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The Multiple Intelligence and Learning Styles of the Grade Four Pupils in Selected Schools of the Division of Dipolog City: Bases for A Program of Pupils' Improved Academic Performance (PPIAP)

Jimmy T. Gemina, MAEM; Shirley G. Bellino, Ed.D
Head Teacher III, Department of Education, Dipolog City, Philippines
Dean, Graduate School and School of Education, Andres Bonifacio College, Inc., Dipolog City, Philippines

ABSTRACT. This descriptive-comparative study investigated the multiple intelligences and learning styles of Grade Four pupils in two selected schools in the Division of Dipolog City Estaka Central School (n = 352) and Dipolog Pilot Demonstration School (n = 580). Data were analyzed using weighted means to profile intelligences and learning styles, and an independent-samples t-test to examine differences between schools. Results indicate that pupils from both schools most frequently manifested moral and interpersonal intelligences (with existential intelligence also prominent), while visual–spatial (Estaka) and naturalist (Dipolog Pilot) intelligences were least represented. Across the four emotional elements, pupils scored in the "Usually" range for motivation, persistence, and responsibility; structure ranged from "Sometimes" to "Usually." The t-test revealed no statistically significant difference in learning-style profiles between the two schools. The findings suggest that instruction emphasizing values, cooperative tasks, reflective activities, and strategically balanced structure will better engage these learners. The study recommends division-level professional development on multiple intelligences and differentiated instruction, classroom sectioning informed by learner profiles, and the design of instructional activities that cultivate fewer dominant intelligences.

Keywords and Phases: Learning Styles Based on Elements of Emotions, Multiple Intelligences.

I. Introduction

History attests that the central aim of education is the development and cultivation of the human mind. Over the years, various strategies and methodologies have been designed to enhance cognitive growth and maximize learners' potential. One remarkable illustration of humanity's fascination with intellectual capability is the extensive research conducted on the brain of physicist Albert Einstein. Because of his reputation as one of the greatest thinkers of the 20th century, scholars have examined his brain in an effort to understand possible neuroanatomical correlates of exceptional intelligence (en.Wikipedia.org). This notion of intelligence, recognized as only one among the multiple intelligences proposed by Gardner (2000), together with the diverse learning styles identified by Dunn and Dunn (1988), highlights the wide academic diversity present in today's school population.

Traditionally, education placed limited emphasis on learners' multiple intelligences and learning styles, focusing primarily on the development of cognitive or mental abilities. However, with today's shift toward a learner-centered approach, it has become increasingly important for teachers to recognize and address the diverse

capabilities that students bring to the classroom. This paradigm shift broadens the role of educators, prompting them to acknowledge that learners possess varied forms of intelligence and distinct learning styles, all of which must be considered to create an effective and responsive teaching–learning environment.

As stated by Performance Concepts International Ltd. (Tenebro, 1996), *"when there is a genuine effort to first understand an individual's needs, the result is trust and rapport leading to high performance and productivity."* In the educational context, this insight underscores the importance of understanding learners' unique characteristics, including their intelligences and learning styles. Although schools consistently strive to enhance learner performance, particularly in achieving higher scores in the National Achievement Test (NAT), the outcomes have continued to fall short of expectations, indicating the need for more responsive and individualized approaches to teaching and learning.

The Division of Dipolog City is not exempt from this continuing challenge. Persistently low National Achievement Test (NAT) results have prompted the Schools Division Superintendent to explore new approaches that could enhance learners' performance by the time they reach Grade Six. In response to this concern, a study focusing on multiple intelligences and learning styles was proposed for implementation within the division. Recognizing its potential to provide valuable insights into learners' diverse abilities and ultimately contribute to improved NAT outcomes the Superintendent approved the conduct of the study. Despite efforts to raise academic performance, limited local research exists on how learners' intelligence profiles and learning preferences influence achievement in the elementary level, thus highlighting the need for this investigation.

II. Literature Review

Multiple Intelligence

There are numerous advantages to applying the principles of Multiple Intelligences (MI) in the school setting. Activities such as drawing, composing or listening to music, and watching performances can serve as meaningful pathways to learning equally as significant as traditional tasks like writing or solving mathematical problems. Studies (Wikipedia, The Free Encyclopedia) reveal that many students who perform poorly on conventional tests become more engaged and successful when classroom experiences incorporate artistic, athletic, interpersonal, and numerical activities. This suggests that recognizing and nurturing diverse intelligences can transform learners' motivation and achievement.

Contemporary psychological theories further support this broadened understanding of intelligence. As reviewed by Bernardo (2006), Glazer (2006) defines intelligence as *"proficiency or competence in intellectual cognitive performance."* Glazer (1991) also emphasized that expertise is demonstrated by the ability to organize information into coherent and interconnected chunks of knowledge. Meanwhile, Sternberg's Triarchic Theory of Intelligence, together with his Mental Self-Government Theory, expands the traditional view of intelligence by identifying three sub theories componential, experiential, and contextual.

The componential sub theory focuses on the cognitive processes involved in planning, monitoring, decision-making, and problem-solving functions that support analytical intelligence. The experiential sub theory highlights two forms of thinking: insightful (non-entrenched) thinking, which enables individuals to generate creative solutions, and automated thinking, which allows for efficient performance of familiar tasks. The contextual sub theory explains how intelligence operates in real-life situations, emphasizing that intelligent behavior involves adapting to, shaping, and selecting environments relevant to one's life.

Beyond his triarchic theory, Sternberg also introduced the theory of intellectual styles, which posits that individuals differ not only in intellectual capacities but also in the preferred ways they engage with tasks and process information.

Collectively, these theories—including Gardner's Multiple Intelligences—highlight a critical insight: learners possess diverse intellectual strengths and cognitive approaches, and when schools recognize and utilize these differences, they create richer, more inclusive learning environments. This reinforces the need to explore the multiple intelligences and learning styles of pupils, particularly in contexts where academic performance requires improvement.

