



Effects of Shifting Schedules in Grade 7's Chemistry Achievement and Study Habits: Basis in the Production of Learning Packets

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Abstract

This study examined the shifting schedules' effect on Grade 7's Chemistry achievement and study habits. A quantitative descriptive design was used with a questionnaire for the students' profiling and an adapted achievement test for the Chemistry achievement. It was pilot tested and had a reliability of 0.78, and the science master teachers ensured its validity. The respondents' profile and study habit data underwent descriptive statistical analysis, while a *t*-test was employed to ascertain the significance of achievement levels between the morning and afternoon shifts. The data revealed that the majority of the students from the two shifts were 12 years old and were females, had parents who were high school graduates, with a combined monthly income of Php1,000.00-Php5,000.00, were regular students from the public elementary schools, and showed a comparable level of Chemistry achievement. The study's findings indicated no significant difference in Chemistry achievement between the morning and afternoon shifts. Consequently, students are encouraged to enhance their study habits to bolster their performance in Chemistry. To facilitate this, the research output includes a comprehensible learning packet. The learning pocket provided objectives, lesson content, and assessments as a guiding tool for effective study sessions.

Keywords: *Chemistry achievement, learning packet, shifting schedules, study habits*

1. Introduction

Everyone is constantly engaged in science. Science has developed into one of human endeavors' greatest and most influential fields. Today

different branches of science investigate almost everything that can be observed or detected. Science shapes how we understand the different things in our surroundings (National Academies of Sciences, Engineering, and Medicine, 2019).

Chemistry is a branch of science that is very important in our lives. It has various great applications in almost all aspects of life (McGrath et al., 2010; Sattar, 2019; Zumdahl & Zumdahl, 2013). Understanding how chemistry works and its relevance in day-to-day activities and society would help students appreciate it more. Learning about it is one of the primary things one can do to help themselves be equipped with the knowledge to sustain life. Learning chemistry knowledge and concepts is essential for understanding and appreciating societal socio-scientific issues (Gulacar et al., 2020).

Based on the Programme for International Student Assessment (PISA) results, the Philippines was ranked as one of the lowest in Mathematics, Science, and Reading Comprehension among 79 participating countries. The country also ranked low in other assessment programs, including TIMSS, SEA-PLM, and NAT. Despite the educational reforms established to improve the Philippine Education System, the Philippines remains low and significantly below its neighboring countries regarding quality education (Ignacio et al., 2022).

To meet society's demand, chemistry teaching reform has taken place worldwide (Elmas et al., 2020). Chemistry achievement in students has been one of the topics in research (Kanwal et al., 2022; Sibomana et al., 2021). One must know the factors that can affect the student's achievement in chemistry. It is done to determine which areas need to be revisited or which areas need to be studied well. Research on various factors affecting academic achievement has been fundamental. Research on chemistry achievement and attitude (Musengimana et al., 2021; Xu & Lewis, 2011), lecture and demonstration and their achievement (Gong & Bergey, 2020), inquiry method and achievement (Khan et al., 2011).

Determinants in the student's performance in chemistry have been the subject of educators and policymakers (Eya et al., 2020; Le et al., 2020). Its inclusion as a core subject in science in secondary school calls for the need to teach it effectively since effective Science teaching can lead to the attainment of scientific and technological greatness (Geverola et al., 2022).

Due to the senior high school's implementation in 2016-2017, there was a massive problem regarding classrooms. Thus, the schedule is divided into the morning and afternoon shifts, known as the first and second sessions. Research has revealed that students' alertness and attentiveness are affected by their time of day preferences (Barner et al., 2019). As stated by Dunn and Bruno (1985), students in middle school have their ideal time to study in the late morning or afternoon. High school students' ideal study time shifts to extremes of early morning and late night. Many studies report this general trend in preferred time of day and the associated change with age, but there are significant differences in individual preferences for all age groups. While group averages are essential, it is impossible to say that all students in one particular age group will learn best at one specific time of day.

Ammons (1995) suggested that the time of day greatly impacted student achievement. When students are taught during a time that harmonizes their learning style preferences, it will result in a higher score in their educational tasks. Some students perform well in the morning. It is reflected by the study of Scherrer (2021) that eveningness was a significant (negative) predictor of overall grade point average (GPA), math–science GPA, and language GPA, after cognitive ability, conscientiousness, need for cognition, achievement motivation, and gender was held constant. Research by Tonog (2003) found that early morning is effective in the achievement level of chemistry.

