

Influence of Work Engagement and Family Support on the Academic Achievements of the Alternative Learning System (ALS) Senior High School Students

Xyra Lou R. Crisostomo*

Graduate School, Holy Cross of Davao Colle, Davao City, Philippines

Abstract—Poor academic performance remains a major concern among Alternative Learning System (ALS) Senior High School learners due to low work engagement and inadequate family support. This study aims to determine the influence of work engagement and family support on the academic achievement of Alternative Learning System (ALS) senior high school students. The study used diagnostic research, random sampling, a survey technique, and multiple regression analysis. The results showed that work engagement had a greater impact on academic achievement than family support. This result partially affirms the Job Demands–Resources (JD-R) Theory. According to the study, future researchers should consider factors such as where Alternative Learning System students complete their schoolwork, how teachers educate, and the assistance they receive from other students. This will enhance our comprehension of how the Alternative Learning System learners succeed academically. To better understand students using the Alternative Learning System and the supports that contribute to their academic success, the study encourages future researchers to consider these issues.

Index Terms—Influence of work engagement, family support, academic achievements, alternative learning system, senior high school students.

1. Introduction

A. The Problem and its Scope

Poor academic performance among Alternative Learning System Senior High School pupils is a widespread issue. Students who struggle to balance work and school and receive little support from their families do poorly. Students frequently participate little, lack motivation, and perform poorly in learning environments. Their lack of interest in their schooling and lack of support at home are the causes of this. To stay motivated and engaged, students using the Alternative Learning System need support. To succeed in school, students require assistance from their families. Moreover, a recent study found that students in ALS programs face problems with academics, classroom performance, and retention. Also, this poses a global educational problem for vulnerable and disadvantaged students. (Kaliisa et al., 2023; Idulsa & Luzano, 2024). Additionally, learners' educational experiences in flexible learning modalities

showed that low family participation and low engagement remain common in alternative learning contexts, leading to lower educational achievement and poorer academic performance among ALS learners (Hero & Gloria, 2025).

In various countries, the influence of work engagement and family support on the academic achievement of alternative education learners remained a significant educational issue. In the United States, pupils in flexible school programs perform poorly. These learners have poor grades and little involvement in class. In addition, this is a result of their lack of enthusiasm for studying and lack of support at home. Learning is difficult for students in various programs, such as flexible educational programs. They lack a support network at home, which is the cause of this. One major issue for pupils in alternative and flexible educational programs is their lack of engagement with their schoolwork. (Assi, 2023). In France, pupils in non-traditional institutions are losing interest and performing poorly in class. They do not receive enough emotional support, which leads to this. They simply have no interest in learning. Students are not receiving assistance from these schools. Traditional French schools exhibit these issues. To maintain their interest and improve their academic performance, the learners require assistance. In addition, non-traditional schools must figure out how to support these learners; as a result, the assistance must come from the schools. In addition, because they do poorly in school and receive insufficient support from their families, many students in Indonesia's non-school-based programs often struggle in the workplace. Furthermore, some Indonesian students struggle academically as a result of a lack of familial support and academic disinterest (Sari et al., 2024). These situations indicate that concerns regarding learner engagement and support systems continue to affect academic achievement in alternative education programs across different countries.

In the Philippine context, the influence of work engagement and family support on the academic achievement of ALS Senior High School learners remained a pressing educational concern. Recent studies have shown that many ALS learners do not participate much in school. They have a hard time

*Corresponding author: xyralou.crisostomo@hcdc.edu.ph

understanding what they read. These ALS learners also lack motivation. They do not receive support from their families, including emotional and financial support. As a result, it affects how they do in school and how far they go with their education. The Alternative Learning System (ALS) learners are not doing well because they do not get the help they need from their families. Furthermore, it affects their academic performance and what they achieve in school. (Antipuesto *et al.*, 2023; Catyong *et al.*, 2023). Moreover, Students enrolled in the Alternative Learning System (ALS) program frequently struggle to focus in class. When they are working on their schoolwork, they give up easily. Due to the ALS program's great flexibility and lack of regulations. As a result, the students in the ALS program struggle academically and perform poorly. Furthermore, learners in the Alternative Learning System (ALS) struggle to learn because of the ALS program. Due to their participation in the Alternative Learning System (ALS) program, the pupils struggle academically. (Idulsa & Luzano, 2024). Despite efforts to improve education and make ALS more effective, many students continue to struggle academically. They face challenges in keeping up with their studies and succeeding in the ALS program. Many students are still not getting the desired outcomes. To address this, educators and the government are making great efforts. It is still a big problem. Students with ALS continue to struggle academically (Wayas & Dinoro, 2023).