Learning Style

Learning style plays a significant role in an individual's academic growth and personal development. When learners become aware of their preferred learning style, they can consciously apply it in the learning process, enabling them to understand concepts more efficiently and effectively. This self-awareness not only facilitates faster and easier learning but also enhances overall academic success. Furthermore, identifying one's learning style helps students develop into more capable problem solvers. According to Biggs (2001), the more effectively individuals can address and resolve the challenges they encounter, the greater control they gain over their learning and, ultimately, their own lives.

One of the most important aspects of learning how to learn is an individual's ability to take responsibility for his or her own learning. Learners must understand their personal learning styles, including the characteristics and strategies associated with them, and should act in ways that align with these preferences. By doing so, individuals can independently acquire the continually expanding body of knowledge without relying heavily on others for support. When learners assume responsibility for their own learning, they begin to find meaning in the process, develop deeper insight into how they learn best, and experience greater satisfaction in their learning environments. Every situation becomes an opportunity for growth. As Coffield (2004) notes, learners have the capacity to explore multiple approaches and refine their learning styles to enhance their overall learning effectiveness.

Learning styles can be defined in various ways, depending on one's theoretical perspective. Brown (2000) describes learning styles as the characteristic ways in which individuals perceive, process, and retain information in learning situations. He explains that learning-style preference is one dimension of this concept, referring to an individual's inclination to favor certain learning conditions or tasks over others. These preferences shape how learners engage with instructional activities and influence the strategies they find most effective.

Celcia-Murcia (2001) defines learning styles as the general approaches such as global versus analytic or auditory versus visual that learners use when acquiring a new language or studying any subject. These approaches reflect the ways in which individuals perceive information, interact with instructional tasks, and respond to the overall learning environment. Similarly, MacKeracher (2004) describes learning style as a set of characteristic cognitive, affective, social, and physiological behaviors that serve as relatively stable indicators of how learners perceive, engage with, and react to their learning context. Together, these definitions highlight the multifaceted nature of learning styles and their significant influence on the learning process.

Conceptual Framework

The conceptual framework illustrates how the characteristics of Grade Four pupils from SPDS and ECS, considered as the independent variables, influence their multiple intelligences and learning styles, which serve as the study's dependent variables. Guided by Gardner's Multiple Intelligences Theory and established learning-style models, the framework assumes that each pupil possesses unique cognitive strengths and preferred modes of learning. These individual differences shape how learners process information, interact with classroom tasks, and respond to instructional strategies.

By identifying and analyzing the pupils' dominant intelligences and learning styles, the study aims to generate data-driven insights that will form the basis for developing the **Proposed Program for Learners' Improved Academic Performance (PPIAP).** This outcome represents the application of the study's findings to create targeted, learner-centered interventions that accommodate diverse abilities and preferences. Ultimately, the framework suggests that understanding learner diversity through the lenses of multiple intelligences and learning styles is essential in designing effective programs that can enhance teaching practices and contribute to improved academic performance among Grade Four pupils.

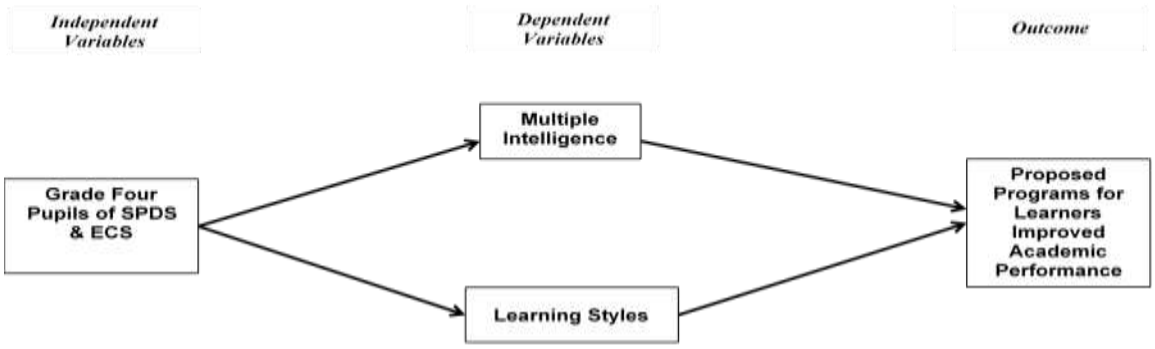

Figure1. **Conceptual Framework of the Study**

Statement of the Problem

This study sought to determine the multiple intelligences and learning styles of Grade Four pupils in selected schools within the Division of Dipolog City. The study was limited to two institutions identified by the Schools Division Superintendent Dipolog Pilot Demonstration School and Estaka Central School which are considered the largest elementary schools in the city. The focus on these schools ensures that the findings are drawn from a substantial and diverse pupil population.

Specifically, it sought to answer the following subsidiary problems:

1. What are the multiple intelligences of Grade four pupils of Estaka Central School and Dipolog Plot Demonstration School?
2. What are their learning styles?
3. Is there a significant difference in the learning styles of Grade Four pupils between Estaka Central School and Dipolog Pilot Demonstration School?
4. What program may be proposed for the improvement of the achievement levels of Grade four pupils
5.

Hypothesis

This study tested the hypothesis below:

There is no significant difference in the learning styles of the Grade Four pupils between Estaka Central School and Dipolog Pilot Demonstration School.

III. Research Methodology

Research Design

This study utilized a **descriptive-comparative research design**, which is appropriate for examining existing conditions and identifying differences between groups. According to **Gay, Mills, and Airasian (2012)**, descriptive research seeks to describe systematically the characteristics of a given population or area of interest, while comparative research determines whether differences exist between two or more groups based on specific variables. This design aligns with the objective of documenting the multiple intelligences and learning styles of Grade Four pupils and comparing these characteristics between two selected schools.

