Original Article

Social Life-Style Attributes and Academic Performance among Students

Davy Guibone [1], Wenie Nahial [2,*], Jenelyn Sabellina [2]

Received: 01 March 2026; Revised: 04 April 2026;
Accepted: 15 April 2026; Published: 01 May 2026

DOI: https://doi.org/10.66074/JRNL88A99B

Abstract

Classroom instruction is considered the primary driver of academic achievement in terms of shaping the behaviors and social interaction among students, collectively termed as “social life attributes.” This plays a critical role, yet is under-researched in pedagogical outcomes. This study assessed the relationship between social lifestyle attributes and the academic performance of Grade 8 students at Mambajao National High School in DepEd-Camiguin, Philippines. This study utilized a descriptive-correlational research design. The data were gathered from 208 respondents selected through proportionate stratified random sampling. This work employed a validated, researcher-developed instrument (alpha = 0.80). Using appropriate statistical tools, the data were analyzed using Spearman’s Rank Correlation and the Kruskal-Wallis test. Findings revealed that students maintain a "Moderate" extent of social lifestyle attributes (overall mean = 2.94), with high engagement in collaborative group activities ($\bar{x}$=3.30) but significantly low participation in extracurricular programs ($\bar{x}$=2.39). Academic performance was rated as "Very Satisfactory" ($\bar{x}$=87.1). Statistical analysis confirmed a significant positive low correlation between social lifestyle and academic achievement (r_s=0.139,p=0.046). Furthermore, there was a significant difference in lifestyle attributes based on sex (p=0.017), in favor of females ($\bar{x}$=3.41). There were no significant differences found across income, household size, or parental education. These results suggest that the school environment serves as a social equalizer, mitigating the impact of socio-economic disparities. The study

[1] Mambajao National High School, Camiguin, Philippines
[2] Camiguin Polytechnic State College, Camiguin, Philippines
* winenahial@gmail.com

Volume 2, Issue 2, June 2026

concludes that fostering structured social engagement and self-regulated study habits is essential for sustaining academic excellence in the island state context.

Keywords: 21st-century skills, academic performance, social equalizer, social lifestyle attributes

1. Introduction

Academic achievement is no longer viewed solely as a product of classroom instruction and cognitive ability in the present educational landscape. Increasingly, research recognizes that "social lifestyle attributes", the reflection of everyday behaviors, digital habits, and social patterns, form the primary environment in which learning occurs (Cabilangan, 2022). These attributes, comprising screen time and sleep hygiene to peer dynamics and extracurricular engagement, offer a holistic view of a student's well-being that will eventually become a pedagogical outcome.

Longitudinal studies suggested that individual habits like sleep duration and dietary patterns significantly influence longitudinal changes in academic performance (Paclar & Hinacay, 2025). However, there remains a critical gap in the literature regarding how these variables interact collectively within specific socio-cultural contexts. Current evidence suggests that poor sleep quality and irregular schedules directly impair memory consolidation and concentration (Hassan et al., 2025). Accordingly, healthy dietary habits bolster cognitive processing speeds (Elkhatir et al., 2025). Moreover, the role of organizational routines and time management was identified as a cornerstone of success in high-pressure academic institutions (Aljaffer et al., 2024).

In the Philippines, high school students have unique challenges such as heavy academic workloads, high parental expectations, and an intensifying digital culture (Aying et al., 2023). These become pressures among students, where the natural lifestyle balance is repeatedly sacrificed. However, excessive digital engagement and sleep deprivation are known to undermine motivation to gain significant learning (Song, 2025). To counter this, positive social outlets like school clubs can become an avenue for productive student engagement (Vispo & Macalinao, 2024).

This study aims to contribute positively to the United Nations Sustainable Development Goals (SDG 3 and 4) by examining the connection between the promotion of a healthy lifestyle and quality education (United Nations, 2015). By investigating these relationships among Grade 8 students at Mambajao National High School, this research seeks to understand the role of the relevant explanatory variables.

Overall, this inquiry aims to produce a comprehensive understanding of how social lifestyle attributes collectively influence academic achievement and offer insights for all to consider in the promotion of a healthy learning environment as envisioned by the World Health Organization (WHO, 1996). Particularly, the social

life attributes are conceptualized as a multi-dimensional construct as behavioral manifestations of the students' daily routine. This includes the social-interpersonal dynamics (peer collaboration and socialization), academic and self-regulatory habits (time management and study schedules), and digital and extracurricular engagement (technology use). These attributes are unified under the 'lifestyle' framework as they collectively form the non-cognitive environment that supports or hinders formal learning (Cabilangan, 2022).

