

Learning Styles and Academic Performance of Intermediate Pupils

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Abstract

This study aimed to assess the extent of learning styles of intermediate pupils in Tomas Claudio Colleges during the School Year 2025–2026 and determine their relationship with academic performance. The respondents were the total population of 240 intermediate pupils. They were described in terms of age, sex, sibling position, number of children in the family, monthly family income, parents' educational attainment, and parents' occupation. A descriptive survey research design was utilized, employing a questionnaire checklist to measure the extent of learning styles in terms of visual, auditory, and kinesthetic modalities. Documentary analysis was also conducted to determine the pupils' academic performance based on their first-quarter average grades. Findings revealed that most of the respondents were 9–10 years old, female, first-born, from families with three children, belonging to an income bracket of ₱20,000 and above, with parents who were college graduates and self-employed. The pupils often utilized visual, auditory, and kinesthetic learning styles as perceived by themselves. Results showed that demographic profile variables such as age, sex, sibling position, family size, income, parents' educational attainment, and occupation were not significant factors influencing learning styles. Furthermore, the academic performance of the pupils was rated as outstanding, with a mean grade of 91.00. However, no significant relationship was found between learning styles and academic performance. Based on the findings, it was concluded that learning styles do not predict academic performance among the respondents. It is recommended that teachers adopt differentiated and multi-sensory instructional strategies, while school administrators provide appropriate training and resources to support varied learning approaches. Pupils are also encouraged to explore diverse learning strategies to enhance their learning experience..

Keywords: Learning Styles, Visual Learning, Auditory Learning, Kinesthetic Learning, Academic Performance, Intermediate Pupils, Descriptive Research

Introduction

Education is a continuous and evolving process that responds to the changing demands of society. In contemporary times, Education plays a vital role in shaping the holistic development of learners, encompassing intellectual, physical, emotional, and spiritual growth. It aims to produce well-rounded individuals who are not only knowledgeable but also socially responsible and emotionally balanced. In the Philippines, the importance of quality education is enshrined in Article XIV, Section 1 of the 1987 Philippine Constitution, which mandates the State to protect and promote the right of all citizens to accessible and quality education. This legal provision highlights the government's commitment to ensuring that every Filipino child is provided with meaningful learning opportunities.

In support of this mandate, the Department of Education (DepEd) emphasizes learner-centered and flexible teaching approaches through DepEd Order No. 021 s. 2019, which promotes constructivist, inquiry-based, reflective, collaborative, differentiated, and integrative pedagogies. These approaches recognize learners as active participants in the learning process, underscoring the importance of adapting instruction to the diverse needs and characteristics of students.

A number of foreign studies have explored the relationship between learning styles and academic performance. For instance, Ha (2021) found that different learning styles, when aligned with appropriate learning settings, can significantly enhance students' academic achievement. Similarly, Nja (2021) reported that students exhibit diverse learning style preferences and that these preferences positively correlate with academic performance, emphasizing the need for varied teaching strategies. In the same vein, Eremie (2021) revealed that visual, auditory, and kinesthetic learning styles all have significant relationships with students' academic performance, suggesting that accommodating these styles can improve learning outcomes. Further, Maya (2021) highlighted that learning styles are influenced by educational contexts and assessment methods, while also emphasizing that abstract conceptualization contributes to higher academic performance. Obi (2021) and similar studies also confirmed that students have varied learning style preferences and that these preferences may influence learning effectiveness. Additionally, Hoque (2022) demonstrated that socio-economic and parental factors

such as income and educational attainment significantly affect academic performance, indicating that learner outcomes are influenced by multiple variables beyond learning styles alone.

Local studies also support the importance of learning styles in education. Cabual (2021) emphasized that recognizing students' learning preferences leads to more effective teaching strategies, while Absin (2021) found that although students exhibit different learning styles, these do not necessarily show a significant relationship with academic performance. Similarly, Pineda (2021) reported that only visual learning style had a limited effect on academic performance in specific subjects, while others showed no significant influence. Ibarrientos (2021) also found a significant relationship between learning styles and academic performance, particularly in certain learning dimensions.