The **descriptive component** of the design was employed to identify and analyze the pupils' dominant multiple intelligences and preferred learning styles. These characteristics were measured using standardized instruments grounded in established theories, such as Gardner's Multiple Intelligences Theory (1983, 2000) and the learning style frameworks of Brown (2000), Celcia-Murcia (2001), and MacKeracher (2004). The descriptive approach made it possible to generate a detailed profile of how pupils think, learn, and process information.

The **comparative component**, as described by **Creswell and Creswell (2018)**, examines differences that may exist between naturally occurring groups. This design was used to determine whether significant differences existed in the learning styles of pupils from Dipolog Pilot Demonstration School and Estaka Central School. Identifying such differences can help educators tailor instruction to the specific needs of each school population.

Research Setting

The current study was conducted in two selected schools within the Division of Dipolog City: Dipolog Pilot Demonstration School and Estaka Central School. These institutions were chosen because they are the largest elementary schools located in the Poblacion of Dipolog City, representing a substantial, diverse, and academically significant learner population. Their size and central location make them ideal settings for generating comprehensive data that can inform instructional planning and the development of learner-centered programs.

Respondents of the Study

The respondents of the study consisted of all Grade Four pupils who were present during the administration of the research questionnaires, following a complete enumeration approach. These pupils also constituted the cohort who took the National Achievement Test (NAT) in the preceding school year, 2012–2013. Their inclusion provided a comprehensive representation of the target population and ensured that the findings accurately reflected the learners' multiple intelligences and learning styles.

Research Instrument

The research instrument used in this study was developed by the researcher and patterned after Tenedero's (1998) descriptions of Multiple Intelligences, as well as the Learning Styles Model of Dunn and Dunn (1998). The instrument measured the pupils' dominant intelligences and their preferred ways of processing information. For the learning styles component, the study specifically adopted the emotional elements emphasized by Dunn and Dunn—such as **motivation, persistence, responsibility, and structure**—as these factors are strongly associated with learners' readiness and approach to classroom tasks. The combination of these established frameworks ensured that the instrument was both theoretically grounded and appropriate for profiling Grade Four pupils.

Scoring Procedure

The study utilized a **5-point Likert scale** to determine the respondents' levels of multiple intelligences and learning styles. Each statement in the questionnaire was rated according to the frequency with which the behavior or preference applied to the pupil. The scoring followed the scale and corresponding descriptions below:

Scale	Description (English)	Meaning (Cebuano/Visayan)
5	Always (A)	Kanunay
4	Usually (U)	Kadaghan pero dili kanunay

Scale	Description (English)	Meaning (Cebuano/Visayan)
3	Sometimes (So)	Usahay
2	Seldom (Se)	Talagsaon
1	Never (N)	Wala

Data-Gathering Procedure

Prior to the actual administration of the research instrument, formal permission was obtained from the Schools Division Superintendent. The request was properly endorsed by the Dean of the Graduate School of Andres Bonifacio College for approval. Subsequently, the researcher also secured permission from the principals of Dipolog Pilot Demonstration School and Estaka Central School, the schools identified as research sites.

To ensure the accuracy and authenticity of the pupils' responses, the researcher personally administered the questionnaires to the Grade Four classes. During the administration, the researcher stood in front of the class and read each item aloud. Each statement was then translated into the pupils' mother-tongue languages to ensure full comprehension. Before answering, the pupils were reminded of the meaning of each number in the Likert scale. Afterward, they were asked to encircle the number that best represented their response.This procedure was implemented to minimize misunderstanding, promote honest responses, and obtain a reliable representation of the pupils' multiple intelligences and learning styles.

Statistical Treatment of Data

To analyze the data gathered from the Grade Four pupils of Dipolog Pilot Demonstration School and Estaka Central School, the following statistical tools were employed:

Weighted Mean. The weighted mean was used to determine the pupils' dominant multiple intelligences and learning styles based on their Likert scale responses. This measure provided the average level at which each intelligence or learning style was manifested.

Samples t-Test. The t-test for independent samples was applied to determine whether a significant difference existed in the learning styles of Grade Four pupils between Dipolog Pilot Demonstration School and Estaka Central School. This inferential test assessed differences between the mean scores of the two independent groups.

The computed t-value was compared with the critical value at a **0.05 level of significance** to determine whether the difference between groups was statistically significant.

Development of the Proposed Program (PPIAP). The results from descriptive and comparative statistics were interpreted and used as the basis for crafting the Program for Pupils' Improved Academic Performance (PPIAP). Data on dominant intelligences and learning styles informed recommendations for instructional strategies, sectioning, and teacher training.

IV. Results

Table 1
Multiple Intelligences of Pupils of Estaka Central School

Multiple Intelligence	Frequency	%	Rank
Linguistic	29	8.24	5

Logico-Math	15	4.26	9
Musical	31	8.81	4
Visual-Spatial	10	2.84	10
Bodily-Kinesthetic	18	5.12	7
Interpersonal	63	17.90	2
Intrapersonal	16	4.54	8
Naturalist	25	7.10	6
Existential	42	11.93	3
Moral	103	29.26	1
TOTAL	**352**	**100.00**	

Based on the results, **Moral Intelligence** obtained the highest frequency (f = 103, 29.26%), making it the most dominant intelligence among Grade Four pupils of Estaka Central School. This is followed by Interpersonal Intelligence (f = 63, 17.90%) and Existential Intelligence (f = 42, 11.93%). These findings indicate that most pupils demonstrate strong moral judgment, social interaction skills, and the ability to reflect on deeper questions and meanings. On the other hand, the least dominant intelligences are Visual–Spatial (f = 10, 2.84%) and Logical–Mathematical (f = 15, 4.26%), suggesting that fewer pupils identify with problem-solving, analytical thinking, or visual interpretation abilities. Overall, the profile suggests that pupils tend to excel more in values-oriented, social, and reflective domains rather than in analytical or visual–spatial intelligences. This means that Grade Four pupils of Estaka Central School predominantly possess Moral, Interpersonal, and Existential intelligences, indicating a learner population that is socially aware, reflective, and guided by values and ethical understanding. Meanwhile, fewer pupils exhibit strong Logical–Mathematical and Visual–Spatial intelligences. The strong presence of Moral and Interpersonal intelligences implies that instructional strategies that emphasize collaboration, group tasks, discussions, values integration, and real-life applications will likely be effective for these learners. The current finding is supported by Gardner's Theory of Multiple Intelligences (1983, 2000) which indicated that learners differ significantly in their cognitive strengths. He asserts that moral, interpersonal, and existential capacities develop when learning environments emphasize relationships, values, and meaningful engagement elements common in Philippine basic education settings.

