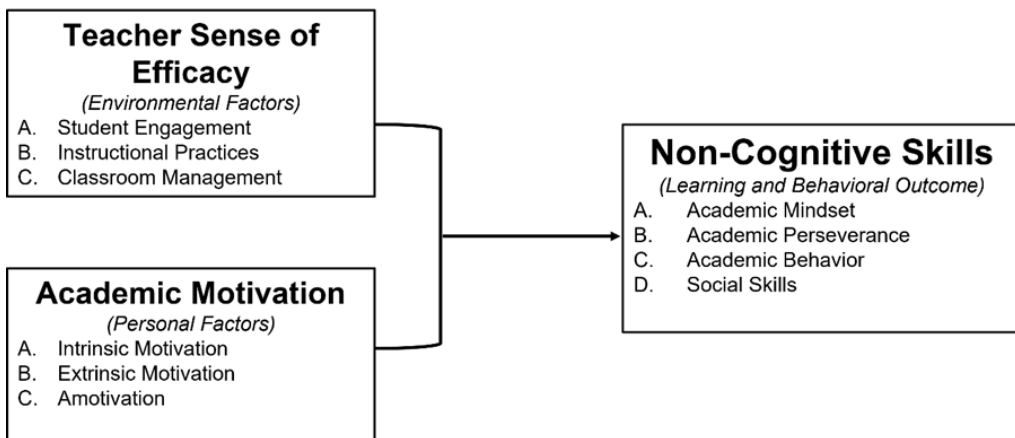
- H₀₁: Teacher sense of efficacy does not significantly correlate with non-cognitive skills of Senior High School students.
- H₀₂: Academic Motivation does not significantly correlate with non-cognitive skills of Senior High School students.
- H₀₃: The strength of the model to predict non-cognitive skills using teacher sense of efficacy and academic motivation as predictors is not significant.

1.5 Theoretical Framework and Conceptual Framework

This study is anchored in Albert Bandura's Social Cognitive Theory (SCT), which posits that human learning and behavior arise from the continuous and reciprocal interaction of personal, behavioral, and environmental factors (Bandura, 1986).

In this study, personal factors are represented by academic motivation, while the teacher sense of efficacy represents environmental factors. Non-cognitive skills function as behavioral determinants. In this study, Teacher Sense of Efficacy serves as the Environmental Independent Variable (IV), encompassing student engagement, instructional strategies, and classroom management, which provide learners with support, guidance, and academic expectations from their teachers. Academic Motivation represents the Personal Independent Variable (IV), including intrinsic motivation, extrinsic motivation, and amotivation, reflecting students' confidence and determination to influence their learning. On the other hand, Non-Cognitive Skills serve as the Behavioral Dependent Variable (DV), representing human learning and behavior. Guided by Bandura's Social Cognitive Theory, which posits that human learning and behavior arise from the reciprocal interaction of personal, behavioral, and environmental factors, the study suggests that these independent variables interact to shape students' behavioral outcomes, thereby influencing the non-cognitive skills of Senior High School students. The behavioral factor was excluded in this study. Hence, this study was partly anchored to the theory.

Figure 1: The Conceptual Framework of the Study



2. Methodology

Presented in this chapter is the discussion, elaboration, and substantiation of the following: research design, locale of the study, sample and sampling technique, research instrument, data gathering procedure, data analysis, and trustworthiness of the study.

2.1 Research Design

This study employed a quantitative predictive research design, which is suitable for examining relationships between the identified independent and dependent variables and for assessing the extent to which one variable predicts another. Quantitative research designs focus on collecting and analyzing numerical data to answer research questions or test hypotheses (Slater & Hasson, 2025). This is achieved through the application of objective, systematic, and thorough processes to generate knowledge.

Within this framework, a predictive design, as explained by Brodowicz (2024), allows the researcher not only to describe variables and determine the strength and direction of their relationships but also to evaluate the predictive power of independent variables for a dependent outcome. This design is therefore well-suited to the study's objective of assessing how teacher sense of efficacy and academic motivation predict the non-cognitive skills of senior high school students.

