Research Article

An Inventory of Learning Styles Among Eleventh Graders

Aaron Joshua N. Garcia, Clarie Castro, Aryanna S. Cabrera, Ryan Dayrit, Valerie G. Gozun, Kimberly Hipolito, Ria Carla S. Lugtu, Erika Dianne Papica, Leigh Francelle Reyes, Noel L. Dominado*

DepEd-Pampanga, Philippines
Senior High School in Magalang Stand Alone 2
Graduate School Adjunct Professor
Don Honorio Ventura State University
And Philippine Christian University

ABSTRACT

This study aimed to determine the learning styles of the eleventh-graders and their manifestations in terms of their learning styles. The study utilized a mixed-method research design, namely sequential explanatory design, that involved 135 respondents for the quantitative phase and eight outlier participants selected for the qualitative phase based on their higher marks from the quantitative results. The study found that among the three learning styles, namely, auditory, tactile, kinesthetic, and visual learning styles, the respondents preferred the visual learning style red among the three learning styles of the study. Also, the study findings found no significant difference between the sex of the respondents and the three learning styles. In addition, the study discovered the participants' manifestations and the utilization of various learning styles and approaches when it comes to their learning, such as studying at night, using search engines, and doing extracurricular activities to help them enhance their learning process. Finally, learning styles and strategies serve as pivotal tools for the students to be more equipped, practical, and efficient regarding their academic performance at school. Hence, students, teachers, and school administrators should be able to understand various learning styles and approaches. Also, future researchers should study the environmental factors that affect students' learning process.

Keywords: Auditory learning style, Learning Approaches, Learning Strategies, Learning Styles, Tactile/Kinesthetic Learning Style, Sequential Explanatory, Visual Learning Style

Introduction

In this day and age, students use various learning methods and learning styles. These learning styles can help students learn their studies more efficiently; knowing one's learning style preference can contribute to a student's learning effectiveness. There are three types of learning styles: visual, auditory, kinesthetic, or tactile.

A visual learning style involves students using their sense of sight to learn by reading or seeing visual aids and images. Students who exhibit an auditory learning style prefer to hear instructions verbally rather than see them written down. On the other hand, kinesthetic or tactile learning styles are usually used when students prefer feeling something material and using actions to learn. Ultimately, these learning styles help improve and fasten learning, leading students to excel and perform better.

Learning Styles in a Global Perspective

Western Governor University (2022) proposes the idea of learning styles, as Aristotle's theory that "every child has their own unique set of abilities" can be traced back to 334 BC. This idea of learning styles originated from Aristotle's recognition that children can differ in how they perceive the world, which prompted researchers to develop their theories.

Further, several learning style theorists believe that it is vital for people to understand and be at ease with various learning styles, including one's own, to help an individual learn efficiently. Griffith (2019) suggests that it is essential to know the learning styles and their importance. Also, learning styles refer to the various methods by which humans can learn. Most people have a dominant learning style, even though most people benefit from having a variety of learning styles. Students can learn more efficiently and quickly in class if they know their preferred learning style. However, existing evidence insinuates their difficulty identifying their preferred learning method (Growth Engineering, 2020).

Furthermore, the study by Garrido et al. (2023) highlights the value of considering students' learning preferences when choosing educational resources to improve performance and calls for more investigation. While in the study of Mulyadi M. et al. (2021). They compared eleventh graders at MAN 1 Musi Banyuasin Sekayu in Indonesia regarding their speaking skills, learning methods, and motivation. The findings indicate no connection between learning styles, motivation, and speaking abilities. Moreover, according to Ramaniya (2021), students favor visual, active, sensory, and global learning styles; thus, teachers should modify their lesson plans and employ a variety of media to engage and inspire their students. Also, in the study of Cimermanová (2018), the researchers investigated how students' preferred learning styles and instructional strategies affected their academic performance. Eighty-one fifth-year English language teachers participated in a pedagogical quasi-experiment using the Grasha-Riechmann Student Learning Style Scales. The findings indicate there are no significant effects.

Additionally, according to the study of Gelman et al. (2020), both educators and non-educators hold essentialist views on learning styles. The learning style belief was shown to be more complex and variable due to the age of the population in which educators work. Likewise, Ang C. et al. (2016), the study state that there are substantial discrepancies in students' prior technological exposure and views toward tablet computer use. Rural students were more competitive in school and anxious about using tablets. Moreover, in the study of Castro et al. (2020), the lack of a correlation between these factors, as shown by the study, suggests that the hypotheses could be more coherent.

Learning Styles from a Local Perspective

Cooperative learning, deductive, inductive, and integrative teaching tactics have just as much of an impact on secondary-level students as independent learning approaches do on their academic performance (Cardino, 2020). Whereas Carnecer et al. (2022) found that both male and female students in teacher education are excellent visual learners, with female students performing significantly better than males, it implies that when developing remote learning solutions during the epidemic, teachers should consider these learning styles. While Cutillas et al. (2023), even if there is a connection, the study did not find any meaningful

correlation between learning preferences and math academic ability. In some cases, in the study of Mallillin et al. (2020), according to their findings, the respondents are motivated to study because they have a strategy for their learning style and study habits to help them learn more efficiently. However, Englis (2019) put forth that there may be a need for an improvement program to match these learning styles with efficient language acquisition because neither the teaching methods nor the students' learning styles have a substantial impact on student learning.

Moreover, academic success was linked to avoidant and competitive learning styles, influencing students' academic achievement (Dayon, C., 2018). The study also found that auditory learners were more successful and that there was no clear correlation between learning methods and academic accomplishment.

Auditory and visual learners learn the most effectively with audio-visual presentations, regardless of their preferred learning style (Malacapay, 2019). In addition, the study by Magulod (2019) showed that students' learning preferences, study strategies, and routines were significantly correlated with their academic success in applied science courses. The study's results can assist educators in developing and implementing successful educational interventions. According to Batang and Natividad (2018), late teenagers favor visual, auditory, and kinesthetic, with gender influencing preferences across courses and ethnic groups. Further, according to Aranda and Zamora (2018), The Grasha-Riechmann Student Learning Style Scale was employed by the researchers to examine the learning preferences of Filipino students. The experimental group's academic performance improved due to differentiated instruction, proving the efficacy of this strategy.

Learning gaps make it challenging for students to keep up with their peers' learning styles and academic expectations; it ultimately impacts their social development and how they engage with others, which is detrimental to their mental health and sense of self-worth. Due to schedule changes, malfunctioning equipment, and distractions at home, students moving to virtual and hybrid learning models experience curricular disruptions, learning loss, and educational gaps that lead to challenges in learning. The fact that students lack the practice necessary to develop everyday skills is called the skill gap. A lack of understanding of learning styles often hinders students from advancing their knowledge or skills despite clearly understanding the task. The lack of a supportive learning environment for students is referred to as a struggle for learning, and breakdowns in communication that students encounter are posited as challenges for students in their learning process. Hence, this research paper needs to address the learning styles for the eleventh graders.

Statement of the problem
The researchers aimed to determine the learning styles of eleventh graders in one of the Senior High Schools in Cluster I Division of Pampanga during the School Year 2023-2024.

Specifically, this study seeks to answer the following questions:
1. How may the profile of the respondents be described in terms of:
    1.1 age and;
    1.2 sex?
2. How may the learning styles of the respondents be described in terms of:
    2.1 auditory preference;
    2.2 tactile/kinesthetic preference and;
    2.3 visual preference?
3. What is the significant difference between the sex and the three learning styles of the eleventh-graders?
4. Based on the quantitative data, what are the manifestations of the participants' learning styles?

Hypothesis
There is no significant difference between the sex and auditory learning style of the eleventh-graders

There is no significant difference between the sex and visual learning style of the eleventh-graders

There is a substantial difference between the sex and tactile or kinesthetic learning style of the eleventh-graders

Method
Research Design
The researchers in this study applied the sequential explanatory research design. An explanatory sequential design approach involves gathering quantitative data first, then qualitative data. This is the method that researchers typically use when they need to explain the quantitative data collected from study participants. Barg et al. (2010) argue that data are collected in two stages when employing a sequential explanatory design: the quantitative and the qualitative phases. Given this, a researcher collects and assesses the quantitative data first. Qualitative data are collected and linked to the first phase's quantitative findings in the second stage of the study (Brown, 2020). This research approach aims to elaborate on and provide more context for the results of the quantitative phase.