Table 2

Multiple Intelligences in Dipolog Pilot Demonstration School

Multiple Intelligence	Frequency	%	Rank
1. Linguistic	44	7.59	4
2. Logico-Math	33	5.69	7
3. Musical	43	7.41	5
4. Visual-Spatial	28	4.83	8
5. Bodily-Kinesthetic	25	4.31	9
6. Interpersonal	117	20.17	2
7. Intrapersonal	42	7.24	6
8. Naturalist	23	3.97	10
9. Existential	72	12.41	3
10. Moral	153	26.38	1
Total	**580**	**100**	

The results show that Moral Intelligence ranks the highest among the Grade Four pupils, with a frequency of **153 (26.38%)**, indicating that many learners possess strong values, ethical awareness, and a sense of right and wrong. This is followed by **Interpersonal Intelligence** with **117 (20.17%)**, suggesting that many pupils excel in social interaction, cooperation, and relationship-building.Meanwhile, Existential Intelligence ranks third with 72 (12.41%), signifying that a substantial number of pupils demonstrate reflective and meaning-seeking

tendencies.The lowest-ranked intelligence is Naturalist Intelligence, with 23 (3.97%), indicating fewer pupils prefer learning through nature-related or environmental activities. This means that the Grade Four pupils of Dipolog Pilot Demonstration School are predominantly morally grounded, socially oriented, and reflective learners. Their strengths lie in ethical awareness, collaboration, and deep thinking. Core academic intelligences such as linguistic, logical-mathematical, and visual-spatial exist but are less dominant compared to moral and interpersonal domains. This implies that learners in Dipolog Pilot Demonstration School respond best to activities involving values clarification, social interaction, collaboration, and reflective thinking. Teachers should therefore integrate cooperative learning tasks, character-building activities, and meaningful discussions into classroom instruction. Aligning teaching strategies with these dominant intelligences may enhance learner engagement, improve classroom behavior, and strengthen academic performance.

The finding is supported by **Shearer (2018)**, who emphasized that learners with strong interpersonal, moral, and existential intelligences thrive in environments that allow them to explore personal meaning, ethical reasoning, and social interaction. Shearer explains that when classroom activities involve group collaboration, value-laden reflection, and opportunities to understand life purpose, students demonstrate higher motivation and deeper learning. This aligns with the observed dominance of these intelligences among the pupils, suggesting that instruction should be tailored to these strengths.

Table 3

The Learning Styles of thePupils of Estaka Central School In Terms of Motivation

Learning Styles in Terms of Motivation	Weighted Means	Interpretation
What motivates you most to learn well?		
1. I am really tuned into academic learning in the usual classroom.	3.89	Usually
2. I enjoy academic freedom.	4.15	Usually
3. I "turn on", but I am not interested, no one can make me do it.	3.22	Sometimes
4. I like to learn most of the time,especially when the subject is interesting.	3.37	Sometimes
5. I enjoy learning and get a sense of accomplishment from achieving.	4.0	Always
Mean	**3.73**	**Usually**

The overall mean of 3.73 indicates that the Grade Four pupils "Usually" demonstrate motivation toward learning. The highest indicators reflect that pupils enjoy academic freedom (4.15) and gain a sense of accomplishment from achieving (4.00), showing strong internal motivation. Meanwhile, items showing "Sometimes" responses such as learning when interested (3.37) and "turning on" when motivated (3.22) suggest that pupils' motivation fluctuates depending on engagement and task relevance. This means that pupils exhibit **moderate to high levels of intrinsic motivation**, particularly when allowed independence, freedom, and opportunities for success. However, motivation tends to decline when the learning task is less interesting or when pupils feel disengaged. This implies that while students generally enjoy learning, their motivation strengthens significantly when lessons are personalized, enjoyable, and linked to meaningful accomplishments. This implies that the Grade Four pupils of Estaka Central School are generally motivated to learn when they are given academic freedom, feel a sense of accomplishment, and are engaged in classroom activities that interest them. Since motivation levels fall within the "Usually" range, teachers can effectively enhance pupils' learning by incorporating choice-based tasks, providing opportunities for independent work, and designing lessons that allow

pupils to experience success. This suggests that motivation is not constant but can be strengthened through meaningful, relevant, and student-centered instructional strategies.

Ryan and Deci (2020) argue that intrinsically motivated students are more persistent, more engaged, and perform better academically when learning environments support autonomy, competence, and interest. This aligns with the pupils' strong preference for academic freedom and accomplishment-based learning. Similarly, **Heckhausen and Heckhausen (2018)** highlight that motivation is strengthened when learners feel competent and successful in their tasks—consistent with pupils' high rating on gaining a sense of achievement.