The consequences of low work engagement and limited family support were evident in the academic achievement and overall educational development of Alternative Learning System (ALS) learners. Learners who are distracted in class frequently perform poorly academically, are inactive, and are easily discouraged. Students in educational programs face similar challenges, as they often find it difficult to complete their programs. The need for alternative education programs becomes very important in such cases. Learners who do not participate in the learning process typically achieve poor results in alternative education programs (Bahian & Brobo, 2023). Likewise, Alternative Learning System (ALS) learners suffer when their families fail to provide emotional, academic, and financial support. As a result, learners in the Alternative Learning System (ALS) may develop a lack of confidence and perform poorly in class (Cataan & Baluya, 2023). These conditions can make things even worse for Alternative Learning System (ALS) learners. They may not have the chance to learn and grow as others do. In other words, they will have a hard time getting ahead in life and in their jobs. The result is that Alternative Learning System (ALS) learners will have difficulty obtaining the education and financial support they need to succeed.

B. Significance of the Study

This study is highly relevant to both national policy and global education mandates. The study directly supported the goals of Sustainable Development Goal (SDG) 4: Quality Education by identifying the specific external factors, Work Engagement and Family Support, that drive academic success among non-traditional, marginalized learners. Understanding

how different factors work together is key to improving education for everyone, helping young people and adults who are not in school learn throughout their lives. The findings will provide teachers and those who implement Alternative Learning Systems (ALS) with the information needed to create comprehensive plans that make the most of external support. Furthermore, this will help policymakers allocate resources and create flexible, supportive learning environments. It is particularly important for out-of-school youth and adults. The goal is to enhance equitable quality education and foster lifelong learning opportunities worldwide. This study really helped Alternative Learning System learners achieve their goals. Doing so helped Alternative Learning System learners get the education they needed. Also, this is important because it helps Alternative Learning System learners get jobs and become more productive. As a result, Alternative Learning System learners can help their families and communities, benefiting everyone in society.

C. Statement of the Problem

This study determined the influence of work engagement and family support on the academic achievements of Alternative Learning System (ALS) senior high school students. Specifically, the study aimed to achieve the following objectives:

1. To determine the levels of influence of work engagement in terms of organizational support, job autonomy, and co-worker social support; family support in terms of emotional and psychological, instrumental, and financial support; and academic achievement in terms of the general average of Alternative Learning System (ALS) Senior High School students
2. To determine the significant relationship between work engagement and the academic achievement of the Alternative Learning System (ALS) Senior High School students.
3. To determine the significant relationship between family support and the academic achievement of the Alternative Learning System (ALS) Senior High School students
4. To determine the significant influence or combined effect of work engagement and family support on the academic achievement of the Alternative Learning System (ALS) Senior High School students

D. Hypotheses

The following hypotheses were tested using the 0.05 level of significance:

H₀₁: There is no significant relationship between work engagement and family support and the academic achievement of Alternative Learning System (ALS) Senior High School Students.

H₀₂: Work engagement and family support do not significantly influence the academic achievement of Alternative Learning System (ALS) senior high school students.

E. Theoretical/Conceptual Framework

This study is based on the Job Demands-Resources Theory. The Job Demands-Resources Theory says that how well people do their jobs and how much they care about their work depend on whether they have help and support. The Job Demands-Resources Theory states that factors such as family support, kind words, and assistance from the organization make people more interested in their work, more motivated, and perform better in school. If people do not have enough of these things, they might not care much about their work and might not do as well. The Job Demands-Resources Theory is important because it shows that people need a balance between demands and resources to perform at their best (Bakker et al., 2023).

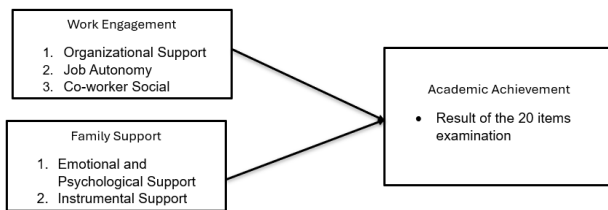


Fig. 1. Conceptual framework of the study

Moreover, the JD-R Theory defines work engagement as vigor, dedication, and absorption leading to positive educational and performance outcomes among learners and workers (Demerouti, 2023).