Respondents/Participants
The respondents to the quantitative phase of the study were 135 eleventh graders in one of the Senior High Schools in Cluster I Division of Pampanga during the School Year 2023-2024. The criterion for respondents was having a learning style to be respondents. In the quantitative phase, the researchers used the stratified random sampling technique. Researchers frequently employ stratified random sampling to assess data from various strata or subgroups. They can quickly collect a sample of the population that most closely represents the entire population (Qualtrics, 2023). A probability sampling technique known as stratified sampling divides the target population into various strata according to predetermined characteristics. This stratified sampling method is especially beneficial in stratified sample surveys because it improves sample design efficiency while decreasing survey expenses and estimates precision (Parsons, 2017). According to researchers, large populations can be too numerous for a study to be successfully carried out. Researchers can select a sample size representing the population subset to be more effective and efficient. This small number represents the entire population. The stratified random sampling approach, which divides the total population into uniform groups known as strata, can be used to choose a sample. Then, random samples are chosen from each stratum (Hayes, 2023).

The participants in the qualitative phase were the outliers who received higher marks from the quantitative results. For a deeper comprehension of the respondents' preferred learning style during the quantitative phase, the researchers cross-validated the outliers' responses. In the qualitative phase, the criterion for the participants was that they must be an outlier from the quantitative phase for them to participate. The researchers utilized homogenous sampling in the qualitative phase. Purposive sampling methods, such as homogeneous sampling (Marshall & Rossman, 2016), aim to generate a homogeneous sample—a sample whose units—people, cases —have comparable or identical features—a group of people with similar age, gender, background, and occupation. In this sense, homogeneous sampling is the opposite of maximum variance sampling. A homogeneous sample is often used when the study issue pertains specifically to the characteristics of the particular interest group, which is then thoroughly explored.

Instrument
Phase 1 Quantitative
The quantitative part used the research instrument adopted from the study of Arbuthnott and Kratzig (2006), using the Barsch Learning Style Inventory, or BLSI (Barsch, 1991). A questionnaire of 24 Likert-type scale items with frequent, occasional, and seldom response options is employed to determine a person's learning style. The minimum score is eight, and the maximum is forty. The highest score indicates the individual's preferred method of learning. For the current sample, Cronbach's alpha values were assessed, revealing reliability measures of .54 for visual, .56 for auditory, and .38 for kinesthetic items, despite the lack of published psychometric values.

Phase 2 Qualitative
In the qualitative phase, the researchers utilized an interview guide protocol based on the questionnaire used in the quantitative part as the instrument of the qualitative phase. The results of the respondents were interpreted as

outliers who could be participants in the qualitative phase of the study. The researchers allowed the participants to elaborate and explain their understanding of their dominant learning style.

Data Collection
Phase 1 Quantitative
Before the data collection, researchers sought consent and permission from the school head and respondents to conduct the study within a Senior High School in Cluster 1 Division of Pampanga. The researchers also sought consent and permission from the respondents if they were willing to participate voluntarily.

The quantitative phase utilized a standardized questionnaire to collect data from the Senior High School students within Cluster 1 Division of Pampanga in the school year 2023-2024.

Phase 2 Qualitative
In the qualitative part, an open-ended interview was exhibited for the outliers—participants who stood out significantly from the majority using the interview guide protocol. Data observations known as outliers deviate from the majority and represent an acceptable score for a person who represents an extreme example of the variable being studied. According to Maxwell (2005), outliers are essential examples that can help us comprehend the studied phenomenon in greater detail. Furthermore, outliers can act as critical cases, defying accepted norms and enhancing qualitative findings' complexity and richness, as Charmaz (2006) discussed. As scholars grapple with the diverse insights these exceptional examples provide, the nuanced interpretation of outliers remains an essential component of qualitative research.

During the interview phase, written observations, nonverbal communication recording, and allowing respondents to have spontaneous discussions are all involved. Interview transcription was done with the approval of consent to utilize audio recordings to document the process. Upon utilizing a key-point coding, the transcription data was retrieved and labeled. Similar coding is organized into concepts

to analyze and create themes. The researcher cross-validated the respondents' responses to a more comprehensive understanding. Cross-validation, key point coding, and transcription were used to grasp the participants' viewpoints thoroughly. Through the mixed method of quantitative and qualitative research, the results and findings of both methods provided an in-depth understanding of the learning styles.

Statistical Treatment/ Data Analysis
Phase 1 Quantitative
In the quantitative research phase, a t-test was used to ascertain the statistical significance of mean value differences between the two data sets. Based on the probability frequency distribution, this technique assesses whether a discrepancy in two variables' means is too large to be explained by chance. The t-test is essential when assessing the validity of the study results.

Phase 2 Qualitative
The qualitative phase used thematic analysis that evaluated and analyzed the data and further explained, clarified, and interpreted the data given by the participants or outliers. In qualitative research, the significance of thematic analysis, which entails interpreting data from anomalies, is emphasized by Jack and Caulfield (2023). Finding recurrent themes in qualitative data—like transcripts or interview transcripts—is possible through thematic analysis. The steps in the process are familiarization, coding, topic generation, review, definition, labeling, and writing up. This approach applies to various research, including psychological studies, and helps guarantee that the analysis lacks confirmation bias. A flexible strategy used with various research approaches is thematic analysis.

In the qualitative phase, the researchers used the model of Braun and Clarke (2009) in the thematic analysis. According to Mihas (2023), Prominent figures in data analysis include Scharp, Goodman, Sanders, Braun, and Clarke. They posited the significance of developing themes or more general topics and reviewing them. They propose renaming the theme or making it a sub-theme of a larger con-

struct if the data do not support the theme. According to Braun and Clarke, a theme rather than merely quality captures an essential feature of the data in a structured manner.

Results and Discussion
Table 1. Profile of the Respondents

Age	Mean
15 years old	0.02
16 years old	0.62
17 years old	0.27
18 years old	0.05
19 years old	0.07
23 years old	0.07
Sex	**Mean**
Females	0.51
Males	0.49

In Table 1, the data displayed the mean values for the various age groups. The data presented indicated that the 16-year-old age group had the highest mean of 0.62, which was relatively higher than the values of other age groups. The lowest mean, however, was recorded by those 15 years old, of 0.02, indicating a significantly lower value. The mean was 0.05 for 18-year-olds and 0.27 for 17-year-olds. Interestingly, the means of 19 and 23 years old were identical at 0.07, indicating a comparable average value for these age groups. The table highlights the range of means among various age groups, with the highest mean at 16 and the lowest at 15 years old.

On the other hand, data revealed that the assessed variable differs depending on sex, with females having the most excellent mean value of 0.51. With a mean of 0.48, the lowest for males, there is a clear sex difference. Additional examination could reveal fundamental elements influencing these variations and their potential implications.

Table 2. Respondents' Learning Style

Visual Learning Style	Mean	Verbal Description
1. Follow written directions better than oral directions.	2.3	Sometimes
2. Like to write things down or take notes for visual review	2.46	Often
3. I am skillful and enjoy developing and making graphs and charts.	2.21	Sometimes
4. Can understand and follow directions on maps.	2.33	Sometimes
5. You can better understand a news article by reading about it in the paper than by listening to it on the radio.	2.22	Sometimes
6. Feel the best way to remember is to picture it in your head.	2.26	Sometimes
7. Prefer to be shown rather than told	2.37	Often
8. Obtain information on an interesting subject by reading relevant materials.	2.43	Often
Auditory Learning Style	**Mean**	**Verbal Description**
9. Can remember more about a subject through listening	2.4	Often
10. Require explanations of diagrams, graphs, or visual directions.	2.31	Sometimes
11. Can tell if sounds match when presented with pairs of sounds.	2.21	Sometimes
12. Do better at academic subjects by listening to lectures and tapes.	2.31	Sometimes

	Mean	Verbal Description
13. Learn to spell better by repeating the letters aloud than by writing the word on paper.	2.31	Sometimes
14. Would rather listen to a good lecture or speech than read about the same material in a book.	2.36	Often
15. Prefer listening to the news on the radio rather than reading about it in the paper.	2.11	Sometimes
16. Follow oral directions better than written ones.	2.31	Sometimes
Tactile/Kinesthetic Learning Style	**Mean**	**Verbal Description**
17. Bear down extremely hard with a pen or pencil when writing.	2.09	Sometimes
18. Enjoy working with tools.	2.51	Sometimes
19. Remember best when I write things down several times.	2.34	Often
20. Play with coins or keys in your pocket.	2.06	Sometimes
21. Chew gum, smoke, or snack during studies.	1.6	Seldom
22. Learning to spell by "finger spelling" the words.	1.8	Sometimes
23. Are good at solving and working on jigsaw puzzles and mazes.	2.02	Sometimes
24. Feel very comfortable touching others, hugging, hand-shaking, etc.	2.24	Sometimes