Table 4

The Learning Styles of the Pupils of Estaka Central School in Terms of Persistence

Learning Styles in Terms of Persistence	Weighted Mean	Interpretation
How persistent are you in completing the task?		
1. I enjoy working several tasks simultaneously.	3.78	Usually
2. Whether or not I complete what I have started depends only if I have interest on it.	3.35	Sometimes
3. I complete the things I begin.	4.09	Usually
4. I complete the things begun, infact, it bothers me not to.	3.80	Usually
5. I work on task on a one-at-a-time basis.	3.42	Sometimes
Mean	**3.69**	**Usually**

The overall weighted mean of **3.69**, interpreted as **"Usually,"** indicates that pupils of Estaka Central School generally demonstrate persistence when accomplishing tasks. Specifically, they *usually* complete what they begin (WM = 4.09 and 3.80), enjoy multitasking to some extent (WM = 3.78), and are willing to work steadily even on tasks they find challenging. However, pupils show only *sometimes* persistence when the task is not interesting to them (WM = 3.35) and when working on tasks one at a time (WM = 3.42). Pupils exhibit a consistent level of persistence, particularly in completing tasks they initiate. However, their persistence decreases when tasks fail to capture their interest or require sustained attention. This indicates that task engagement and relevance strongly influence persistence levels among learners. The findings imply that teachers should design learning tasks that are engaging, varied, and meaningful to sustain pupils' persistence. Activities that spark interest, offer choices, and allow pupils to take ownership of their work can significantly enhance their perseverance. Additionally, integrating strategies that promote focus such as structured routines and gradual task breakdowns can help pupils maintain persistence even when activities are less motivating.

The current finding aligns with the Kim and Park (2020) study, which indicated students persist longer and perform better when learning activities are meaningful and aligned with their personal interests, demonstrating stronger intrinsic motivation and sustained effort. This supports the finding that pupils in the study are more persistent when tasks capture their interest and allow them to complete what they have started.

Table 5

The Learning Styles of Pupils of Estaka Central School in Terms of Responsibility

Learning Styles in Terms of Responsibility	Weighted Mean	Interpretation
How do you like to learn and do things well?		
1. I like to do things most other people usually don`t do;I do not respond well to authority.	3.60	Usually
2. I enjoy doings I know I would be better off not doing. I am fairly conjuring.	3.45	Sometimes

3. Whether or not I do the usual things depends on the tasks, how I feel about the circumstances.	3.80	Usually
4. I do things that I do believe that I ought to do.	3.82	Usually
5. I feel best when I do things I know I should do, and that is I do most of the time.	4.03	Usually
Mean	**3.74**	**Usually**

Table 6 reveals that the Grade Four pupils of Estaka Central School *usually* demonstrate responsible learning behaviors, as shown by the overall mean of 3.74. The highest-rated item is *"I feel best when I do things I know I should do"* with a mean of 4.03, indicating that pupils commonly experience satisfaction when fulfilling expected tasks. Other items, such as *"I do things that I believe I ought to do"* (mean = 3.82) and *"Whether or not I do the usual things depends on how I feel about the tasks"* (mean = 3.80), also show that pupils generally act responsibly, though their consistency is somewhat influenced by interest or personal motivation. Only one indicator falls within the "Sometimes" category (mean = 3.45), showing that external factors or hesitation occasionally affect responsible behavior. This means that the pupils exhibit a **high level of responsibility** in their learning tasks. They are inclined to complete tasks they believe they should do, respond positively to fulfilling academic expectations, and typically make decisions aligned with responsible student behavior. This suggests that Grade Four learners possess a foundational sense of accountability, which is essential for academic success and classroom functioning. These findings imply that teachers can rely on pupils' natural tendency toward responsible behavior when assigning tasks and projects. Because pupils generally feel good about doing what is expected of them, teachers should reinforce responsibility through clear expectations, structured routines, and meaningful feedback. However, the occasional dips in responsibility suggest the need for tasks that are engaging and purposeful to sustain consistent responsible behavior, even when interest levels vary. According to **Zimmerman (2015)**, students who feel accountable for their tasks develop stronger self-regulation and are more likely to persist and complete academic work. Similarly, **Panadero (2017)** emphasizes that responsibility and self-regulated learning go hand-in-hand, enabling learners to take initiative and make decisions that support academic success.

Table 6

The Learning Styles of the Pupils of Estaka Central School in Terms of Structure

Learning Styles in Terms of Structure	**Weighted Mean**	**Interpretation**
How do you feel when you are given instructions?		
1. I find it difficult to have other people told me what to do or how to do it.	3.71	Usually
2. I really like to do things my way.	3.32	Sometimes
3. What is being done, with whom and why, determines whether it gets done my way, with someone or cooperatively.	3.35	Sometimes
4. I don`t mind getting told what or how to do a task as long as I like the person telling me.	3.18	Sometimes
5. I feel best when told exactly what is required and where I know exactly how to proceed before starting.	3.88	Usually
Mean	**3.49**	**Sometimes**

The pupils of Estaka Central School obtained an overall mean of **3.49**, interpreted as **"Sometimes"**, indicating a *moderate need for structure* when given instructions. They usually feel comfortable when they know exactly what is required (WM = 3.88), but they sometimes prefer flexibility (WM = 3.32–3.35) and occasionally

rely on interpersonal comfort when receiving directions (WM = 3.18). This suggests that while the pupils appreciate clear expectations, they are not heavily dependent on rigid guidance. The findings indicate that Grade Four pupils exhibit a **balanced preference** between structured and flexible learning environments. They benefit from clear, organized instructions but also value opportunities for autonomy in completing tasks. A "sometimes structured" profile means that pupils can adapt to both guided and independent learning situations depending on the activity and the level of clarity provided. These results imply that teachers should adopt a **balanced instructional approach** providing clear directions, examples, and expectations while also allowing room for pupil choice, creativity, and independence. Structured routines help reduce confusion and increase confidence, but incorporating flexible tasks fosters self-regulation and critical thinking. A blend of scaffolding and autonomy will cater to the pupils' varied structural preferences and support smoother task completion.

Recent research supports the need for balanced structure in the classroom. **Peters (2018)** found that learners perform better when instructional tasks combine clarity of expectations with opportunities for autonomy, as structured guidance reduces cognitive load while flexible learning enhances engagement and independence. Likewise, **Nguyen (2021)** emphasizes that children thrive academically when teachers provide predictable routines but also encourage them to make decisions and explore tasks their own way. This aligns with the pupils' moderate preference for structure reflected in the table.