The theory is important in the context of the Alternative Learning System (ALS) Senior High School learners. Learners who receive adequate family support and are highly engaged in learning activities are predicted to achieve better academic outcomes amid the demands of flexible, non-traditional education programs (Lee & Jo, 2023). The theory further explains that supportive environments and sufficient personal resources strengthen learner motivation, persistence, and academic participation, which are essential factors in promoting academic success among ALS learners (Lep et al., 2023).

2. Method

Discussed in this section are the research design, locale of the study, sample and sampling technique, data gathering, data analysis technique, and ethical considerations.

A. Research Design

The study used a diagnostic research design, which was appropriate as it aims to determine relationships among variables to understand educational concerns and learner performance (Creswell & Guetterman, 2023), explain existing conditions (Miksza et al., 2023), and determine factors associated with students' academic outcomes (Miksza et al., 2023).

B. Locale of the Study

The study's respondents were from secondary schools in the Kidapawan City Division, Region XII. In the 2nd Legislative District of the Province of North Cotabato, Kidapawan City was referred to as the "City of Fruits and Highland Springs." In the forty (40) barangays that make up Kidapawan City's geopolitical jurisdiction, there are eight (8) integrated schools under three zones, sixteen (16) public secondary schools, and fifty-three (53) elementary schools distributed among five districts.

C. Sample and Sampling Technique

The study involved 120 senior high school Alternative Learning School (ALS) learners; therefore, the researcher employed random sampling, a technique in which the selection process was done in a way that corresponds (Chan, 2016), and each member of the total population had equal opportunities to be selected (a sample drawn at random was a fair representation of the population); thus, the researcher considered this type of sampling technique suitable for this study.

D. Data Gathering Technique

The study used a survey method, which was appropriate for collecting the data because it allowed the researcher to systematically evaluate work engagement, family support, and academic achievement of ALS Senior High School learners (Miksza et al., 2023; Creswell & Guetterman, 2023). The study used a modified survey questionnaire from previous studies on work engagement and family support, including validated and reliable statements measured on a five-point Likert scale (Taherdoost, 2023; Story & Tait, 2023).

E. Data Analysis Technique

The study employed descriptive statistics, correlation analysis, and multiple linear regression.

Descriptive statistics (mean and standard deviation) were

Table 1

The following scale was used to interpret the level of variables

Scale	Level	Work Engagement	Family Support	Academic Achievement
4.20 - 5.00	Very High	Very Strongly Agree	Very Strongly Agree	Very Strongly Agree
3.40 - 4.19	High	Strongly Agree	Strongly Agree	Strongly Agree
2.60 - 3.39	Moderate	Moderately Agree	Moderately Agree	Moderately Agree
1.80 - 2.59	Low	Rarely Agree	Rarely Agree	Rarely Agree
1.0 - 1.79	Very Low	Never Agree	Never Agree	Never Agree

Table 2

Standard deviation value of ranges and interpretation

SD Value Range	Level of Variability	Interpretation
.00 - 0.50	Very low	Variability/responses are very consistent.
0.51 - 1.00	Low	Variability/responses are relatively consistent.
1.01 - 1.50	Moderate	Variability/responses vary significantly.
1.51 - 2.00	High	Variability/responses vary significantly.
Above 2.00	Very high	Variability/responses are highly dispersed.

appropriate for summarizing, organizing, and describing the characteristics of the collected data to determine the levels and variability of respondents' perceptions of work engagement, family support, and academic achievement (Casinillo, 2023). Furthermore, descriptive statistics are also frequently employed in educational research due to their ability to clearly present and interpret quantitative data and learner responses (Rahadian & Budiningsih, 2023).

Moreover, to determine the significant relationship between work engagement, family support, and academic achievement, the Pearson Product-Moment Correlation Coefficient (Pearson r) was utilized. Correlation analysis is a statistical method for exploring the nature of the relationship between two variables and is most suitable for examining whether increases or decreases in one variable are linked to changes in another variable (Miksza *et al.*, 2023). In addition, correlation analysis is frequently employed in educational and behavioral research to investigate relationships among learner-related variables and academic outcomes (Osorio *et al.*, 2023).