2.2 Locale of the Study

This study was conducted at Caraga National High School located in the Municipality of Caraga, Davao Oriental, during School Year 2025–2026. The school is a large public secondary institution in a rural setting, operated by the Department of Education (DepEd) – Division of Davao Oriental. As one of the division's large schools, it offers a complete secondary program from Grades 7 to 12. With an average enrollment of more than 1,600 learners, the school plays a significant role in providing accessible education to students within the province. The school is an appropriate setting for this investigation because it reflects the conditions typically experienced by senior high school students in rural public schools, where academic challenges and varying levels of teacher effectiveness are common.

2.3 Sample and Sampling Technique

The study involved 239 Senior High School students enrolled at Caraga National High School in Caraga, Davao Oriental, during School Year 2025–2026. The respondents were selected using simple random sampling, a probability sampling technique that gives each student an equal chance of being included, ensuring representativeness of the population. From a total population of 630 SHS students, a sample size of 239 respondents was calculated using the Raosoft Sample Size Calculator. The computation was based on a 95% confidence level and a 5% margin of error, in accordance with the calculator's prescribed parameters (Raosoft, 2026). This method enables the researcher to gather reliable, generalizable data from students with characteristics relevant to the study, ensuring an accurate assessment of teacher sense of efficacy, academic motivation, and non-cognitive skills among senior high school learners.

2.4 Data Gathering Technique

The online survey method was used to gather data. This technique is a systematic method of collecting information from a sample using structured questionnaires and internet-based questionnaires using platforms such as Google Forms to describe the characteristics, opinions, or behaviors of a larger population and is applied in research to efficiently assess, test, or generalize findings across a defined population (Sheikh et al., 2024). According to Oranga and Matere (2025), this offers advantages such as reaching large and diverse populations, producing quantifiable data for pattern analysis, enabling generalization, allowing faster data collection, and supporting replicability through standardized procedures.

In this study, three adapted and modified survey questionnaires were used:

The first instrument, the Teacher Sense of Efficacy, was adapted from the study of Tschannen-Moran and Hoy (2001). It consists of 24 items designed to assess teacher effectiveness in terms of student engagement, instructional strategies, and classroom management. A four-point Likert scale was used to describe the degree to which respondents perceived the teacher sense of efficacy. It was pilot-tested for reliability, yielding a Cronbach's alpha of 0.956.

The second instrument measured academic motivation and was adapted from Vallerand et al. (1993). It comprises 28 items designed to capture students' level of academic motivation across intrinsic, extrinsic, and amotivation factors. This questionnaire also used a four-point Likert scale to assess the extent of students' academic motivation. Pilot testing revealed a Cronbach's alpha of 0.908.

The third instrument, which assessed students' non-cognitive skills, was adapted from Rulida et al. (2024). It includes 40 items focusing on indicators such as academic mindset, academic perseverance, academic behavior, and social skills. Similar to the previous tools, this instrument employed a four-point Likert scale to measure the level of non-cognitive skills among SHS students. Pilot testing showed a Cronbach's alpha of 0.957.

2.5 Data Analysis Technique

In this study, the data analysis techniques used were descriptive, correlation, and regression analyses. Descriptive analysis helps organize and summarize large amounts of data, making it easier for researchers to understand real-world patterns while saving time, regardless of the situation or field of study (Costa, 2024). In this study, the mean and standard deviation were used as statistical measures. Moreover, the correlation analysis examines the strength and direction of the relationship between two continuous variables (Rizk, 2023). It is commonly applied in research when a researcher wants to examine whether changes in one variable are associated with changes in another variable without implying causation. Correlation analysis is often used in education, psychology, business, and social sciences to identify patterns and relationships among variables. One advantage of correlation analysis is that it helps researchers efficiently predict and identify significant associations using numerical data (Creswell & Creswell, 2018). The Pearson Product-moment correlation statistical tool was used.