Table 7

Summary of the Learning Styles of Pupils in Estaka Central School in Terms of the Elements of Emotion

Learning Styles	Weighted Mean	Interpretation
1. Motivation	3.73	Usually
2. Persistence	3.69	Usually
3. Responsibility	3.74	Usually
4. Structure	3.49	Sometimes
Mean	**3.66**	**Usually**

Table 8 shows that the learning styles of pupils in Estaka Central School in terms of the elements of emotion all fall under the interpretation **"Usually"**, except for structure, which is interpreted as **"Sometimes."** Motivation (3.73), persistence (3.69), and responsibility (3.74) all recorded relatively high weighted means, indicating that pupils generally demonstrate positive emotional engagement in learning. Structure obtained the lowest mean (3.49), suggesting that while pupils appreciate guidance, they do not always rely on structured or highly regulated learning conditions. The findings reveal that pupils tend to be **self-motivated, responsible, and persistent**, demonstrating readiness to engage in learning tasks. However, they are **less dependent on strict step-by-step instructions**, indicating a degree of flexibility and independence in their learning style. This suggests a learner group that values autonomy while still maintaining foundational emotional traits required for academic engagement. These results imply that teachers should strengthen instructional practices that **support learner autonomy**, such as allowing choices, fostering self-directed learning, and offering tasks that encourage initiative and accountability. Since pupils already possess adequate levels of motivation, persistence, and responsibility, teachers can build on these strengths by designing learning environments that encourage independent exploration while providing structure only when necessary. Minimal but meaningful guidance will help sustain their emotional readiness toward learning while nurturing critical thinking and problem-solving skills.

Recent studies reinforce the importance of emotional elements motivation, persistence, responsibility, and structure in shaping students' learning behavior. According to **Zhao and Li (2023)**, emotionally engaged learners demonstrate higher academic resilience and sustained interest in learning tasks, even when faced with challenges. Similarly, **Cáceres et al. (2019)** emphasize that students with strong self-regulation skills, such as responsibility and persistence, perform better in flexible learning environments that balance autonomy with guided

instruction. Meanwhile, **Barak (2017)** highlights that structured learning is beneficial but should not restrict students' creativity and independence, aligning with the pupils' lower reliance on structure in this study.

Table 8

Learning Styles of the Pupils of Dipolog Pilot Demonstration School in Terms of Motivation

Learning Styles in Terms of Motivation	Weighted Mean	Interpretation
What motivates you most to learn well?		
1. I am really tuned into academic learning in the usual classroom.	3.57	Usually
2. I enjoy academic freedom.	3.48	Sometimes
3. I "turn on", but I am not interested, no one can make me do it.	3.17	Sometimes
4. I like to learn most of the time, especially when the subject is interesting.	4.04	Usually
5. I enjoy learning and get a sense of accomplishment from achieving.	3.67	Usually
Mean	**3.59**	**Usually**

The table shows that the pupils' motivation to learn falls under the **"Usually"** category, with an overall weighted mean of **3.59**. The highest-rated indicator is *"I like to learn most of the time, especially when the subject is interesting"* (WM = **4.04**, Usually), indicating strong engagement when lessons capture their interest. Two indicators fall under *Sometimes "I enjoy academic freedom"* (WM = **3.48**) *"I 'turn on,' but if I am not interested, no one can make me do it"* (WM = **3.17**) revealing that students' motivation fluctuates depending on personal interest. Overall, the findings suggest that pupils are generally motivated but depend heavily on interest-driven tasks. The pupils demonstrate a moderate to high level of academic motivation, particularly when learning activities align with their interests or involve meaningful content. Their motivation declines when tasks do not appeal to them, indicating that motivation is not constant but situational. These findings imply that teachers should integrate engaging, interest-based, and meaningful activities to boost pupils' motivation. Lessons that provide variety, autonomy, and relevance are likely to sustain motivation. When properly designed, such learning experiences can help pupils remain consistently motivated, even in less engaging tasks.

Recent research underscores that student motivation increases when learning is relevant, engaging, and aligned with their personal interests. According to Opoku-Asare (2022), learners show higher motivation and academic engagement when lessons connect with their intrinsic interests and provide opportunities for meaningful participation.

Table 9

Learning Styles of the Pupils in Dipolog Pilot Demonstration School in Terms of Persistence

Learning Styles in Terms of Persistence	Weighted Mean	Interpretation
How persistent are you in completing the task?		
1. I enjoy working several task simultaneously.	4.61	Usually
2. Whether or not I complete what I have started depends only if I have interest on it.	3.41	Sometimes
3. I complete the things I begin.	3.98	Usually
4. I complete the things begun,in fact,it bothers me not to.	3.46	Sometimes
5. I work on task on a one-at-a-time basis.	3.17	Sometimes

Overall Weighted Mean	**3.53**	**Usually**

Table 9 reveals an overall weighted mean of 3.53, interpreted as "Usually." This indicates that pupils from Dipolog Pilot Demonstration School generally demonstrate consistent persistence when completing tasks. The highest-rated item is "I enjoy working several tasks simultaneously" (WM = 4.61, Usually), showing that many pupils are comfortable juggling multiple tasks.Pupils also report that they usually complete what they begin (WM = 3.98).However, some behaviors score lower and fall under "Sometimes," particularly: Completing tasks only when interested (WM = 3.41), Working on a task one-at-a-time (WM = 3.17) These findings show a mixed persistence pattern, where pupils can sustain effort but are also influenced by interest and work habits. The findings indicate that Grade Four pupils from Dipolog Pilot Demonstration School **exhibit moderate to high levels of persistence**, especially when tasks are engaging or when they can manage several activities at once. Their persistence, however, decreases when tasks do not appeal to their interests or when they lack structured task sequences. This suggests that persistence is **situational and interest-driven**, rather than fully internalized. The results imply that teachers should intentionally design learning activities that stimulate interest and offer manageable levels of challenge to sustain pupils' persistence. Pupils benefit from tasks that allow for multitasking opportunities, autonomy, and meaningful engagement. Likewise, since some pupils struggle when interest is low, teachers may need to enhance persistence by using task chunking, clear routines, and guided prompts. Supporting pupils in developing one-task-at-a-time discipline may also strengthen academic stamina, especially during complex tasks.