For the interpretation scale of r -value, the following scheme, as proposed by Guilford (1956), was used:

Computed r Descriptive	Interpretation
+/- 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
0.0	No correlation

Finally, multiple linear regression analysis was conducted to determine which independent variables (work engagement and family support) were significant predictors of the dependent variable (academic achievement) of learners of ALS Senior High School (Beñalet *et al.*, 2023). Additionally, regression analysis is applicable to educational research because it explains how predictor variables affect variability in student academic outcomes and academic performance (Leem, 2023).

Further, unstandardized and standardized Beta (β) coefficients were used to determine the strength and direction of each predictor (Hair *et al.*, 2023).

In terms of Scale of Beta (β) Coefficient Strength, the following scheme, as proposed by Cohen (1988) and Hair *et al.* (2019), was used:

β Value Range	Strength of Influence
$\pm 0.00 - \pm 0.09$	Very Weak
$\pm 0.10 - \pm 0.29$	Weak
$\pm 0.30 - \pm 0.49$	Moderate
$\pm 0.50 - \pm 0.69$	Strong
± 0.70 and above	Very Strong

F. Ethical Considerations

The researcher observed ethical standards in the conduct of the study, obtained informed consent, ensured voluntary participation, anonymity, and confidentiality, used data for academic purposes only, provided respondents the option to withdraw from the study at any time, sought approval from relevant school authorities before collecting data, and followed the Data Privacy Act of 2012. It was also reviewed and approved by the Society of Moral Integrity and Legal Ethics (SMILE) to adhere to ethical and legal principles for research.

3. Results

This section presented descriptive, correlation, and regression analyses, along with their corresponding interpretations. It concluded with a summary of findings.

A. Descriptive Result

Table 5 is the descriptive Table. It contains the predictive and criterion variables involved in the study. It also includes the number of respondents, standard deviations, computed means, and the corresponding descriptive interpretations.

Specifically, the Table shows that the work engagement factor variable had a mean of 4.30, indicating very high engagement. This indicates that Alternative Learning System (ALS) learners demonstrate very strong work engagement. All the indicators registered very high. The corresponding standard deviation of 0.49 shows that the variability is very consistent.

The second variable, family support, had a mean of 4.00, indicating high levels of support. It indicates that family support for Alternative Learning System (ALS) learners is strong. The standard deviation of 0.78, described as variability, is relatively consistent.

Lastly, for academic achievement, the mean is 3.93, which is a very satisfactory performance. It implies that the Alternative Learning System (ALS) learners have shown very satisfactory performance levels. The standard deviation value of 0.58 denotes consistent variation.

Based on the findings, it can be seen that ALS learners demonstrated high levels of work engagement; however, their

Table 5
Descriptive table (n=120)

Variables	SD	Mean	Interpretation
Work Engagement	0.35	4.30	Very High
<i>Behavioral Engagement</i>	0.43	4.35	Very High
<i>Cognitive Engagement</i>	0.47	4.04	High
<i>Emotional Engagement</i>	0.46	4.34	Very High
<i>Motivational Engagement</i>	0.42	4.48	Very High
Family Support	0.78	4.00	High
<i>Emotional and Psychological Support</i>	0.80	4.10	High
<i>Instrumental and Academic Support</i>	0.82	3.96	High
<i>Financial Support</i>	0.79	3.95	High
Academic Achievement	0.58	3.93	Very Satisfactory

For FI and SC: 1.00-1.79 Very Low, 1.80-2.59 Low, 2.60-3.19 Moderate, 3.20-4.19 High, 4.20-5.00 Very High
For AA: 1.00-1.79 DNME, 1.80-2.59 FS, 2.60-3.19 Satisfactory, 3.20-4.19 Very Satisfactory, 4.20-5.00 Outstanding

Table 6
Correlation table (n-120)

Variables	Academic Achievement		
	r-value	p-value	Interpretation
Work Engagement	0.327	0.000	<i>Positive, Weak but Significant Relationship</i>
Family Support	0.207	0.023	<i>Positive, Weak but Significant Relationship</i>

Table 7
Regression table (n-120)

Independent Variables	Academic Achievement					
	Estimate	Std. Estimate	SE	t	p	Interpretation
Intercept	1.43		0.64	2.24	0.027	
Work Engagement	0.49	0.29	0.15	3.26	0.001	Significant Influence
Family Support	0.10	0.13	0.07	1.45	0.151	Not Significant Influence

R= 0.350, R²= 0.123, Adjusted R²=0.108, F=8.17, Sig.=0.000

Level of Significant: 0.05

Decision Rule: Reject H if $p < 0.05$

families also contributed to some degree. Moreover, they also performed exceptionally well academically.