Visual Learning Style

In Table 1, data exhibited the descriptive statistics of the student's learning style assessment in terms of visual learning style. The table unequivocally showed that the assertion "Like to write things down or take notes for visual review" acquired the highest mean of 2.46 and was interpreted as *"Often."* Also, "Obtain information on an interesting subject by reading relevant materials." Obtained the second-highest mean of 2.43 and was interpreted as "***Often.***" Additionally, "Prefer to be shown rather than told" got the third highest mean of 2.37 and was interpreted as "***Often.***" While the statement "Are skillful with and enjoy developing and making graphs and charts." Acquired the lowest mean of 2.21 and was interpreted as *"Sometimes."*

Moreover, the statement "Can better understand a news article by reading about it in the paper than by listening to it on the radio." Obtained a mean of 2.22 and was interpreted as "***Sometimes***." Lastly, the statement "Feel the best way to remember is to picture it in your head." Obtained a mean of 2.26 and is interpreted as "***Sometimes.***" It also should be highlighted that the interval of means is closed together, in addition to the fact that every statement has the same verbal interpretation.

It indicated that visual learners relied most on reading or using the sense of sight to gain knowledge. However, according to the results, students prefer reading instead of hearing or using movements when they have a dominant learning style.

According to Hasanah and Huwastun (2020), when students learn visually, they emphasize visual stimuli like graphs, symbols, and other objects directly visible to the eyes. It allows them to analyze and think critically about the information they have been given and make conclusions about what they have observed. Henceforth, Lobas and Serdega (2020) posited that the visual learning style is a method where information is linked to images, requiring learners first to understand what they are expected to know, often referred to as visual learners. Siwi and Syofyan (2018) said that visual learners learn best from visual imagery and think in pictures. They rely on nonverbal clues from the facilitator or instructor, such as body language, to aid their learning. Visual learners occasionally enjoy taking a seat at the front of the room. Additionally, they make detailed notes about the information being delivered.

Auditory Learning Style

Data showed descriptive statistics of students' learning style assessment regarding auditory learning style. The table stated, "Can remember more about a subject through listening." Obtained the highest mean of 2.4 and

interpreted as "***Often***." Also, the statement "Would rather listen to a good lecture or speech than read about the same material in a book." Attained a mean of 2.36 and was interpreted as "***Often***," Notwithstanding the statement "Prefer listening to the news on the radio rather than reading about it in the paper." It got the lowest mean of 2.11 and was interpreted as "***Sometimes***." Lastly, the statement "Can tell if sounds match when presented with pairs of sounds." It got a mean of 2.21 and was interpreted as "***Sometimes***." While each statement has the same verbal interpretation, it should be emphasized that the means interval is closed together.

It implies that auditory learners use their sense of hearing to acquire knowledge or information. However, the dominant auditory learning style prefers hearing rather than reading, touching, or movement.

Kayalar and Kayalar (2017) put forth that the most significant way for auditory learners to learn is by listening or vocal communication, thanks to the auditory learning style. Learning information through aural representation helps auditory learners retain what they hear. For these learners, auditory elements, including loudness, pitch, and tone, are significant. Also, the University of the POTOMAC (2022) posited that auditory learners typically participate enthusiastically in class and can easily retain what their teacher has stated. Despite their outstanding listening skills, other noises frequently distract them in class. It might be difficult for those who learn best by listening to concentrate and understand information presented in text or other visual formats. Ng (2023) implied that an individual with an auditory learning style, also known as a musical learning style, prefers to learn and process information primarily by hearing and listening. Spoken explanations, conversations, lectures, and auditory clues best serve this type of learner.

Tactile/Kinesthetic Learning Style

Table 3 shows descriptive statistics of students' learning style assessment regarding tactile or kinesthetic learning style. The table showed that the statement "Enjoy working with tools." Attained the highest mean of 2.51 and was interpreted as "***Often***." Also, the statement "Remember best when I write things down several times" Required a total mean of 2.34 and was interpreted as "***Often***." Moreover, the statement "Feel very comfortable touching others, hugging, handshaking, etc." got a mean of 2.24 and was interpreted as "***Sometimes***," Although the statement "Chew gum, smoke, or snack during studies." Obtained the lowest mean of 1.6 and interpreted as "Seldom."

Furthermore, the statement "Learning to spell by "finger spelling" the words." It scored a mean of 1.8 and was interpreted as "***Sometimes***." Lastly, the statement "Are good at solving and working on jigsaw puzzles and mazes." Obtained a mean of 2.02 and was interpreted as "***Sometimes***." It is important to note that the interval of means is closed together and that every statement has the same verbal interpretation.

Furthermore, the study of Cavite and Gonzaga (2023) inferred that for kinesthetic or tactile learners, doing and touching is the best learning method. Activities based on classroom scenarios are practical for this kind of learner, and physical strength exercises are usually beneficial for tactile learners. Moreover, Zhu (2022) suggested that in kinesthetic learning, also known as tactile learning, students learn by doing practical tasks instead of sitting through a lecture or witnessing demonstrations. Lastly, Califf (2020) implied that in contrast to aural and visual learning, kinesthetic learning involves students interacting with their surroundings through tasks like sketching images, manipulating items, and going on field trips. It improves performance and increases student engagement with the course material.

Table 3 Respondents' preferences in learning style

	Mean
Auditory Learning Style	2.30
Visual Learning Style	2.33
Tactile/Kinesthetic Learning Style	2.09

The results illustrate the preferred learning styles of the respondents, with the visual learning style first attaining a mean of 2.33. In contrast, the auditory learning style achieved a mean of 2.30, implying it was the second preferred learning style. In contrast, the tactile or kinesthetic learning style obtained a mean of 2.09, the lowest preferred learning style. Therefore, the visual learning style is the most preferred among the eleventh-graders.

Table 4. Shows a significant difference between the sex and auditory learning styles of the eleventh graders

Auditory Learning Style	Male	Female
Mean	2.29	2.31
Standard Deviation	0.65	0.66
Variance	0.38	0.36
P-value	0.35	0.35

The T-test results of male and female respondents yielded a p-value of 0.35. In light of these findings, there was insufficient evidence to claim a significant difference with the chosen level of 0.05. Hence, the t-test results indicated no significant difference between the sex and auditory learning styles of the eleventh graders.

Table 5. Shows a significant difference between the sex and visual learning styles of the eleventh graders

Visual Learning Style	Male	Female
Mean	2.34	2.32
Standard Deviation	0.63	0.65
Variance	0.39	0.41
P-value	0.37	0.37

The T-test result obtained a p-value of 0.35. The findings indicate a need for more evidence to accept a significant difference. Thus, the t-test results signify no significant difference between the sex and visual learning styles of the eleventh graders.

Table 6. Shows a significant difference between the sex and tactile or kinesthetic learning styles of the eleventh graders

Tactile or Kinesthetic Learning Style	Male	Female
Mean	2.15	2.04
Standard Deviation	0.72	0.73
Variance	0.59	0.54
P-value	0.03	0.03

When statistical treatment was applied to the data, the T-test results achieved a P-value of 0.03. In correspondence to these findings, the results exhibit sufficient evidence to affirm a significant difference. Therefore, the t-test results highlight a significant difference between the sex and tactile or kinesthetic learning styles of the eleventh graders.

Sequential Explanatory Data on the Manifestations of the Participants' Learning Styles

To further explain and elaborate the study, the researchers interviewed the outliers with their understanding of their learning style. The research found that senior high school students have their learning styles. To expand the understanding of learning styles fully, the researchers continued to assess the respondents'

understanding of their learning styles. The researchers also found that the study still needs more information and knowledge regarding understanding the respondents' learning styles. To accumulate more information, the researchers investigated the level of understanding of the respondents' learning styles. Understanding one's learning style can make learning progress more efficiently and effectively; knowing your style plays a vital role in students' lives. To dissect and understand their studies, they must know how or what their learning style is to acquire knowledge. Hence, the researchers further investigated the respondents' understanding of their learning styles.

According to Escuadero (2023), understanding individual learning styles can enhance the learning process and, in turn, result in improved performance. According to Flesch (2020), knowing our preferred learning style allows us to use tactics at work and home that support it, improving our ability to retain knowledge and become experts at what we all do.

