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Learning styles of Gen-Z students of Bagabag National High School and their preferred instructional approaches

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Abstract

This study investigated the learning styles of 188 Grade 12 students of Bagabag National High School during the Academic Year 2025–2026 and examined their relationship with preferred instructional approaches. Employing a quantitative research design, the study utilized a descriptive-correlational method to determine the extent of association between students' perceived learning styles and instructional preferences. Data were collected using validated and reliable learning style and instructional approach instruments and analyzed through descriptive statistics and Spearman's Rank Correlation at the 0.05 level of significance. Findings revealed that Generation Z students demonstrated a high overall level of learning style manifestation, indicating adaptability across multiple modalities. Visual learning emerged as the most dominant, followed by interpersonal and logical styles, while auditory, linguistic, kinesthetic, and intrapersonal styles also showed notable significance. In terms of instructional approaches, students generally preferred diverse teaching strategies, with technology-enhanced, motivational, content-focused, and facilitative approaches ranking highest, reflecting their inclination toward interactive, learner-centered, and digitally enriched learning environments. Correlation analysis showed significant relationships between specific learning styles and instructional approaches. Visual learners favored facilitative and motivational strategies, auditory learners aligned with teacher-centered, interactive, and lecture-based approaches, while linguistic, kinesthetic, logical, and intrapersonal learners demonstrated varied preferences for student-centered, facilitative, technology-enhanced, content-focused, and structured instructional methods. These results affirm that learning styles significantly influence instructional approach preferences. Based on the findings, the study developed an educational management intervention consisting of seven learning activities and ten targeted teaching strategies designed to address areas of lower engagement and preference. Overall, the study underscores the importance of adaptive, multimodal, and differentiated instruction in

optimizing teaching effectiveness and enhancing learning outcomes among Generation Z learners.

Keywords: Gen-Z students, learning styles, preferred instructional approaches

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1. Introduction

The rapid transformation of the educational landscape brought about by globalization, technology, and digital literacy has reshaped the way contemporary learners prefer to receive and process information. In particular, students belonging to Generation Z—those born from the mid-1990s to early 2010s—demonstrate distinct learning tendencies that differ from previous generations due to their early exposure to gadgets, multimedia platforms, and interactive technologies. These students tend to thrive in learning environments that are fast-paced, visually stimulating, socially interconnected, and grounded in real-world relevance. Observations in classroom settings reveal that conventional instructional approaches that rely heavily on rote memorization and teacher-centered delivery often fail to sustain their attention, suggesting a meaningful connection between learning effectiveness and the alignment of teaching methods with Gen-Z learning styles.

Recent literature emphasizes that Gen-Z learners are highly visual, tech-savvy, and inclined toward interactive learning modalities, often demonstrating shorter attention spans but stronger multi-tasking capabilities (Sari & Wahyudin, 2021). They are also more likely to value autonomy, peer collaboration, and the integration of digital platforms in the learning process (Pratama & Firmansyah, 2020). These characteristics demand a transition from rigid pedagogical traditions to more dynamic, student-centered approaches. As schools continue to recover from pandemic-induced shifts in education, such rethinking of instructional delivery becomes not only relevant but necessary. Moreover, research stresses the influential role of learning style alignment in increasing academic engagement and achievement. When instructional approaches correspond with students' preferred learning modalities, learners demonstrate greater motivation, deeper comprehension, and longer retention of information (Yadav et al., 2022). Conversely, mismatches between teaching and learning styles may weaken student participation, trigger disinterest, and contribute to underperformance. Understanding student learning styles, therefore, is not merely diagnostic—it is developmental and transformative for classroom instruction.

In the Philippine context, the integration of differentiated instruction guided by learning preferences has been cited as a key driver for responsive classroom practice and 21st-century skills development (Pacheco & Panganiban, 2023). Schools catering to digital-native learners must embrace instructional methods that incorporate technology, inquiry, collaboration, and experiential learning to foster meaningful engagement. Identifying the preferred instructional approaches of Gen-Z students becomes a crucial step toward creating inclusive, future-ready learning environments.