B. Correlation Analysis

Table 6 is the correlation table. It presents the predictive and criterion variables. Likewise, the Table shows the r-value indicating the strength of the correlation, the p-value describing the level of significance at the 0.05 confidence level, and the corresponding interpretation.

Specifically, the Table shows that the correlation between work engagement and academic performance variables yielded a p-value of 0.000, which is less than 0.05, indicating a significant association. Hence, the null hypothesis was rejected. It means that there is statistical significance in the correlation. The r-value is 0.327, indicating a weak positive correlation. Meaning that students who show greater engagement are likely to perform better academically, but the association between the two is weak.

Additionally, the correlation between the family support variable and the academic performance variables yielded a p-value of 0.023. It is lower than the 0.05 confidence level. Therefore, the null hypothesis is not accepted in this instance. In other words, it means the correlation is already significant. The correlation coefficient r is 0.207 for this particular study. There is a positive but weak correlation between the two variables. Those with more support, whether emotional, academic, or financial, usually achieve better academic grades than others.

From the above results, it can be concluded that there is a significant relationship between the two variables examined, namely, work engagement and family support, with academic accomplishment. However, given the correlation coefficients, there may be other significant variables affecting learners' performance in alternative learning systems.

C. Regression Analysis

Table 7 presents the regression analysis. It examined the influence of the predictive variables and criterion variables. Furthermore, the Table showed the unstandardized beta, beta coefficient, t-value, p-value, and the corresponding interpretation.

From the Table, it can be observed that the influence of work engagement on academic achievement attained a standardized Beta coefficient value of 0.29. From this, it is evident that the

influence of work engagement on the criterion variable is rather weak. Considering that the p-value associated with it is 0.001, which is below the 0.05 level of significance, the null hypothesis is rejected. It means that work engagement affects academic achievement. It thus follows that a one-unit change in work engagement results in a 0.29 change in academic achievement.

However, the effect of family support on performance was associated with a Beta coefficient of 0.13. The above suggests that the effect of family support on the criterion is relatively very weak. Considering a p-value of 0.151 that exceeds the level of significance (0.05), the null hypothesis was accepted. The above means that family support does not have any significant effect on performance levels. It is worth noting that with an additional unit of family support, performance increases by 0.13 units, with a p-value of 0.000, which is less than the level of significance of 0.05.

The Table also shows the R-squared of 0.108, indicating the combined influence of work engagement and family support on the academic achievement of Alternative Learning System (ALS) senior high school students. Hence, the null hypothesis was rejected. Indicating that about 12.3% of the variation in academic achievement is explained by work engagement and family support, while the remaining percentage is attributed to other unmeasured factors.

The results revealed that among the two determinant variables, only work engagement significantly explains variations in academic achievement. At the same time, family support does not show a statistically significant effect in the regression model.

D. Summary of Findings

Based on statistical results, it specifically found that:

1. Work engagement and family support are strongly correlated with academic achievement.
2. Work engagement, not family support, significantly influences academic achievement.

4. Discussions

This section presents the discussion and the study's results. Specifically, it includes reviews of previously published studies that either supported or denied the results of this study.

A. Correlation between Work Engagement and Academic Achievement

The results from the study presented in this paper confirm those of Fredricks *et al.* (2023), who found that learners who exhibit high engagement behaviorally, emotionally, and cognitively generally achieve academic success. The study by Fredricks *et al.* (2023) highlighted the positive influence that engagement, motivation, and commitment have on academic success among learners. In this case, the study conducted showed that ALS SHS learners exhibiting high work engagement were more academically successful than their peers.

However, the current study disapproves of the findings of Bahian & Brobo (2023), who argue that work engagement does not always correlate with educational achievement, as even among learners enrolled in different forms of learning institutions, their motivation and engagement do not necessarily guarantee good performance. They suggest that socioeconomic issues, learning difficulties, and a lack of learning materials can affect learners' academic achievement. Therefore, the current study contradicts the findings of Bahian & Brobo (2023) because other variables beyond work engagement are at play.

