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Teachers' Profile and Implementation Fidelity of Differentiated Instruction: Implications for Academic Achievement

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***Abstract*:** This study examined the level of implementation fidelity of Differentiated Instruction (DI) among primary grade teachers and determined its relationship with learners' academic performance. Specifically, it sought to (1) describe the level of DI implementation in terms of content, process, product, and learning environment; (2) determine the relationship between teachers' profile variables and their DI implementation fidelity; and (3) examine the association between DI implementation fidelity and learners' first-quarter academic performance. The study employed a descriptive-correlational research design and was conducted in East Butuan District II, Butuan City Division. Complete enumeration was utilized, involving all 60 primary grade teachers from ten public elementary schools. Data were gathered using an adopted and validated Department of Education (DepEd) survey questionnaire with a five-point Likert scale. Statistical tools used in the analysis included weighted mean and Spearman correlation analysis to determine relationships among variables. Findings revealed that most teacher profile variables such as position, grade level taught, and teaching experience, did not show statistically significant associations with DI implementation fidelity. However, sex, highest educational attainment, participation in online courses, and attendance in training workshops demonstrated significant associations with selected DI components, particularly content, product, and learning environment. Moreover, results indicated that none of the DI implementation components had a statistically significant relationship with learners' academic performance, which generally remained at the "moving towards mastery" level. The study concluded that while professional development influenced DI fidelity, high reported implementation did not automatically translate into improved learner academic outcomes, highlighting the need for sustained monitoring and strengthened instructional support.

Keywords: ***Academic performance, Descriptive-correlational design, Differentiated instruction, Implementation fidelity, Professional development***

INTRODUCTION

Differentiated instruction aims to tailor teaching to meet individual student needs by varying content, process, product, and learning environment. This approach recognizes that learners differ in readiness, interests, and learning pace, and therefore moves beyond the traditional one-size-fits-all model. In the Philippine basic education system, differentiated instruction is strongly emphasized through Department of Education (DepEd) policies that promote learner-centered and inclusive teaching. DepEd underscores the use of differentiated strategies to address learner diversity and improve academic outcomes, particularly in the foundational grades where differences in literacy development are most evident (DepEd, 2021). Consistent with this policy direction, differentiated instruction champions adaptive teaching methodologies and resources that enhance learner engagement and deepen comprehension (Ojong, 2023).

The growing emphasis on differentiated instruction is grounded in the evolving understanding of learner diversity. Tracey and Morrow (2024) explained that early assumptions of uniform learning gradually shifted as educators recognized individual differences in development, background, and learning pace. Classroom observations, especially in literacy instruction, revealed that learners acquire skills at varying rates, prompting the need to move away from standardized approaches. These insights, supported by learning theories that highlight individual learning styles and prior knowledge, led to the widespread adoption of differentiated instruction as an essential element of effective pedagogy.

Despite strong policy support and extensive research evidence, challenges persist in the consistent and effective implementation of differentiated instruction. In many Philippine public schools, particularly those operating in resource-constrained contexts, teachers face difficulties related to limited instructional time, large class sizes, and insufficient access to sustained professional development. For primary grade teachers, these challenges are more pronounced, as they are tasked with addressing wide variations in learners' reading abilities while maintaining instructional fidelity. Limited opportunities for targeted training further constrain teachers' capacity to apply differentiated strategies effectively (Mocorro, 2022).

In East Butuan District II, these challenges are evident in classrooms where learners demonstrate varying levels of reading proficiency, comprehension, and engagement. The teacher-researcher observed that while differentiated instruction is encouraged and practiced, maintaining fidelity to its core principles is difficult due

to classroom management demands, time limitations, and uneven access to instructional resources. These local conditions raise concerns about whether differentiated instruction is being implemented as intended and whether such implementation translates into improved academic performance among primary grade learners.

Given these concerns, this study sought to bridge the gap between policy, theory, and classroom practice by examining the level of implementation fidelity of differentiated instruction among primary grade teachers in East Butuan District II and its relationship to learners' academic performance. By generating research-based insights and proposing actionable strategies, the study aimed to strengthen the quality of differentiated instruction in the local context and contribute to the effective realization of DepEd's goal of inclusive and meaningful learning. Ultimately, addressing these challenges is essential to ensuring that all learners receive appropriate instructional support and are enabled to progress toward academic mastery and lifelong learning.

Theoretical framework

The Differentiated Instruction (DI) Theory, developed by Tomlinson (1999), served as the primary foundation of this study. The theory emphasizes the need for teachers to intentionally modify content, process, product, and learning environment to address learners' diverse readiness levels, interests, and learning profiles. Tomlinson posited that effective instruction moves beyond a one-size-fits-all approach by recognizing that learners differ in cognitive abilities, learning preferences, and developmental readiness, thus requiring flexible and responsive teaching strategies.