Lastly, multiple regression analysis was employed to assess the extent to which teacher sense of efficacy and academic motivation predicted SHS students' non-cognitive skills. The use of this statistical technique was deemed appropriate because the study examined the predictive influence of multiple independent

variables on a single dependent variable. Sun et al. (2023) described multiple regression analysis as a method for assessing the relationship between several predictor variables and an outcome variable and estimating the contribution of each predictor to the model. The technique has been widely utilized in educational, social, and behavioral research to identify significant predictors of a particular outcome. According to Field (2018), a key advantage of multiple regression analysis is its ability to control for the effects of other variables, thereby allowing researchers to examine the unique contribution of each predictor variable.

In analyzing the levels of Teacher Sense of Efficacy, Academic Motivation, and Non-Cognitive Skills, the four orderable gradations were used, along with their respective mean ranges and descriptions.

<i>Range of Means</i>	<i>Descriptive Equivalent</i>	<i>Teacher Sense of Efficacy</i>	<i>Academic Motivation</i>	<i>Non-Cognitive Skills</i>
3.25 – 4.00	Very High	Very Strong	Very Strong	Very Good
2.50 – 3.24	High	Strong	Strong	Good
1.75 – 2.49	Low	Weak	Weak	Poor
1.00 – 1.74	Very Low	Very Weak	Very Weak	Very Poor

The standard deviation value ranges and interpretation are as follows:

<i>Range</i>	<i>Description</i>	<i>Interpretation</i>
$SD \leq 0.50$	High Consistent Responses	Strong and Uniform Perception
$SD = 0.51 - 1.00$	Moderate Consistent Responses	Acceptable Consistency
$SD = 1.01 - 1.50$	Low Consistent Responses	Differing Views or Experiences
$SD > 1.50$	Very Low Consistent Responses	High Variability and Lack of Consensus

In this study, the significance of the correlation is tested at a 0.05 confidence level. For determining equivalent descriptive interpretation of the r-value, the following scheme was used:

<i>Computed r</i>	<i>Descriptive Interpretation</i>
+/- 1.00	Perfect Correlation
Between +/- 0.75 – +/- 0.99	High Correlation
Between +/- 0.51 – +/- 0.74	Moderately High Correlation
Between +/- 0.31 – +/- 0.50	Moderately Low Correlation
Between +/- 0.01 – +/- 0.30	Low Correlation
0.00	No Correlation

In terms of Scale of Beta (β) Coefficient Strength, the following scheme, as proposed by Hair et al. (2022) and updated for modern multivariate modelling and PLS-SEM, was used:

β Value Range	Predictive Strength
+/- 0.50 and above	Very strong
+/- 0.30 - +/- 0.49	Strong
+/- 0.20 - +/- 0.29	Moderate
+/- 0.10 - +/- 0.19	Weak
Below +/- 0.10	Very weak/ Negligible

2.6 Ethical Considerations

This quantitative study adhered to strict ethical standards to protect participants' rights. Clearance to conduct the research was obtained from the Society of Moral Integrity and Legal Ethics (SMILE), the ethics board of the Holy Cross of Davao College. Also, permission to conduct the study was respectfully sought and obtained from the DepEd Schools Division of Davao Oriental and the school head, ensuring compliance with institutional and legal-ethical guidelines. The respondents' data privacy and confidentiality were rigorously maintained. No personally identifying information was collected, and any sensitive data known to the researcher was securely stored and not disclosed in reports or shared results. All procedures respected the principles of voluntary participation, informed consent, and assent. The respondents were fully informed about the purpose of the study, the procedures involved, and the potential risks and benefits associated with their participation. Appropriate measures were implemented to minimize potential harm and safeguard the well-being of the respondents throughout the research process. Furthermore, the findings were reported honestly and transparently, in accordance with the principles of academic integrity and ethical research practices.

3. Results and Discussions

Included in this chapter are the descriptive, correlational, and regression analyses in tabular form, along with the corresponding statistical results and interpretations. This chapter ended with a summary of findings.

3.1 Descriptive Results

Shown in Table 1 are the descriptive statistical results of the study, including the variables involved, namely, teacher sense of efficacy, academic motivation, and non-cognitive skills, with their respective indicators. Likewise, the number of samples, mean, standard deviation, and descriptive level for each variable are shown in the table.