On the other hand, some students perform well in the afternoon. It is implied by Norbury and Evans (2019) that delaying school start time has a positive effect on students' academic achievement. Wheaton et al. (2016) stated that to improve the academic performance of adolescents, one of the factors to consider is to delay school start times as a policy change to address insufficient sleep among adolescents, a largely sleep-deprived population.

The attitude of students towards studying is of great consideration. Study habits are a significant determinant of academic performance. On the other hand, cultural aspects may affect determined habits and negatively or positively affect academic performance. Henceforth, it is essential to develop constructs that may help education institutions identify factors affecting test performance since their study habits determine how students prepare for exams (Cerna & Pavliushchenko, 2015).

One of the tools that can help one improve study habits is a learning packet. It is an instruction blueprint tailored to individualized needs,

allowing students to progress at his pace. It includes instructions on "what" the learner will attempt to learn and "how" by choosing from various resources and activities. It also determines if the student has learned. Further, it increases student-teacher interaction and minimizes, if not eliminates, failure (Akinbadewa & Sofowora, 2020).

On this premise, this study was undertaken to assess the effect of the shifting schedules on the academic achievement in Chemistry and the study habits of the Grade 7 students. It is the effort of the researcher to determine the effect of the schedule on academic achievement so that the findings of this study will be the basis for proposing a lesson packet that will be utilized in studying the lessons to improve their academic achievement.

The limitation of the study is that the achievement test is not adapted from a research publication since it was not published. The achievement test was utilized for two years at the time of the study and was pilot tested on grade 7 students. It was used explicitly since the K to 12 had just started and involved the new curriculum. Therefore, it is timely since junior high school has just started then. Another limitation is that the study was conducted in one high school only due to budget and time constraints.

2. Research Methodology

This research paper used a descriptive quantitative design to determine the effect of shifting schedules on grade 7's chemistry achievement and study habits.

The input was the profile of the respondents according to their age and gender, parents' socioeconomic status, parents' highest educational attainment, combined monthly family income, student classification, type of elementary school they graduated from, and study habits. It also included the achievement result in Chemistry of the morning and afternoon shift students. It also tested the significant difference in the student's achievement in chemistry between the morning and afternoon shifts. The study process included the procedures being observed in handling the data, such as the transmittal letter, orientation of the respondents as to what the study is about, administering the questionnaire, retrieval of the questionnaire, tallying the data, treatment of the data, and its interpretation. The output of the study was the proposed lesson packet in grade 7 chemistry.

The research was conducted at a public national high school in Carmen, Cebu, Philippines. The respondents were the grade 7 students

enrolled in chemistry. The respondents were selected using random sampling. The morning shift starts at 6:30 am to 12:30 in the afternoon. The second shift begins at 12:30 in the afternoon until 6:30 in the evening. The sample size was calculated by determining the number of sections for the morning and afternoon shifts. There were nine sections in the morning and six in the afternoon. Each section has different numbers of the total students enrolled. The researcher then randomly selected one-third of the sections from the morning and afternoon shifts. Three sections were for the morning shift and two for the afternoon shift, which served as the sample size. The chosen sections in the morning shift were Tulip, Aster, and Carnation, which had 114 students.

In contrast, the afternoon shift's chosen sections were Lilac and Sampaguita, which comprised 69 students. The study's respondents were all the students in that section, which was considered the sample size in the morning and afternoon shifts. Overall, the total number of respondents is 183.

Table 1. Distribution of Respondents

Schedule	Sections	Number of Students	Percentage (%)
Morning Shift	Tulip	35	31
	Aster	39	34
	Carnation	40	35
Total		114	100
Afternoon Shift	Lilac	35	51
	Sampaguita	34	49
Total		69	100
Overall Total		183	100