In Bagabag National High School, teachers have begun to notice varied levels of student engagement depending on the teaching strategies used. Some classes become highly participative when technology, collaboration, or multimedia content is integrated, while others stagnate when traditional lecture-based instruction is employed. These instructional discrepancies highlight the significance of knowing students' preferred ways of learning to ensure that pedagogy remains responsive rather than generic or assumptive. This study emerges from the researcher's desire to better understand the learning styles of Gen-Z students in this specific school context and to determine which instructional approaches best match their cognitive preferences and socio-emotional learning needs. The outcomes of this investigation aim to serve as a foundation for instructional refinement, curriculum responsiveness, and innovative teaching practices tailored to the learners of today.

Given this context, this study seeks to determine the learning styles of Gen-Z students of Bagabag National High School and examine their preferred instructional approaches. By establishing a clear connection between learners' cognitive tendencies and teacher pedagogy, this research aims to contribute to instructional improvement, culturally relevant practice, and enhanced learner outcomes in the secondary school setting. Moreover, despite the

growing body of literature on Generation Z learners, significant gaps remain in understanding the specific learning styles of Filipino secondary school students, particularly in rural public schools such as Bagabag National High School. Most studies addressing Gen-Z learning preferences are situated in urban contexts or focus on college-level learners, leaving a gap in the localized and grade-specific realities of junior and senior high school students. Furthermore, many existing studies tend to generalize learning styles without examining their alignment to concrete instructional approaches currently practiced in the classroom. This mismatch between theoretical assumption and actual pedagogical application highlights the need for contextualized research that bridges student learning preferences with classroom realities.

Another research gap lies in the limited empirical evidence exploring how Gen-Z traits—such as digital immersion, preference for visual media, and need for interactive engagement—translate into day-to-day classroom behaviors in provincial Philippine settings. Teachers frequently rely on intuition or anecdotal observation when designing lessons rather than evidence-based knowledge about student learning styles. As a result, classroom strategies do not always match the cognitive and motivational profile of learners, creating a gap between instructional planning and student needs. This study seeks to address this gap by providing localized data that can support instructional alignment and pedagogical responsiveness.

In practice, teachers encounter several recurring challenges in catering to Gen-Z learners. Many struggle to maintain student engagement in traditional lecture-based activities and report difficulty motivating students who quickly lose interest in tasks that do not involve technology, collaboration, or creative expression. Additionally, limited access to ICT resources, inconsistent internet connectivity, and the absence of structured training on differentiated instruction further complicate the delivery of learner-centered pedagogy. These constraints result in teachers defaulting to conventional methods despite their awareness of changing learner profiles. Students also face their own challenges. Although Gen-Z learners are technologically inclined, not all have equal access to digital tools at home, which creates disparities in engagement and learning opportunities. Some also experience difficulty concentrating during lengthy teacher talk and perform better when information is chunked, visualized, or linked to real-life situations. These learner-related barriers reinforce the urgency of conducting context-based research that captures both teacher realities and student preferences. Ultimately, this study was motivated by the need to provide a research-based foundation for designing instructional approaches that are genuinely responsive to the learning styles of Gen-Z students in Bagabag National High School.

It is also noted by the current researcher that this study is grounded on several international, national, and institutional research priorities that emphasize inclusive, equitable, and quality education. First, it aligns with the United Nations Sustainable Development Goal (SDG) 4: Quality Education, which advocates for learner-centered, relevant, and future-ready instructional practices. By examining the learning styles of Gen-Z students, the study supports efforts to make teaching more responsive to learner diversity, ensuring that no student is disadvantaged by a mismatch between pedagogy and preferred modes of learning. Furthermore, the study contributes to the SDG target on enhancing learning outcomes through innovative approaches, recognizing that instructional responsiveness is essential to 21st-century education.

At the national level, this research is also linked to the National Research Agenda for Teacher Education (NRATE), which underscores the need for pedagogical innovations, learner development, and evidence-based instructional practices. NRATE emphasizes that research must directly respond to learner contexts and classroom realities. This study addresses that call by generating localized data on Gen-Z learning preferences, which can inform the selection and adaptation of teaching strategies, leading to more effective classroom delivery. In addition, the study supports the DepEd Research Agenda, particularly under the themes of Teaching and Learning and Inclusive Education. The Department of Education advocates differentiated instruction and learner-centered frameworks to address diverse needs and promote equity. By identifying which instructional approaches align with specific learning styles, the study provides empirical grounding for teachers seeking to implement responsive strategies that foster engagement, participation, and achievement across student groups.

