

Multiple Intelligences, Teaching Styles, and Triarchic Intelligence of the Grade 6 Learners

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Abstract

Teaching styles play a crucial role in aligning with students' diverse learning preferences by fostering their strengths and addressing their learning challenges. This study has determined the level of Multiple Intelligences of teachers, teaching style, and triarchic intelligences of Grade 6 learners. This quantitative study utilized descriptive and correlational research designs to assess the levels of multiple intelligences and teaching styles among teachers, alongside the triarchic intelligence of learners in the Tboli West District for the school year 2024–2025. Results revealed that teachers exhibited very high levels of visual-spatial, intrapersonal, and bodily-kinesthetic intelligences, with high levels also observed in musical, linguistic, logical-mathematical, interpersonal, and naturalist domains. In terms of teaching styles, educators predominantly adopted authority and facilitator approaches at very high levels, while hybrid,

demonstrator, and delegatory styles were also employed consistently. Learners, on the other hand, demonstrated a high level of triarchic intelligence, marked by their capacity for analytical, creative, and practical thinking. However, regression analysis indicated that teachers' multiple intelligences significantly predict their chosen teaching styles. Additionally, a moderate negative correlation was found between teachers' multiple intelligences and learners' triarchic intelligence. Notably, the authority teaching style showed a significant inverse relationship with students' analytical intelligence, suggesting that highly structured instructional methods may restrict opportunities for critical thinking and problem-solving. These findings underscore the importance of incorporating more flexible, learner-centered strategies to better support intellectual development.

Keywords: *multiple intelligences, teaching styles, triarchic intelligence, critical thinking, learner-centered strategies, instructional practices*

Introduction

Teaching styles play a major role in reaching the pupils' learning preferences. They provide ways to improve their strengths and compensate for their weaknesses. Given that learners are different from one another, this poses a challenge to all educators to design pedagogies that cater to all types of learners.

In relation to this, the concept of multiple intelligences for curriculum design could provide various intellectual learning activities and create an environment in which students feel comfortable (Inan & Erkus,

2017). Additionally, Minnier et al. (2019) mentioned that the application of multiple intelligences to teaching differs from traditional methods; teaching with multiple intelligences adopts multiple instructional strategies and activities. Awang et al. (2017) also proposed that teaching with multiple intelligences could positively enhance students' academic performance, particularly in English listening, speaking, reading, and writing.

Meanwhile, the Triarchic Theory of Intelligence sought to understand human intelligence, proposing that intelligence results from information-processing components being applied to experiences for the purposes of adaptation to, shaping of, and selection of environments. Similarly, the painful reality that while students have been taught how to analyze, many teachers lack effective model to empower them in facilitating critical thinking skills.

Considering these theoretical foundations, and recognizing that teaching methods and student learning styles have always been closely related, it is crucial for educators to become knowledgeable about and comfortable with a variety of teaching philosophies. Doing so enables them to maximize their influence and infuse their classrooms with fresh ideas and creativity, particularly in the educational system of the twenty-first century.

However, at present, the locale of the study experiences problems such as the lack of applied teaching styles among teachers, which limits learners' capabilities to excel in their academic performance. Learners' preference for logical-mathematical intelligence was stronger. It is important to note that many studies conducted thus far relate multiple intelligence teaching styles only to adaptive functioning; dynamic intellectual abilities; and academic performance. The relationship between multiple intelligence teaching styles and the triarchic intelligence of pupils, however, remains largely theoretical.

In addition, although teaching strategies such as collaboration, cooperative learning, and conceptual change texts have been widely used to help improve students' understanding of material taught, as demonstrated in various studies (Amponsah et al., 2018), no research has yet examined how the multiple intelligences teaching styles of teachers and the triarchic intelligences of students. Hence, in view of this research problem and information gap, the researcher is prompted to undertake this study on multiple intelligence teaching styles and triarchic intelligence of the learners.

Statement of the Problem

This study aimed to find out the relationship between multiple intelligence teaching styles of the teacher and triarchic intelligence of the pupils. It sought answers to the following questions:

1. What is the level of multiple intelligence of teachers relative to:
 - 1.1 bodily-kinesthetic;
 - 1.2 interpersonal;
 - 1.3 intrapersonal;
 - 1.4 linguistic;
 - 1.5 logical-mathematical;
 - 1.6 musical;
 - 1.7 naturalist; and
 - 1.8 visual-spatial?
2. What is the extent of teaching style employed by the teachers to address various learners such as:
 - 2.1 authority style;
 - 2.2 delegatory style;
 - 2.3 facilitator style;
 - 2.4 demonstrator style; and
 - 2.5 hybrid style?
3. What is the level of triarchic intelligence of the learners in terms of:
 - 3.1 analytical;
 - 3.2 practical; and

3.3 creative?