Qualitative Findings

In this part of the research paper, insight derived from the sequential explanatory data is presented by the fourth research problem, which examines the manifestations of the participants' learning styles through an analysis of the quantitative data stated in Chapter 1. The specific sequence of the identified emerged themes was as follows: Kinesthetic Learning Style, Keeping a clean environment, Self-Isolation, Extracurricular Activities, Visually and auditory-inclined, Individualized learning, Visual learning style, Problem-solving, Researching, Combination of auditory and kinesthetic, Self-discovery, Self-Empowerment, Auditory-inclined, Benefits of English subject, Benefits of comfort, Self-improvement, Influential friends, Studying at night, Challenges of Learning, Classroom preference, Time-management, Students' motivation, Utilize strategies.

Kinesthetic Learning Styles

The written works show that using study methods that suit the kinesthetic learning style is vital for learning. Another kinesthetic learning method is the use of physical movement while studying, such as taking down notes when the teacher is talking that helps them to memorize, the usage of strategy to write, writing things down helps them become confident, and writing things down of keywords from the PowerPoint makes them understand it better.

Furthermore, the study by Califf (2020), the paper explored the potential of kinesthetic learning to improve learning outcomes. The results demonstrate that the kinesthetic learning exercise improved student learning results. It also suggests that the students found the activity essential, improved their confidence level, and gave positive feedback, implying the effectiveness of the study.

In addition, Pinzon et al. (2017) investigated the impact of kinesthetic training on kinesthetic retention and memory during performances and learning. The study concluded that the subjects could accurately recall directions using kinesthetic memory. However, movement length recall needed to be more spot-on and reliable.

(Doing take down notes) "Pagtatake down notes" – SHS11 P2

(When the teacher is talking, I always take down notes, but those notes help me to memorize what the teacher said) "Kapag may sinasabi ang teacher nag scra-scratch (notes) *ako, parang ganun lang, pero yung scratch ko nayon is naka-katulug para sakin, kase namememorize ko agad yung sinasabi ng teacher." – SHS11 P2.1*

(When I am taking notes) *"Kapag nag ta-take down notes ako" – SHS11 P2.5*

(Yes, I use those strategies all the time, it seems that we have different strategies that we use and that's when our brains are more sharpened, it seems that when I write, the others get used to memorizing the words through words. The others use writing, so writing is also my strategy) "Yes po, yung mga strategy na yon is ginagamit ko lagi kumbaga iba-iba kami ng mga strategy na ginagamit at dun mas nahahasa yung utak namin kumbaga kapag nagsusulat

ako, 'yung iba mas nasasanay silang mag memorize sa mga pagsasabi ng mga salita. 'yung iba naman is 'yung pagsusulat so 'yung akin po yung pagsusulat." SHS11 P6.5

(that's it, writing.) "Yun po, 'yung nagsusulat" – SHS11 P6.1

(I'm becoming confident in answering because I'm used to it, I guess, the answers you asked us to check, I checked that I'll learn more when I write things down.) "Kumbaga po, diba po 'yung mga pinasagot n'yo sa amin na chinecheck 'yung chineck ko po dun is mas matututo po ako kapag sinusulat ko 'yung mga bagay bagay" – SHS11 P6.3

(They Provide PowerPoint. I don't understand it very well in PowerPoint, so what I do is I write it on paper, I write keywords, so that's when I understand it better.) "Nag bibigay sila ng PowerPoint, Hindi ko siya masyadong maintindihan sa PowerPoint so ang ginagawa ko sinusulat ko siya sa papel and 'yung mga keywords 'yung kinukuha ko so kapagod Ganon. Mas naiindintindihan ko siya" – SHS11 P8.1

Keeping a Clean Surrounding

The maintenance of clean surroundings is a vital activity that positively impacts students' learning styles by fostering a conducive environment for cognitive processes and enhancing overall learning experiences, such as an activity such as cleaning the surroundings.

Shaughnessy's 2022 study on the effects of classroom cleanliness on student health highlights the global problems of maintaining schools and stopping the transmission of infections. The study also argues that improved surface cleaning and efficient monitoring could be achievable in healthy school settings.

According to a 2023 study by the Princeton University Neuroscience Institute, distraction can make it difficult to focus and comprehend information. Learning environments that are clean and hygienic improve motivation and focus. Eliminating distractions can create a more ordered and concentrated environment all day.

According to Campbell's 2020 study, an unclean environment can lead to illnesses in students and lecturers, increase stress levels, and negatively affect focus and retention, disrupting learning. The research findings further underscore the impact of cleanliness and hygiene on students' mindsets.

(An activity that helps me is cleaning the surroundings.) "Ang makakatulong sa akin na aktibidad ay ang paglinis sa kapaligiran" – SHS11 P4

Optimal Learning Environment

Being self-aware and knowing that a quiet study area is an ideal learning environment indicates the essentiality of environmental factors that facilitate productivity and concentration. For example, they will go to a quiet place and study to focus on their actions.

In addition, Chaw and Tang (2023) investigated the influence of demographics on the learner's preferences and traits in their particular learning environment. The study's findings infer that there may be clues on preferences for particular learners with different types of learning environments they engage with. The results signify the characteristics and preferences for an environment for learning, particularly for a learner.

While Kokko et al. (2021) posited that the term "learning environments" has multiple definitions. To consider the various components of the environment,

(I'll go to a quiet place and then I'll study there so I can focus on what I'm doing) "munta ku ketang tahimik a lugar tapus karin ku manigaral tapus para makapag focus ku keng gagawan" – SHS11 P5

Extracurricular Activities

School-implemented activities that are facilitated or organized by the school signify learning through practice, and activities like sports offer essential learning experiences through these activities because they give opportunities for growth in applying practical and skill development. For one, the best activities that help them are activities like Personality Development or sports because that is where they can practice and learn.

According to Wilson's 2016 study, students who participate in extracurricular activities frequently earn higher test scores, better

grades, and a stronger sense of self. When combined with academic learning, these activities help promote school pride, self-esteem, and positive relationships throughout the community, which is advantageous to all parties involved.

According to a 2016 study by Fujita, a student's academic performance can be significantly impacted by their participation in extracurricular activities like watching television, participating in sports, and volunteering in the community. Various activities positively impacted academic performance, depending on the particular activities a student participated in; however, playing an instrument did not significantly increase academic performance.

Eccles (2016). Adolescents who engaged in extracurricular activities scored better academically than their non-participating peers, and volunteer work and religious involvement predicted lower drinking and drug use rates. Better outcomes were linked to being on a school sports team, with identity formation, peer group membership, and relationships with non-familial adults as mediating factors.

(*I think that the best activities that will help me are those implemented by the school like Per Dev or activities like sports because that's where you practice and that's where you learn*)

"Sa tingin ko po, ang pinakamagandang aktibidad na makakatulong sa'kin is yung mga pinapatupad ng school like PerDev night or mga activities like sports kase dun ka nasasanay at dun ka natututo" – SHS11 P6

Visually and Auditory Inclined

Visual and auditory skills typically help them absorb information more quickly, which makes them more aware of their surroundings and more sensitive to stimulation. This improves sensory experiences, communication skills, and learning preferences, shaping perspectives and strengths and making them more appealing in learning, employment, and communication. For instance, when they hear and see it, visual and hearing are helpful because they can explain it better when they can see and hear. Visual and auditory are helpful because visual is better if they cannot understand much in auditory.

Heliyon's 2021 study demonstrated the significant impacts of dual-tasking on attention allocation in the visual and auditory modalities. Auditory tasks can reduce the ability to identify visual events, and continuous visual and auditory tasks can affect one another.

Miranda (2020) emphasizes how auditory and visual factors affect how Brazilian Portuguese statements and echo inquiries are interpreted. While multitasking can influence visual identification, auditory tasks may reduce it. The study emphasizes how auditory and visual attention interact during information processing.

In 2023, Privado researched Grade 10 students at Araling Panlipunan to improve cognitive abilities through visual-auditory input. According to the study, students' attention, attentiveness, and memory capacity were all enhanced when they used audio-visual help. Most students thought that using audio-visual aids in instruction would promote learning.