At the institutional level, this research corresponds with the Nueva Vizcaya State University (NVSU) Research Agenda, which prioritizes research that improves basic education quality, strengthens teacher competence, and promotes innovation in pedagogical practices. As SUCs play a vital role in educational research supporting local schools, this study reinforces NVSU's mandate to contribute knowledge that enhances public education systems within the province. Finally, the study is anchored on the College of Teacher Education (CTE) Research Agenda, which places great importance on instructional enhancement, learning outcomes, and adaptive 21st-century pedagogy. The CTE promotes inquiry into learner diversity, technology integration, and responsive curriculum design—areas directly addressed in this investigation. By exploring the learning styles of Gen-Z students and their preferred instructional approaches, the study not only enriches the academic discourse but also provides actionable insights that can be adopted by pre-service and in-service teachers.

Taken collectively, this research serves as an important response to international commitments, national education goals, and institutional mandates that aim for high-quality, inclusive, and forward-looking education. This study operates on the basic assumption that students possess diverse learning styles that significantly influence the way they absorb, process, and apply instructional content. It also assumes that Gen-Z learners, being digital natives, are more inclined toward multimedia-rich, collaborative, and interactive approaches rather than linear or lecture-centered modes of instruction. Another assumption is that when teachers are aware of these learning preferences, they can better design lessons that promote engagement, motivation, and deeper understanding. The study also presumes that instructional alignment—matching teaching methods with student learning styles—can lead to more meaningful classroom participation and improved academic performance.

As an Assistant Principal, the researcher has observed several pressing challenges and concerns among teachers that further justify the need for this investigation. Many teachers acknowledge that Gen-Z students have changing attention patterns and prefer fast-paced, tech-integrated methods, yet they struggle to consistently deliver such approaches due to limited training and insufficient classroom resources. Some teachers report disengagement during traditional board work and teacher-led discussions, resulting in passive learning and reduced participation. There are also concerns about widening learning gaps among students who are not sufficiently stimulated by conventional instruction. Moreover, teachers express uncertainty about which instructional strategies are truly effective for Gen-Z learners, as they often rely on trial-and-error rather than research-based alignment. These classroom realities highlight a strong necessity for empirical guidance on student learning styles and corresponding pedagogical practices. Therefore, this study is timely and relevant as it provides evidence-based insight that can support teachers in crafting instructional approaches that are both responsive and effective for Gen-Z learners.

This study investigated the learning styles of Gen-Z learners particularly Grade 12 students of Bagabag National High School for academic year 2025-2026 and its relationship to their preferred instructional approaches. Specifically, it answered the following questions.

1. What is the perception of the respondents of their learning styles along visual, auditory, linguistics, kinesthetic, logical, interpersonal, and intrapersonal styles?

2. What is the perception of the respondents of their preferred instructional approaches along teacher-centered, student-centered, interactive, lecture-based, authoritative, facilitative, technology-enhanced, traditional, motivational, and content-focused approaches?

3. Is there a significant relationship between the perceived learning styles and preferred instructional approaches of the respondents?

4. Based on the significant findings of the study, what educational management intervention could be developed?

2. Related Literature

This study is anchored on the Felder and Silverman's Learning Styles Theory (1988) and the Constructivist Learning Theory originally advanced by Bruner (1966) and Vygotsky (1978). These theories provide a conceptual lens for explaining how Gen-Z students learn, interact with knowledge, and choose instructional approaches that best facilitate their academic engagement and performance in the contemporary classroom.

Felder and Silverman's Learning Styles Theory (1988) posits that students differ significantly in the ways they prefer to take in and process information, and that learning effectiveness is influenced by the degree of alignment between learner preferences and instructional strategies. According to this theory, learners may be visual or verbal in terms of information reception, active or reflective in terms of information processing, and sequential or global in terms of cognitive organization. In the context of Gen-Z students, these learning style preferences become even more salient, as this generation has been immersed in digital, visual, and interactive learning environments from an early age. Thus, understanding their predominant learning styles is essential in designing instructional experiences that accommodate their cognitive orientations and sustain engagement.

