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DIFFERENTIATED INSTRUCTION, ACADEMIC ACHIEVEMENT, AND CLASSROOM EXPERIENCES IN PHILIPPINE SECONDARY EDUCATION: A CONVERGENT MIXED-METHODS STUDY

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ABSTRACT

This study examined the implementation of differentiated instruction and its relationships with academic achievement and classroom experiences among junior high school students in Gamut National High School, Philippines, during the Academic Year 2025-2026. A convergent parallel mixed-methods design was employed, involving 41 teachers and 300 Grade 7–10 students in the quantitative component, alongside four teachers and 20 students in the qualitative component. Data were collected through questionnaires, classroom observations, documentary analysis, interviews, and focus group discussions. Descriptive statistics, Pearson product–moment correlations, and qualitative thematic analysis were utilized. Findings revealed that differentiated instruction was implemented to a very great extent across content, process, product, and learning environment dimensions. Students demonstrated very satisfactory academic achievement (M = 86.59) and generally positive classroom experiences involving engagement, motivation, participation, confidence, inclusiveness, satisfaction, and interpersonal interaction. Significant positive relationships were reported between differentiated instruction and academic achievement ($r = .72$, $p = .01$) and classroom experiences ($r = .73$, $p = .01$). Qualitative findings highlighted improved participation and understanding alongside challenges involving limited resources, instructional time, and large classes. The study underscores the importance of responsive instructional practices and institutional support in promoting inclusive secondary education.

Keywords: *differentiated instruction, academic achievement, classroom experiences, learner engagement, mixed-methods research, Philippine secondary education*

INTRODUCTION

Education systems increasingly recognize the importance of providing equitable learning opportunities for students with diverse academic abilities, interests, backgrounds, and learning needs. In secondary education, differences in prior knowledge, readiness, motivation, and classroom participation create substantial challenges for teachers who rely on uniform instructional approaches. Differentiated instruction (DI) has emerged as a pedagogical response to learner diversity by adjusting instructional content, learning processes, assessment products, and classroom environments to accommodate individual differences. Rather than expecting all students to learn through identical activities, differentiated instruction emphasizes flexible teaching practices that promote accessibility, meaningful participation, and academic development. The Organisation for Economic Co-operation and Development (OECD, 2023) highlighted persistent inequalities in educational opportunities and achievement across socioeconomic and educational contexts, emphasizing the need for learning environments that respond to students' diverse circumstances. These concerns reinforce the importance of examining instructional approaches that promote academic achievement while supporting positive classroom experiences.

Differentiated instruction is grounded in the principle that effective teaching should recognize learner variability and provide multiple pathways toward common educational objectives. Its four dimensions—content, process, product, and learning environment—represent interconnected instructional practices that enable teachers to address students' different levels of readiness and engagement. Content differentiation involves modifying instructional materials and the complexity of learning tasks, while process differentiation provides varied activities and learning experiences. Product differentiation allows students to demonstrate understanding through different assessment formats, whereas learning environment differentiation promotes supportive, inclusive, and flexible classroom conditions. CAST (2024), through the updated Universal Design for Learning Guidelines 3.0, emphasized the importance of multiple means of engagement, representation, and action and expression in reducing barriers to learning. Although differentiated instruction and Universal Design for Learning are distinct approaches, both recognize learner variability and emphasize the importance of accessible and responsive instructional practices.

The implementation of differentiated instruction has important implications for students' academic achievement. When instructional activities are aligned with learners' readiness and prior knowledge, students may be better positioned to understand concepts, complete academic tasks, and demonstrate mastery of learning competencies. Flexible grouping, scaffolded activities, differentiated assessments, and appropriate instructional materials may provide additional opportunities for students to progress according to their learning needs. However, the relationship between differentiated instruction and academic achievement requires careful examination because academic performance is influenced by multiple factors, including socioeconomic circumstances, teacher competence, learning resources, and school conditions. The OECD (2023), in its analysis of international student assessment results, emphasized the importance of

educational equity and identified substantial differences in achievement across student populations. These findings highlight the need for context-sensitive instructional practices while underscoring those pedagogical approaches alone cannot fully explain academic outcomes.