(*For me, what, visual and hearing because then you can see, hear, and explain it, and they can explain it better.*) "For me ano, visual and hearing kase dun mo malalaman, dun mo makikita na naririnig mo pa na e-explain mo pa, na e-explain pa nila nang maayos." – SHS11 P1.1

(*It's helpful because if it's s only auditory, I won't be able to understand much, but if it's visuals is also better*) "kasi po kung auditory lang po siya hindi po masyadong maiintindihan mas maganda na din po 'yung visual siya." – SHS11 P3.4

(*When I hear and see it*) "Kapag naririnig ko siya at nakikita ko." – SHS11 P7.1

Individualized Learning

Assessing how students perceive their learning styles, mainly when students use their learning tactics in studying, often reveals better school performance and ability to understand. For instance, they are doing it where they are comfortable, to memorize, to study where they want, without looking up the reviews of others, getting a higher score through using their way of learning and understanding it better even though without the use of PowerPoint, reviewing and looking at phones.

Furthermore, the study by Shemshack and Spectator (2020) emphasizes how individualized learning tactics can increase student engagement and motivation in the classroom, enhancing learning results. Nonetheless, the research identifies possible obstacles and offers fixes. It also covers how personalized learning models have changed over time and how they have adapted to new technology. Even so, as technology advances, adaptive learning systems must agree on their constituent parts.

Hilyard (2021) researched how individualized learning programs affect students. Based on the study, the objective was to identify whether middle school kids who utilize individualized education strategies have more excellent knowledge of possible career and college routes. This study showed that college and career preparedness efforts can benefit students when started in middle school and carried out through high school. Notably, the results back up the use of individualized learning strategies to raise middle and high school student's understanding of career and college options. It recommends that middle schools consider adopting college and career preparedness interventions by using individualized learning plans that assist students in creating both short- and long-term goals in the future.

University students must develop the skills required to exchange knowledge, work together, and improve team performance as well as knowledge in the workplaces of the future, given the competitive and dynamic character of the business world outside of school (Lin & Huang, 2020). The findings show that each member significantly impacts knowledge sharing and team effectiveness and that members' appreciation of one another's work and team trust are positively correlated. Information sharing was crucial in this learning environment because it acted as a strong moderator between team efficacy and views on the value of individual members' contributions and between efficacy and trust. The group's performance in these classes also aided individual students' learning.

(*Do it where you are more comfortable, you will memorize, you will study, where you want, not the one you keep up with, looking at the reviewer of others*) "Gawin mo kung saan ka kumportable magmemorize ka, mag-aral ka kung saan 'yung gusto mo hindi 'yung nakikisabay ka, nakikitingin sa mga reviewer ng iba." - SHS11 P6.7

(*I use my way and I use my method to understand the lessons.*) "Gumagamit ako ng sarili kong way and gumagamit ako ng sarili kong method para maintindihan ko ang mga lesson" - SHS11 P8

(*When I use my way of learning as I understand it, the score I get is higher, but when I don't use my way, I have a bit of a hard time, and the scores I get are just correct or sometimes low when I don't use my way of reviewing.*) "Magiging komportable ka pag way mo 'yung ginagawa mo para matuto ka kase kung napipilitan kang sundin 'yung way ng iba is mas mahirapan kang matutunan 'yung pinapagawa or kailangan mong matutunan lesson" - SHS11 P8.3

(*Because based on what I do, I understand it better. Since I was young, that's what I did, so I'm not used to PowerPoint or reviewing and looking at phones.*) "Mas na e-enchance 'yung parang mas nasasanay ako ganon so kapag ginagaya ko 'yun way meron paring knowledge na naka-tatak sa isip ko." - SHS11 P8.5

Visual Learning Style

A tendency to absorb knowledge using visual aids such as maps, charts, graphs, diagrams, movies, and animations is known as their visual learning style. Tasks involving visual discrimination, pattern recognition, and visual memory can be effectively completed by someone with this style, which is linked to excellent spatial and visual processing abilities. Using visual aids and approaches to improve their learning can be beneficial, including when they read and repeat it to themselves; it is like reflecting on their own that helps them the most. Reading and looking at PowerPoint presentations and images is helpful in FABM because they can understand it when they can see it, and having strategies to use in reading helps them memorize it and learn it.

Felder (2017). Information processing and retention can be significantly enhanced using graphs, charts, and other visual learning strategies. According to Pashler et al. (2019), color coding and other visual aids in educational

materials help visual learners understand and draw connections between complex subjects.

Bahrick et al. (2016). Exposure to visual stimuli, such as educational movies or interactive multimedia tools, can help with retention and comprehension for people who learn best visually.

(My learning style is that when you read and repeat it to yourself, it is like reflecting on your own. That is what helps me the most.) "My learning style is pota pung mamasa ka tas ulitulitan me keng sarili mu like you are reflecting by yourself. 'Yun 'yong mas nakaka help sa'kin." – SHS11 P1.4

(Visual, I read and look at PowerPoint presentations and images.) "Visual po, binabasa ko po mga powerpoint or tinitignan pati mga images" – SHS11 P3.1

(It helps a lot, especially in FABM, because if I can visually see it, I can understand it.) "Nakakatulong siya lalo na sa FABM, kasi kapag doon ko nakikita, mas naiintindihan ko." – SHS11 P7.4

(I use strategies. For example, I try not to look at it and memorize it whenever I read. That is the strategy that I use to learn and memorize it.) "May mga strategies ako. Kunware, kapag binabasa ko, tina-try kong hindi tignan, tas try kong i-memorize, 'yun 'yung strategy ko para matutunan at mamemorize ko siya." – SHS11 P7.5

Problem-Solving

Problem-solving is best described as methodically breaking down the problem, figuring out its essential elements and connections, and then developing and implementing a solution. It displays a planned and proactive approach to reaching practical and long-lasting solutions; for example, it uses learning styles by understanding the question first before fixing it.

According to Donald J. et al. (2023), creative problem-solving combines analytical and creative thinking to solve common problems and avoid surprises and disappointments.

Pal, A. et al (2017). Issues will inevitably arise and need to be resolved immediately. Project implementations try to deal with them in daily life. This article explores problem-solving strategies, focusing on reducing circumstances

and offering multiple approaches to fixing them.

Kapur, R. (2020). People from all walks of life should concentrate on developing their problem-solving abilities to deal with challenges in their personal and professional lives. They ought to know strategies and tactics to improve their capacity for problem-solving.

(Yes, I use learning styles, just like understanding the question first before I fix it.) "Oo, gumagamit ako katulad ng pag iintindi sa tanong bago ko ayusin." – SHS11 P4.1

Researching Strategy

Learning and problem-solving should be proactively approached through research and online platforms that demonstrate a willingness to explore new knowledge sources and different sources beyond traditional education—for example, using strategy to research using Google Search to understand something not taught in school for adaptability.

Baguia (2018). Research and internet resources should be used for proactive learning and problem-solving to discover new information sources outside the conventional educational system. Every learning activity needs search engines to assist students in finding references, working through issues, increasing their knowledge, clearing up any confusion, and stimulating their curiosity.

Heliyon (2018). The effects of internet technologies on communication, academic achievement, and general education in developing nations have mainly concentrated on smartphone usage and subscriptions to open-access e-journals and Google, Yahoo, and other providers. On the other hand, students think using the internet enables them to conduct pre-research, assign different homework assignments, broaden their reading and learning horizons, learn from peers and themselves, and prepare better for exams.

Salehi (2018). Students use the internet more frequently, which has educators worried about the possible drawbacks of individualized learning in higher education.

(Yes, I use strategy, I research first to understand it.) "Oo, gumagamit ako ng strategy,

nireresearch ko muna para maintindihan ko." – SHS11 P4.5

(Yes, I use a different style like Google Search to understand something.) "Wa, gagamit kung aliwang istilu kalupa na ning pag search kareng google para abalu ke ing metung a bage" – SHS11 P5.1

(The strategy I used was to search online to adopt something that I didn't know yet that wasn't taught here in school) "Ing diskarting gewa ku itang mag search kareng online para maadopt ing bage na ekupa balu na eda tuturu kening skwela" – SHS11 P5.5

Combination of Auditory and Kinesthetic

The person who speaks highlights the particular nature of their language, underlining that whatever they refer to serves a specific purpose based on their needs or interests. The person talking suggests that they use something for personal reasons. They highlight the importance of listening, meaning that hearing allows them to absorb the information they are studying or striving to comprehend. Furthermore, they are more like oral recitations, quizzes, and essays, and they can use them personally by listening to and writing what they hear and learn.

According to a 2019 Hahn et al. study on the advantages of multimodal learning approaches on STEM student performance, learning outcomes increased when students integrated spoken instructions with practical experiences.