The questionnaire consisted of three parts. Part 1 is about the sociodemographic profile of the respondents. Part 2 assessed the students' study habits. Part 3 evaluated the achievement result in the morning and afternoon chemistry shifts. Part 1 contains the profile of the respondents, such as age and gender, socioeconomic status of parents, parents' highest educational attainment, combined monthly family income, student classification, and type of elementary school they graduated from. Part 2 contains statements describing the study habits adapted from Rezaie Looyeh et al. (2017), which was modified

by the researcher based on the context of Filipino students (Magulod, 2019). This questionnaire includes questions about study habits, and the construct is measured using four variables such as always (if you are doing it regularly), most often (if you do it most of the time, sometimes (if you do it once or twice), and never (if you are not doing it). Part 3 is the teacher-constructed test, standardized by conducting the pilot test for the grade 7 students. The test was found to be reliable with Cronbach alpha of 0.78 and was tested for validity by the master teachers in science. It contains the 50-item achievement test in grade 7 chemistry. Each question is multiple-choice with (4) alternatives, (3) distractors, and (1) correct answer. The verbal description of the scores is the following: Advanced (40-50), Proficient (31-40), Approaching Proficiency (21-30), Developing (11-20), and Beginning (0-10). The gathered data were analyzed and interpreted using the frequency, percentage, and weighted mean with verbal description, and it was statistically analyzed using a t-test to compare the achievement between the two shifting schedules.

3. Results and discussions

This section presents the profile of the respondents in terms of their age and gender, parents' socioeconomic status, parents' highest educational attainment, combined monthly family income, student classification, and type of elementary school they graduated from.

Table 2. Age and Gender of Respondents

Age	First Shift		Second Shift	
	Frequency	Percentage (%)	Frequency	Percentage (%)
15&above	4	3.50	3	4
14	3	3.00	3	4
13	40	35.00	23	33
12	63	55.00	30	44
11	4	3.50	10	15
Total	114	100.00	69	100
Gender				
Male	50	44.00	32	46
Female	64	56.00	37	54
Total	114	100.00	69	100

Most first- and second-shift respondents were 12 years old and were females. It is the same as with the study of Naylor et al. (2006) that grade 7 students are in 11-12 years of age. It implies that they are in the proper age bracket for their grade level when they are in school (Francis et al., 2017). Compared with the study of Tiauzon and Malquisito (2019) and Hoffmann (2002), most respondents were female rather than male.

Most started schooling at the right age and were not retained or had stopped schooling in their early grades. It is evident in the study of Dee and Sievertsen (2018) that students who study at the right age are linked to positive achievement. (Capuno et al., 2019). The correct age grade level alignment enhances the comparability of educational research findings. Researchers can make more accurate comparisons and draw meaningful conclusions when students are appropriately placed in their grade levels based on age. It enables researchers to assess educational interventions, curricula, or instructional approaches by considering students' progress, achievements, and challenges at similar developmental stages.

Table 3. Highest Educational Attainment

Highest Educational Attainment	First Shift				Second Shift			
	Father		Mother		Father		Mother	
	Freq uen cy	Perce ntage (%)	Freq uen cy	Perce ntage (%)	Freq uen cy	Perce ntage (%)	Freq uen cy	Perce ntage (%)
Post Graduate	1	1	1	1	2	3	0	0
College Graduate	16	14	7	6	10	14	9	13
College Level	11	10	10	9	6	9	2	3
Technical Vocational	0	0	0	0	2	3	2	3
High School Graduate	31	27	38	33	19	28	20	29
High School Level	20	18	20	18	5	7	11	16

Elementary Graduate	16	14	21	18	3	4	13	19
Elementary Level	19	17	17	15	22	32	12	17
Total	114	100	114	100	69	10	69	100

Most of the parents in both morning and afternoon shifts were high school graduates. The result is the same as in the study of Capuno et al. (2019). This finding also agrees with the study of Shumow and Miller (2001) that the parents of students who are high school graduates helped their children more than those who were not high school graduates. However, it will be more beneficial for the student's parents to be college educated since it will affect their performance better than the former. It is explained in the study of Wilder (2014) that the connection is most vital if parental participation is characterized as parental aspirations for their children's academic success. It is evident in the study of Shapira-Lishchinsky and Zavelevsky (2020) that parents who have higher educational levels have a positive correlation with the student's academic achievement.

Parents are considered second teachers when students are at home. They are expected to guide their children to accomplish the tasks at home. However, parents with limited knowledge of school tasks cannot guide their children. Parental education had a significant relationship with the students' performance (Abbasian et al., 2020). Those students whose parents were educated performed better than those whose parents were less educated. Furthermore, they stressed that the mother's educational attainment has a significant influence on the student's performance, were in those students whose mothers were highly educated had a higher academic performance.