Specifically, Table 1 shows that the teacher sense of efficacy variable obtained a mean of 3.14, described as high. It indicates that the teacher sense of efficacy is strong. All of its indicators are described as high. The standard deviation of 0.60 indicates moderately consistent responses, indicating acceptable consistency. Moreover, the academic motivation obtained a mean of 3.03, described as high. It indicates that the students are strongly motivated, except for identified extrinsic motivation, with a mean of 3.29, described as very high, which implies that respondents are very strongly motivated. The standard deviation of 0.48 indicates highly consistent responses, indicating strong and uniform perception. Lastly, non-cognitive skills obtained a mean of 3.01, described as high. This indicates that the non-cognitive skills of senior high school students are good.

The standard deviation of 0.49 indicates highly consistent responses, indicating strong and uniform perception.

Teacher sense of efficacy, academic motivation, and non-cognitive skills were consistently interpreted as high, indicating strong teacher effectiveness and positive academic engagement among the respondents. Among the indicators of academic motivation, extrinsic motivation emerged as the only dimension that was interpreted at a very high level.

Table 1. Descriptive Statistics (N= 264)

Variables	Sample Size	SD	Mean	Descriptive Level
Teacher Sense of Efficacy	264	0.60	3.14	High
<i>Student Engagement</i>		0.65	3.17	<i>High</i>
<i>Instructional Strategies</i>		0.65	3.16	<i>High</i>
<i>Classroom Management</i>		0.59	3.11	<i>High</i>
Academic Motivation	264	0.48	3.03	High
<i>Intrinsic Motivation-to know</i>		0.64	3.21	<i>High</i>
<i>Intrinsic Motivation-toward Accomplishment</i>		0.63	3.15	<i>High</i>
<i>Intrinsic Motivation- to experience Stimulation</i>		0.63	3.07	<i>High</i>
<i>Extrinsic Motivation- identified</i>		0.63	3.29	<i>Very High</i>
<i>Extrinsic Motivation- introjected</i>		0.62	3.15	<i>High</i>
<i>Extrinsic Motivation- external regulation</i>		0.67	3.12	<i>High</i>
<i>Amotivation</i>		0.86	2.23	<i>Low</i>
Non-Cognitive Skills	264	0.49	3.01	High
<i>Academic Mindset</i>		0.55	3.03	<i>High</i>
<i>Academic Perseverance</i>		0.54	3.14	<i>High</i>
<i>Academic Behavior</i>		0.54	2.92	<i>High</i>
<i>Social Skills</i>		0.52	2.93	<i>High</i>

3.2 Correlation Results

Table 2 presents the correlation table. It contains the predictive variables, namely, teacher sense of efficacy and academic motivation, and non-cognitive skills as the criterion variable. Likewise, the r-value, p-value, hypothesis decision, and interpretation are presented. Finally, the correlational results between the teacher sense of efficacy and academic motivation as predictors, and non-cognitive skills as the criterion variable are also denoted.

As shown in Table 2, the correlation between the teacher sense of efficacy and the non-cognitive skills variables yielded a p-value of 0.000, which is less than the 0.05 level of significance; hence, the null hypothesis was rejected. It indicates that its correlation is significant. Furthermore, it obtained an r-value of

0.659, indicating a moderately strong positive correlation. This finding implies that when a teacher sense of efficacy is very strong, the student's non-cognitive skills are also very good. On the other hand, the correlation between academic motivation and non-cognitive skills yielded a p-value of 0.000, which is less than the 0.05 level of significance; hence, the null hypothesis is rejected. It indicates significant correlation. The obtained r-value of 0.786 indicates a strong positive correlation. This implies that when students are highly motivated, their non-cognitive skills are also strong.

Moreover, both the teacher sense of efficacy and academic motivation showed a high positive correlation. This implies that both correlations are statistically significant, leading to the rejection of the respective null hypotheses. These results signify that teacher sense of efficacy and academic motivation play a crucial role in predicting non-cognitive skills among senior high school students.