Meanwhile, the Constructivist Learning Theory provides the theoretical grounding for the second major construct of this study — the preferred instructional approaches of Gen-Z learners. Constructivism asserts that knowledge is not merely transmitted from teacher to student, but actively constructed through social interaction, reflection, contextual experience, and problem-solving (Vygotsky, 1978). From this standpoint, students favor learning environments that allow participation, collaboration, creativity, autonomy, and meaningful connection to real-life contexts. This is reinforced by Bruner's (1966) notion of discovery learning, which advocates that instruction should encourage learners to explore, inquire, and build understanding through active engagement rather than passive reception.

The convergence of these two theories suggests that instructional effectiveness is maximized when teaching approaches align with learners' inherent cognitive preferences. If Gen-Z students are predisposed to visual, interactive, and collaborative modes of learning, then their instructional preferences will naturally gravitate toward student-centered, technology-enhanced, and facilitative teaching methods that empower them to co-construct knowledge. Conversely, misalignment — such as traditional, highly didactic instruction imposed upon learners who thrive in experiential and multimodal formats — may result in disengagement, reduced motivation, and lower instructional impact. Therefore, grounding this study on these two complementary theories enables a coherent interpretation of the relationship between learning styles and instructional preferences. By connecting learner cognition with pedagogical choices, the theoretical framework underscores the necessity of responsive and adaptive teaching models in the post-pandemic era of education, particularly for Gen-Z students who embody new learning identities shaped by digital fluency and socio-interactive modes of meaning-making.

Learning styles refer to the characteristic ways in which learners acquire, organize, and process information within a learning environment. They influence the effectiveness of learning by shaping student engagement, cognitive processing, and long-term retention (Akbari et al., 2021). In the context of Gen-Z learners who are immersed in technology-rich environments and accustomed to fast, visually oriented content delivery, learning styles become especially significant in understanding how pedagogy must adapt. This generation demonstrates unique cognitive behaviors influenced by multimedia exposure and digital literacy, which reframe traditional assumptions about classroom learning and participation (Irwanto et al., 2022).

Visual learners prefer images, charts, spatial representations, and multimedia content to make sense of information, and they tend to interpret meaning better through visual mapping and symbolic organization rather than linear explanation (Sari & Putra, 2021). Meanwhile, auditory learners learn more effectively through spoken words, discussions, and oral repetition. They benefit from debates, collaborative dialogues, and aural reinforcements that activate conversational reasoning (Mustaqim & Imrona, 2020). Learners with a linguistic or verbal learning style prefer learning through reading, writing, and language-based reasoning. They process

meaning from textual explanation and construct knowledge through vocabulary-rich and analytical writing tasks (Khan & Masood, 2021). Kinesthetic learners prefer experiential learning through hands-on tasks, movement, simulations, and real-world applications. They comprehend concepts by doing rather than merely observing, making performance-oriented and activity-based learning highly effective for them (Rahardjanto et al., 2021). Logical learners, on the other hand, rely on reasoning, sequencing, deduction, and systematic thinking. They prefer organized information, problem-solving strategies, and analytical presentation of content, especially in mathematics and science settings (Wahyuni & Fitriani, 2022).

Interpersonal learners function best through social engagement, peer interaction, and cooperative learning structures where meaning is co-constructed through group participation. They rely on relationship-building and group dynamics to make sense of knowledge (Susanti et al., 2023). By contrast, intrapersonal learners exhibit self-directed learning tendencies and prefer reflective tasks, journals, introspective thinking, and independent pacing. They construct meaning through personal insight and internal processing rather than external interaction (Lestari & Wening, 2022). Current evidence indicates that Gen-Z students demonstrate multidimensional preferences that frequently combine visual, kinesthetic, and interpersonal learning orientations because of their exposure to multimedia, gaming environments, and collaborative platforms (Putra et al., 2022). This suggests that instructional strategies aligned with multimodal and technologically integrated learning yield deeper engagement and cognitive persistence. When teachers do not recognize these style preferences, students may disengage, lose motivation, or perform below potential despite having the capability to learn at high levels.