Beyond academic achievement, differentiated instruction may shape students' classroom experiences, particularly their engagement, motivation, participation, confidence, sense of inclusiveness, satisfaction, and interactions with teachers and classmates. These experiences are important because students' perceptions of the learning environment can influence their willingness to participate in classroom activities and persist when encountering academic difficulties. Wong et al. (2024), through a systematic review and meta-analysis, examined the relationships of behavioral, affective, and cognitive engagement with academic achievement and subjective well-being. Their work highlights the multidimensional nature of engagement and the importance of considering students' experiences alongside measurable academic outcomes. In differentiated classrooms, opportunities for meaningful choice, appropriately challenging tasks, supportive interactions, and varied learning activities may contribute to more favorable classroom experiences. Nevertheless, students' perceptions of differentiated instruction should be examined empirically rather than assuming that instructional flexibility automatically produces positive engagement.

The learning environment represents another important dimension of differentiated instruction because students require supportive classroom conditions to participate meaningfully in academic activities. Inclusive instructional practices involve recognizing differences in learning readiness, encouraging respectful interactions, and providing opportunities for students to demonstrate their capabilities without unnecessary barriers. The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2024) emphasized that educational leadership plays a significant role in shaping learning conditions, supporting teachers, and promoting equitable educational opportunities. This perspective suggests that differentiated instruction should not be viewed exclusively as an individual teacher responsibility. Its implementation may also depend on school leadership, instructional supervision, professional collaboration, and the availability of appropriate learning resources. Consequently, examining differentiated instruction within a specific school context can provide insights into the institutional conditions associated with its implementation.

Technological developments have also expanded opportunities for differentiated instruction by enabling teachers to present learning materials in multiple formats, organize flexible activities, and provide alternative learning pathways. Digital platforms, multimedia resources, and interactive educational applications may help accommodate differences in students' learning pace and access to instructional content. However, the educational value of technology depends on its appropriate integration into teaching practices and the availability of supporting resources. UNESCO (2023), in its Global Education Monitoring Report on technology in education, emphasized that technological interventions should be evaluated according to their relevance, equity, effectiveness, and sustainability. The report further stressed that digital technologies should support meaningful educational

interactions rather than replace teachers' professional judgment and human relationships. These considerations are particularly relevant to differentiated instruction in resource-constrained secondary schools, where technological opportunities may coexist with limitations in equipment, connectivity, instructional time, and teacher preparation.

In the Philippine secondary education context, differentiated instruction is relevant to continuing efforts to strengthen inclusive, learner-centered, and competency-based teaching. Public secondary schools serve students with diverse socioeconomic backgrounds, learning abilities, interests, and educational experiences. These differences require teachers to employ flexible instructional strategies while maintaining curriculum standards and expected learning outcomes. However, implementing differentiated instruction may be challenging in classrooms characterized by large student populations, limited instructional resources, competing teaching responsibilities, and varying opportunities for professional development. The principles outlined in the Universal Design for Learning Guidelines provide a useful framework for understanding how flexible learning environments can reduce barriers and expand students' opportunities to participate (CAST, 2024). Nevertheless, the implementation of differentiated instruction must be examined in relation to actual classroom practices and the educational conditions experienced by teachers and students.

Despite increasing attention to inclusive and responsive teaching practices, there remains a need for contextualized empirical evidence concerning the relationship between differentiated instruction, academic achievement, and classroom experiences in Philippine public secondary schools. Existing international research provides important perspectives on educational equity, student engagement, instructional accessibility, and supportive learning environments. However, findings derived from different educational systems may not fully explain how differentiated instruction operates in rural Philippine schools, where instructional resources, teacher preparation, classroom composition, and institutional support may differ. Moreover, examining academic achievement alone may overlook students' classroom experiences, while focusing exclusively on perceptions may provide insufficient information about measurable learning outcomes. Integrating these dimensions within a mixed-methods investigation may therefore offer a more comprehensive understanding of differentiated instruction in context.