2. Methodology

2.1 Research Design and Locale

This study utilized a descriptive-correlational quantitative research design to evaluate the relationship between social lifestyle attributes and academic outcomes among Grade 8 students. This design is considered appropriate and align to the objectives of the study. The inquiry was conducted at the Mambajao National High School in Camiguin, Philippines. This secondary school is a mega-school based on the categorization of the Department of Education.

2.2 Respondents and Sampling Procedures

The target population consisted of 452 Grade 8 students distributed in eleven (11) sections in the school year 2024 - 2025. To ensure statistical representativeness, the Raosoft calculator was used to determine the sample size at a 5 percent margin of error and a 95 percent confidence level. A sample size of 208 respondents was needed and determined through proportionate random sampling.

2.3 Research Instrumentation

The primary data collection tool was a researcher-developed survey instrument divided into two modules. The first module gathered socio-demographic data, including sex, family income, and parental education, while the second module utilized a four-point Likert scale to measure social lifestyle attributes such as peer relationships, digital habits, and wellness routines.

2.4 Validity and Reliability

A panel of experts was invited to review the content of the researcher-made survey questionnaire. Comments and suggestions were incorporated in the final draft of the research instrument. This was again reviewed by the same group of experts for their final comment and suggestion. Then, a select group of 30 Grade 8 students composed the pilot test of the instrument. The responses gave a reliability value of 0.80 using a Cronbach’s Alpha, indicating acceptable internal consistency of the items

for the inquiry. Academic performance was quantified using the students' official General Average from the first quarter of the school year, retrieved through official school records.

2.5 Data Gathering Procedure

The researchers observed the research protocols and ethical standards in the implementation of this inquiry. This started by informing the school head (SH) about this work. With the permission of the SH, the researchers sent a letter requesting the Office of the Schools Division Superintendent to allow the implementation of the study through the survey questionnaire to be distributed to the target respondents. Upon approval, the researchers got the support of the SH in getting the consent of the target respondents of the study. After this, the researchers personally distributed the research instrument to the respondents in the schools. After two weeks, the researchers personally retrieved the questionnaire, examined it, and asked follow-up questions when it was necessary. Then, the responses were tallied in the Excel program or file for analysis.

2.6 Data Analysis and Statistical Treatment

Data analysis was performed using professional statistical software, employing both descriptive and inferential techniques. Frequency counts and weighted means were used to characterize the demographic and lifestyle profiles. Due to the ordinal nature of the survey data, Spearman's Rank Correlation (rho) was applied to test the relationship between lifestyle attributes and academic success. Furthermore, the Kruskal-Wallis (H) test was utilized to determine if significant differences existed in these variables when categorized by socio-demographic factors.

2.7 Ethical Considerations

Ethical integrity was maintained by securing informed consent from all respondents and obtaining administrative approval from the school head. The study strictly adhered to the mandates of the Philippine Data Privacy Act of 2012, ensuring that all respondent data were anonymized and treated with the utmost confidentiality.

3. Results

The results of the analysis are presented in tabular form with the corresponding interpretation per findings of the study.

Table 4 reveals that, out of 208 Grade 8 students, there was a slightly higher representation of females (55.29%) compared to males (44.71%). In terms of family monthly income, the highest counts of respondents (37.02%) fall within the "near-

poor" income bracket (PhP 12,082 – PhP 24,164), followed by respondents from poor families (less than PhP 12,082). Furthermore, the majority of respondents (60.58%) live in households with 4 - 6 members, followed by families with 7 and above members, typical of household sizes in the Philippines. Lastly, 74.04 percent of the respondents have parents with at least a college-level standing, while 10.10 percent completed the basic education, or are high school graduates.

Table 1. Socio-demographic profile of the respondents (N=208).