Table 2. Correlation Table (N= 264)

Variables	Non-Cognitive Skills			
	r	p-value	Decision on H ₀	Interpretation
Teacher Sense of Efficacy	.659	.000	Reject	Moderately High Positive, Significant Correlation
Academic Motivation	.786	.000	Reject	High Positive, Significant Correlation

Level of Significance: 0.05

Decision Rule: Reject H₀ if $p < 0.05$

3.3 Regression Results

Table 3 presents the predictive and criterion variables. The standardized and unstandardized beta coefficients, along with the p-value, the hypothesis decision, and the interpretations, are also shown.

The table specifically shows that the model to forecast non-cognitive skills, using teacher sense of efficacy and academic motivation as predictors, is expressed as $NCS = 0.139 + 0.667 + 0.551$. The corresponding R² Value of 0.632 indicates very strong predictive power. Likewise, the p-value is 0.000, which is less than the 0.05 significance level. It indicates that its correlation is significant. This implies that for every unit change in the predictors, there is a corresponding unit change in the predicted strength of non-cognitive skills. The regression model demonstrated a strong and statistically significant ability to predict non-cognitive skills using teacher sense of efficacy and academic motivation as predictors. This finding suggests that strengthening teacher sense of efficacy and fostering students' academic motivation may contribute to the development of learners' non-cognitive skills.

Table 3. Regression Table (N = 264)

Non-Cognitive Skills (NCS)							
Variables	Unstandardized Coefficients		Standardized Coefficients			Decision on H_0	Interpretation
	B	Std. Error	Beta	t	Sig.		
(Constant)	.551	.118		4.681	.000	-	-
Teacher Sense of Efficacy (TSE)	.139	.045	.171	3.063	.002	Reject	Positive Significant Influence
Academic Motivation (AM)	.667	.056	.660	11.827	.000	Reject	Positive Significant Influence

Model Summary:
 $R = 0.795$ | $R^2 = 0.632$ | $F(2,261) = 223.699$ | $p = 0.000$
 Level of Significance: 0.05
 Decision Rule: Reject H_0 if $p < 0.05$
 Predictive Model: $NCS = 0.551 + .139(TSE) + .667(AM)$

3.4 Teacher Sense of Efficacy and Non-Cognitive Skills Correlation

The findings of this study reveal that teachers' sense of efficacy is significantly correlated with the non-cognitive skills of Senior High School students. The result reveals a significant correlation between teachers' sense of efficacy and non-cognitive skills, as evidenced by respondents' experiences with academic mindset, academic perseverance, academic behavior, and social skills. There is tremendous consistency among the studies' findings worldwide on self-efficacy, which significantly impacts non-cognitive skills in a variety of ways. Teacher self-efficacy can lead to improved student non-cognitive skills (Hafner, 2024). Furthermore, Hafner's (2024) study revealed that teachers who have a strong sense of confidence in their overall teaching ability can effectively manage their classrooms and keep students engaged. Similarly, the findings of Miras (2019) revealed that teacher high self-efficacy reveals that there are high chances of student learning going on in the classroom (academic mindset), a wide range of learners to become independent and strategic (academic perseverance), and finally, suggests their high success in establishing appropriate behavior in their classroom (academic behavior). However, the study contradicts Emiru and Gedifew's (2024) study, which used data from 714 selected secondary school teachers in Ethiopia's Amhara region. Their research revealed a significantly low correlation level between teachers' sense of efficacy and non-cognitive skills, suggesting that secondary school students were reluctant to develop their non-cognitive abilities.

3.5 Academic Motivation and Non-Cognitive Skills Correlation

The findings of this study show that academic motivation has a highly significant positive correlation to non-cognitive skills. This supports a previous study by Shala et al. (2024), which claims that academic motivation is a pivotal factor influencing success, particularly in students' non-cognitive skills. They added that academic motivation, encompassing intrinsic and extrinsic motivation that drives students' desire and commitment to learning, plays a fundamental role in shaping their educational journey and is crucial for developing non-cognitive skills. In a similar study by Rulida et al. (2024) involving 302 senior high school students at General Luna National High School, the results showed a positive correlation coefficient, indicating a positive relationship between the respondents' non-cognitive skills and academic motivation. Despite this positive correlation, the study by Stankov and Lee (2025) found moderate correlations between academic motivation and non-cognitive domains, suggesting the need to invest in praise and encouragement.