A 2018 study by Liu and Murray found that students with various learning preferences understood concepts better when auditory and kinesthetic signals were incorporated into language acquisition. It implies that this combination can support a variety of learning goals.

A 2017 meta-analysis by Smith and Jones found that combining tactile and auditory learning strategies enhanced information processing and memory recall. The interactive nature of multimodal learning modalities improved learning results, increasing brain connectivity and cognitive engagement.

(More like oral recitation, quizzes, and essays) "more like oral recitations, quizzes, and essay" – SHS11 P3

(I can use it personally. Of course, if listen, I can learn the lesson I take. I write what I learn. I write what i hear.) "Nagagamit ko siya pang personal ko. Syempre, kapag naririnig ko siya, natutunan ko 'yung mga lesson na pinag-aaraln ko. Sinusulat ko 'yung natututunan ko, sinusulat ko 'yung naririnig ko." – SHS11 P7.1

Self-Discovery

Students' preferences for visual learning and public speaking highlight the value of these experiences for developing critical thinking, confidence, and communication skills as part of self-discovery. For instance, they discover their selves based on their capabilities based on the test given; understanding their learning styles, they also learned to cope faster with the lesson if it were visual, and they also learned that their words improve in front of people. They learned a style that they had yet to use in school.

Arnett (2016). It highlights the relevance of self-discovery for people, especially students, as it helps them understand their beliefs, values, and principles, which are essential for making decisions about their academic and career paths.

In their study, Tietjen and Brunell (2018) found that college students who engaged in self-discovery-promoting activities expressed more significant happiness and contentment with their lives.

According to research by Kim et al. in 2020, high school students' self-discovery is linked to a sense of purpose and better self-esteem.

(I discovered myself and then what my capabilities are based on that test that you gave.)

"I discovered myself tapos ano yung mga capabilities ko based on that test na binigay niyo" – SHS11 P1.2

(I learned what my learning style is)

"Kung pakananu ing learning style ku" – SHS11 P2.2

(I learned that I can cope faster with the lesson if it is visual) "mas mabilis po kong maka cope up sa mga lessons if visually po siya" – SHS11 P3.2

(Yes, I learned from myself that my words improve in front of people.) "Oo, natutunan ko sa aking sarili na nag iimprove yung salita ko sa mga harap ng tao." – SHS11 P4.2

(Yes, because I just learned that style, which I have not done in school yet.)

"Atin, kasi karin kupa ikit itang style a makanta na ekupa agawa keng school" – SHS11 P5.2

Self-Empowerment

Confidence in abilities is derived from diligent study and hard work, with investment in learning being key. However, they acknowledge challenges with misunderstandings and occasional difficulties with school tasks, indicating a need for more precise communication or support, strengths, and areas for improvement in their learning journey. Furthermore, they can learn more by trusting in their abilities whenever they work hard and study, and they have quite a lot of confidence in their understanding of learning.

Akbari (2020). Students' self-confidence significantly affects their capacity to study, engage in class, pursue objectives, show interest in the subject matter, lower anxiety, feel at ease around classmates and teachers, and express their opinions.

According to Steinmayr et al. (2019). Accomplishment motivation is crucial in predicting academic success since it drives behavior toward performance.

According to Nieminen (2020). Students' self-evaluation is a standard formative assessment method that improves learning, self-regulation, reflexivity, and empowerment.

(*For me what I trust in my ability is that when I work hard, I study, that's where I can learn more, and that I don't understand when there is a misunderstanding explaining and the description.*) "For me ing pagkatiwalan ku keng sarili kung kakayanan is that if peghirapan ke, peg aralan ke talaga ka rin ku matutu and keretang eku ayntindyan which is potang misunderstanding na ning pamag explain ampo itang pamag larawan" – SHS11 P1.3

(*I have quite a lot of confidence in my understanding of learning, the vague thing is that sometimes I have difficulty with what i do in school*) "Medyu maragul ku tiwala keng kanakung pag unawa keng pamag aral, ing malabu naman itang minsan mgkasakit ku murin kareng gagawan kening school" – SHS11 P5.3

Auditory Learning Style

Auditory inclination refers to a preference for processing and interpreting information through hearing and listening. It impacts learning, communication, and interaction and often leads to a deeper appreciation for the auditory senses. For instance, when listening to a teacher, one can be confident that they can hear it. However, not listening can also hinder the learning style, and when hearing it, one can understand it immediately.

Gupta (2022). Higher education aims to assist students in achieving their academic goals. Chatbots provide an anonymous, interactive, and readily available means of support for students with different learning styles and backgrounds. Students who learn best by auditory means can benefit from creative tasks. However, because of technological capabilities, execution can be complex.

According to King (2018), the auditory cortex is an essential component of neural processing that starts in the ear and moves into the cortex. It is a vital component of the brain's network and is responsible for learning, perceptual decision-making, and student prediction.

According to Kayalar (2017). Those who learn better via hearing or verbal communication are said to have an auditory learning style. They have excellent recall skills and are auditory and musically sensitive. They can participate in group conversations, are talkative, and are inclined to pick up foreign languages. They might, however, have trouble with writing and reading, and they might use audiotapes to practice their language abilities.

(*Listen to teacher*) "Makinig sa teacher" – SHS11 P2.7

(*Sometimes I'm not kind of confident because it's sometimes better if I can hear it*) "minsan po hindi po ako masyadong confident kasi po minsan maganda rin po minsan yung naririnig" – SHS11 P3.3

(*There is also something that hinders my style, it's when I'm not listening to the lesson.*) "Meron ding nakakahadlang sa istilo ko, yung hindi pakikinig sa lesson." – SHS11 P4.4

(*When hearing it, yes, and when seeing it, no. Of course, if I see it and I'm just looking at it, sometimes I don't understand it. When I hear it,*

I understand it immediately.) "Kapag naririnig ko siya, oo, at kapag nakikita ko, hindi. Syempre, kapag nakikita ko siya at kapag tinititigan ko, minsan hindi ko naiintindihan. Kapag narinig ko, naiintindihan ko siya." – SHS11 P7.3

Benefits of English Subject

English subjects improve one's thinking, self-worth, and confidence, which promote personal development. They also promote effective communication, critical thinking, and an appreciation of lifelong learning. It is helpful because it helps them with everything, especially reading, public speaking, and everything else.

The English for Specific Purposes (ESP) field uses a diverse theoretical framework and research-based language instruction to meet the communication demands of particular professional groups. Hyland's 2019 research imposed that the social context on language use seeks to empower students, dismantle the gap between theory and practice, and advance academic and professional genres.

In Oktaviani's 2024 study, which was about an analysis of independent curriculum implementation in English subjects, the research revealed that through observation and interviews, it was discovered that a self-regulating English subject was being implemented. This curriculum used formative and summative assessments, diagnostic tests, and student-centered learning methodologies, all of which helped teachers and students get a more profound knowledge of the subject matter.

According to the study of Zamzami in 2021, since language promotes cooperation and efficient communication, language is essential to human growth. Since many books are only available in English, students must be fluent in the language to learn well. Additionally, fluency makes it possible for students to interact with one another during lectures, and it is crucial to speak in one's native tongue when communicating overseas.

(For me, the English subject is helpful because it helps me in everything, especially in reading, public speaking, and everything else.) "Para kaku Meka sawup kanaku ing subject English kasi asopan naku kareng egana ganang bage lalu

na king pamamasa kareng public pamanyagut ampo kareng aliwa pang bage" – SHS11 P5.4

Benefits of Comfort

The benefits of comfort in studying are enhancing their learning process, such as memorizing the information swiftly and efficiently and understanding it more thoroughly. This leads to better academic performance in school, enhanced acquisition of knowledge, ability to think critically, and learning abilities that will lead to growth and improvement. For instance, they feel like memorizing faster because they are comfortable with the learning style.

Wells (2019). Comfort is crucial in improving overall health and lowering stress levels since comfortable surroundings make people feel less anxious and more at ease.

Smith et al. (2018). Studies show that a comfortable work environment increases employee productivity and job satisfaction because persons with ergonomic workstations are more productive and feel more content with their professions.

Jones & Lee (2020). Being comfortable improves one's body image and self-esteem, boosting confidence and contentment with oneself.

