Influence of Problem-Solving Skills and Emotional Regulation on Learner Motivation to Finish Senior High School Program

Christian Oliver F. Guilaran

Graduate School Program, Student, Holy Cross of Davao College, Philippines

ABSTRACT

Demotivation to complete schooling is alarming. This study aimed to determine the significance of problemsolving skills and emotional regulation in determining motivation to complete schooling. The study used a diagnostic research design with 204 Senior High School students selected through simple random sampling, employed a survey questionnaire, and analyzed the data using multiple linear regression. The findings show that the determinants significantly influence the criterion, partially supporting Resilience Theory. Future studies should examine additional variables, such as family and external support systems, to explain the remaining 47.40% of the variance. At the same time, schools implement programs that strengthen students' problem-solving and emotional regulation skills, thereby enhancing motivation to complete schooling.

Keywords: Problem-solving skills, emotional regulation, motivation to complete schooling, persistence, Senior High School.

INTRODUCTION

The Problem and Its Scope

Globally, students often lack motivation to complete their schooling. Studies have revealed that many students exhibit low motivation to complete their education (OECD, 2023); research indicates that students who lack motivation are less likely to complete their schooling (Szabó et al., 2024).

In the United States, research indicates that low academic motivation among students is associated with declining (Alivernini, 2023). In Europe, educational data show that student disengagement and difficulties in sustaining motivation are ongoing concerns (OECD, 2023). In Latin America, student motivation remains a challenge, with stagnant learning outcomes (UNESCO, UNICEF, & ECLAC, 2024).

Studies on student motivation in the Philippines indicate challenges with sustaining academic engagement, including motivation, which are associated with increased absenteeism, lower participation, and potential withdrawal from schooling (Dominado et al., 2025).

The effects of demotivation extend beyond individual students to communities and the broader economy. Incomplete education can limit employment opportunities and reduce workforce readiness, thereby affecting long-term socioeconomic progress.

Reports indicate that demotivated students are more likely to miss school. Being demotivated is associated with lower school engagement. The problem, nonetheless, stems from a lack of interest that initially shapes the type of environment and social affiliations they fit into.

In the local setting, Senior High School Learners are often motivated to finish by the belief that they need to secure a job even before completing their studies. This factor contributed to these learners leaving school for personal reasons, and left the impression that landing a job is more promising than staying in school and doing their assignments.

Significance of the Study

This study addresses low student motivation to complete schooling and supports SDG 4 by providing insights into improving engagement, reducing dropouts, and promoting quality education. Aligned with DepEd's goals by guiding interventions that promote perseverance, encourage self-directed learning, and support the development of competent, resilient graduates. It also supports the mission of the Holy Cross of Davao College by informing programs that enhance students' motivation, perseverance, and holistic growth.

Statement of the Problem

This study aimed to determine the significance of problem-solving skills and emotional regulation in determining motivation to complete schooling. Specifically, it aimed to achieve the following learning goals.

1. To determine the levels of problem-solving skills as indicated by identifying and analyzing problems, generating possible solutions, decision-making, and implementation; emotional regulation as indicated by managing negative emotions, maintaining emotional balance under stress, and using positive coping strategies; and the motivation to finish schooling, indicated by academic persistence, goal-setting, commitment, and engagement in learning activities.

2. To determine the significance of the relationship between problem-solving skills, emotional regulation, and motivation to finish schooling.

3. To determine the significance of the individual and combined degree of influence of problem-solving skills and emotional regulation on motivation to finish schooling.

Hypotheses

The following hypotheses were formulated and tested at the 0.05 significance level:

Ho1: Problem-solving skills and emotional regulation are not significantly associated with the motivation to complete schooling.

Ho2: Problem-solving skills and emotional regulation did not significantly influence motivation to complete schooling as individual determinants, nor did they influence it as combined determinants.

THEORETICAL FRAMEWORK

(Garmezy 1985) Proposed that resilience emerges from the interaction of three major systems: individual attributes, family support systems, and external support systems. His theory emphasized that resilience is not a fixed trait but a dynamic developmental process in which people learn to manage emotions, solve problems, and use available resources to overcome academic, social, and emotional challenges. In education, this means that students become more motivated and persistent when they develop coping skills and receive supportive environments.