Understanding learning styles is therefore not merely a psychological classification but a pedagogical tool for designing instruction that aligns with learner cognition and experience. It reinforces the shift toward learner-responsive education models where students are not passive receivers of content but active constructors of knowledge whose preferences matter in the orchestration of learning conditions. In high school settings, particularly among Gen-Z students, instructional alignment with learning styles supports inclusivity, differentiation, and personalized learning pathways that strengthen educational equity.

Preferred instructional approaches refer to the types of teaching strategies that learners believe most effectively support their engagement, comprehension, and overall academic performance. The effectiveness of instruction is not solely determined by its delivery but by its alignment with learner needs and cognitive preferences (Dewi & Atmojo, 2021). Among Gen-Z learners, such preferences are significantly shaped by exposure to digital media, social interaction, multimodal input, and participatory learning environments. These preferences influence not only motivation but also the degree to which students internalize and apply knowledge. Some learners gravitate toward teacher-centered approaches where the teacher remains the primary knowledge source and classroom authority. This form of pedagogy relies on structured content delivery and explicit instruction, which can be beneficial for learners who require clarity, order, and strong academic guidance (Mulyani & Halimah, 2021). Closely related is the lecture-based approach, where information is transmitted verbally in a systematic way. Although sometimes perceived as traditional, lecture-based teaching continues to be effective particularly in concept-heavy disciplines where direct explanation is necessary (Khan & Malik, 2020). The authoritative approach similarly emphasizes teacher control and firm guidance, which can provide students with security and structure, particularly in environments requiring clear academic discipline and expectations (Rahmawati & Ningsih, 2022).

Contrastingly, student-centered instruction emphasizes learner autonomy, active participation, and individual construction of meaning. This approach promotes inquiry, collaboration, and reflective thinking, particularly among Gen-Z learners who value agency and personalization in learning (Sagala et al., 2022). The interactive approach widens this concept by encouraging social engagement, dialogue, and cooperative learning as vehicles for understanding. Peer discussions and group exploration enable students to construct knowledge through social negotiation, making learning more authentic and meaningful (Zamua & Abidin, 2021). The facilitative approach redefines the teacher as a learning guide rather than a transmitter of knowledge. The teacher scaffolds learning, encourages exploration, and provides supportive feedback while allowing students to take cognitive responsibility for their own learning process (Rosyid et al., 2023). Technology-enhanced instruction has likewise become highly

preferred among Gen-Z learners, who are digital natives accustomed to multimodal and interactive platforms. Integrating technology expands opportunities for visualization, creativity, and real-time feedback, improving academic engagement and conceptual retention (Handoko & Darmawan, 2020).

Some students still favor traditional approaches, particularly when they are accustomed to sequential and structured learning environments. Traditional teaching may be preferred by learners who process knowledge best through repetition, direct explanation, and routine (Hartati & Puspita, 2021). Meanwhile, motivational approaches emphasize affective engagement, encouragement, and intrinsic drive. These strategies help students sustain academic perseverance and emotional connection to learning, particularly in high-pressure academic settings (Nurdiana & Yusuf, 2022). Finally, content-focused instruction prioritizes mastery of subject matter and intellectual rigor. It appeals to learners who value depth, conceptual clarity, and scholastic competence (Salmawati et al., 2023). Contemporary research suggests that Gen-Z students do not subscribe to a single rigid instructional preference but instead favor hybrid models that combine interactivity, technology, student-centered facilitation, and structured guidance when necessary (Budiarto & Pratiwi, 2022). This diversity in preference reflects the changing ecology of learning, where students expect instruction to be adaptive, multimodal, and cognitively relevant. Understanding these instructional preferences enables teachers to design responsive pedagogies that align with learner needs and enhance instructional effectiveness.