(I feel like I'm memorizing faster because I'm comfortable with the learning style I'm using) "Kumbaga mas napapabilis po yung pag mememorize ko kase dun ako kumportable sa ginagawa kong learning style." – SHS11 P6.4

(I am comfortable when I use my way of learning as I understand it, the score I get is higher, but when I don't use my way, I have a bit of a hard time, and the scores I get are just correct or sometimes low when I don't use my way of reviewing.) "*Mas magiging komportable ka kapag way mo Yung ginagawa mo para matuto ka Kase kung napipilitan Kang sundin yung way ng iba is mas mahirapan Kang matutunan Yung pinapagawa or kailangan mong matutunan lesson*" – SHS11 P8.2

(*Let them understand where they are more trained, then they should do their way where they are more comfortable because that's where their thinking or their knowledge will be enhanced and their learning ability will be enhanced.)* "intindihin nila kung sana Sila mas

nasasanay then Gawin nila Yun way nila kung saan Sila mas komportable Kasi doon mas ma enchance Yun thinking nila or yung knowledge nila mas na enchance nila hung kakayanan nila sa pag aaral" – SHS11 P8.7

Self-Improvement

Self-improvement is development, growth, and maturity in rational decision-making and learning processes. The impact and effectiveness of personalized learning styles or approaches in improving knowledge acquisition and retention also lead to long-term knowledge retention and a better understanding of the acquired information. Thus, they learn how to decide correctly, enhancing their learning style.

The relationship between personality development and self-improvement is highlighted in the 2017 study by Ramakrishna et al., underscoring the significance of continuous self-improvement for individual success.

The 2017 study by Li et al. investigates the relationship between young people's self-improvement motivation and their personality traits and control perceptions.

Park et al.'s 2017 study examines the relationship between life satisfaction and self-improvement activities and emphasizes the moderating effect of self-esteem.

(Yes, to decide correctly.) "Magdesisyon nang tama." – SHS11 P7.2

(My learning style is enhancing, so when I do it that way, there is still knowledge imprinted in my mind.) "mas na e-enchance Yung parang mas nasasanag ako Ganon so kapag ginagaya ko Yun way meron paring knowledge na nakatatak sa isip ko." – SHS11 P8.6

Influential Friends

Influential friends are vital in determining the learning styles of students. They can shape the students' perspectives and coping mechanisms, encouraging personal development. These companions can stimulate intellectual growth, promote inquiry, and present new learning methods. For one, they prefer a good mindset and a good community where their friends help them, encourage them to study better, and study with them; they can also learn from their learning styles as they can adapt and apply them.

The study about friends, academic achievement, and school engagement during adolescence 2018 by Wong emphasizes how vital peer pressure is for shaping teenage academic attitudes and conduct. It shows that academic accomplishment reduces peer pressure and selection and that emotional, mental, and behavioral involvement in peers enhances the possibility of developing new relationships like friendships and the way you influenced your friends and how your friends influenced you.

Friends have a significant impact on early adolescents' academic achievement, school adjustment, attitudes, and actions, according to a 2022 study about friends' influence on academic performance among early adolescents conducted by Palaclos. The research states that the academic achievement of friends has a more significant impact on socially liked students; qualities such as cooperation, reciprocity, and quality friendships enhance this influence.

According to Brouwer's 2022 study about the development of peer networks and academic performance in learning communities in higher education, social dynamics in higher education are strongly influenced by academic performance. Due to their perceived knowledge and abilities, peers are more inclined to choose friends or academic leaders from students who perform well academically. Additionally, the study discovered a favorable association between social interactions and academic performance, pointing to a rise in the acceptance and use of academic support.

(For me, it means a good mindset and a good community. Your friends should help you and encourage you to study better and study with them.) "For me, a good mindset and a good community. That yung mga friends mo dapat they will help you, encourage you to study better and study with them." – SHS11 P1.

(For me, the community with your friends, because their learning styles are different, and then you can learn from their learning styles, where one always lectures, then you will adapt it, and then you will apply it to your learning styles.)

"For me by community with your friends, kase pu aliwa-liwa lareng learning styles da ren, tapus makakwa ka kareng learning styles da, which is itang metung mapag lecture ya then you will adapt it and then you will apply it on your learning style." – SHS11 P1.6

Night-time Studying

The importance of environmental factors in studying indicates the participant's awareness of how environmental factors or external factors may affect their study time. Furthermore, a specific time of the day that suits and works best positively affects the condition of studying and achieving better academic performance. For instance, they prefer to review at night because it is quieter, and they can understand better at night.

Jalali (2020) asserts that sleep affects a range of functions linked to practice, learning, academic achievement, mental and physical health, and neuro-behavioral processes, all of which are critical for preserving human health.

According to Li et al. (2023), in addition to the connections between night owl students' academic performance, study habits, and learning style, it is essential to consider students' learning capacities and habits to provide an adequate education.

Stella (2018) highlights how students' study habits and preferences, especially those regarding midnight study, significantly impact their academic progress in today's fast-paced academic environment.

(I prefer more to review at night because it's quieter and I understand better) "mas prefer ko po yung mag review po ng mga gabi po kasi po tahimik po non and mas naiintindihan ko" – SHS11 P3.5

Challenges to Learning

Students need help learning online, such as inadequate connectivity, unclear lessons, and a lack of individualized attention. All of these things make it harder for them to concentrate and do well in school; for example, the challenge is that when they have pile up tasks, the other teacher gives more without knowing the capability of the student; sometimes, they are also confused about lessons, there are often no signals in the online class mode of learning, and not everyone has a gadget or device to use for searching.

Tartari et al. described students' difficulties when learning online (2021). These difficulties included a lack of drive, obstacles to group projects, and problems with accessibility. The significance of academic staff members gaining further knowledge regarding digital media was also emphasized.

According to Barrot et al. (2021), their home was the most challenging learning environment for students with the lowest technical literacy and proficiency levels. Online learning has a significant positive impact on student's mental health and the quality of their experiences. Time management, resource allocation, help requests, and enhancing technical proficiency were often employed strategies.

According to Ezeonwumelu (2020). Academic overload and redundant learning materials significantly negatively influence young learners' efficacy.

(The challenge is that when you pile up tasks the other teachers almost give more tasks without knowing the capability of the student. If you're always absent, you'll be late for lessons and it's hard to do anything again because you'll run out) "Reta pung challenges pu is that when you-pota pong metambak naka talaga kasi pu reng aliwang teachers mostly mag-tambak la without knowing na the capability of the student. Tas potang mapag absent ka rin malalate ka karetang lessons and masakit lang ikayi ulit kasi matagal naka." SHS11 P1.6

(Sometimes I'm confused about lessons) "Minsan naguguluhan ako sa mga lesson" – SHS11 P2.6

(*In the online class, there was often no signal*) "sa online class po, madalas po kasi non walang signal" – SHS11 P3.6

(The online mode of learning.) "Yung online na pag aaral)" – SHS11 P4.6

(The difficulty is that online sometimes there is no signal and not everyone has a gadget or device to use for searching) "Ing pasakit Karin itang kareng online Minsan alang signal at enaman egana gana ating gadget or device para agamit keng pang search" – SHS11 P5.6

Face-to-Face Learning

Some people find learning in a traditional classroom setting easier than learning online. The structured learning environment, quick feedback, and interpersonal connections commonly encountered in a traditional classroom help some people comprehend and grasp concepts. For instance, they prefer the classroom because they understand it better than online classes.

Bali and Liu (2018) found that face-to-face learning was perceived to be more socially present, socially interactive, and satisfying than online learning. However, there was no statistically significant difference in learning preferences across student levels. Meanwhile, other students were quite comfortable with online learning since it allowed them to innovate with computer technology.

According to Nasution et al. (2021), the study aimed to ascertain the students' perception of learning and explore the preferences of students. The findings of the study illustrate that face-to-face learning was the most preferred choice by students of the Islamic Religious Education Study Program in IAIN Takengon, with 78 students (78%), 20 students (20%) of the study being done in blended learning, and only two students (2%), choosing online learning.

(I think classroom because I can understand it more in the classroom unlike in online class, I cannot understand it.) "Sa tingin ko classroom kasi mas naiintindihan ko siya sa classroom, sa online kasi hindi ko siya naiintindihan" – SHS11 P7.6

Time Management

Time management utilizing a personalized reviewing method or learning approach requires more time to utilize the method comprehensively. For instance, their style of reviewing takes more time. They also need more time to review for a quiz as they are still writing the paper.

According to Wolters et al. (2020), for students to achieve their academic goals, they must actively manage their time and involvement in extracurricular activities. Time management is one of the most crucial self-regulation skills.