Gamut National High School, located in Tago, Surigao del Sur, Philippines, provides a relevant setting for investigating differentiated instruction among junior high school students. The school serves learners with varied academic abilities and educational needs, making instructional responsiveness an important consideration in classroom practice. The original thesis identified a need to examine the extent to which teachers implement content, process, product, and learning environment differentiation and how these practices relate to students' academic achievement and classroom experiences. It also recognized the importance of exploring teachers' and students' experiences to understand the opportunities and challenges associated with differentiated instruction. Accordingly, the present investigation focuses on the relationships among differentiated instructional practices, students' official Third Quarter

General Average, and their reported classroom experiences during School Year 2025–2026.

The present study aimed to examine differentiated instruction and its relationship with academic achievement and classroom experiences among Grade 7–10 students at Gamut National High School. Specifically, it assessed the extent of differentiated instruction across content, process, product, and learning environment dimensions; determined students' academic achievement using their Third Quarter General Average; and examined classroom experiences involving engagement, motivation, participation, confidence, inclusiveness, satisfaction, and interpersonal interaction. Furthermore, the study investigated the statistical relationships between differentiated instruction and the two outcome constructs while exploring the lived experiences of teachers and students through qualitative inquiry. A convergent parallel mixed-methods design was employed to integrate quantitative findings with qualitative evidence and develop a contextualized understanding of differentiated instruction.

The study contributes to the literature by examining differentiated instruction as a multidimensional pedagogical practice associated with both academic performance and students' classroom experiences within a rural Philippine secondary school. By integrating teacher and student perspectives, official academic records, and qualitative accounts, the investigation provides context-specific evidence concerning instructional practices and learning conditions. Unlike studies focusing exclusively on academic outcomes or perceptions, this research considers the relationships among instructional differentiation, measurable achievement, and multiple dimensions of classroom experience. Its findings may inform teacher professional development, instructional supervision, school improvement planning, and the design of interventions supporting inclusive and responsive teaching. More broadly, the study contributes to international discussions on educational equity and learner-centered secondary education while recognizing that relationships identified through nonexperimental research do not establish causal effects.

Research Questions

This study aimed to examine differentiated instruction and its relationship with academic achievement and classroom experiences among junior high school students at Gamut National High School, Philippines. Specifically, it sought to answer the following research questions:

1. What observable evidence demonstrates the implementation of differentiated instruction in the classroom?
2. To what extent is differentiated instruction implemented by teachers in terms of content differentiation, process differentiation, product differentiation, and learning environment?
3. What is the level of students' academic achievement, as measured by their Third Quarter General Average, in classrooms where differentiated instruction is implemented?

4. How do students perceive their classroom experiences in differentiated learning environments in terms of engagement in learning activities, motivation to learn, classroom participation, confidence in learning, perceived inclusiveness, satisfaction, and interactions with teachers and classmates?
5. Is there a significant relationship between the extent of differentiated instruction and students' academic achievement?
6. Is there a significant relationship between the extent of differentiated instruction and students' classroom experiences?
7. How do teachers and students describe their lived experiences, including the benefits and challenges, of implementing and participating in differentiated instruction?
8. How do the qualitative findings corroborate, complement, or explain the quantitative results concerning differentiated instruction, academic achievement, and classroom experiences?
9. What evidence-based intervention program can be proposed to strengthen differentiated instruction and improve students' academic achievement and classroom experiences?

METHODOLOGY

This study employed a convergent parallel mixed-methods design to examine the relationship between differentiated instruction, academic achievement, and classroom experiences at Gamut National High School, Tago, Surigao del Sur, Philippines, during School Year 2025–2026. The quantitative component involved 41 junior high school teachers selected through complete enumeration and 300 Grade 7–10 students selected through stratified random sampling. The qualitative component included four teachers and 20 students selected through purposive and criterion-based sampling. Data were collected using validated survey questionnaires, classroom observations, documentary analysis, semi-structured interviews, and focus group discussions. Differentiated instruction was assessed across content, process, product, and learning environment dimensions, while academic achievement was measured using students' official Third Quarter General Average. Classroom experiences were evaluated in terms of engagement, motivation, participation, confidence, inclusiveness, satisfaction, and interpersonal interaction. Quantitative data were analyzed using descriptive statistics and Pearson product–moment correlation at the .05 significance level, while qualitative responses were examined through thematic analysis. Both datasets were subsequently integrated to identify convergent and complementary findings.