Variable	Counts	Percentage (%)
Sex		
Male	93	44.71
Female	115	55.29
Total	**208**	**100.00**
Family Monthly Income (in pesos)		
Less than 12,082	53	25.48
12,082 to 24,164	77	37.02
24,164 to 48,328	40	19.23
48,328 to 84,574	28	13.46
84,574 to 144,984	10	4.81
Total	**208**	**100.00**
Household Size (members)		
3 and below	24	11.54
4-6	126	60.58
7 and above	58	27.88
Total	**208**	**100.00**
Parents' Highest Educational Attainment		
Elementary graduate	7	3.36
High school level	26	12.50
High school graduate	21	10.10
College level	48	23.08
College graduate	80	38.46
Postgraduate	26	12.50
Total	**208**	**100.00**

On the next variable, Table 2 shows that there was a "Moderate" overall extent (M=2.94) of social lifestyle attributes among Grade 8 students. The low standard deviation (SD = 0.48) suggests a strong consensus among the responses. The social lifestyle attributes of the respondents were categorized as social-interpersonal dynamics with five indicators, academic self-regulation with three indicators, and digital and extracurricular engagement with two indicators. Obviously, each category is at moderate extent.

Table 2. Extent of social lifestyle attributes among grade 8 students.

Dimensions and Indicators	Mean	Qualitative Description
Social-Interpersonal Dynamics		
I enjoy participating in group activities inside the school.	3.3	High Extent
I spend time socializing with friends during school days.	3.16	Moderate Extent
I feel motivated when collaborating with peers.	3.04	Moderate Extent
I frequently engage in group discussions or study groups.	2.95	Moderate Extent
My friends influence my study habits positively.	3.02	Moderate Extent
Academic Self-Regulation		
I manage my time effectively between academic and personal life.	3.29	High Extent
I follow a consistent study schedule.	2.71	Moderate Extent
I spend hours studying daily.	2.58	Moderate Extent
Digital & Extracurricular Engagement		
I used technology for academic purposes.	2.92	Moderate Extent
I am involved in any extracurricular activities.	2.39	Less Extent
Overall Mean	2.94	Moderate Extent
Standard Deviation	0.48	

In appreciating the academic performance of the respondents, DepEd Order No. 8, s. 2015 was utilized as shown in Table 3.

Table 3. Academic performance distribution of students for SY 2024-2025.

Grading Scale	Description	Counts	Percentage (%)
90-100	Outstanding	64	30.77
85-89	Very Satisfactory	81	38.94
80-84	Satisfactory	51	24.52
75-79	Fair/Passing	12	5.77
Total		**208**	**100.00**
Average Grade =87.1 (Very Satisfactory); SD= 4.18			

The academic performance of the cohort is described as "Very Satisfactory" (M=87.1,SD = 4.18). Approximately 30.77 percent of the respondents (the students) achieved the "Outstanding" performance level, while 38.94 percent achieved the “Very Satisfactory” performance level. None of them got failing grades. This distribution shows that there seems to be a clustering of the ratings at the upper tier (level) due to the grading system of the Department of Education, with components at different weights.

In terms of the primary objective of the study, Table 4 shows that there was a significant positive low relationship between the two variables ($r_s=0.139, p< .05$), the social lifestyle attributes and academic performance of the respondents. This implies that as the respondents (Grade 8 students) improve their social lifestyle, time

management, and peer collaborations, their academic performance will tend to rise. The coefficient of determination,(r^2=0.019) indicates that only 1.9 percent of the variation in academic performance can be explained by the social lifestyle attributes. In other words, 98.81 percent of the variance in the outcome variable is influenced by other variables not accounted for by the researcher.

Table 4. Spearman's rank correlation between social lifestyle attributes and academic performance.

Variables	r_s	df	p-value	Statistical Decision
Social lifestyle attributes and academic performance among students	0.139	206	.046*	Reject Ho

* *indicates significance*

With the use of an appropriate statistical tool, Table 5 revealed a significant difference in lifestyle attributes when grouped by sex (H(1)=5.65,p<.05), where females exceeded males by a mean of 3.41. However, there were no significant differences when grouped by family monthly income (H(4)=2.26,p=.687), household size (H(2)=0.43,p= .807), and parents' highest educational attainment (H(5)=7.07,p= .216). These vital findings indicate that these explanatory variables serve as a social equalizer since the lifestyle attributes of the respondents did not vary.

Table 5. Kruskal-Wallis test for significant differences in lifestyle attributes across demographic groups.