Despite the abundance of studies on learning styles, several gaps remain evident. First, most of the reviewed studies were conducted in foreign settings or focused on college and secondary students, leaving limited research specifically targeting intermediate pupils in the Philippine context. Second, findings across studies are inconsistent—some reveal a significant relationship between learning styles and academic performance, while others show no significant correlation. This inconsistency indicates the need for further investigation to clarify the relationship in different educational contexts.

Moreover, few studies have examined learning styles in relation to the specific demographic and socio-economic profiles of pupils within local private school settings. There is also a lack of localized data that can guide teachers and school administrators in designing appropriate instructional strategies tailored to the needs of intermediate pupils. Lastly, while many studies acknowledge learning styles, there is limited empirical evidence on how these styles are actually perceived by pupils themselves in relation to their academic performance.

In light of these gaps, this study was conceptualized to assess the extent of learning styles among intermediate pupils at Tomas Claudio Colleges and determine their relationship with academic performance. The findings of this study aim to contribute to the growing body of knowledge on learner diversity and provide a basis for enhancing instructional practices that promote effective and inclusive education.

Material and methods

2.1 Research Design

The study used the descriptive method of research specifically, the survey design

2.2 Locale of the Study

The study was conducted in Tomas Claudio Colleges located in Morong, Rizal. The school offers complete elementary education from kindergarten to grade six. Tomas Claudio Colleges, located in Taghangin, Barangay San Juan, Morong, Rizal, is a private educational institution that offers a complete range of academic programs from basic education to graduate studies.

2.3 Respondents of the Study

The respondents of the study were the total population of the intermediate pupils in Tomas Claudio Colleges. These consist of 240 pupils. They were described in terms of age, sex, sibling position, number of children in the family, monthly family income, parents' educational attainment, and parents' occupation.

2.4 Sample and Sampling Procedure

The study employed a total population sampling design, a type of non-probability sampling, wherein all intermediate pupils of Tomas Claudio Colleges were included as respondents. This approach was deemed appropriate since the population size was manageable and allowed the researcher to gather comprehensive data without the need for sampling selection techniques. A total of 240 pupils participated in the study, ensuring complete representation of the target group. The respondents were described based on selected demographic variables, including age, sex, sibling position, number of children in the family, monthly family income, parents' educational attainment, and parents' occupation. This design ensured that the findings accurately reflected the characteristics and learning styles of the entire population under investigation.

2.5 Research Instrument

The study utilized a researcher-made questionnaire-checklist as the primary data gathering instrument. It consisted of two parts: Part I collected the respondents' demographic profile, including age, sex, sibling position, family size, monthly family income, parents' educational attainment, and parents' occupation; while Part II measured the extent of learning styles in terms of visual, auditory, and kinesthetic, with 30 items equally distributed across the three domains. A 5-point Likert scale was used to determine the extent of learning styles, ranging from "Never" to "Always," with corresponding

verbal interpretations. Similarly, academic performance was assessed using the pupils' average grades, interpreted through a standard performance scale from "Did Not Meet Expectations" to "Outstanding." To ensure the validity of the instrument, it underwent content validation by experts including the thesis adviser, professors, a master teacher, a school principal, and the dean of graduate studies, whose feedback and recommendations were incorporated into the final version of the questionnaire.

2.6 Data Gathering Procedure

Based on the Gantt Chart of Activities, the researcher followed the different steps in the conduct of the study. The title conceived by the researcher was presented and was approved by the panel members during the title defense. The researcher collected related literature and studies. After gathering the needed data, the researcher developed the required three (3) chapters and submitted them to the professorial lecturer. The presentation of the proposal was scheduled. After the proposal defense, the questionnaire was presented to the adviser for approval and was recommended for content validation by the experts. Permission to conduct the study was obtained from the Division Office before fielding the questionnaires. The questionnaires were administered to the intermediate pupils. Gathering of the needed information followed the guidelines in the Data Privacy Act of 2012. Data gathered were treated statistically based on the formulated problems utilizing the Statistical Package for Social Sciences (SPSS). Analysis and interpretation of the data followed. A summary of findings, conclusions, and recommendations was formulated. After the oral defense, the manuscript was revised following the comments and suggestions of the oral examination committee. The manuscript was also subjected to an anti-plagiarism test. After the final editing and revision, hardbound copies of the manuscript were submitted to the Office of the Graduate Studies Program and other relevant offices.