Table 4. Combined Monthly Income

Combined Monthly Income	First Shift		Second Shift	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Php 12,000 & above	21	18	8	12
Php 6,000 - 11,000	19	17	10	14
Php 1,000-5,000	63	55	28	41
Php 1,000 & below	11	10	23	33
Total	114	100	69	100

The numbers imply that most students from both schedules have a lower monthly income of Php1,000-5000. It is below the poverty line, equal to PHP 9,140.00 per month, according to the poverty threshold survey of the Philippine Statistics Authority as of 2015. The poverty threshold is the minimum income required to meet basic needs such as food, clothing, shelter, transportation, health, and education. Based on the result of this study, the majority of the parents are high school graduates only. Thus it is also empirical that the income is less than that of college graduates. It is evident in the study of Bayudan-Dacuycuy and Lim (2014) that the household head's educational attainment is one factor in determining poverty. Moreover, Mangahas (2001) stated that perhaps the most critical factor determining whether someone lives in poverty is how well educated they are as opposed to household size, age, and gender.

Some benefits of parental involvement are stratified by familial socioeconomic status, like the achievement of students with highly educated parents (Tan et al., 2020). Studies found that parents from lower socioeconomic status backgrounds fail to be as involved as parents from more advantaged social milieux (Malone, 2017; Wang et al., 2016).

Their monthly income can reflect the capability of parents to send their children to school. That is why it is essential to assess their monthly income so it could be the basis for understanding the respondents' performance. It is reflected in the study of Capuno et al. (2019) that high school students had parents whose combined monthly income was less than 7,890, and most of the respondents belonged to a family below the poverty line. Indeed, at this point, most public school students usually live below the poverty line (Capuno et al., 2019; Fine, 2018; Milner et

al., 2017). Thus, the government should look into capacitating parents to increase their income.

Table 5. Student Classification

Student Classification	First Shift		Second Shift	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Regular Student	97	85	58	84
Working Student	17	15	11	16
Total	114	100	69	100

Most first and second shifts students were classified as regular students, meaning they were students their families financed. It is the same as with the study of Grana et al. (2010): most respondents were considered high school students with no part-time job. It is evident in the study of Tiauzon and Malquisito (2019) that grade 7 students are still in the guardianship of their parents since they are still young. Regarding labor and employment, they are still unemployable because of their age bracket. Moreover, they need more skills to be hired for standard jobs. Furthermore, employers who employ underage are liable for the safety of the minor employees. Parents at this stage also prefer that students will study since research from Moro-Egido and Panades (2010) found that holding a part-time job while studying is more likely to express less satisfaction with their educational experience.

Table 6. Type of Elementary School Graduated From

Type of Elementary School Graduated From	First Shift		Second Shift	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Public	113	99	68	99
Private	1	1	1	1
Total	114	100	69	100

The data revealed that 99% of students came from public elementary and only 1% from private schools. This situation is evident in their combined monthly income, indicating they live below the poverty line. Indeed, the majority of public school students are experiencing economic problems (Layton, 2015; Suitts, 2007; Suitts, 2016).

It is in accord with the book of Lubienski and Lubienski (2013) that the majority of the students are studying in public schools since there are many advantages that one gets from it, like it is less expensive, has vouchers, and has good instruction. One can ensure quality teaching in public schools because one of the minimum qualifications of a public school teacher in the Philippines is a licensed teacher. It means the teacher is knowledgeable and has passed the Licensure Examination for Teachers (LET) (Paler & Roble, 2021). Moreover, the public school offers free education, thus ensuring that even if they come from low-income families, they will still be catered to due to the mandate of Education for All (EFA), which highlights that the government shall protect and promote the right of all citizens to quality education at all levels and shall take appropriate steps to make such education accessible to all (Dela Fuente, 2021).