Conceptual Framework

In this study, problem-solving skills, as indicated by identifying and analyzing problems, generating possible solutions, decision-making, and implementation (D'Zurilla & Goldfried, 1971), served as the individual attribute element mentioned in the theory. Emotional regulation, as indicated by managing negative emotions, maintaining emotional balance under stress, and using positive coping strategies (Gross & John, 2003), also reflected individual attributes. Motivation to finish school, as indicated by academic persistence, goal-setting, commitment, and engagement in learning activities (Deci & Ryan, 1985; Deci & Ryan, 2000), served as the resilience concept in the theory.

This study was limited only to the relationship between internal attributes and resilience. Family and external support, as factors of resilience, were excluded from the study.

INDEPENDENT VARIABLES **DEPENDENT VARIABLE**

Problem-solving Skills
Identifying and analyzing problems
Generating possible solutions
Decision-making and implementation

Emotional Regulation
Managing negative emotions
Maintaining emotional balance under stress and
Using positive coping strategies

Motivation to Finish Senior High Program
Academic persistence
Goal-setting, commitment, and
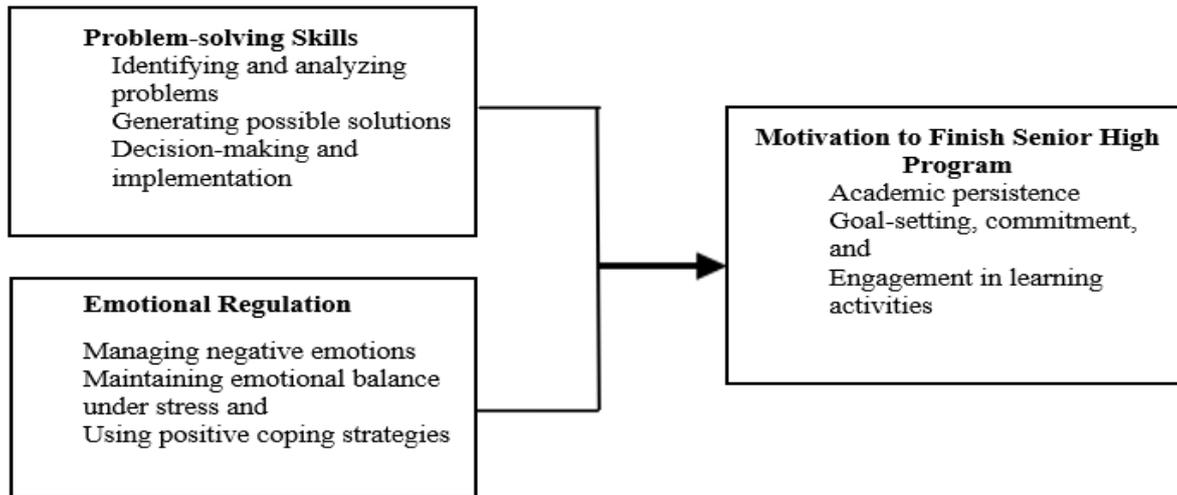Engagement in learning activities

Figure 1. Conceptual Framework of the Study

METHODOLOGY

This chapter describes the methods used in this study, including the research design, respondents, locale, instrument, data gathering procedure, and data analysis.

Research Design

This study used a diagnostic research design. Diagnostic research design is a quantitative research type that investigates the underlying causes of a problem. The design goes beyond mere description, seeking not only what is happening but also why it is happening and what factors are associated with it. This design typically involves identifying and analyzing variables to determine their relationships and root causes. It explains the association between the variables; more or less, it uses cross-sectional data (Research.life. 2023)

Locale of the Study

The study conducted in Davao City, a highly urbanized city in southern Philippines, known for its diverse population and strong educational sector; It serves as a regional hub for commerce, culture, and public services in Mindanao, providing a suitable environment for educational and social research; Its mix of urban and suburban communities enables the study to capture a diverse range of socioeconomic and academic contexts.