Recent studies emphasize that student persistence is closely tied to motivation, task engagement, and meaningful learning experiences. Hidi and Renninger (2020) argue that learners demonstrate stronger persistence when tasks are interest-driven and emotionally engaging. chunk and DiBenedetto (2021) highlight that self-regulation and structured guidance increase learners' ability to sustain effort.

Table 10

Leaning Styles of the Pupils in Dipolog Pilot Demonstration School in Terms of Responsibility

Learning Styles in Terms of Responsibility	**Weighted Mean**	**Interpretation**
How do you like to learn and do things well?		
1. I like to do things most other people usually don`t do;I do not respond well to authority.	3.31	Sometimes
2. I enjoy doings I know I would be better off not doing. I am fairly conjuring.	3.57	Usually
3. Whether or not I do the usual things depends on the tasks, how I feel about the circumstances.	3.40	Sometimes
4. I do things that I do believe that I ought to do.	3.42	Sometimes
5. I feel best when I do things I know I should do, and that is I do most of the time.	3.85	Usually
Mean	**3.51**	**Usually**

Table 10 shows that pupils at Dipolog Pilot Demonstration School exhibit a *"Usually"* level of responsibility, with an overall weighted mean of 3.51. The highest indicator (WM = 3.85) shows that pupils *feel best when they do things they know they should do*, suggesting a strong sense of duty and self-regulation. Meanwhile, lower items, such as resistance to authority (WM = 3.31), indicate that some pupils still respond better to autonomy than directive instruction. The results conclude that Grade Four pupils of Dipolog Pilot Demonstration School demonstrate a generally responsible learning style, completing tasks when they believe these are important, meaningful, or aligned with their personal expectations. This suggests that responsibility

among learners is positively associated with internal motivation and task value. Overall, the findings reflect that pupils generally understand and act upon their responsibilities, though they perform better when tasks align with their interests and internal motivation. The findings imply that teachers should provide structured yet autonomy-supportive learning environments. Pupils respond best when expectations are clear, tasks feel meaningful, and they understand why they must perform them.

Recent studies reinforce these findings. Garn, Matthews, and Jolly (2020) found that students show stronger responsibility and task completion when instructional environments support autonomy and make learning meaningful. Learners are more likely to follow through with expected behaviors when they feel a sense of ownership and internal value associated with the task.

Table 11

Learning Styles of the Pupils in Dipolog Pilot Demonstration School in terms of Structure

Learning Styles in Terms of Structure	**Weighted Mean**	**Interpretation**
How do you feel when you are given instructions?		
1. I find it difficult to have other people told me what to do or how to do it.	3.44	Sometimes
2. I really like to do things my way.	3.86	Usually
3. What is being done, with whom and why, determines whether it gets done my way, with someone or cooperatively.	3.82	Usually
4. I don`t mind getting told what or how to do a task as long as I like the person telling me.	3.28	Sometimes
5. I feel best when told exactly what is required and where I know exactly how to proceed before starting.	3.75	Usually
Overall Weighted Mean	**3.63**	**Usually**

The overall weighted mean for pupils' learning styles in terms of **Structure** is **3.63**, verbally interpreted as **"Usually."** This indicates that pupils generally prefer having clear directions, defined expectations, and a structured learning environment. The highest mean is **3.86** ("Usually") for the item **"I really like to do things my way."** This suggests a preference for autonomy within a structured environment. Items related to clarity such as **knowing exactly what is required before starting a task** (WM = 3.75) and **understanding what is being done and why** (WM = 3.82) also scored "Usually," showing that pupils feel more confident when expectations are clear. Lower means (e.g., 3.28 and 3.44, both "Sometimes") appear in items involving authority or being told what to do, suggesting some pupils become less comfortable when control is externally imposed. The findings show that Grade Four pupils at Dipolog Pilot Demonstration School typically learn best in environments where tasks are well-organized, expectations are explicit, and instructions are clearly delivered, but still desire a degree of autonomy in executing tasks. They thrive in structured settings as long as the structure allows personal involvement and understanding of task purpose. The findings imply that teachers should create learning environments that provide clear structure while still allowing room for student autonomy. Giving pupils explicit instructions and expectations, alongside opportunities to make choices and personalize tasks, can strengthen engagement and task completion. Gradually guiding learners to work confidently even with less direction can also enhance their adaptability and self-management skills.

Recent research affirms the importance of structured learning environments for young learners. **Ellis and Barber (2016)** found that children perform better academically when instructional expectations are clear and routines are consistent, as structure reduces cognitive overload. **Zheng and Bender (2019)** highlight that

structured learning supports self-regulation and task persistence, especially among elementary students who depend on predictability.

Table 12

Summary of the Learning Styles of Pupils in Dipolog Pilot Demonstration School in Terms of the Elements of Emotion

Learning Styles in Terms of Emotion	Weighted Mean	Interpretation
1. Motivation	3.59	Usually
2. Persistence	3.53	Usually
3. Responsibility	3.51	Usually
4. Structure	3.63	Usually
Overall	**3.57**	**Usually**

Table 12 shows that the Grade Four pupils of Dipolog Pilot Demonstration School "usually" demonstrate the four emotional learning style elements: motivation (3.59), persistence (3.53), responsibility (3.51), and structure (3.63). Among these, structure has the highest mean, indicating that pupils prefer learning environments with clear instructions and well-defined expectations. Meanwhile, responsibility has the lowest mean, though still within the "usually" level, suggesting that while pupils often take ownership of their tasks, there is still room for developing greater self-regulation and accountability. The pupils generally exhibit positive emotional learning tendencies, showing consistent motivation, perseverance, responsibility, and preference for structured learning situations. These characteristics suggest that they function best in classrooms where expectations are clear, tasks are guided, and learning processes are well-organized. However, their moderate levels in responsibility and persistence highlight the need for more opportunities to foster self-directed and independent learning skills. The findings imply that teachers should provide clear and consistent structure while gradually promoting learner independence. Using explicit instructions, visual guides, and step-by-step modeling can support pupils who prefer structured learning. At the same time, integrating small choices and opportunities for self-management can help strengthen responsibility, persistence, and overall self-regulated learning skills.