In the context of primary grade reading instruction, DI Theory provides a crucial framework for addressing the wide variation in literacy skills within a single classroom. While some learners exhibit strong reading fluency and comprehension, others struggle with basic decoding and vocabulary development. Through differentiated content, varied instructional processes, flexible learning products, and a supportive classroom environment, teachers are able to provide personalized learning experiences that foster literacy development and engagement among all learners.

To further strengthen the theoretical foundation of the study, Self-Efficacy Theory, proposed by Bandura (1997), was integrated as a complementary learning theory. Self-Efficacy Theory posits that learners' beliefs in their ability to perform tasks significantly influence their motivation, persistence, and academic achievement. According to Bandura, students who possess high self-efficacy are more likely to engage actively in learning tasks, persevere through difficulties, and demonstrate improved performance, while those with low self-efficacy may withdraw or avoid challenging learning situations.

The integration of Self-Efficacy Theory with Differentiated Instruction is particularly relevant in the primary grades, where learners' confidence in reading and academic tasks is still developing. Differentiated instruction supports the development of self-efficacy by providing tasks that are appropriately challenging, offering multiple opportunities for success, and allowing learners to demonstrate understanding through varied products. These practices help reduce learning anxiety, promote positive learning experiences, and strengthen learners' belief in their own capabilities.

Differentiated Instruction Theory and Self-Efficacy Theory provided a strong conceptual lens for this study. While DI Theory explains how instruction should be adapted to meet diverse learner needs, Self-Efficacy Theory explains why such adaptations influence learner engagement and performance. Evaluating the faithful implementation of differentiated instruction among primary grade teachers, therefore, not only examined instructional practices but also considered their potential influence on learners' confidence and academic performance. This combined theoretical framework guided the investigation, helped identify areas for improvement, and supported the formulation of strategies aimed at enhancing both instructional quality and learner outcomes.

Methodology

This study employed a descriptive-correlational research design to examine the level of implementation fidelity of Differentiated Instruction (DI) and its relationship to learners' academic performance. The descriptive component assessed teachers' implementation of DI across four key components: content, process, product, and learning environment. It also described teachers' profile variables, including sex, years in teaching, highest educational attainment, position, grade level taught, and relevant trainings attended. The correlational component determined the relationships between teachers' profile variables and their level of DI implementation, as well as the association between DI implementation fidelity and learners' first-quarter academic performance.

The research was conducted in East Butuan District II, Butuan City Division, encompassing ten public elementary schools. Data were gathered using an adopted survey questionnaire from the Department of Education (DepEd), designed to measure teachers' self-reported practices in implementing DI. The instrument utilized a five-point Likert scale ranging from Never (1) to Always (5). To ensure validity and reliability, the instrument underwent expert validation and pilot testing prior to its full administration.

For data analysis, descriptive and inferential statistical tools were employed. The weighted mean was used to determine the level of DI implementation, while correlation analysis was applied to examine the

relationships among the identified variables. Ethical considerations, including informed consent, voluntary participation, and confidentiality of responses, were strictly observed throughout the conduct of the study.

Sampling Technique and Sample

The sample of the study consisted of 60 primary grade teachers from ten public elementary schools in East Butuan District II, Butuan City Division. Of the total respondents, 7 were males and 53 were females. These teachers represented all primary grade levels across the district and served as the direct sources of data regarding the implementation fidelity of Differentiated Instruction (DI).The study employed complete enumeration as its sampling technique. This approach included all primary grade teachers in the district rather than selecting a subset of the population. By involving the entire population of eligible teachers, the study ensured comprehensive representation and minimized sampling bias, thereby strengthening the accuracy and reliability of the findings regarding DI implementation fidelity.

Results and Discussions

This section presents the test of a significant relationship in the Level of the Teacher's Implementation of the Kindergarten Blocks of Time and the Level of Performance of the Kindergarten Learners in the Developmental Domains

Table 1 presents the correlation analysis between the level of the teacher's implementation of the kindergarten blocks of time and the performance of kindergarten learners across the four developmental domains: physical, language, cognitive, and socio-emotional development.