Table 7. Study Habits

As a student I	First Shift	Second Shift
	Mean	Mean
1. make a regular schedule for my study.	2.15	2.27
2. study in a random and unplanned manner.	1.90	1.89
3. give enough time to study complex subjects.	2.33	2.32
4. keep my study room adequately lighted.	2.34	2.60
5. keep my study room free from glare.	2.11	2.35
6. keep my study room free from the sharp contrast of light.	1.96	2.25
7. keep all my books, notebooks, ball pens, etc., on my table.	2.44	2.54
8. I am not obstructed while studying.	2.08	1.99
9. listen to the radio while studying.	1.83	1.83
10. review each subject every week.	2.28	2.19
11. strictly follow my study time even if I want to do something.	2.07	2.17
12. always study on Sundays in preparation for the week.	2.26	2.29
13. always study late at night.	2.11	1.85
14. study every chapter test.	2.38	2.51
15. study every summative test.	2.59	2.51

16. study every periodical test.	2.82	2.80
17. study while lying down.	2.15	2.09
18. study in a very relaxed position.	2.35	2.43
19. recite silently after reading a lesson.	2.26	2.51
20. write down questions on my readings.	2.05	2.16
21. repeat to me the answer to my questions.	2.41	2.45
22. take down notes during the lecture.	2.46	2.17
23. always put highlights on the essential terms in my notebook.	2.49	2.33
24. review my assignments all the time.	2.46	2.52
25. usually, wait until the last day to prepare and accomplish all assignments	2.25	2.45
26. survey through the entire reading assignment.	2.38	2.35
27. check out the internet media for my research.	2.41	2.23
28. listen attentively to my teacher.	2.72	2.55
29. always ask for answers from my classmates.	2.17	1.96
30. always depend on my stock knowledge.	2.18	2.23
Grand Mean	2.28	2.29
Verbal Description	Sometimes	Sometimes

Legend:

Mean

4.00 – 3.25
it regularly.

3.24 – 2.49
of the time.

2.48 – 1.73
or twice.

Verbal Description

Always – If you are doing

Most Often – If you do it most

Sometimes – If you do it once

The data revealed that students from the first and second shifts got an average in the "SOMETIMES" category. It implies that students study only some of the time. For study habits, there is a very slight difference in the grand mean of the students from the first and second shifts, equal to 2.28 and 2.29, respectively.

It implied that the students from both shifting schedules have low study habits. Most students do not ideally follow effective study habits (Kumar, 2015).

Therefore, it will be a factor to consider in the student's achievement level since study habits seem to be an essential determinant of academic performance (Cerna & Pavliushchenko, 2015). Study habits are at the core of a learner's academic success. It is an action like reading, taking notes, conducting study groups that students perform frequently, and regularly accomplishing the learning goals (Tus et al., 2020).

The findings of this study are supported by the study of Osa-Edoh and Alutu (2012), which found that study habits are highly correlated with the academic performance of secondary students. Similar findings were also observed by Bashir and Mattoo (2012) and Capuno et al. (2019), who found that study habit is a significant variable in students' academic achievement in high school students. Sakirudeen and Sanni (2017) found that study habits like notetaking, usage of the library, and study time allocation influenced the students' academic performance.

Table 8. Chemistry Achievement Test Results

Competencies	Level of Achievement in Chemistry	Morning Shift		Afternoon Shift	
		Frequency	Percentage (%)	Frequency	Percentage (%)
Identify the observation skill.	Beginning	2	2	4	6
Classify the laboratory apparatus, predict the scientific attitude and steps in the scientific method, and infer the type of scientist.	Developing	53	46	35	51
Apply the correct standard unit and convert one quantity to another.	Approaching Proficiency	56	49	27	39

its	Proficient	3	3	3	4
Evaluate the problems regarding scientific notation, significant figures, and the impacts of science.	Advance	0	0	0	0
Total		114	100	69	100
Average Score		20.71		19.72	
Verbal Description		Approaching Proficiency		Developing	

Most students are in the developing stage, while others are in the proficiency stage. Students in each shifting schedule did not get an achievement level of advance. It is the consequence of their low study habits. Also, the highest possible score of the students in each shifting schedule belongs to the proficient level only.

The research revealed that the average or the mean score of the two shifting schedules is more likely to be comparable. There is a slight difference in the average score between 20.71 from the first shift, considered approaching proficiency, and 19.72 from the second shift, regarded as developing. Although the verbal description of the average score is different, the numeric value of the score between the two is just 0.99. It falls on the boundary between the developing and the approaching proficiency or the satisfactory level; therefore, it is still comparable.