Sample and Sampling Technique

The study selected 204 Senior High School students from public schools enrolled in SY 2025–2026; in the study, we used a simple random sampling technique to select the respondents; a probability sampling method in which every member of the target population has an equal and known chance of being selected for the sample (Ahmed, S.K., 2024).

Research Instruments

The researcher rated all questionnaires using a 4-point Likert scale: 4 = strongly agree, 3 = agree, 2 = neither agree nor disagree, 1 = strongly disagree.

Data Gathering Technique

The data-gathering technique used in this study was a survey technique. In quantitative research, a survey questionnaire is a structured instrument consisting of a series of standardized questions designed to systematically collect numerical data from respondents on specific variables of interest. This tool allows

researchers to obtain numerical data that can be statistically analyzed to describe, explain, or test hypotheses related to the research problem. Researchers widely use survey questionnaires because they enable efficient data collection from large samples in a consistent and comparable format, thereby facilitating the generalizability of findings (Ranganathan, 2023).

Data Analysis

The data were summarized, sorted, and analyzed using the statistical tools. The researcher used the following statistical instruments to analyze the data, with assistance from a statistician.

Mean and Standard Deviation. The researchers used these instruments to measure the level of problemsolving skills, emotional regulation, and motivation of senior High School learners to complete school. The mean provided the average level of each variable, while the standard deviation indicated the variability or dispersion of the responses. This Analysis addressed the first research question.

Pearson Correlation (r) indicated that higher problem-solving skills and emotional regulation were positively associated with SHS learners' motivation, suggesting that enhancing these skills may increase their drive to complete schooling.

Multiple Linear Regression Analysis. This Analysis examined how problem-solving and emotional regulation influenced the motivation of Senior High School learners. The model illustrated the contribution of each skill to persistence, highlighting those with the greatest impact and informing strategies to enhance motivation and reduce dropout rates.

Ethical Consideration

The Society for Moral Integrity and Legal Ethics (SMILE) promotes ethical accountability at the highest level. The ethical values of informed consent, privacy, and confidentiality are foundational to ethical and professional practice. Privacy and confidentiality ensure individuals' autonomy and control over personal information, and the law provides ethical protection and justification for respecting these rights.

RESULTS

This section presents descriptions of the variables' levels and indicators, analyses of the variables' relationships, and the influence of the predictors on the criteria.

Descriptive Analysis

Table 1 presents the descriptive statistics. It contains the study's variables: Problem-solving Skills, Emotional Regulation, and Motivation to Finish Schooling. Moreover, it covers the sample size, standard deviation, mean, and descriptive interpretation.

Table 1. Descriptive Analysis, n=204

Variables	SD	Mean	Descriptive Level
Problem-Solving Skills	0.358	3.17	High
Identifying and Analyzing Problems	0.414	3.19	High
Generating Possible Solutions	0.420	3.16	High
Decision-Making and Implementation	0.454	3.16	High
Emotional Regulation	0.388	3.06	High

Managing Negative Emotions	0.552	3.10	High
Maintaining Emotional Balance Under Stress	0.478	2.90	High
Using Positive Coping Strategies	0.481	3.17	High
Motivation	0.387	3.28	Very High
Academic Persistence	0.401	3.37	Very High
Goal-Setting and Commitment	0.485	3.30	Very High
Engagement in Learning Activities	0.469	3.16	High

Specifically, the table shows that the problem-solving skills variable had a mean of 3.17, indicating that respondents have strong problem-solving skills. Identifying and Analyzing Problems, Generating Possible Solutions, Decision-Making, and Implementation were described as high. With a standard deviation of .358,

the indicators showed strong uniformity. Moreover, the emotional regulation variable had a mean of 3.06, indicating that respondents had good problem-solving skills; the researcher described it as high. The researcher described all its indicators as high. With a standard deviation of .388, the indicators showed a strong uniform response. Lastly, the motivation to finish school variable had a mean of 3.28, indicating that respondents had strong problem-solving skills. Two of its indicators were rated very high, and one was rated high. With a standard deviation of 0.387, the indicators showed a strong uniformity of perception.