2.7 Data Analysis Techniques

The study employed various statistical tools to analyze and interpret the data gathered. Frequency, percentage, and rank distribution were used to describe the profile of the respondents. The weighted mean was utilized to determine the extent of learning styles of intermediate pupils in terms of visual, auditory, and kinesthetic aspects. To examine significant differences in learning styles based on respondents' profile variables, one-way analysis of variance (ANOVA) was applied. Meanwhile, the level of academic performance, based on pupils' average grades, was analyzed using frequency, percentage, mean, and standard deviation. Finally, correlation analysis was employed to determine the significant relationship between the extent of learning styles and the academic performance of the intermediate pupils.

2.8 Ethical Considerations

This study strictly adhered to ethical standards in the conduct of research. Prior to data collection, permission was sought from the school authorities and concerned officials to ensure proper coordination and approval. The respondents were informed about the purpose of the study, and their participation was entirely voluntary. Informed consent was obtained, assuring them that they could withdraw from the study at any time without any consequences. Confidentiality and anonymity of the respondents were strictly maintained by not disclosing their identities and ensuring that all collected data were used solely for academic purposes. Additionally, the researcher ensured that no harm, discomfort, or bias would affect the participants throughout the process. All information gathered was treated with utmost respect and integrity, and results were presented honestly and objectively.

Results and Discussion

3.1 Profile of the Two Groups of Respondents in Terms of the Selected Variables

The profile of the respondents reveals that most intermediate pupils are aged 9–10 years old and predominantly female, with a large proportion being first-born in families consisting of three children. In terms of socio-economic background, many belong to families earning ₱20,000 and above monthly. Additionally, the majority of parents are college graduates and are primarily self-employed, while only a small percentage are elementary graduates or overseas workers. Overall, the data suggest that the respondents generally come from moderately sized families with relatively stable income and educational backgrounds, which may contribute to their learning environment.

Table 1
*Frequency and Percentage Distribution of the Respondents
in Terms of Selected Variables*

Profile	f	%	R
Age			
13 - 14 years old	67	27.9	3
11 - 12 years old	78	32.5	2
9 - 10 years old	95	39.6	1
Total	240	100.0	
Sex			

Male	102	42.5	2			
Female	138	57.5	1			
Total	240	100.0				
Sibling Position						
First	76	31.7	1			
Second	69	28.8	3			
Third	72	30.0	2			
Fourth	23	9.6	4			
Total	240	100.0				
Number of Children in the Family						
1	32	13.3	4.5			
2	42	17.5	3			
3	71	29.6	1			
4	63	26.3	2			
5	32	13.3	4.5			
Total	240	100.0				
Monthly Family Income	f	%	R			
Php 20,000 and above	81	33.8	1			
Php 15,000 – 19,999	48	20.0	4			
Php 10,000 – 14,999	56	23.3	2			
Below Php 10,000	55	22.9	3			
Total	240	100.0				
Parents Educational Attainment	Father			Mother		
	f	%	R	f	%	R
College Graduate	86	35.8	1	90	37.5	1
College Undergraduate	49	20.4	3	64	26.7	2
High School Graduate	53	22.1	2	45	18.8	3
High School Undergraduate	41	17.1	4	16	6.7	5
Elementary Graduate	11	4.6	5	25	10.4	4
Total	240	100.0		240	100.0	
Parents Occupation	Father			Mother		
	f	%	R	f	%	R
Government Employee	40	16.7	4	40	16.7	3
Private Employee	44	18.3	3	43	17.9	2
Self Employed	85	35.4	1	92	38.3	1
OFW	22	9.2	5	26	10.8	5
Househusband/Housewife	49	20.4	2	39	16.3	4
Total	240	100.0		240	100.0	

3.2 Extent of Learning Styles of the Intermediate Pupils as Perceived by Themselves with Respect to Visual, Auditory and Kinesthetic

The composite table shows that the overall extent of learning styles among intermediate pupils has a weighted mean of 4.46, interpreted as “Often” or high extent, indicating that pupils frequently utilize a variety of learning strategies. Among the three aspects, kinesthetic learning style ranks first with a mean of 4.55 (Very High Extent), followed by visual learning style at 4.46 (High Extent), while auditory learning style ranks last with 4.36, though still within the high extent category. These findings suggest that pupils tend to prefer hands-on and activity-based learning, while still benefiting from visual aids and auditory instruction. This implies that teachers should employ differentiated and multi-sensory teaching strategies—such as demonstrations, visual materials, discussions, and interactive activities—to effectively address diverse learning preferences and enhance pupil engagement and understanding. Moreover, exposing pupils to varied instructional approaches can further develop their adaptability and learning skills. These results support the findings of Honey (2021), Masa (2021), and Callanta (2021), who emphasized that learners possess diverse learning styles and that integrating multiple modalities in instruction can improve learning experiences and outcomes.