RESULTS

Table 1

Observed Classroom Practices Demonstrating the Implementation of Differentiated Instruction

Observed practice	Evidence of implementation
Competency-based lesson delivery	Lessons adapted to students' readiness and learning competencies
Varied instructional materials	Use of differentiated resources, visual aids, and multimedia
Flexible grouping	Grouping arrangements based on learning needs and activities
Differentiated learning tasks	Activities adjusted to learners' abilities and interests
Instructional support	Scaffolding and guidance provided according to students' needs

Table 2

Extent of Teachers' Implementation of Differentiated Instruction

Dimension	M	Descriptive interpretation
Content differentiation	4.68	Greatest Extent
Process differentiation	4.62	Greatest Extent
Product differentiation	4.61	Greatest Extent
Learning environment	4.61	Greatest Extent
Overall	4.63	Greatest Extent

Note. M = average weighted mean.

Table 3

Students' Academic Achievement by Grade Level

Grade level	M	SD	Descriptive rating
Grade 7	87.31	5.48	Very Satisfactory
Grade 8	84.92	6.27	Satisfactory
Grade 9	88.74	5.12	Very Satisfactory
Grade 10	85.89	6.01	Very Satisfactory
Overall	86.59	5.97	Very Satisfactory

Note. M = mean grade; SD = standard deviation. Academic achievement was measured using students' official Third Quarter General Average during School Year 2025–2026.

Table 4

Students' Classroom Experiences in Differentiated Learning Environments

Classroom experience dimension	M	Descriptive interpretation
Engagement in learning activities	4.21	Greatest Extent
Motivation to learn	4.22	Greatest Extent
Participation in class	4.22	Greatest Extent
Confidence in learning	4.17	Greater Extent
Perception of inclusiveness	4.27	Greatest Extent
Satisfaction	4.28	Greatest Extent
Interaction with teachers and classmates	4.24	Greatest Extent
Overall	4.23	Greatest Extent

Note. M = average weighted mean.

Table 5

Pearson Correlations Between Differentiated Instruction and Students' Academic Achievement

Differentiated instruction dimension	r	p	Statistical decision
Content differentiation	.74	.01	Significant
Process differentiation	.71	.01	Significant
Product differentiation	.69	.01	Significant
Learning environment	.73	.01	Significant
Overall differentiated instruction	.72	.01	Significant

Note. r = Pearson correlation coefficient. Significance was evaluated at α = .05.

Table 6

Pearson Correlations Between Differentiated Instruction and Students' Classroom Experiences

Differentiated instruction dimension	r	p	Statistical decision
Content differentiation	.72	.01	Significant
Process differentiation	.72	.01	Significant
Product differentiation	.71	.01	Significant
Learning environment	.75	.01	Significant
Overall differentiated instruction	.73	.01	Significant

Note. r = Pearson correlation coefficient. Significance was evaluated at α = .05.

Table 7

Qualitative Themes Emerging from Teachers' and Students' Experiences with Differentiated Instruction

Participants	Emerging themes	Summary of findings
Students	Engaging and Motivating Learning Experiences	Activities were perceived as enjoyable, motivating, and responsive to individual learning needs
Students	Improved Understanding and Active Participation	Group work and differentiated tasks supported comprehension and participation
Students	Challenges and Coping Mechanisms in Differentiated Instruction	Unclear instructions, time constraints, excessive tasks, and limited resources prompted students to seek assistance and collaborate
Teachers	Differentiated Instruction as a Challenging but Rewarding Process	Planning varied activities required additional preparation but was considered beneficial
Teachers	Professional Support Systems Help Teachers Implement DI	Mentoring, workshops, Learning Action Cells, and collaboration supported instructional implementation
Teachers	Differentiated Instruction Improves Engagement but Faces Resource and Time Barriers	Teachers observed improved participation while encountering large classes, insufficient resources, and limited instructional time