Variables	*H*	df	p-value	Effect (ε^2)	Decision
Sex	5.65	1	0.017*	0.027	Reject *Ho*
Family Monthly Income	2.26	`4	0.687	0.010	Failed to reject *Ho*
Household Size	0.43	2	0.807	0.002	Failed to reject *Ho*
Parents' Highest Educational Attainment	7.07	5	0.216	0.034	Failed to reject *Ho*

* *indicates significance*

4. Discussion

In this work, females have a higher number compared to their male counterparts. This sex distribution sometimes interchanges depending on the nature of the inquiry. The Philippine Institute of Development Studies (PIDS, 2023) suggests that sex distribution may vary significantly in some instances in public schools due to the academic tracks of the students. In terms of the family's monthly income, the finding shows a socio-economic vulnerability that aligns with broader national trends, where families struggle with limited financial flexibility (PSA, 2023). While the household sizes indicate that the respondents belonged to families in need of a larger budget to sustain the needs of family members. Students from this household size usually suffer problem on home learning space and accessibility of high-end technology (NEDA, 2023). However, economic constraints did not hamper in achieving college education since 80 (38.46%) of the parents did it. Jabar et al. (2023)

considered this as a non-material support system that can help students achieve their goals in schools despite the low income of their parents.

In the social lifestyle attributes of the respondents, the first dimension is focused on the social-interpersonal dynamics of the respondents. The extent of these constructs indicates the strong collaborative inclinations possessed by the students. According to Battad (2024), Filipino learners highly value collaborative environments as an avenue to develop 21st-century competencies like communication and critical thinking.

Regarding the second dimension of academic self-regulation, students were found to have a high perceived ability to manage time effectively. This means that the students lack the discipline to execute their claims of managing time effectively, as they cannot consistently follow their schedules and spend time wisely studying the lessons every day. This result is a reflection of the study of Aljaffer et al. (2024), who noted that students often reported to have perceived high level of time management, but struggled with their daily organizational routines required for academic success. While in the local context, Cabilangan (2022) found in their study that Filipino high school students often prioritize immediate social or digital engagement over arranged or planned and independent study hours, which results in moderate execution of self-regulatory habits with the high intent to succeed. The students, hence, have this high will to achieve success, but do not like to execute a process to succeed.

Finally, the dimension of digital and extracurricular engagement revealed the lowest responses. The respondents, the Grade 8 students, revealed a moderate use of technology. According to Zakir (20205), academic success depends on digital literacy and attitude, not on merely access to the device. It also posited that digital literacy is about the ability and attitude of the students to utilize gadgets for educational purposes. Despite the encouragement of the school to engage in extracurricular activities to increase social interaction among the students, the respondents took it into moderate consideration. The study of Vispo and Macalinao (2024) revealed that Filipino high school students have heavily engaged in academic and co-curricular activities. In these activities, the respondents fulfill their need for collaboration with fellow students, rather than seeking out formal and time-consuming school organizations.

The academic performance of the respondents at the "Very Satisfactory" level indicates that, despite socio-economic challenges, the instructional strategies of the teachers at Mambajao National High School may have effectively raised cognitive mastery among the respondents of the study. This achievement agrees with the findings of Paclar and Hinacay (2025), who postulated that a balanced lifestyle, even if to a moderate extent, can sustain the achievement of desirable outcomes by providing the emotional stability required for cognitive ease.

In the primary objective of the study, the positive weak (low) correlation implies that while daily habits and peer dynamics of the students serve as foundations of learning, these are not the primary drivers of academic achievement among the Grade 8 learners. This finding is consistent with the local study of Magulod (2019), who observed that while Filipino students may manifest a moderate level of study

habits and lifestyle routines, these factors often show a significant but low-to-moderate relationship with actual academic grades, suggesting that instructional quality and cognitive variables may play a more dominant role. Consequently, these attributes may likely serve as enabling conditions to support, rather than dictate, the achievement of cognitive outcomes learned through formal classroom instruction.

Finally, the study found a significant difference in lifestyle attributes when grouped by sex, where females showed a higher perception than males. This is consistent in the study of Burrows et al. (2017) and Habes et al. (2019), which found that female students had more structured and socially balanced lifestyles. Females showed a more organized lifestyle compared to their male counterparts. However, the respondents revealed no significant differences when grouped by family monthly income, household size, and parents' highest educational attainment. These vital findings indicate that these explanatory variables serve as a social equalizer since the lifestyle attributes of the respondents did not vary. The lack of significant differences in the parents' income and educational background has an equalizing effect in the locale of the study. The respondents' consensus is enough to show the homogeneity of lifestyle attributes across diverse socio-economic backgrounds among the Grade 8 students of Mambajao National High School. This aligns with the findings of Sulaiman et al. (2020), who noted that institutional culture and peer influence often outweigh familial socio-economics in shaping the daily habits and social perceptions of students within the school context.