Correlation Analysis

Table 2 presents the correlation results. It covers the study's variables, namely problem-solving skills and emotional regulation. On the left side of the table is the predictive variable, which represents problemsolving skills and emotional regulation. Motivation, as represented by the criterion variable, shows the details and values in the table describing the r-value, p-value, decision on the null hypothesis, and interpretation.

Table 2. Correlation Table

Variable	**r**	**p-value**	**Decision on Ho ($\alpha = 0.05$)**	**Interpretation**
Problem-Solving Skills	0.674	p < 0.001	Reject Ho	Significant
Emotional Regulation	0.607	p < 0.001	Reject Ho	Significant

Range of r-value	Strength of Correlation	Interpretation
±0.00 - ±0.19	Very Weak	Negligible or almost no relationship
±0.20 - ±0.39	Weak	Low degree of relationship
±0.40 - ±0.59	Moderate	Substantial or fair relationship
±0.60 - ±0.79	Strong	High degree of relationship
±0.80 - ±1.00	Very Strong	Very high or near-perfect relationship

Standard Interpretation of the Correlation Coefficient (r)

Specifically, the table shows the correlation between problem-solving skills and motivation to finish schooling, which obtained a p-value of 0.001, which is less than the 0.05 significance level; hence, the researchers rejected the null hypothesis. An r-value of 0.674 indicates a strong, significant relationship between these variables. Additionally, the correlation between problem-solving skills and motivation to finish schooling, which obtained a p-value of 0.001, which is less than the 0.05 significance level; hence, the researchers rejected the null hypothesis. An r-value of 0.674 indicates a strong, significant relationship between these variables. Additionally, the correlation between problem-solving skills and motivation to finish schooling obtained a p-value of 0.001, which is less than the 0.05 significance level; hence, the researchers rejected the null hypothesis. An R-value of 0.607 indicates a strong, significant relationship between these variables.

Comparing the correlations, problem-solving skills showed a slightly stronger association with motivation than did emotional regulation, but both variables demonstrated meaningful, positive relationships that influenced students' persistence in schooling. In summary, both dependent variables were significant determinants.

Regression Analysis

Table 3 presents the regression results. The study includes the following determinants: problem-solving skills and emotional regulation, and the criterion variable, motivation to finish schooling. It also includes the beta coefficient, standard error, t-value, p-value, decisions on the hypothesis, and corresponding interpretation.

Table 3. Regression Analysis

	Motivation to Finish Schooling						
	Unstandardized Coefficients		Standardized Coefficients				
Determinants	**B**	**Std. Error**	**Beta**	**T**	**p value**	**Decision on Ho**	**Interpretation**
Constant	0.614	0.190		3.234	0.001		
Problem-Solving Skills	0.524	0.068	0.485	7.724	p<0.001	Reject Ho	Significant
Emotional Regulation	0.328	0.063	0.328	5.226	p<0.001	Reject Ho	Significant

$R = 0.725$; $R^2 = 0.526$;   Adjusted $R^2 = 0.521$; F-value = 99.43; p-value = p<0.001

Table 3 specifically shows that problem-solving skills had a standardized beta coefficient of 0.485, indicating a 48.5% influence on motivation to finish schooling. With a p-value of 0.001, which is less than 0.05 degrees of confidence, the researcher rejected the null hypothesis. It implies that such a degree of influence is significant. Moreover, the emotional regulation variable had an unstandardized beta coefficient of 0.328, indicating a 32.8% influence on motivation to finish schooling. With a p-value of 0.001, which is less than 0.05 degrees of confidence, the researcher rejected the null hypothesis. It implies that such a degree of influence is significant.

The combined problem-solving skills and emotional regulation accounted for an R^2 of 0.526, indicating a 52.6% influence on motivation to finish schooling. With a p-value of 0.001, which is less than 0.05, the researcher rejected the null hypothesis. It implies that such a degree of influence is significant.

The regression results indicate that both problem-solving skills and emotional regulation significantly determine motivation to finish schooling. However, problem-solving skills contribute more strongly than emotional regulation.

SUMMARY OF FINDINGS

1. Problem-solving skills and emotional regulation are significantly correlated with motivation to finish schooling.

2. Problem-solving skills and emotional regulation significantly influence motivation to finish schooling as individual and combined determinants, respectively.