3.6 Non-Cognitive Skills as Predicted by Teacher Sense of Efficacy and Academic Motivation

The study is finding that teachers' sense of efficacy and academic motivation significantly predict students' non-cognitive skills is consistent with previous studies. In a study by Kang et al. (2024) exploring the relationships among teacher support, self-efficacy, academic motivation, resilience, and non-cognitive skills, the results revealed direct links among these variables. It also explored the relationship between teacher support and academic motivational resilience, revealing mixed results specifying that instrumental aid (teacher effectiveness) and self-worth assurance (motivation) had both direct and indirect effects on perseverance (non-cognitive skills). Students tend to persevere more when they sense support and respect from their teachers. Furthermore, they demonstrate more resilient behaviors when they possess greater academic self-efficacy, which is bolstered by instrumental support from teachers or by self-worth assurance.

The study reinforces that proper support from teachers enhances students' motivation to learn. Although learning tasks may not be inherently interesting, students are motivated to complete them when they feel supported and valued by important figures in their lives, such as teachers who show genuine support and respect. Furthermore, Kang et al. (2024) added that by demonstrating empathy, awareness of students' perspectives, genuine concern, dedication, and accessibility, teachers can increase students' motivation and engagement in learning.

5. Conclusion

Based on findings, it was concluded that non-cognitive skills are significantly predicted by teacher sense of efficacy and academic motivation. The model's strength (63.2) in predicting the criterion variable is very strong. This result affirms the Social Cognitive Theory, which posits that human learning and behavior arise from the continuous and reciprocal interaction of personal, behavioral, and environmental factors. In this study, personal factors are represented by academic motivation, while the teacher's sense of efficacy represents environmental factors. Non-cognitive skills play a role in human learning and behavior. The behavioral factor was excluded in this study.

6. Recommendations

Based on the conclusion, the following are recommended:

1. Further study may consider additional variables not included here to account for the remaining 36.8% of the variance in the model's strength. Qualitative research may be pursued to identify the potential variables.
2. School leaders may strengthen teacher effectiveness in instructional functions and reinforce in the school curriculum through learning plan development, the integration of life skills, social skills, and values for student support mechanisms, increased student participation, and improved academic performance outcomes and non-cognitive abilities.

Acknowledgement

The rese archer wishes to express his heartfelt gratitude and sincere appreciation to all the individuals who have contributed to the successful completion of this thesis. Above all, he gives thanks and glory to Almighty God for His boundless grace, wisdom, strength, and guidance throughout this academic journey.

The researcher extends his deepest appreciation to Dr. Reynaldo O. Cuizon, Dean of the Graduate School, for his leadership, encouragement, and commitment to academic excellence, which inspired the researcher to pursue and complete this endeavor. Special thanks are likewise accorded to Dr. Giovanni A. Montejo, Thesis Adviser, for his invaluable expertise, insightful guidance, constructive suggestions, patience, and unwavering support throughout the conduct and completion of this study. His mentorship greatly contributed to the refinement and quality of this research.

Sincere appreciation is extended to the Senior High School students of Caraga National High School, whose participation and cooperation as respondents were essential to the successful conduct of this study. Their willingness to share their time and insights made this research possible. Most importantly, he expresses his profound gratitude to his family for their unconditional love, understanding, prayers, sacrifices, and unwavering support. Their encouragement served as a constant source of motivation in overcoming challenges and achieving this academic milestone.