B. Correlations between Family Support and Academic Achievement

The current findings affirm the study of Hero and Gloria (2025), which stated that learners who receive strong emotional and academic support from their families tend to demonstrate better academic performance and persistence in school. According to their research, family support and encouragement have a good impact on students' motivation and academic success in the Alternative Learning System (ALS). In a similar vein, the current study found a positive correlation between academic success among ALS Senior High School students and family support.

On the other hand, the current findings oppose the study of Idulsa and Luzano (2024), which explained that family support does not always directly influence academic achievement because learner motivation and academic engagement may have a stronger effect on educational performance. Their findings suggested that academic success among ALS learners may still depend more on personal engagement and self-regulation rather than family assistance alone.

C. Academic Achievement as Influenced by Work Engagement and Family Support

The current findings affirm the study of Lee and Jo (2023), which explained that work engagement and supportive environments positively contribute to learners' academic achievement. Their study emphasized that engaged learners who receive adequate emotional and social support tend to perform better academically and persist in school. Similarly, the present study revealed that work engagement and family support positively influenced the academic achievement of Alternative Learning System (ALS) Senior High School learners.

However, the present study rejects the findings reported by

Bahian and Brobo (2023), who reported that engagement by the learners as well as the support provided by their families may not necessarily lead to success in academics since there could be other factors involved, such as the socioeconomic status of the learners, the learning gaps, and insufficient educational materials.

D. Conclusion

Based on the findings of the study, engagement at work is more significant than family support for students' academic achievement at ALS Senior High School. The above observation could be seen as some kind of proof of the JD-R theory, which suggests that the imbalance between demands and resources influences a person's productivity and engagement. It should be noted that, according to the theory, resources, including family support, boost engagement and academic performance (Bakker *et al.*, 2023).

E. Recommendations

Based on the conclusion, the following recommendations are proposed:

1. Developed a continuous professional development for all Alternative Learning System teachers and facilitators that focuses on strategies and techniques that enhance students' behavioral, emotional, and cognitive engagement to be able to sustain the interest and participation of the learners.
2. Promote an active family involvement through orientation and programs that emphasize the role of positive reinforcement and emotional encouragement in strengthening the learners' motivation and engagement.
3. Conduct future studies that include additional variables or factors, such as the learning environment, teaching strategies, or peer support, to explain further academic achievement among Alternative Learning System (ALS) senior high school students.

References

- [1] A. I. Antipuesto, A. L. Quibranza, M. R. Ugabaniel, and C. Cabello, "The Alternative Learning System (ALS) students' challenges in untangling the reading comprehension ability," *Psychology and Education: A Multidisciplinary Journal*, vol. 12, no. 4, pp. 320–328, 2023.
- [2] S. A. Assi, *A Work and School Perspective on the Experiences of Working Students*, M.S. thesis, Concordia Univ., 2023.
- [3] R. V. Bahian and M. A. Brobo, "Instructional approaches and learners' attitude towards Alternative Learning System (ALS)," *International Journal of Research Publication*, vol. 126, no. 1, pp. 90–101, 2023.
- [4] A. B. Bakker, E. Demerouti, and A. Sanz-Vergel, "Job demands–resources theory: Ten years later," *Annual Review of Organizational Psychology and Organizational Behavior*, vol. 10, pp. 25–53, 2023.
- [5] C. E. C. Beñalet, M. E. Pacquiao, M. C. A. Hatagi, E. O. Iñigo, and M. M. N. Edig, "The influence of social media usage and the level of motivation on students' academic performance: A linear regression analysis," *International Journal of Research and Innovation in Social Science*, 2023.
- [6] L. F. Casinillo, "Regression model for students' learning style in distance statistics education," *EDUCATUM Journal of Science, Mathematics and Technology*, vol. 10, no. 1, 2023.
- [7] J. Cataan and J. Baluya, "Traces of the past: A glimpse into the journey of Alternative Learning System students," *Philippine E-Journals*, 2023.
- [8] J. Cataan and J. Baluya, "Traces of the past: A glimpse into the journey of Alternative Learning System students," *Philippine E-Journals*, 2024.