5. Conclusion

This study concludes that Grade 8 students maintain a "Moderate" level of social lifestyle attributes, characterized by a distinct preference for collaborative school-based activities over formal extracurricular engagements. Rather than a critical pedagogical shift, these findings suggest a need for a targeted integration of supportive social habits into the existing school framework. While socio-economic factors like family income and parental education are often viewed as primary determinants of success, they do not significantly differentiate the social lifestyle choices of students in this locale. Instead, the school environment appears to provide an "equalizing effect," where institutional culture and peer dynamics lead to behavioral homogeneity among learners.

The central finding highlights a significant but low positive correlation between social lifestyle attributes and academic performance ($r_s = 0.139$, $p = .046$). This indicates that while behaviors such as time management, peer collaboration, and digital habits are complementary components of the academic ecosystem, they account for only a small portion (1.9%) of the variance in grades. The "Very Satisfactory" academic performance of the cohort suggests that instructional strategies remain the primary driver of success, with social lifestyle attributes acting as enabling conditions rather than dominant predictors. Furthermore, females exhibited a higher manifestation of these attributes than their male counterparts, while family income,

household size, and parents' educational attainment appeared to have a negligible impact on the students' daily routines. Finally, the academic success of the students is primarily driven by classroom instruction, though it is modestly supported by the structured routines and social interactions students maintain outside formal learning hours.

6. Recommendations

Based on the findings, the following recommendations are proposed to enhance student outcomes:

- For School Administrators: Encourage the gradual integration of interest-led activities into existing school schedules to subtly improve student engagement without overwhelming the academic workload.
- For Educators: Incorporate brief, targeted guidance on time management and digital literacy within the existing curriculum to provide students with basic self-regulatory tools that can support their primary academic tasks.
- For Parents: Foster supportive home environments that prioritize consistent study schedules and sleep hygiene, as these health-related attributes were shown to correlate with higher cognitive performance.
- For Future Researchers: Conduct a longitudinal study to observe how these lifestyle attributes evolve as students transition into Senior High School. Additionally, a qualitative inquiry could further explore the "gender gap" found in this study to understand the specific social pressures facing male students in the region.

Acknowledgment

Sincere appreciation is given to all peer reviewers for their valuable comments and suggestions, which helped the authors to improve the quality of the manuscript.

Conflict of Interest Statement

The authors declare no conflict of interest.

References

Aljaffer, M. A., Alkhadher, M. A., Al-Saffar, A. J., Al-Abbad, M. A., & Al-Saffar, Z. J. (2024). The impact of study habits and personal factors on the academic achievement performances of medical students. *BMC Medical Education, 24*(1), 834. https://link.springer.com/content/pdf/10.1186/s12909-024-05889-y.pdf

Aying, F. L., Cabanilla, A., Canillo, J., Capangpangan, A., & Conocono, A. S. (2023). Filipino Students Experiences in Online Learning: A Meta-Synthesis. *Int J Res Appl Sci Eng Technol, 11*(3), 1181-9.

https://www.academia.edu/download/100478127/Filipino_Students_Experiences_in_Online_Learning.pdf

Battad, J. L. (2024). Instructional Leadership Skills of School Heads and Its Relation to the Self-Efficacy of Elementary Teachers in Castillejos District. *International Journal of Multidisciplinary: Applied Business and Education Research, 5*(8), 3071-3078. http://dx.doi.org/10.11594/ijmaber.05.08.12

Burrows, T., Goldman, S., Pursey, K., & Lim, R. (2017). Is there an association between dietary intake and academic achievement: a systematic review. *Journal of Human Nutrition and Dietetics, 30*(2), 117-140. https://onlinelibrary.wiley.com/doi/abs/10.1111/jhn.12407

Cabilangan, R. A. (2022). The Relationship of Sociability and the Academic Achievement Among Senior High School Students. *Psychology and Education: A Multidisciplinary Journal, 3*(10), 1-1. https://www.academia.edu/download/90266729/The_Relationship_of_Sociability_and_the_Academic_Achievement_among_Senior_High_School_Students.pdf