The present study operates on the assumption that students possess distinct learning style preferences that influence their engagement and responsiveness to various instructional approaches. It presumes that these preferences are relatively stable cognitive dispositions rather than situational reactions, and that they significantly shape how Gen-Z learners process information and construct meaning within a classroom environment. Likewise, it assumes that the preferred instructional approaches of students are reflective of their perceived learning efficiency and comfort, rather than mere familiarity or convenience. The study further assumes that students are capable of accurately self-reporting their learning style preferences and instructional expectations when provided with valid and reliable instruments. Another underlying assumption is that the interaction between learning styles and instructional approaches is measurable and can produce meaningful statistical relationships. In addition, it is presumed that aligning instruction with learner preferences leads to improved motivation, participation, and comprehension. It is also assumed that teachers and schools' benefit from understanding these learning preferences, as they provide pedagogical insight that may guide curriculum delivery and instructional planning. Finally, the study assumes that the contextual realities of Bagabag National High School, including its learning environment, culture, and technological exposure, influence the development of learning preferences among Gen-Z students.

3. Methodology

Research Design. This study employed a quantitative descriptive–correlational research design to examine the learning styles of Generation Z students and their preferred instructional approaches at Bagabag National High School during the 2025–2026 school year. The design enabled objective measurement, description, and statistical analysis of naturally occurring variables without manipulation (Creswell, 2012; Gay et al., 2009). The descriptive component identified prevailing learning styles and the extent of preference for various instructional approaches, while the correlational component examined the strength and direction of the relationship between learning styles (visual, auditory, kinesthetic, collaborative, technology-oriented) and instructional approaches (learner-centered, inquiry-based, experiential, collaborative, technology-integrated).

Research Setting. The study was conducted at Bagabag National High School (BNHS), a public secondary institution in Barangay San Pedro, Bagabag, Nueva Vizcaya. Established in 2000 through Republic Act 8764, BNHS serves learners from diverse socio-economic backgrounds across urban and rural communities. The school currently accommodates 1,967 students with 96 qualified teachers and staff, offering Junior and Senior High School tracks and technology-enhanced classrooms. Its dynamic and inclusive learning environment provided an appropriate context for examining students' learning styles and instructional preferences.

Participants and Sampling. The respondents comprised 188 Grade 12 students, representing 53.86% of the total population (N = 349). Sample size was determined using Slovin's formula with a 5% margin of error. Stratified random sampling was employed, with each section serving as a stratum, followed by simple random selection within strata to ensure proportional representation and minimize bias.

Research Instruments. Two validated instruments were utilized:

- *Students' Learning Styles Questionnaire* (Cadalig et al., 2025): A 35-item survey measuring visual, auditory, linguistic, kinesthetic, logical, interpersonal, and intrapersonal learning styles. Cronbach's α = 0.829. Responses were rated on a 4-point Likert scale (1 = Strongly Disagree to 4 = Strongly Agree) and interpreted from Poor to Very High.
- *Students' Preferred Instructional Approaches Questionnaire* (Bolintao et al., 2025): A 50-item survey assessing teacher-centered, student-centered, interactive, lecture-based, authoritative, facilitative, technology-enhanced, traditional, motivational, and content-focused approaches. Responses were rated on a 4-point Likert scale (1 = Strongly Disagree to 4 = Strongly Agree) and interpreted from Not Preferred to Highly Preferred.

Data Collection Procedure. Formal permission was secured from the school principal, and coordination with class advisers ensured minimal disruption to classes. Orientation sessions explained study objectives, procedures, and ethical safeguards. Written informed consent was obtained from participants, and parental consent was secured for minors. Questionnaires were administered in printed or electronic formats and collected within one to three classroom days. Data were encoded and stored in a secure, password-protected database, with only aggregated results reported.

Ethical Considerations. The study adhered to principles of voluntary participation, informed consent, confidentiality, and anonymity. No identifying information was used, and data were employed solely for research purposes.

Statistical Analysis. Descriptive statistics (mean) were used to determine levels of learning styles and instructional preferences. Spearman's rank-order correlation was employed to examine relationships between students' learning styles and their preferred instructional approaches, with significance tested at the 0.05 level.