Recent studies affirm that structured learning environments significantly enhance learners' emotional engagement and task completion. According to Hammond (2020), clearly articulated expectations and predictable routines reduce cognitive load and allow pupils to focus more effectively on learning tasks. Similarly, Liu and Li (2023) found that structured yet autonomy-supportive classrooms improve students' motivation, persistence, and responsibility by providing both clarity and opportunities for self-directed action. These findings align with the pupils' strong preference for structured learning and their developing emotional learning skills.

Table 13 Significant Difference Between the Learning Styles of thePupils Between Estaka Central School and Dipolog Pilot Demonstration School

Learning Styles	Estaka Central School (weighted mean)	Dipolog Pilot Demonstration School (weighted mean)	t-observed df , 3	t-critical $\dot{\alpha}$ = .05	Interpretation
1. Motivation	3.73	3.59	**1.385**	**3.182**	**Not Significant**
2. Persistence	3.69	3.53			
3. Responsibility	3.74	3.51			
4. Structure	3.49	3.63			

Table 14 shows that the computed t-value of **1.385** is **lower** than the critical value of **3.182** at 0.05 significance level using df = 3. This means that **there is no significant difference** between the learning styles of pupils from Estaka Central School and Dipolog Pilot Demonstration School across the four emotional elements: **motivation, persistence, responsibility, and structure**. Both schools show similar weighted means, indicating a consistent learning style pattern among Grade 4 pupils in the two institutions. Based on the statistical results, the learning styles of Grade Four pupils from both schools are **statistically comparable**. Despite being from different school environments, pupils demonstrate similar tendencies in how they are motivated, how they persist in tasks, how responsible they are in learning activities, and how much structure they prefer in classroom tasks. The findings imply that a **uniform learning support program** may be effectively implemented across both schools. Since pupils share similar learning style profiles, teachers can adopt common strategies emphasizing structured guidance, motivation-building activities, and opportunities to develop persistence and responsibility. A division-wide program rather than school-specific interventions will likely benefit learners equally.

Recent studies confirm that learners from similar developmental stages often exhibit **parallel learning style patterns**, even across different school settings. For example, **Pocaan (2022)** found that students from varied institutions demonstrated similar learning style tendencies when exposed to comparable curricular and environmental conditions. Additionally, **Opoku (2025)** emphasized that emotional learning patterns such as motivation and persistence are often stable across school contexts, especially among primary learners who share similar socio-cultural experiences.

V. Discussions and Recommendations

The findings of the study revealed that Grade Four pupils from both Estaka Central School and Dipolog Pilot Demonstration School exhibited dominant **Moral**, **Interpersonal**, and **Existential** intelligences, indicating that learners are strongly inclined toward values-based decision-making, social interaction, and reflective thinking. These results align with recent research showing that learners today respond strongly to activities involving collaboration, empathy, and real-life meaning (Pocaan, 2022; Shearer, 2018). With regard to learning styles, pupils from both schools consistently showed preferences in the emotional domains of **motivation**, **persistence**, **responsibility**, and **structure**, with overall interpretations of "Usually." This suggests that pupils are generally motivated, persistent, responsible, and comfortable when tasks follow clear directions and structured routines. Moreover, the t-test results showed **no significant difference** in the learning styles of pupils from the two schools, indicating homogeneity in learner characteristics despite being from different school environments. This implies that both schools cater to similar learner profiles, making unified intervention programs such as the Proposed Program for Pupils' Academic Improvement (PPIAP) appropriate and feasible for both contexts. Overall, the findings highlight the need for learner-centered approaches that value moral and interpersonal learning, instructional scaffolds that support structure, and opportunities for developing responsibility and autonomy.

Based on the findings of the study, the following recommendations are proposed: Teachers should design lessons that incorporate collaborative tasks, reflection activities, and values-driven learning to support pupils' dominant moral, interpersonal, and existential intelligences. Activities like group discussions, journaling, decision-making exercises, and community-linked tasks can enhance engagement and deepen understanding.

Schools should implement professional development programs to familiarize teachers with Multiple Intelligences Theory and the Dunn & Dunn Learning Styles framework. Training should focus on practical classroom strategies aligned with the study's findings. Since learning profiles are similar across the two schools, the PPIAP can be adopted as a division-level model to improve teaching practices and enhance overall academic performance, particularly in preparation for the NAT. To strengthen generalizability, similar studies should be conducted across different grade levels and other schools in the division or region.

VI. conclusion

The study revealed that Grade Four pupils from both Estaka Central School and Dipolog Pilot Demonstration School consistently demonstrated dominant emotional learning styles—particularly motivation, persistence, responsibility, and the need for structure—indicating that they "usually" rely on these elements when engaging with academic tasks. Multiple intelligences profiles further showed strong manifestations of moral, interpersonal, and existential intelligences across both schools, suggesting that pupils thrive in learning environments that emphasize values, social interaction, and reflective thinking. While slight variations in learning style means appeared between the two schools, statistical analysis confirmed no significant difference, implying that the pupils share similar learning tendencies despite differences in school context. Overall, the findings underscore the importance of structured, supportive, and value-rich learning environments that nurture pupils' natural strengths while gradually building autonomy, adaptability, and self-regulated learning skills. These insights provide a strong foundation for designing the Proposed Program for Pupils' Improved Academic Performance (PPIAP), ensuring that instructional strategies are aligned with pupils' multiple intelligences and emotional learning profiles.

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