DISCUSSION

This chapter presents the discussion of the findings, conclusions, and recommendations.

The results show that problem-solving skills and emotional regulation significantly influence motivation to complete schooling.

The study finds that Problem-solving skills and emotional regulation are significantly related to students' motivation to complete schooling, supporting Rentzios et al.'s (2025) assertion that emotional regulation and emotional intelligence positively influence academic motivation and engagement. Moreover, the study also affirms Günaydın, H. D. (2021), that social problem-solving skills were significantly associated with academic motivation, indicating that stronger problem-solving abilities are associated with higher motivation to study. Lastly, this study supports Usán Supervía et al. (2021) by encouraging that emotional regulation is significantly linked to self-efficacy and academic motivation, thereby supporting students' persistence and performance.

However, the findings of this study contradict those of Hormillada and Jajalla (2025), who reported that problem-solving skills did not directly predict motivation, suggesting that their effect on motivation may be indirect or mediated by other factors. Additionally, Hayes et al. (2022) stated that Psychological inflexibility, rather than emotional regulation, predicted school satisfaction and dropout intentions, suggesting that regulation alone may not determine motivation to finish schooling. The current study also opposed this. Finally, the idea of Thomas et al. (2024) that emotional intelligence does not directly predict dropout intention, as motivational factors mediate its effect on degree completion, is opposed.

Problem-solving skills and emotional regulation significantly influence motivation to finish schooling as individual and combined determinants, respectively.

The study's findings show that problem-solving skills and emotional regulation significantly influence students' motivation to complete schooling, both individually and in combination, supporting de la Fuente et al. (2023), who found that problem-solving ability uniquely contributes to student adjustment, well-being, and academic persistence. In addition, the study's findings support Arias et al. (2022), who noted that emotional intelligence, including emotional regulation, is significantly correlated with school motivation, suggesting that emotional competencies are predictors of academic motivation. Lastly, Mahrous, R. M. (2025) affirms that emotional intelligence positively correlates with learning motivation and academic performance, reinforcing the link between emotional regulation and motivation in educational settings.

The study's results contradict those of Enguídanos et al. (2023), which stated that emotional experiences and regulation affect dropout intentions. The study's findings oppose Nieto-Carracedo, A. (2024), who stated that Emotional intelligence indirectly influences academic achievement through factors such as motivation and learning strategies, suggesting that emotional regulation alone may not directly determine school motivation or completion. Ultimately, this study opposes Sánchez-Cabrero et al. (2022), who found that the relationship between emotional intelligence and academic performance is not direct but occurs through mediators such as emotional well-being and learning strategies, highlighting the complexity of how emotional competencies affect schooling outcomes.

CONCLUSION

Based on findings, the researcher concludes that problem-solving skills and emotional regulation together significantly impact motivation to finish schooling. Hence, resilience theory is partly supported, stating that individual attributes shape resilience. The researchers attributed the study's limitation to its partial focus on the family and external support systems.

RECOMMENDATIONS

Based on the study's conclusion, researchers may pursue a further regression analysis. Utilizing the other remaining variables not covered in this study, such as the family support system and external support system, in order to account for the remaining 47.40% variance in motivation to finish schooling. Furthermore, schools may implement additional programs and classroom activities that enhance students' problem-solving skills and emotional regulation, thereby strengthening motivation to complete schooling.