4. Do multiple intelligences of teachers a significant predictor of their teaching style?
5. Is there a significant relationship between the teaching styles and triarchic intelligence of the learners?

Hypotheses

The following statements stated the hypothesis of this study:

1. The multiple intelligences of teachers do not significant predict their teaching style.
2. There is no significant relationship between the teaching styles and triarchic intelligence of the learners.

METHODOLOGY

This study employed descriptive and correlational research designs, which are commonly used to examine relationships between variables and to describe the nature and strength of their association (Johnson & Christensen, 2020). The primary aim was to determine the relationship between teaching styles based on multiple intelligences and the triarchic intelligence of learners.

The respondents of the study included 205 Grade Six learners and 30 teachers from selected schools in the Tboli West District of the Department of Education, Division of South Cotabato, for the School Year 2024–2025. The research was specifically conducted in the following schools: Tboli Integrated School (IS), Tdaan Leteng Elementary School (ES), Lamla ES, Afus ES, Desawo ES, Tbolok ES, Lemsnon ES, Talufo IS, Lamhaku IS, Kesugmong IS, Datal Teblow IS, Lamsalome IS, Lambuling ES, Lambuling ES–Damlas Extension, and Lambuling ES–Datal Lebe Extension. These schools are located in the Tboli West District, an area known for its cultural and geographic diversity.

To gather the necessary data, the study utilized survey questionnaires composed of three parts. The first part was adapted and modified from the work of Mackenzie (2000) and consisted of 40 items designed to assess teachers' use of multiple intelligences in their teaching styles. The second part comprised 41 items that described the specific teaching styles employed by teachers toward their pupils. The third part of the questionnaire, borrowed from Sternberg (2015), included 18 items aimed at measuring the triarchic intelligence of the learners, which encompasses analytical, creative, and practical intelligence components.

For the analysis of data, the study employed mean and standard deviation as statistical tools. The mean, a measure of central tendency, was used to determine the average levels of multiple intelligence teaching styles, teaching style application, and the triarchic intelligence of learners. It is calculated by summing all the values in a dataset and dividing by the number of observations. Meanwhile, the standard deviation measured the variability or dispersion of responses, indicating how much the values deviate from the mean.

Results and Discussion

Level of Teachers' Multiple Intelligences

This table presents summary of the level of multiple intelligence of teachers.

Table 1. Level of Teachers' Multiple Intelligence

Indicators	Mean Ratings	SD	Qualitative Description
Visual-Spatial	4.38	0.47	very high
Intrapersonal	4.35	0.41	very high
Musical	4.14	0.47	high
Linguistics	4.12	0.38	high
Logical-Mathematical	4.12	0.51	high

Interpersonal	4.07	0.55	high
Naturalist	3.87	0.49	high
Bodily-kinesthetic	3.76	0.45	high

The results indicate that teachers demonstrate varying levels of multiple intelligences, with the highest-rated intelligence being visual-spatial (Mean = 4.38, SD = 0.47) verbally described as very high. This suggests that teachers demonstrate an exceptional proficiency in terms of capacity to think images, pictures, and can visualized accurately. The high level of visual-spatial intelligence suggests that teachers are adept at using visual aids, diagrams, and other spatial representations in their teaching.

In contrast, the lowest-rated intelligence is bodily-kinesthetic (Mean = 3.76, SD = 0.45, High). This suggests that teachers are well rounded in their ability to control one's movement and handle objects skillfully.

The finding aligns to (Sweller et al., 2020) who posited that the ability to think in images, use visual materials effectively, and manipulate spatial elements is crucial for fostering an engaging and interactive learning environment. However, incorporating role-playing, hands-on experiments, and movement-based learning techniques can enhance student engagement and accommodate diverse learning styles (Jensen, 2019).

Teacher's Teaching Style

This section presents the teaching style of teachers in Tboli West District comprising authority style; delegatory style; facilitator style; demonstrator style; and hybrid style.

Table 2. Summary of the Extent of the Teaching Style Employed by Teachers to Different Learners

Indicators	Mean Ratings	SD	Qualitative Description
Authority style	4.25	0.41	very high
Facilitator style	4.23	0.38	very high
Hybrid style	4.13	0.34	high
Demonstrator style	4.01	0.40	high
Delegatory style	3.86	0.41	high

The findings reveal that teachers exhibit varying levels of multiple intelligence in their teaching styles, with an overall tendency toward very high and high levels across different approaches. The Authority Style received the highest rating (M = 4.25, SD = 0.41), indicating that teachers place strong emphasis on structure, clear expectations, and discipline in their instructional methods.