4. Results and Discussion

The main focus of this study was to investigate the existing learning styles of 188 Grade 12 students of Bagabag National High School during the academic year 2025–2026 and to examine their relationship with their preferred instructional approaches. This research employed a quantitative research design using a descriptive-correlational method to determine whether a significant relationship existed between the two variables. Data were gathered through valid and reliable instructional preference and learning style instruments and statistically analyzed using measures such as mean and Spearman's Rank Correlation. The hypothesis was tested at the 0.05 level of significance.

The objectives of this study were to determine the perceptions of the student-respondents regarding their learning styles across the dimensions of visual, auditory, linguistic, kinesthetic, logical, interpersonal, and intrapersonal styles. Additionally, the study aimed to identify the perceptions of the respondents concerning their preferred instructional approaches, including teacher-centered, student-centered, interactive, lecture-based, authoritative, facilitative, technology-enhanced, traditional, motivational, and content-focused approaches. The research further sought to examine the significant relationship between the perceived learning styles and preferred instructional approaches of the respondents. Finally, based on the significant findings, the study aimed to develop an educational management intervention. Below are the significant results of the study.

1. The Gen-Z students of Bagabag National High School exhibit a high overall level of learning style

manifestation (grand mean = 3.40), indicating versatility and adaptability across multiple modes of learning. Visual learning ranked highest (M = 3.46), highlighting the effectiveness of visual aids, diagrams, and multimedia in enhancing comprehension. Interpersonal (M = 3.45) and Logical (M = 3.42) dimensions suggest the importance of collaborative and problem-solving activities, while Auditory (M = 3.39) and Linguistic (M = 3.38) preferences underscore the relevance of verbal explanations and reading/writing tasks. Kinesthetic learning (M = 3.36) reflects engagement through hands-on activities, and Intrapersonal learning (M = 3.34) indicates the value of self-reflection and independent learning. Overall, these results emphasize the need for multimodal and interactive instructional strategies tailored to Gen-Z learners.

2. The Gen Z students perceived their preferred instructional approaches with a grand mean of 3.42, described as "Preferred," indicating a general appreciation for diverse teaching strategies that enhance learning. Technology-Enhanced Instruction (M = 3.72) was most favored, reflecting their affinity for digital tools and multimedia, followed closely by Motivational (M = 3.71), Content-Focused (M = 3.68), and Facilitative (M = 3.53) approaches, highlighting engagement and learner-centered instruction. Interactive methods (M = 3.42) emphasized collaboration, while Teacher-Centered (M = 3.39) and Student-Centered (M = 3.37) approaches were moderately preferred. Conventional methods were less favored, underscoring the need for dynamic, technology-integrated, and participatory pedagogies.

3. The study examined the relationship between respondents' learning styles and their preferred instructional approaches using Spearman's rank correlation at a 0.05 significance level. Visual learners showed substantial positive correlation with the facilitative approach ($r = 0.463$, $p = 0.001$), indicating a preference for guided exploration, scaffolded learning, and autonomy, and a slight but significant correlation with motivational approaches ($r = 0.231$, $p = 0.001$), suggesting responsiveness to encouragement and engagement strategies. Auditory learners were significantly correlated with teacher-centered ($r = 0.218$, $p = 0.002$), interactive ($r = 0.336$, $p = 0.001$), and lecture-based approaches ($r = 0.215$, $p = 0.003$), reflecting benefits from verbal communication and structured explanations. Linguistic learners preferred student-centered ($r = 0.207$, $p = 0.004$) and facilitative approaches ($r = 0.208$, $p = 0.004$), supporting engagement through collaboration, reflection, and guided inquiry. Kinesthetic learners correlated with lecture-based ($r = 0.171$, $p = 0.018$), facilitative ($r = 0.305$, $p = 0.001$), and motivational approaches ($r = 0.221$, $p = 0.002$), favoring active, problem-solving, and discovery-based learning.

4. Logical learners showed slight but significant correlations with teacher-centered ($r = 0.149$, $p = 0.041$), technology-enhanced ($r = 0.153$, $p = 0.036$), and content-focused approaches ($r = 0.223$, $p = 0.002$), reflecting preference for structured, analytical, and mastery-oriented instruction. Intrapersonal learners significantly preferred lecture-based ($r = 0.195$, $p = 0.007$) and content-focused approaches ($r = 0.167$, $p = 0.021$), highlighting favorability for structured, independent, and self-reflective learning environments. These findings indicate that learning styles influence instructional approach preferences, emphasizing the need for diverse, adaptive, and multimodal teaching strategies.