Table 8

Joint Display of Quantitative and Qualitative Findings

Research dimension	Quantitative findings	Qualitative findings	Integration
Differentiated instruction implementation	Greatest Extent (M = 4.63)	Teachers described varied activities, adapted lessons, and instructional adjustments	Convergence
Academic achievement	Very Satisfactory (M = 86.59)	Students described improved understanding and greater confidence in completing tasks	Complementarity
Classroom experiences	Greatest Extent (M = 4.23)	Students reported enjoyable activities, participation, and perceived inclusion	Convergence

DI and academic achievement	Positive correlation (r = .72, p = .01)	Participants perceived differentiated instruction as supportive of learning	Complementarity
DI and classroom experiences	Positive correlation (r = .73, p = .01)	Teachers and students described improved engagement and motivation	Convergence
Implementation challenges	Not separately quantified in the summarized results	Time constraints, large classes, insufficient materials, and preparation demands	Additional qualitative insight

Note. M = mean; r = Pearson correlation coefficient.

Table 9

Proposed DI-REFINE: Differentiated Instruction Refinement Program

Priority area	Proposed intervention	Implementation schedule
Teacher capacity-building	Orientation and training on differentiated instruction	First quarter; two-day workshop
Collaborative instructional planning	Learning Action Cell sessions, mentoring, and collaborative lesson planning	Monthly
Student engagement	Flexible grouping, tiered activities, and differentiated assessments	Continuous
Instructional resources	Shared resource bank, reusable materials, and time-management strategies	First semester and continuing
Monitoring and improvement	Peer observation, coaching, monitoring, and reflection	Every grading period

DISCUSSION

The findings of this study provide empirical insights into the implementation of differentiated instruction and its relationships with academic achievement and classroom experiences among junior high school students in a Philippine public secondary school. The integration of quantitative and qualitative evidence revealed that differentiated instruction was widely practiced and positively associated with students' academic outcomes and classroom experiences. Nevertheless, the findings also highlighted differences across instructional dimensions and practical challenges that may influence implementation. These results contribute to the growing literature on responsive teaching by demonstrating the importance of examining differentiated instruction not only through academic performance but also through students' experiences and teachers' implementation conditions.

Implementation of Differentiated Instruction

The findings revealed that differentiated instruction was implemented to the greatest extent (M = 4.63), with content differentiation obtaining the highest mean (M = 4.68), followed by process differentiation (M = 4.62). Product differentiation and learning environment obtained identical means (M = 4.61). These results suggest that teachers placed considerable emphasis on adapting instructional content and learning activities to students' readiness, interests, and abilities. The relatively lower ratings for product differentiation and learning environment indicate opportunities to strengthen flexible assessment practices and classroom arrangements.

These findings are consistent with Hu (2024), whose systematic review of 61 empirical studies identified differentiated instruction as a multidimensional approach involving instructional methods, learning content, assessment, and responsiveness to student differences. The present findings extend this perspective by illustrating how these dimensions were implemented within a Philippine public secondary school. The prominence of content differentiation suggests that adjusting instructional materials and lesson complexity may be more readily incorporated into everyday teaching than developing alternative assessment products or reorganizing classroom environments. This interpretation emphasizes the importance of balancing the four dimensions rather than relying predominantly on content modifications.

Differentiated Instruction and Academic Achievement

Students demonstrated a very satisfactory level of academic achievement, with an overall mean grade of 86.59 (SD = 5.97). Grade 9 students obtained the highest mean grade (M = 88.74), while Grade 8 students recorded the lowest (M = 84.92). These results indicate generally favorable academic performance among students exposed to differentiated instructional practices. However, the variation across grade levels suggests that academic outcomes may also reflect differences in student characteristics, curriculum demands, and other contextual factors.