On the other hand, Delegatory Style (M = 3.86, SD = 0.41) got the lowest mean. Though rated high, indicating that while teachers model and guide students in learning, there is comparatively less reliance on student-led and self-directed learning experiences.

These results suggest that although teachers demonstrate strong proficiency in structured and facilitative teaching approaches; such as clearly organized instruction, consistent routines, and guided learning there remains significant potential to improve instructional effectiveness by integrating more student-centered and experiential learning strategies.

The findings align with Weimer (2013), who emphasized that shifting toward a learner-centered paradigm encourages students to take greater responsibility for their learning, thereby fostering autonomy, engagement, and critical thinking. Additionally, Kolb (2015) highlighted the importance of experiential learning cycles in

helping learners connect theory to practice through reflection and active experimentation. By incorporating more student-driven learning opportunities, such as project-based learning and peer collaboration, teachers can better address the diverse needs and strengths of learners (Tomlinson, 2020).

Level of the Learners' Triarchic Intelligence

This section presents the findings on the level of learners' triarchic intelligence comprising analytical, practical, and creative intelligence.

Table 3. Level of the Learners' Triarchic Intelligence

Dimensions	Mean	SD	Qualitative Description
Practical	4.08	0.37	high
Creative	4.04	0.48	high
Analytical	3.80	0.51	high
Overall Mean	3.98	0.36	high

Among the three dimensions, Practical Intelligence received the highest rating ($M = 4.08$, $SD = 0.37$), suggesting that students excelled in applying knowledge to real-world situations, problem-solving, and adapting to different environments. In

Meanwhile, Analytical Intelligence had the lowest score ($M = 3.80$, $SD = 0.51$), implying that while students could analyze and evaluate information, there was room for improvement in developing critical thinking, logic-based reasoning, and structured problem-solving skills.

The findings indicated that learners exhibited a high level of Triarchic Intelligence, with an overall mean score of 3.98 ($SD = 0.36$). This suggests that students are well-rounded in their cognitive abilities, demonstrating strength in analytical, practical, and creative aspects of intelligence. Such a profile implies that learners are capable of analyzing problems critically, applying knowledge in real-world contexts, and generating innovative solutions.

The findings support Sternberg's Triarchic Theory of Intelligence (Sternberg, 2019), which posits that intelligence is not a single general ability but comprises three interrelated components: analytical (problem-solving and critical thinking), creative (innovation and imagination), and practical (application of knowledge to everyday situations). Learners who score highly across all three domains are more adaptable and effective in diverse learning environments.

Furthermore, it is aligned with Grigorenko, et al. (2020) who asserted that educational programs that foster triarchic abilities enhance students' academic performance and lifelong learning skills. The balanced development of these intelligences equips learners to handle both academic challenges and practical life tasks, encouraging both school success and real-world competence.

Testing Whether Multiple Intelligences are Predictors of Teaching Style

This section shows the results of regression analysis on the multiple intelligences and teaching style of teachers.

Table 4. Regression Analysis on Multiple Intelligences and Teaching Style

Variable	R	R ²	t-comp	t-tab	Interpretation
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MI-Authority Style	0.89	0.79	29.52	1.98	significant
MI-Delegatory Style	0.88	0.77	28.57	1.98	significant
MI-Facilitator Style	0.81	0.66	20.95	1.98	significant
MI-demonstrator Style	0.80	0.64	20.35	1.98	significant
MI-hybrid style	0.83	0.69	22.70	1.98	significant

$\alpha=0.05$ level of significance

The highest correlation was observed between MI and the authority teaching style ($R = 0.89$, $R^2 = 0.79$), suggesting that 79% of the variance in using the authority style can be explained by the integration of multiple intelligences. Similarly, the delegatory style also demonstrated a high correlation ($R = 0.88$, $R^2 = 0.77$), followed by the hybrid ($R = 0.83$, $R^2 = 0.69$), facilitator ($R = 0.81$, $R^2 = 0.66$), and demonstrator ($R = 0.80$, $R^2 = 0.64$) styles.

All computed t-values far exceeded the tabular value ($t_{\text{tab}} = 1.98$), confirming that each relationship was statistically significant at the 0.05 level. These findings align with the theoretical underpinnings of Gardner's Multiple Intelligences Theory, which posits that recognizing and responding to diverse intelligences enhances instructional effectiveness and learner engagement (Gardner, 2011). Moreover, research by Armstrong (2020) supported the idea that teachers who integrate MI into their teaching practices often adopt varied instructional strategies to accommodate learners' strengths. This statistical evidence reinforces the importance of differentiated teaching styles, guided by MI principles, in fostering inclusive and adaptive educational environments (Alavinia & Mollahosseini, 2019). Hence, the study highlights the crucial role of MI in shaping effective teaching styles and adapting instruction to meet diverse student needs.