Table 2

Extent of Learning Styles of the Intermediate Pupils as Perceived by Themselves with Respect to Different Aspects

Aspects	Overall Mean	Verbal Interpretation	Rank
Visual Learning Style	4.46	Often (High Extent)	2
Auditory Learning Style	4.36	Often (High Extent)	3
Kinesthetic Learning Style	4.55	Always (Very High Extent)	1
Composite Mean	4.46	Often (High Extent)	

3.3 Significant Difference on the Extent of Learning Styles of Intermediate Pupils with Respect to the Different Aspects in Terms of Their Profile

The results in Table 3 reveal that there is no significant difference in the extent of learning styles of intermediate pupils when grouped according to age, sex, sibling position, number of children in the family, monthly family income, parents' educational attainment, and parents' occupation, as all computed p-values are greater than 0.05, leading to the acceptance of the null hypothesis. This indicates that these profile variables do not significantly influence how pupils perceive their learning styles in terms of visual, auditory, and kinesthetic modalities. The findings imply that learning styles are more likely shaped by individual preferences, cognitive processes, and classroom experiences rather than demographic or socio-economic factors. Regardless of background, pupils tend to develop their own ways of processing information, whether through visual aids, auditory input, or hands-on activities. This suggests that teachers should focus more on providing varied and inclusive instructional strategies rather than relying on learners' profiles when addressing learning needs. However, the findings contradict the study of Hoque (2022), which emphasized the significant influence of family-related factors on learners' outcomes, and Maya (2021), who highlighted that personal and educational variables can affect learning styles and performance.

Table 3

Significant Difference on the Extent of Learning Styles of Intermediate Pupils with Respect to the Different Aspects in Terms of Their Profile

Profile	f-value	p-value	Decision	Verbal Interpretation
Age				
Visual Learning Style	.012	.913	Accepted	Not Significant
Auditory Learning Style	.111	.739	Accepted	Not Significant
Kinesthetic Learning Style	.125	.725	Accepted	Not Significant
Sex				
Visual Learning Style	.336	.799	Accepted	Not Significant
Auditory Learning Style	1.844	.144	Accepted	Not Significant
Kinesthetic Learning Style	1.921	.113	Accepted	Not Significant
Sibling Position				
Visual Learning Style	1.596	.195	Accepted	Not Significant
Auditory Learning Style	.210	.889	Accepted	Not Significant
Kinesthetic Learning Style	.568	.637	Accepted	Not Significant
Number of Children in the Family				
Visual Learning Style	.458	.712	Accepted	Not Significant
Auditory Learning Style	1.116	.347	Accepted	Not Significant
Kinesthetic Learning Style	1.264	.125	Accepted	Not Significant
Monthly Family Income				
Visual Learning Style	1.635	.172	Accepted	Not Significant
Auditory Learning Style	1.318	.269	Accepted	Not Significant
Kinesthetic Learning Style	.356	.839	Accepted	Not Significant
Father's Educational Attainment				
Visual Learning Style	.749	.561	Accepted	Not Significant
Auditory Learning Style	.781	.540	Accepted	Not Significant
Kinesthetic Learning Style	.678	.609	Accepted	Not Significant
Mother's Educational Attainment				

Visual Learning Style	.280	.890	Accepted	Not Significant
Auditory Learning Style	1.406	.238	Accepted	Not Significant
Kinesthetic Learning Style	.586	.674	Accepted	Not Significant
Father's Occupation				
Visual Learning Style	.898	.468	Accepted	Not Significant
Auditory Learning Style	.246	.911	Accepted	Not Significant
Kinesthetic Learning Style	1.152	.337	Accepted	Not Significant
Mother's Occupation				
Visual Learning Style	.761	.431	Accepted	Not Significant
Auditory Learning Style	.946	.331	Accepted	Not Significant
Kinesthetic Learning Style	1.314	.981	Accepted	Not Significant