- [9] C. I. Catyong, M. D. A. Luchavez, and L. M. Garciano, "Recognizing the status, needs, and challenges of Alternative Learning System students in a rural district," *Journal of Education and Practice*, vol. 14, no. 17, 2023.
- [10] C. H. Y. Chan, "Building an online library for interpretation training: Explorations into an effective blended-learning mode," *Computer Assisted Language Learning*, vol. 27, no. 5, pp. 454–479, 2016.
- [11] J. W. Creswell and T. C. Guetterman, *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*, 7th ed. Pearson Education, 2023.
- [12] J. Cohen, *Statistical Power Analysis for the Behavioral Sciences*, 2nd ed. Lawrence Erlbaum Associates, 1988.
- [13] E. Demerouti, "Job demands–resources theory: Ten years later," *Annual Review of Organizational Psychology and Organizational Behavior*, vol. 10, pp. 25–53, 2023.
- [14] J. A. Fredricks, P. C. Blumenfeld, and A. H. Paris, "School engagement and academic achievement in flexible learning environments," *Journal of Educational Psychology*, vol. 115, no. 4, pp. 522–538, 2023.
- [15] J. F. Hair, G. T. M. Hult, C. M. Ringle, and M. Sarstedt, "When to use and how to report the results of PLS-SEM," *European Business Review*, vol. 31, no. 1, pp. 2–24, 2019.
- [16] J. F. Hair, W. C. Black, B. J. Babin, and R. E. Anderson, *Multivariate Data Analysis*, 9th ed. Cengage Learning, 2023.
- [17] J. L. Hero and D. S. Gloria, "Self-regulated learning of Alternative Learning System senior high school learners in flexible learning modality," *Journal of Education and Learning (EduLearn)*, vol. 19, no. 4, 2025.
- [18] F. L. Idulsa Jr. and R. A. Luzano, "Students' motivation and academic engagement in Alternative Learning System," *International Journal of Multidisciplinary Research and Analysis*, vol. 7, no. 3, pp. 1019–1032, 2024.
- [19] R. Kaliisa, J. Mugisha, and A. Mwesigwa, "Learner engagement and academic performance in flexible learning environments," *International Journal of Educational Development*, vol. 98, Art. no. 102744, 2023.
- [20] D. Y. Lee and Y. Jo, "The job demands-resource model and performance: The mediating role of employee engagement," *Frontiers in Psychology*, vol. 14, Art. no. 1194018, 2023.
- [21] B. H. Leem, "Impact of interactivity on learning outcome in online learning settings: Ordinal logit model," *Journal of Educational Technology Systems*, 2023.
- [22] Ž. Lep, E. Klemenčič Mirazchiyski, and P. V. Mirazchiyski, "The relative effect of job demands, resources, and personal resources on teaching quality and students' engagement during the COVID-19 pandemic," *Frontiers in Psychology*, vol. 14, Art. no. 1282775, 2023.
- [23] G. L. Magatines and G. T. Flores, "A study of challenges in delivering instruction, learning resources, and student attitudes: The case of ALS program," 2024.
- [24] P. Miksza, J. T. Shaw, L. K. Richerme, P. M. Hash, and D. A. Hodges, "Correlational statistics," in *Music Education Research: An Introduction*. Oxford University Press, 2023, pp. 347–370.
- [25] S. Nadaud, P. Bernard, and M. Fournier, "Academic engagement and learning persistence among students in alternative education settings in France," *European Journal of Education*, vol. 58, no. 2, pp. 221–235, 2023.
- [26] E. A. Osorio, S. Inzunza, and S. E. Ward, "Modelación estadística para el aprendizaje de la correlación y regresión lineal," *PNA*, vol. 17, no. 3, pp. 295–321, 2023.
- [27] D. P. Sari, A. Nugroho, and R. Hartono, "Family support and academic engagement among alternative education learners in Indonesia," *International Journal of Instruction*, vol. 17, no. 1, pp. 455–470, 2024.
- [28] D. A. Story and A. R. Tait, "Survey research," *Anesthesiology*, vol. 138, no. 3, pp. 481–489, 2023.
- [29] H. Taherdoost, "Designing a questionnaire for a research paper: A comprehensive guide to design and develop an effective questionnaire," *Asian Journal of Managerial Science*, vol. 12, no. 1, pp. 8–16, 2023.
- [30] S. Wayas and A. Dinoro, "An assessment of Alternative Learning System (ALS) in the Philippine rural areas," *Asia Research Network Journal of Education*, 2023.