5. The findings of the study led to the development of instructional interventions tailored to address the diverse learning needs and preferences of the respondents. Specifically, seven (7) learning activities were crafted to correspond with the learning style dimensions that registered the lowest mean scores. These activities were designed based on benchmark statements and serve as practical references for teachers to implement in the classroom, promoting engagement and accommodating varied learner preferences. Additionally, the study identified benchmark statements with the lowest mean scores across the preferred instructional approaches. These findings informed the creation of ten (10) targeted teaching strategies aimed at enhancing areas where students demonstrated lower preference or engagement, ensuring that instruction is responsive, balanced, and aligned with learner needs. Together, the proposed learning activities and teaching strategies provide a structured framework for educators to optimize teaching effectiveness, foster active participation, and support holistic student learning outcomes.

5. Conclusions

Based on the findings, the study concludes the following:

1. The Gen-Z students of Bagabag National High School exhibit a high level of learning style manifestation, demonstrating versatility and adaptability across multiple modalities. Visual, interpersonal, and logical learning dominate, while auditory, linguistic, kinesthetic, and intrapersonal preferences also show significance. These results highlight the importance of implementing multimodal, interactive, and student-centered instructional strategies to effectively engage Generation Z learners.

2. The students generally prefer diverse instructional approaches, with technology-enhanced, motivational, content-focused, and facilitative methods being most favored. Interactive, teacher-centered, and student-centered strategies are moderately preferred, while conventional methods are less engaging. This underscores the need for dynamic, participatory, and digitally enriched pedagogical approaches.

3. Significant correlations exist between specific learning styles and instructional preferences. Visual, auditory, linguistic, kinesthetic, logical, and intrapersonal learners show varied alignments with facilitative, motivational, teacher-centered, student-centered, lecture-based, technology-enhanced, and content-focused approaches. These findings emphasize that learning styles influence preferred teaching strategies, supporting the adoption of adaptive, multimodal, and differentiated instruction.

4. The study's results informed the development of seven learning activities and ten teaching strategies targeting areas of lower engagement or preference. These interventions provide practical, structured frameworks for teachers to enhance learning, accommodate diverse styles, promote participation, and foster comprehensive academic growth among students.

Recommendations - Based on the above conclusions, the study recommends the following:

1. Teachers may design and deliver lessons that integrate multiple learning modalities, such as visual, auditory, kinesthetic, and interpersonal approaches, to cater to the diverse learning preferences of Generation Z students. Incorporating interactive activities, hands-on tasks, collaborative projects, and reflective exercises can enhance engagement, comprehension, and retention.

2. Educators are encouraged to utilize digital tools, multimedia resources, and motivational techniques to create dynamic and stimulating learning environments. Technology-rich and learner-centered approaches should be combined with content-focused instruction to foster both academic mastery and active participation.

3. Teachers may tailor instructional strategies to align with students' specific learning styles, such as providing guided exploration for visual learners, verbal explanations for auditory learners, and problem-solving tasks for logical and kinesthetic learners. This ensures that all learners can access content effectively and maximize their potential.

4. School administrators may provide training and capacity-building programs to equip teachers with the knowledge and skills to implement multimodal, differentiated, and technology-enhanced teaching strategies. Continuous support and mentoring will enhance instructional effectiveness and responsiveness to student needs.

5. Future researchers are encouraged to replicate this study in different contexts, such as other grade levels, schools, or regions, to validate the findings and explore potential variations in learning styles and instructional preferences among diverse learner populations.

6. Future studies may investigate other factors that may influence the relationship between learning styles and preferred instructional approaches, such as students' motivation, self-regulation, emotional intelligence, socio-economic background, or academic performance. Examining these variables can provide a more comprehensive understanding of how individual differences and contextual factors shape learning preferences, enabling educators

to design even more targeted, effective, and holistic instructional strategies.

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