3.4 Level of Academic Performance of Intermediate Pupils as Revealed in Their Average Grades in the First Quarter

The table shows that the majority of pupils achieved outstanding academic performance, with 53.3% obtaining grades of 90 and above, followed by 46.7% who attained very satisfactory ratings (85–89), while none fell below these categories. The computed mean of 91.00, interpreted as Outstanding, and a low standard deviation of 3.124 indicate consistently high and closely grouped academic performance among the pupils. This suggests that intermediate pupils are performing at a high academic level, possibly due to effective study habits, supportive learning environments, and the application of their preferred learning styles—whether visual, auditory, or kinesthetic. The findings imply that when instructional strategies align with learners' preferences, pupils are more engaged, motivated, and able to comprehend lessons effectively, leading to improved academic outcomes. This highlights the importance of differentiated instruction and the integration of varied teaching approaches in the classroom. The results are consistent with the studies of Pineda (2021) and Absin (2021), which found that learners demonstrate better academic performance when teaching methods complement their preferred learning styles.

Table 4

Level of Academic Performance of Intermediate Pupils as Revealed in Their Average Grades in the First Quarter

Grade	Verbal Interpretation	f	%	Rank
90 and above	Outstanding	128	53.3	1
85 - 89	Very Satisfactory	112	46.7	2
80 - 84	Satisfactory	-	-	-
75 - 79	Fairly Satisfactory	-	-	-
below 75	Did not meet expectations	-	-	-
Total		240	100.0	-
Highest Rating	96			
Lowest Rating	86			
Mean	91.00 – Outstanding			
Standard Deviation	3.124			

3.5 Significant Relationship Between the Extent of Learning Styles of Intermediate Pupils and Their Level of Academic Performance

The results indicate that the null hypothesis is accepted, as all computed p-values exceed the 0.05 level of significance, confirming that there is no significant relationship between the extent of learning styles—visual, auditory, and kinesthetic—and the academic performance of intermediate pupils. This means that pupils' perceived learning preferences do not directly influence or predict their academic achievement. Although learners may favor certain styles, these alone are not sufficient determinants of high or low performance. The findings imply that academic success is influenced by a combination of factors such as teaching quality, study habits, motivation, prior knowledge, and cognitive abilities rather than learning styles alone. Thus, while incorporating varied instructional strategies can enhance engagement, teachers should also focus on developing higher-order thinking skills, mastery of content, and effective learning strategies among pupils. This finding

contradicts the studies of Eremie (2021), Nja (2021), and Ibarrientos (2021), which reported a positive relationship between learning styles and academic performance, suggesting that such relationships may vary depending on context and population.

Table 5

Significant Relationship Between the Extent of Learning Styles of Intermediate Pupils and Their Level of Academic Performance

Aspects	r-values	p-values	Ho	Verbal Interpretation
Visual Learning Style	.024	.815	Accepted	Not Significant
Auditory Learning Style	.107	.290	Accepted	Not Significant
Kinesthetic Learning Style	.134	.184	Accepted	Not Significant

Conclusion & Recommendations

Based on the findings, it can be concluded that the demographic profile of the pupils—such as age, sex, sibling position, number of children in the family, monthly family income, parents' educational attainment, and parents' occupation—does not significantly influence or predict their perception of learning styles in terms of visual, auditory, and kinesthetic. Furthermore, the study revealed that there is no significant relationship between the pupils' learning styles and their academic performance, indicating that preferred learning styles alone do not determine or guarantee academic success. This suggests that other factors, such as instructional methods, study habits, motivation, and cognitive abilities, may play a more critical role in influencing pupils' academic achievement.

In light of these findings, it is recommended that school administrators provide training and professional development programs for teachers on differentiated instruction, integrating visual, auditory, and kinesthetic strategies to enhance teaching effectiveness. Schools should also ensure the availability of adequate instructional materials to support multi-sensory learning. Teachers are encouraged to design varied and engaging lessons, incorporate diverse assessment methods, and promote active learning experiences. Meanwhile, pupils should be guided to explore different learning strategies and participate in collaborative and peer-assisted activities to enhance their understanding and skills. These recommendations aim to improve the overall quality of teaching and learning despite the absence of a direct relationship between learning styles and academic performance.

Compliance with ethical standards

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