REFERENCES

1. Ahmed, S. K. (2024). How to choose a sampling technique and determine a sample. ScienceDirect. https://doi.org/10.1016/j.scs.2024.03.004
2. Alivernini, F., Manganelli, S., Lucidi, F., & Cavicchiolo, E. (2023). Understanding and supporting the motivation of students from low-income families. Contemporary Educational Psychology, 73, 102177. https://doi.org/10.1016/j.cedpsych.2023.102177
3. Arias, J., Soto-Carballo, J. G., & Pino-Juste, M. R. (2022). Emotional intelligence and academic motivation in primary school students. Psicologia: Reflexão e Crítica, 35, Article 14.
4. Dominado et al., (2025). Factors affecting the absenteeism among senior high school learners. International Journal of Multidisciplinary: Applied Business and Education Research, 6(3), 1142–1160. https://doi.org/10.11594/ijmaber.06.03.15 Please double-check if mentioned in the content.
5. Deci, E. L., & Ryan, R. M. (1985). Intrinsic motivation and self-determination in human behavior. Springer Science & Business Media.
6. De la Fuente, A., Cardeñoso, O., Chang, E. C., et al. (2023). The role of problem-solving ability, beyond academic motivation, in college students' psychological adjustment. Current Psychology, 42, 17888–17897.
7. D'Zurilla, T. J., & Goldfried, M. R. (1971). Problem-solving and behavior modification. Journal of Abnormal Psychology, 78(1), 107–126. https://doi.org/10.1037/h0031360
8. Enguídanos, D., Aroztegui, J., Iglesias-Soilán, M., Sánchez-San-José, I., & Fernández, J. (2023). Academic emotions and regulation strategies: Interaction with higher education dropout ideation. Education Sciences, 13(11), Article 1152. https://doi.org/10.3390/educsci13111152
9. Garmezy (1985). Stress-resistant children: The search for protective factors. In J. E. Stevenson (Ed.), Recent research in developmental psychopathology (pp. 213–233). Pergamon Press.
10. Gross & John (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. Journal of Personality and Social Psychology, 85(2), 348–362.
11. Günaydın, H. D. (2021). The impact of social problem-solving skills on academic motivation. Current Psychology, 41(1), 427–436.
12. Hayes et al. (2022). The role of psychological inflexibility in adolescent satisfaction with the educational track and school dropout intentions. Journal of Contextual Behavioral Science, 24, 141–148.
13. Hormillada, C. F., & Jajalla, J. B. (2025). Relationship of problem-solving skills and student performance as mediated by mathematics motivation among mathematics majors in the teacher education program.
14. Psychology and Education: A Multidisciplinary Journal, 31(1), 13–41. https://doi.org/10.5281/zenodo.14717740
15. Mahrous, R. M. (2025). Emotional intelligence, academic motivation, and academic performance. Journal of Emotional and Educational Studies.

16. Nieto-Carracedo, A., Gómez-Iñiguez, C., Tamayo, L. A., & Igartua, J.-J. (2024). Emotional intelligence and academic achievement: The relationship and emotional well-being, motivation, and learning strategies as mediating factors. Psicología Educativa, 30(2), 67–74. https://doi.org/10.5093/psed2024a7

17. OECD. (2023). Student engagement and motivation: Trends in education. OECD Publishing.

18. Ranganathan, P. (2023). Designing and validating a research questionnaire [https://www.ncbi.nlm.nih.gov/articles/PMC10405529/](https://www.ncbi.nlm.nih.gov/articles/PMC1 04 05529/)

19. Rentzios et al. (2025). Academic emotions, emotion regulation, academic motivation, and approaches to learning: A person-centered approach. Frontiers in Education. https://doi.org/10.3390/bs15070900

20. Researcher. life. (2023). What is research design? Types, elements, and examples. https://researcher.life/blog/article/what-is-research-design-types-examples

21. Sánchez-Cabrero et al., (2022). Measuring the Relation between Academic Performance and Emotional Intelligence at the University Level after the COVID-19 Pandemic Using TMMS-24. Sustainability, 14(6), 3142.

22. Szabó, et al., (2024). The relationship between student engagement and dropout risk in early adolescence.

23. International Journal of Educational Research Open, 6(1), Article 100328. https://doi.org/10.1016/j.ijedro.2024.100328

24. Thomas et al., (2024). Emotional intelligence and dropout intention: The mediating influence of expectancy and task value. Discover Psychology, 4, 106.

25. UNESCO, U., & ECLAC. (2024). Education in Latin America and the Caribbean at a crossroads: Regional monitoring report SDG4-Education 2030 (Regional Monitoring Report). United Nations Educational, Scientific and Cultural Organization; United Nations Children's Fund; Economic Commission for Latin America and the Caribbean.

26. Usán Supervía, P., & Quílez Robres, A. (2021). Emotional regulation and academic performance in the academic context: The mediating role of self-efficacy. International Journal of Environmental Research and Public Health, 18(11), 5715.