Correlational Analysis between the Teachers' Multiple Intelligence and Students' Triarchic Intelligence

This section presents the correlation between the teachers' multiple intelligences and students' triarchic intelligences.

Table 5. Correlational Analysis between the Teachers' Teaching Styles and Students' Triarchic Intelligence

	Statistics	Authority	Delegatory	Facilitator	Demonstrator	Hybrid
Analytical	Pearson's r	-0.54	-0.36	-0.49	-0.50	0.44
	p-value	0.04*	0.19	0.07	0.06	.10
Practical	Pearson's r	-0.36	-0.20	-0.28	-0.40	0.39
	p-value	0.19	0.47	0.31	0.14	.15
Creative	Pearson's r	-0.48	-0.44	-0.41	-0.45	0.45
	p-value	0.07	0.10	0.13	0.09	.09

Overall Mean	Pearson's r	-0.53	-0.37	-0.45	-0.51	0.47
	p-value	0.04*	0.18	0.09	0.05	.08

A=0.05 level of significance

The correlational analysis between teachers' multiple intelligences and students' triarchic intelligence revealed that there is a moderate negative correlation between multiple intelligences and level of learners triarchic intelligences ($r=-0.53$, $p=0.04$). Specifically, teachers who employed the authority teaching style exhibited a statistically significant negative correlation with students' analytical intelligence ($r = -0.54$, $p = 0.04$), indicating that rigid, highly structured instructional methods may hinder students' ability to think critically and evaluate information. All other domains do not shows any significant relationship.

Overall, the findings suggested that teacher-centered approaches, particularly the authority teaching styles, negatively impacted students' triarchic intelligence, with significant effects on analytical intelligence. These results aligned with previous research indicating that teacher-directed instruction might have limited students' ability to develop higher-order thinking skills and self-directed learning habits (Marzano, 2022). Conversely, the facilitator and delegatory styles showed weaker negative correlations, implying that a more student-centered approach might have provided better opportunities for the development of students' analytical, practical, and creative intelligence (Sternberg, 2020).

Conclusion

Based on the findings of the study, the researchers concludes that tteachers exhibited varying levels of multiple intelligences which indicates their strong capacity to utilize visual aids, demonstrate self-awareness, and incorporate physical engagement in their instructional practices. Moreover, teachers showed a preference for structured, directive instruction, often guiding students closely in the learning process.

Students, on the other hand, displayed a high level of triarchic intelligence, suggesting their ability to apply knowledge in real-world contexts, think creatively, and analyze information critically. Additionally, the study also showed that multiple intelligences were significant predictors of teaching styles, implying that an educator's intelligence profile statistically influence their chosen instructional method.

Additionally, a moderate negative correlation was found between teachers' multiple intelligences and students' triarchic intelligence. Notably, the authority teaching style demonstrated a statistically significant negative correlation with students' analytical intelligence, suggesting that overly rigid and structured teaching approaches may hinder students' development of critical thinking and problem-solving skills.

Recommendations

The following recommendations are made based on the facts and conclusions drawn from this study:

1. Since teachers demonstrated strong visual-spatial, intrapersonal, and bodily-kinesthetic intelligences, professional development programs should incorporate diverse instructional strategies that leverage these strengths while also integrating methods that enhance their musical, linguistic, logical-mathematical, interpersonal, and naturalist intelligences to create a more inclusive and multifaceted learning environment.
2. Given teachers' preference for structured, directive, and guided instruction, they may try to adopt a more flexible and student-centered approach that incorporates inquiry-based learning, collaborative activities, and problem-solving tasks to foster a more engaging and adaptive classroom experience.
3. Since students exhibit a high level of triarchic intelligence, educators may design instructional activities that further enhance their practical, creative, and analytical skills through real-life applications, open-ended projects, and interdisciplinary learning opportunities to maximize their intellectual potential.

4. Since multiple intelligences were found to be significant predictors of teaching style, schools and education policymakers may develop activities to enhance intelligences of teachers in various aspects.
5. Given that the authority teaching style negatively correlates with students' analytical intelligence, teachers may adopt more flexible, student-centered instructional strategies that promote critical thinking and problem-solving. Encouraging discussion-based learning, open-ended questioning, and inquiry-based tasks may reduce rigidity in instruction and enhance students' ability to analyze and evaluate information independently.
6. Future research may explore the influence of external factors such as classroom environment, teacher-student interaction, and curriculum design on the relationship between teachers' multiple intelligences and students' triarchic intelligence. Additionally, a longitudinal study may examine how these relationships evolve over time and impact student academic achievement and lifelong learning skills.

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