Based on the results of this study, the average student's performance in chemistry, which is a science subject, is satisfactory. It is similar to Tiauzon and Malquisito's (2019) study, where students performed satisfactorily in Math and Science, which requires analytical skills. Moreover, Jay-ar and Lasaten (2018) found that the average grade 7 student's performance was 84.09 in science, which was considered satisfactory.

Hence, there is no significant difference between the first and second shifts in the achievement levels. It agrees with the study of Scherrer and Preckel (2020) that there is no significant difference in the achievement scores of students who had no time preference in either morning or afternoon shift.

The data suggest that the study habits of the respondents need to be improved. The kind of study habits they have can be seen as one of the reasons for their satisfactory performance in chemistry. Chemistry concepts usually involve analysis, computations, and problem-solving, which require students to practice in school and at home. That is why teachers generally give students assignments to practice the skills. However, when students are busy with other activities, they will be limited or have no time to practice the learned skills (Capuno et al., 2019).

Table 9. Comparative Independent Group *t*-test Analysis of Student Classifications

Student classification	N	Mean	SD	<i>t</i> -test	<i>p</i> -value	Significance
Morning shift	114	20.71	5.30	1.17	0.2447	Not Significant
Afternoon shift	69	19.72	5.97			

The morning shift had 114 respondents, whereas the afternoon shift had 69 respondents. The morning shift exhibited a mean score of 20.71 with a standard deviation of 5.30, while the afternoon shift displayed a mean score of 19.72 with a standard deviation of 5.97. Comparing statistical significance, the *p*-value of 0.2447 surpasses the alpha value of 0.05. Therefore, the result is not statistically significant, indicating insufficient evidence to support a significant difference between the groups/conditions being compared. As a result, no substantial difference in chemistry achievement between the two shifts was observed. Both the morning and afternoon shifts demonstrated comparable levels of performance.

Several studies have varying claims about which schedule students will achieve better. Others say morning, while others say afternoon. Morningness-eveningness can be seen as an individual difference characteristic gaining increasing interest in personality psychology and learning research (Preckel et al., 2020). Evening types share worse achievement in school and university, and the effect is more substantial

in school students probably because university students have some control over their study schedules (Tonetti et al., 2015).

Students with morning preferences performed better in school achievement (Hershner, 2020). Also, students in Chemistry subject prefer cool temperatures and an early morning time of day (Tonog, 2003). On the other hand, other researchers found that students perform better in the afternoon than in the early morning (Williams & Shapiro, 2018). Another research found that early school start times negatively affect student achievement (Scrimgeour, 2021). Thus, the shifting schedule is not a determining factor in the student's achievement in Chemistry; instead, it depends on other factors. Based on the data of this research, the study habit is one of the bases why there is a minimal difference in the achievement rate of the two shifts since they have a comparable study habit which is considered low.

A study by Khan (2019) pointed out the importance of self-discipline since it has more impact on the academic achievement of the student rather than the intelligence quotient (IQ). A student's study habits and skills improve academic performance more than any other non-cognitive factor (Liu et al., 2022).

4. Conclusion and Recommendations

This study investigated how shifting schedules impact Grade 7 Chemistry achievement and study habits. The participants were randomly chosen students from a public secondary school in Region 7, Philippines, whose parents' combined monthly income ranged from Php1,000.00 to Php5,000.00.

The findings suggest that shifting schedules do not significantly influence academic success in Grade 7 Chemistry. However, the results highlight a lack of students' study habits, as seen from their achievement scores. Students should focus on enhancing their study habits, considering the well-established link between solid study habits and better academic performance. The study provides self-directed learning packets featuring interactive activities and self-paced modules to boost study habits. Future research must delve into the many factors shaping study habits, given their crucial role in academic achievement. In a time of increased reliance on technology, students relying heavily on the Internet need to improve the quality of their study habits. Examining variables such as teacher profiles, teaching methods, motivation, and attitude can provide comprehensive insights into student achievement.

It is recommended that researchers should aim to broaden the comparison of achievement levels between morning and afternoon shifts across various schools and regions. This would expand the study's scope, addressing the limitations imposed by time and financial constraints. Recognizing these limitations emphasizes the potential for future research to offer broader perspectives by involving a more diverse range of schools and regions.

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