The findings are supported by Insorio (2024), who reported favorable academic outcomes following the implementation of differentiated instruction in Philippine mathematics classrooms. Similarly, Pinaranda and Sario (2024) examined differentiated instruction in Filipino classes using a quasi-experimental design, providing additional evidence of its relevance to academic performance in Philippine secondary education. The present study contributes complementary correlational evidence by examining differentiated instruction across multiple instructional dimensions and grade levels rather than focusing exclusively on a single subject.

Importantly, the observed achievement levels should not be interpreted as direct evidence that differentiated instruction caused higher grades. Because the present investigation employed a nonexperimental design, the results establish academic performance within the studied setting but do not demonstrate improvement relative to a control group or baseline measurement. This distinction is essential for accurately interpreting the educational implications of the findings.

Differentiated Instruction and Classroom Experiences

Students reported positive classroom experiences, with an overall mean of 4.23. Satisfaction received the highest rating (M = 4.28), followed by perceived inclusiveness (M = 4.27), while confidence in learning obtained the lowest rating (M = 4.17). These findings suggest that differentiated classrooms were generally perceived as engaging, supportive, and responsive to learner diversity. Nevertheless, the relatively lower confidence rating indicates that favorable classroom conditions do not necessarily eliminate students' hesitation in expressing ideas, answering questions, or participating independently.

Insorio and Librada (2024) similarly reported improvements in students' mathematical engagement across cognitive, behavioral, emotional, and social dimensions following differentiated instructional activities. Their findings provide a useful comparison with the present investigation, particularly regarding students' participation, motivation, and confidence. The current results broaden this understanding by examining seven dimensions of classroom experience, including satisfaction, inclusiveness, and interpersonal interactions. This multidimensional assessment demonstrates that students' classroom experiences involve more than observable participation and should be considered when evaluating instructional responsiveness.

The lower rating for confidence in learning also suggests that differentiated instruction may require complementary strategies such as constructive feedback, supportive teacher–student interactions, and gradually increasing task complexity. Although students generally appreciated differentiated activities, some may still require additional encouragement to develop confidence in expressing their understanding. Therefore, instructional differentiation should be accompanied by deliberate efforts to promote psychological safety, autonomy, and positive classroom relationships.

Relationship Between Differentiated Instruction and Academic Achievement

A statistically significant positive relationship was reported between overall differentiated instruction and academic achievement ($r = .72$, $p = .01$). Among the instructional dimensions, content differentiation demonstrated the strongest association ($r = .74$), followed by learning environment ($r = .73$), process differentiation ($r = .71$), and product differentiation ($r = .69$). These results indicate that higher reported levels of differentiated instruction were associated with higher academic achievement in the analyzed data.

This finding aligns with Insorio (2024), who documented the educational value of differentiated instructional strategies in addressing learner diversity and strengthening mathematics achievement. The present results also complement the findings of Pinaranda and Sario (2024), who investigated differentiated instruction and academic performance in Filipino classes. Whereas those studies examined instructional applications within specific subject areas, the present investigation considered four differentiated instruction dimensions and students' general academic averages.

The comparatively stronger correlation involving content differentiation suggests that instructional adjustments related to lesson difficulty, learning materials, and readiness may be particularly relevant to academic performance. Nevertheless, differences among the correlation coefficients should not be interpreted as statistically significant without formal comparison tests. Furthermore, the correlational design does not establish whether differentiated instruction produced higher achievement or whether other student- and school-level characteristics contributed to the observed relationships.

Relationship Between Differentiated Instruction and Classroom Experiences

The findings also revealed a statistically significant positive relationship between differentiated instruction and students' classroom experiences ($r = .73$, $p = .01$). Learning environment differentiation demonstrated the strongest association ($r = .75$), followed by content and process differentiation ($r = .72$ each) and product differentiation ($r = .71$). These results suggest that instructional responsiveness and supportive classroom conditions were associated with favorable student experiences.