Nasrullah et al. (2023). Time management abilities can dramatically lower students' stress levels. Students must balance their academic responsibilities and personal goals.

Razali et. al (2017). Time management is essential for everyone's performance and achievements. Students often need help with time constraints and the flexibility of university environments, which may impede their capacity to execute required activities.

(When I'm doing my own or my style of reviewing, it takes more time. Sometimes, when I'm just reviewing and we have to do a quiz, it seems like I'm having a hard time because I'm running out of time. After all, I'm still writing in that paper.) "kapag kasi ginagawa ko yun own ko or yung style ko sa pag re-review ko nangangailan siya ng mas malaking Oras so minsan kapag bag r review palang ako tas kailangan na namin mag quiz parang nahihirapan ako Ganon Kasi nakukulangan ako sa Oras Kasi sinusulat ko pa sa papel Ganon" – SHS11 P8.6

Students' Motivation

The importance of perseverance and maintaining focus to achieve success is the highlight of students' motivation. For instance, they focus and then keep striving. Then, they encourage them to go to school and help them with other things they do not know so that they work harder in school.

Steinmayr et al. (2019). Task values, objectives, ability self-concepts, and accomplishment motives are some of the many complex facets of achievement motivation.

Yarborough & Fedesco (2020). As a complex but essential part of teaching, instructors must consider encouraging student motivation, ranging from enthusiastic and engaging to apathetic and reticent.

Parrish (2020). Engagement depends on student motivation, and effective engagement can encourage students' drive in the future.

(They focus and then keep striving) "mag focus lang po sila and then keep striving lang po" - SHS11 P3.7

(Encourage them to go to school and help them with other things they don't know so that they work harder in school) "Ikayatan lang lungub keng skwelahan at sopan kareng bage na

eda balu para mas sumipag lapa kareng gaga-wan da keng school" – SHS11 P5.7

Utilizing Strategies

In their 2019 study, Zimmerman and Schunk highlighted the importance of self-regulated learning techniques in raising academic attainment, emphasizing the relevance of goal-setting, self-monitoring, and strategic planning.

According to Pintrich and De Groot's 2017 study, students who actively used cognitive strategies, like organization and elaboration, had much superior comprehension and recollection of the content than passive learners.

The 2018 study by Hattie and Timperley emphasized the value of prompt and accurate feedback in directing students' learning and promoting academic progress.

(*My only advice to all students like me is to keep on going to where they're learning.*) "Ang payo ko lang sa mga mag aaral na katulad ko, ipag patuloy nila kung saan sila na-tututo." – SHS11 P4.7

(*I can give advice or I can share "Why not?" because if I can do it, they can also use strategies like what I am doing.*) "Mabibigay kong advice at mashashare ko is "why not?" kasi kung kaya ko, kaya din nila. Pwede din nilang ga-yahin yung strategies kagaya ng ginagawa ko." – SHS11 P7.7

Summary

1. The male respondents from the quantitative phase comprised sixty-six with a corresponding mean of 0.49, while the female respondents were sixty-nine with a mean of 0.51. The age range of the respondents was 15, 16, 17, 18, 19, and 23. The age of 15 was the lowest with a mean of 0.02, followed by 18 acquired a mean of 0.05, while the 19- and 23-years old respondents both got a mean of 0.07, second to the highest was the 17-years old respondents, and the highest mean of 0.67 were the 16-years old respondents.

2. Learning styles of the respondents in the quantitative phase: The visual learning style acquired a total mean of 2.33, the highest obtained data among the three learning styles. The auditory learning style achieved a total mean of 2.30, the second, and the tactile or kinesthetic learning style accomplished a total mean of 2.09, the lowest obtained data.

3. In treating the data with statistical treatment, in auditory learning style, the male respondents acquired a mean of 2.29 with a corresponding standard deviation of 0.65 and a variance of 0.38. In contrast, the female respondents obtained a mean of 2.31 with a standard deviation of 0.66 and a 0.36 variance; the results achieved a p-value of 0.35. On the other hand, the visual learning style of the male respondents obtained a mean of 2.34 with a corresponding standard deviation of 0.63 and a variance of 0.39. In contrast, the female respondents acquired a mean of 2.32 with a standard deviation of 0.41 and a corresponding variance of 0.41, and the findings of both sexes led to a p-value of 0.37. Lastly, the male respondents' tactile or kinesthetic learning style achieved a mean of 2.15 and a standard deviation of 0.72 with a 0.59 variance. However, the female respondents gained a 2.04 mean and standard deviation of 0.73 with a corresponding variance of 0.54, resulting in a p-value of 0.03.

4. The identified manifestations of participants' learning styles highlight various themes such as Kinesthetic Learning Style, Keeping Clean Surroundings, Optimal Learning Environment, Extracurricular Activities, Visual and Auditory Inclined, Individualized Learning, Visual Learning Style, Problem-Solving, Researching Strategies, Combination of Auditory and Kinesthetic, Self-Discovery, Self-Empowerment, Auditory Learning Style, Benefits of English Subject, Benefits of Comfort, Self-Improvement, Influential Friends, Night-time Studying, Challenges to Learning, Face-to-Face Learning, Time Management, Students' Motivation, Utilizing Strategies.

The participants exhibit a variety of learning approaches in their studies. Their academic performance depends on their learning style, and environmental factors also affect it.

Ultimately, learning styles are vital to the participants' academic performance. The environment or surroundings also affect their performance at school. Additionally, the participants are well aware and knowledgeable about utilizing strategies and learning styles, and external factors like the environment affect their learning outcomes and academic achievements.

Conclusion

1. There are more female respondents in the quantitative phase than male respondents in the study. Moreover, the age 16 dominated the study, achieving the highest mean of 0.62, while the 15-, 17-, 18-, 19-, and 23-year-old respondents got a mean lower than 0.62.
2. In the quantitative phase, the respondents preferred visual learning styles over auditory, tactile, or kinesthetic ones. The visual learning style achieved 2.33, while the auditory learning style obtained 2.30, followed by tactile or kinesthetic, which acquired 2.09, signifying that the visual learning style is the preferred learning style of the respondents.
3. In applying the statistical treatment to the data, a result with a p-value less than .05 signifies statistically significant. Thus, the findings of the sex and auditory and visual learning styles achieved greater than 0.5 p-values, which signify no significant difference between the sex of the respondents with auditory and visual learning styles among the eleventh graders. However, the sex of the respondents and the tactile or kinesthetic learning style acquired a p-value less than 0.5, which highlights sufficient evidence to affirm the significant difference between the sex and tactile or kinesthetic learning style of the eleventh-graders.
4. The participants' learning methods included both hands-on and experiential learning. In addition to the significance of outside variables like comfort and friends, difficulties like time management and classroom preferences, the study emphasized the necessity of self-discovery. It brought attention to how intricate the learning process is as well.

The findings of the qualitative phase revealed the participants' utilization of various learning approaches; some participants had combinations of preferred learning styles, while some had dominant learning styles. Some of them utilized their ways of learning, as well as environmental factors such as a clean environment and the preference for studying at night, which makes them comfortable studying.

Overall, these denote that learning styles and how the participants use them are crucial to delivering a positive academic performance. Also, it highlights that learning or attending school is essential for students to keep striving and focus on school.

Recommendation

1. Students must use learning styles and strategies to enhance their learning process and achieve positive academic achievements. They should also be comfortable with their preferred learning method and be efficient and effective in studying.
2. The researchers suggest that instructional tactics should be adjusted to accommodate students' diverse learning preferences and strategies. Combining customized tactile, visual, and auditory techniques is required for this. Keeping the atmosphere tidy and promoting self-determination and self-exploration are all effective strategies for raising student involvement. Academic programs must incorporate time and resource management techniques to promote holistic growth and learning accomplishment.
3. To advance growth and development in students' learning processes, it is recommended that they understand their learning styles and become more knowledgeable about them. This will foster a more conducive environment for the students, and the learning styles of both males and females will be compatible with the learning methods exhibited by teachers.
4. To enhance and improve the student's learning process, it is recommended that

students, teachers, and school administrators consider these environmental factors to make the environment conducive to learning. Future researchers should delve into the various environmental factors that affect students' learning process to expand their knowledge of environmental factors further. Overall, it is advised that schools and communities understand the various learning styles and environmental factors that affect students' learning outcomes. The school and other communities must know about these factors to have a safe, efficient, and adequate space that nourishes and fosters quality student learning.

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