Elkhatir, M., Ghaffouli, C., Louasté, B., Loukili, A., & Aboussaleh, Y. (2025). Dietary habits and cognitive performance in primary school students: a cross-sectional study in Khemisset region in Morocco. *Frontiers in nutrition, 12*, 1643854. https://doi.org/10.3389/fnut.2025.1643854

Habes, M., Salloum, S. A., Alghizzawi, M., & Mhamdi, C. (2019). *The relation between social media and student's academic performance in Jordan: YouTube perspective*. In A. Hassanien, K. Shaalan, & M. Tolba (Eds.), Advances in Intelligent Systems and Computing (pp. 382–392). Springer. https://doi.org/10.1007/978-3-030-31129-2_35

Hassan, S., Alqahtani, N. M., Alshahrani, S. M., Alhefzy, A. A., Alharthi, O., Alharbi, M., & Alqahtani, N. (2025). Association between sleep quality and academic performance among undergraduate medical health sciences students: a cross-sectional study. *Cureus, 17*(9). https://doi.org/10.7759/cureus.91548

Jabar, M. A. (2023). Child-related factors and parental involvement among parents in select public elementary and high schools in the Philippines. *Education, 51*(1), 72-86. https://www.tandfonline.com/doi/abs/10.1080/03004279.2021.1954968

Magulod Jr., G. C. (2019). Learning styles, study habits and academic performance of Filipino University students in applied science courses: Implications for instruction. *Journal of Technology and Science Education, 9*(2), 184-198. https://doi.org/10.3926/jotse.504

National Economic and Development Authority. (2023). Philippine Development Plan 2023-2028. https://pdp.neda.gov.ph/philippine-development-plan-2023-2028/

Paclar, Windelyn & Hinacay, Jessica. (2025). Students' Lifestyle and Academic Performance. *International Journal of Multidisciplinary Research and Analysis*. https://ijmra.in/v8i4/20.php

Philippine Institute for Development Studies. (2023). Boys are leaving school: Examining gender disparities in Philippine basic education. PIDS Discussion Paper Series No. 2023-05. https://doi.org/10.62986/pn2018.20

Philippine Statistics Authority. (2024). Highlights of the 2023 Family Income and Expenditure Survey (FIES) final results. https://psa.gov.ph/statistics/income-and-consumption/fies/node/1684061546

Republic Act No. 10173. (2012). The Data Privacy Act of 2012. https://www.officialgazette.gov.ph/2012/08/15/republic-act-no-10173/

Song, Boxuan. (2025). The effects of screen time on teen sleep. *Scholarly Review Journal*. Summer 2025. https://www.scholarlyreview.org/article/139030.pdf

Sulaiman, N. F. C., Akhir, N. H. M., Hussain, N. E., Jamin, R. M., & Ramli, N. H. (2020). Data on the impact of socioeconomic status on academic achievement among students in Malaysian public universities. *Data in brief, 31*, 106018. https://www.sciencedirect.com/science/article/pii/S2352340920309124

United Nations. (2015). Transforming our world: The 2030 Agenda for Sustainable Development. United Nations Publishing. https://sdgs.un.org/goals

Vispo, G. B., & Macalinao, Z. A. (2024). Extent of students' involvement in extracurricular activities and academic performance among Grade 8 students. *International Journal of Multidisciplinary: Applied Business and Education Research, 5*(6), 2151-2161. https://doi.org/10.11594/ijmaber.05.06.18

World Health Organization. (1996). Regional guidelines: Health-promoting schools. WHO Regional Office for the Western Pacific. https://iris.who.int/server/api/core/bitstreams/2fe154be-327e-4589-8833-ab4cd9126098/content

Zakir, S., Hoque, M. E., Susanto, P., Nisaa, V., Alam, M. K., Khatimah, H., & Mulyani, E. (2025, June). Digital literacy and academic performance: the mediating roles of digital informal learning, self-efficacy, and students' digital competence. *Frontiers in Education 10*, 1-13. https://www.frontiersin.org/journals/education/articles/10.3389/feduc.2025.1590274/pdf

Author Contributions: Guibone, D., Nahial, W., Sabellina, J.; Study design, method conception, data collection, data analysis and manuscript writing