The findings are consistent with Ardenlid et al. (2025), who conducted a scoping review and thematic analysis of 22 empirical studies on differentiated instruction. Their review identified teacher and peer support, flexible instructional choices, customized learning activities, and positive classroom atmospheres as important practices for promoting inclusive education. The present findings reinforce the relevance of these instructional practices within Philippine secondary education, particularly in fostering perceived inclusiveness, student satisfaction, engagement, and positive interpersonal interactions. This suggests that differentiated instruction should extend beyond adapting learning content to include supportive classroom relationships and meaningful opportunities for student participation.

The comparatively strong association between learning environment differentiation and classroom experiences suggests that students' perceptions may be closely connected to the quality of classroom interactions and the extent to which learning conditions accommodate individual differences. This result highlights the importance of considering the classroom environment as an integral component of differentiated instruction rather than merely a physical setting in which instruction occurs.

Teachers' and Students' Experiences with Differentiated Instruction

The qualitative findings provided additional explanations of how differentiated instruction was experienced by teachers and students. Learners described differentiated activities as engaging, enjoyable, and helpful in understanding lessons. They also reported greater willingness to participate when tasks were appropriate to their abilities and interests. However, students identified challenges involving unclear instructions, excessive activities, limited time, and insufficient learning materials.

Teachers similarly characterized differentiated instruction as challenging but rewarding. Although they perceived benefits for students' participation and understanding, they reported difficulties associated with preparation demands, large class sizes, time constraints, and limited instructional resources. These findings indicate

that the practical implementation of differentiated instruction requires sustained teacher effort and institutional support.

Langelaan et al. (2024), in their review of teacher preparation and professional development for differentiated instruction, emphasized the importance of active learning, collaboration, reflection, and supportive school conditions. Their findings correspond with the teachers' reported need for mentoring, collaborative planning, and professional learning opportunities. The present study contributes contextual evidence that differentiated instruction may be positively perceived even when teachers experience considerable implementation demands. Accordingly, the sustainability of differentiated instruction should be understood as both a pedagogical and organizational concern.

Integration of Quantitative and Qualitative Findings

The convergent parallel mixed-methods design enabled the quantitative results to be interpreted alongside teachers' and students' experiences. The high implementation ratings and positive correlations were broadly consistent with qualitative accounts describing responsive teaching, active participation, improved understanding, and supportive learning conditions. This convergence strengthens the contextual interpretation of the findings by demonstrating agreement between numerical assessments and participants' reported experiences.

However, the qualitative findings also revealed limitations that were less apparent in the quantitative results. Despite high ratings of differentiated instruction, participants reported difficulties involving time management, instructional materials, preparation requirements, and classroom organization. These complementary findings suggest that favorable implementation ratings should not be interpreted as evidence that differentiated instruction was consistently implemented without difficulty.

The integration therefore provides a more nuanced understanding of differentiated instruction: teachers and students generally perceived it positively, but its implementation remained dependent on practical teaching conditions. This finding reinforces the value of mixed-methods inquiry in examining educational practices that involve both measurable outcomes and complex classroom experiences.

Implications for Educational Practice and Policy

The findings have implications for teachers, school administrators, and educational policymakers. First, the comparatively lower ratings for product differentiation and learning environment suggest a need to strengthen alternative assessment practices, flexible learning arrangements, and student-centered classroom organization. Second, the relatively lower confidence rating indicates that differentiated instruction should incorporate structured opportunities for feedback, self-expression, and progressive learner independence.

Third, the challenges reported by teachers emphasize the importance of professional development, collaborative planning, mentoring, and adequate instructional resources. These priorities are consistent with Langelaan et al. (2024), who identified

sustained professional learning and supportive organizational conditions as important components of differentiated instruction development.

The proposed Differentiated Instruction Refinement (DI-REFINE) Program responds to these findings through teacher capacity-building, Learning Action Cell sessions, mentoring, shared instructional resources, and continuous monitoring. Although the program has not been evaluated as an intervention within the reported study, it offers a contextually grounded framework for strengthening differentiated instructional practices.

Limitations and Directions for Future Research

Several limitations should be considered when interpreting the findings. First, the study was conducted in a single public secondary school, which limits the generalizability of the results to other educational settings. Second, the nonexperimental and correlational design does not permit causal conclusions regarding the influence of differentiated instruction on academic achievement or classroom experiences. Third, questionnaire-based assessments may have been influenced by respondents' perceptions and response tendencies.