References

- Abdolrezaipoor, P., Ganjeh, S. J., & Ghanbari, N. (2023). Self-efficacy and resilience as predictors of students' academic motivation in online education. *PLOS ONE*, 18(5), e0285984. <https://doi.org/10.1371/journal.pone.0285984>
- Adomako, S., Shenkar, O., Liu, X., Amankwah-Amoah, J., & Ahsan, M. (2024). Editorial on doing business in Africa: Navigating opportunities and challenges in Africa's emerging markets. *Journal of International Management*, 30(5), 101189. <https://doi.org/10.1016/j.intman.2024.101189>
- Afedzie, R., Aller, J., & Nketia, J. (2021). Reshaping education for the new labour market in Sub-Saharan African countries. In *Advances in educational technologies and instructional design* (Vol. 1, pp. 403–417). IGI Global. <https://doi.org/10.4018/978-1-7998-5345-9.ch022>
- Almerino, P. M., et al. (2020). Educational management processes: Vice-chancellors' perspective on non-cognitive skills. *International Journal of Learning, Teaching and Educational Research*, 19(10). <https://doi.org/10.1155/2020/8877712>
- Avanesian, G., & Rozhkova, K. (2025). The effect of non-cognitive skills on academic performance: Does it vary by socio-economic status? *International Journal of Educational Research*, 133, 102680. <https://doi.org/10.1016/j.ijer.2025.102680>
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice Hall.
- Brodowicz, M. (2024). Correlational research: Explanatory and predictive designs. <https://aithor.com/essay-examples/correlational->

- research-explanatory-and-predictive-designs
- Campos-Vázquez, R. M. (2018). Returns to cognitive and non-cognitive skills: Evidence for Mexico. *Applied Economics Letters*, 25(16), 1153–1156. <https://doi.org/10.1080/13504851.2017.1403551>
- Capili, H. S., & Bauyot, M. M. (2024). Mind your own business: A case study on the non-cognitive skills of senior high school graduates ending up as business owners. *International Journal of Multidisciplinary Educational Research and Innovation*, 2(3), 234–244. <https://doi.org/10.17613/39ys-ka35>
- Choi, S., & Min, I. (2025). The impact of cognitive and non-cognitive skills on occupational outcomes: Evidence from Indonesia. *International Journal of Educational Research*, 133, 102669. <https://doi.org/10.1016/j.ijer.2025.102669>
- Coghlan, D., & Brydon-Miller, M. (2014). *The SAGE encyclopedia of action research*. SAGE Publications. <https://doi.org/10.4135/9781446294406>
- Costa, N. (2024). Decoding the effect of descriptive statistics on informed decision-making. *Innovations in Mechatronics Engineering III*, 135.
- Farmer, L. S. J. (2020). Educating with technology for youth's civic engagement. In Springer eBook (Vol. 1, pp. 401–420). Springer. https://doi.org/10.1007/978-3-030-36119-8_18
- Hafner, N. D. (2024). Teacher self-efficacy and teaching experience (Master's thesis, Eastern Illinois University). The Keep. <https://thekeep.eiu.edu/theses/5011>
- Jones, L. (2024). What is a research gap? (With tips + examples). <https://casestudyhelp.com/blog/research-gap/>
- Kang, D., Lee, S., & Liew, J. (2024). Academic motivational resilience and teacher support: Academic self-efficacy as a mediator. *European Journal of Psychology of Education*. <https://doi.org/10.1007/s10212-024-00870-1>
- Kattan, R. B. (2017). Non-cognitive skills: What are they and why should we care? World Bank Blogs. <https://blogs.worldbank.org/en/education/non-cognitive-skills-what-are-they-and-why-should-we-care>
- Mbaye, M. B. (2024). The flipped learning pedagogy is an innovative strategy to enhance L2 motivation and employability skills. Leeds Beckett University.
- Miras, R. E. (2019). Teacher self-efficacy and grit in relation to teaching effectiveness. *LAMDAG*, 10(1), 87–121.
- Nunoo, J., Opoku, A., Coffie, M., Nsenkyire, E., & Mefful, J. (2024). Cognitive and non-cognitive skills effect on labour market outcomes: A systematic review with implications for the African labour market. *Cogent Education*, 11(1). <https://doi.org/10.1080/2331186X.2024.2434770>
- Organisation for Economic Co-operation and Development. (2015). *Skills for social progress: The power of social and emotional skills*. OECD Publishing.
- Organisation for Economic Co-operation and Development. (2019). *PISA 2018 results (Volume III): What school life means for students' lives*. OECD Publishing.
- Organisation for Economic Co-operation and Development (2019). *Positive energy: emotional well-being of students in high-performing systems on 16 January 2026*.
- Oranga, J., & Matere, A. (2025). Quantitative research: Types, advantages, generalizability, and limitations. *Open Access Library Journal*, 12, 1–9.
- Rammstedt, B., Lechner, C., & Danner, D. (2024). Beyond literacy: The incremental value of non-cognitive skills. *OECD Education Working Papers*, No. 311. OECD Publishing. <https://doi.org/10.1787/7d4fe121-en>
- Rizk, T. H. (2023). Correlation. In *Translational interventional radiology* (pp. 153–156). Academic Press.
- Rokala, V., Pakarinen, E., Eskelä-Haapanen, S., & Lerkkanen, M. K. (2023). Teacher perceived self-efficacy and sense of inadequacy across Grade 1: Bidirectional associations and related factors. *Scandinavian Journal of Educational Research*, 67(7), 1166–1181. <https://doi.org/10.1080/00313831.2022.2116482>
- Rulida, D. O., Cano, J. C., & Andrin, G. R. (2024). Non-cognitive skills as correlates to academic performance among senior high school students. *International Journal of Science and Management Studies*, 7(1). <https://doi.org/10.51386/25815946/ijsms-v7i1p131>
- Shala, S. D., Thaçi, E., & Shala, A. (2024). Learning Styles and Motivation: Their Role in Academic Performance. *Journal of Educational and Social Research*, 14(3), 258. <https://doi.org/10.36941/jesr-2024-0071>
- Sejdiu Shala, D., Thaçi, E., & Shala, A. (2024). Learning styles and motivation: Their role in academic performance. *Journal of Educational and Social Research*, 14(3), 258–270. <https://doi.org/10.36941/jesr-2024-0071>
- Sheikh, M. A., Bajwa, F., Aslam, M. J., & Mir, B. (2024). Survey research: Descriptive and analytical power, types and usages. *International Journal of Politics & Social Sciences Review*, 3(3), 231–239.
- Sivrikaya, A. H. (2019). The relationship between academic motivation and academic achievement of the students. *Asian Journal of Education and Training*, 5(2), 309–315. <https://doi.org/10.20448/journal.522.2019.52.309.315>
- Slater, P., & Hasson, F. (2025). Quantitative research designs, hierarchy of evidence, and validity. *Journal of Psychiatric and Mental Health Nursing*, 32(3), 656–660. <https://doi.org/10.1111/jpm.13135>
- Stangor, C., & Walinga, J. (2019). Psychologists use descriptive, correlational, and experimental research designs to understand behaviour. In *Introduction to Psychology*. <https://www.saskoe.ca/introductiontopsychology/chapter/psychologists-use-descriptive-correlational-and-experimental-research-designs-to-understand-behavior/>
- Sun, Y., Wang, X., Zhang, C., & Zuo, M. (2023). Multiple regression: Methodology and applications. *Highlights in Science, Engineering and Technology*, 49, 542–548. <https://doi.org/10.54097/hset.v49i.8611>
- Tschannen-Moran, M., & Hoy, A. W. (2001). Ohio State Teacher Efficacy Scale (OSTES). APA PsycTests. <https://doi.org/10.1037/t11400-000>
- Vallerand, R., et al. (1992-1993). *ACADEMIC MOTIVATION SCALE (AMS-HS 28) HIGH SCHOOL VERSION*. Educational and

- Psychological Measurement, vols. 52 and 53. https://www.lrcs.uqam.ca/wp-content/uploads/2017/08/HS-emes_en.pdf
- World Bank. (2017). Developing socioemotional skills for the Philippines' better jobs. World Bank Group.
- World Bank. (2018). World development report 2019: The changing nature of work. World Bank.
<https://www.worldbank.org/en/publication/wdr2019>
- World Economic Forum. (2020). The future of jobs report 2020. World Economic Forum.
- Yamazaki, J. (2026). Non-cognitive skills in developing countries. Hot Issues of Skills Development. <https://skills-for-development.com>
- Zhou, K. (2017). Non-cognitive skills: Definitions, measurement, and malleability. UNESCO.