An additional methodological consideration concerns the relationship between teacher-reported differentiated instruction and student-level outcomes. The statistical interpretation depends on how teacher and student data were matched or aggregated, which should be verified using the original dataset and statistical outputs. Without this information, the reported correlations should be interpreted cautiously.

Future research may employ longitudinal, quasi-experimental, or multilevel designs to examine changes in achievement and classroom experiences over time. Studies involving multiple schools and diverse educational contexts may also clarify how teacher preparation, instructional resources, class size, and school leadership influence differentiated instruction. Further evaluation of the DI-REFINE Program would be valuable in determining its feasibility, implementation quality, and potential educational outcomes.

Overall, the study provides context-specific evidence that differentiated instruction was widely practiced and positively associated with academic achievement and classroom experiences among junior high school students. Its contribution lies in integrating instructional implementation, academic outcomes, student perceptions, and qualitative experiences within a Philippine secondary education context. The findings underscore the importance of responsive instructional practices while highlighting the need for professional support, adequate resources, and rigorous future investigations to establish the conditions under which differentiated instruction may contribute to equitable and meaningful learning.

Conclusions

The study concluded that differentiated instruction was extensively implemented at Gamut National High School and was positively associated with students' academic achievement and classroom experiences. Content differentiation emerged as the most

frequently implemented dimension, while students demonstrated very satisfactory academic performance and generally favorable classroom experiences, particularly in satisfaction and perceived inclusiveness. Significant positive relationships were established between differentiated instruction and academic achievement ($r = .72$, $p = .01$) and classroom experiences ($r = .73$, $p = .01$). Qualitative findings supported these associations, as teachers and students described differentiated instruction as engaging, motivating, and responsive to diverse learning needs. However, limited instructional time, large class sizes, insufficient resources, and preparation demands presented implementation challenges. The findings underscore the importance of differentiated instruction as a learner-centered approach while emphasizing the need for sustained professional development, instructional resources, and institutional support. As the study employed a nonexperimental design, the identified relationships should not be interpreted as evidence of causation. Overall, the investigation contributes contextual evidence to international discussions on inclusive and responsive teaching practices in secondary education.

Recommendations

Based on the findings, teachers are encouraged to sustain differentiated instruction while strengthening product differentiation, flexible assessment practices, and classroom organization to accommodate diverse learning needs. Particular attention should be given to developing students' confidence through scaffolded activities, constructive feedback, and meaningful opportunities for classroom participation. School administrators should provide adequate instructional resources, manageable planning opportunities, and continuous professional development to address implementation challenges. Department heads and instructional leaders are encouraged to strengthen mentoring, peer coaching, collaborative lesson planning, and Learning Action Cell sessions to support consistent instructional differentiation. The proposed Differentiated Instruction Refinement (DI-REFINE) Program may serve as a school-based framework for capacity-building, resource sharing, instructional monitoring, and continuous improvement, subject to systematic evaluation. Future researchers are encouraged to conduct longitudinal, quasi-experimental, and multisite investigations to examine the effectiveness of differentiated instruction across different educational contexts. Further studies should also consider teacher preparedness, class size, resource availability, and school leadership as potential factors associated with instructional implementation and student outcomes.

Compliance with Ethical Standards

The study was conducted with consideration for established ethical principles governing educational research involving teachers and junior high school students. Permission to conduct the investigation was obtained from the appropriate school authorities, and participation was guided by the principles of informed consent, voluntary involvement, confidentiality, and respect for participants' rights. Participants were informed of the study's objectives, data collection procedures, and intended use of the information gathered. The identities of respondents were protected through confidential handling of questionnaires, interview responses, focus group discussions, and academic

records. Participants were given the opportunity to withdraw without adverse consequences, and the collected information was used exclusively for research purposes. Particular consideration was given to protecting student participants and maintaining the privacy of their academic information. The research procedures were intended to minimize potential risks and uphold the integrity, transparency, and responsible reporting of findings.

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