Table 1

Correlation analysis between the teachers' profile and their fidelity implementation of the differentiated instruction

Profile Variable		Content	Process	Product	Environment
Position	Correlation Coefficient	.080	-.096	.153	.196
	p-value	.543	.467	.244	.133
	Decision on H_0	Do not reject H_0	Do not reject H_0	Do not reject H_0	Do not reject H_0
	Interpretation/Remarks	Not significant	Not significant	Not significant	Not significant
Sex	Correlation Coefficient	.319*	.054	.234	.336**
	p-value	.013	.681	.072	.009
	Decision on H_0	Reject H_0	Do not reject H_0	Do not reject H_0	Reject H_0
	Interpretation/Remarks	Significant	Not significant	Not significant	Significant
Highest Educational Attainment	Correlation Coefficient	.114	-.038	.190	.266*
	p-value	.384	.771	.146	.040
	Decision on H_0	Do not reject H_0	Do not reject H_0	Do not reject H_0	Reject H_0
	Interpretation/Remarks	Not significant	Not significant	Not significant	Significant
Grade level Taught	Correlation Coefficient	-.100	-.069	-.048	-.074
	p-value	.447	.602	.716	.575
	Decision on H_0	Do not reject H_0	Do not reject H_0	Do not reject H_0	Do not reject H_0
	Interpretation/Remarks	Not significant	Not significant	Not significant	Not significant
Teaching Experience	Correlation Coefficient	-.076	-.250	.016	-.041
	p-value	.563	.054	.903	.757
	Decision on H_0	Do not reject H_0	Do not reject H_0	Do not reject H_0	Do not reject H_0
	Interpretation/Remarks	Not significant	Not significant	Not significant	Not significant
Training workshops	Correlation Coefficient	.298*	-.159	.340**	.178
	p-value	.021	.226	.008	.173
	Decision on H_0	Reject H_0	Do not reject H_0	Reject H_0	Do not reject H_0
	Interpretation/Remarks	Significant	Not significant	Significant	Not significant

The overall data reveals that the teacher's profile variables generally show no statistically significant association with the implementation fidelity of Differentiated Instruction, with most correlation coefficients being weak and the decision being "Do not reject" across the data presented. Specifically, Position, Highest Educational Attainment, Grade Level Taught, and Teaching Experience were found to have no significant correlation with the fidelity of Content, Process, Product, or Environment implementation. However, exceptions were noted, primarily in the areas of teacher development and certain demographic factors: Sex showed a moderate, significant association with Content (0.319) and Environment (0.366) fidelity; Content fidelity (0.277); and Training workshops correlated significantly with both Content (0.298) and Product (0.340) fidelity.

Highest educational attainment shows positive, weak but significant association with environment (ρ=.266; p=.040) indicating that teachers with higher educational attainment tend to have higher levels of fidelity implementation of creating and sustaining a supportive environment in the delivery of differentiated instruction. This also implies that higher education beyond the basic bachelor's degree enhances the teachers' understanding of how to manage and adjust classroom settings for diverse learners.

The literature explicitly addresses the crucial role of the learning environment in effective differentiation. Ojong (2023) stated that a positive and inclusive classroom atmosphere encourages student engagement and fosters a sense of belonging, which is essential for effective learning. This directly supports the finding because higher educational attainment (Master's units/CAR/degree) implies advanced study in educational theory and pedagogy, enhancing a teacher's understanding of Ojong's principle: a supportive environment is not merely an optional setting, but a foundational requirement for

student success. The higher educational exposure likely strengthens a teacher's commitment to prioritizing these sophisticated socio-emotional and organizational practices. Furthermore, the literature highlights that differentiated curriculum design aligns with broader frameworks like Universal Design for Learning (Nave, 2021), which promotes accessible learning experiences. Teachers with advanced degrees are more likely to have studied and integrated these comprehensive frameworks, thus improving their ability to manage and adjust classroom settings for diverse learners, leading to the observed higher implementation fidelity in the Environment component.

The literature consistently highlights that effective application of DI is challenging for teachers, and that they require ongoing support and training (Thaver, 2025). The significant association Content fidelity demonstrates that this specific mode of training successfully provides the necessary knowledge for teachers to implement the contents more accurately. Content implementation which involves modifying materials, complexity, and resources is a technical skill that benefits directly from structured training, as seen in the work of Tomlinson (2023), who defines the modification of content as a core action of DI.

Moreover, findings show that the teachers' attendance to training workshops in DI are significantly associated with content (ρ= .298; p=.021) and environment (ρ=.340; p=.008). This implies that teachers who are exposed to actual trainings and workshops have better tendencies to enhance their implementation of the DI in the selection of content and maintaining the conducive learning atmosphere in the class because of the learning gained from these professional advancements.

The significant association demonstrates that actual trainings and workshops successfully enhance a teacher's ability to implement DI. This aligns with the assertion by Thaver (2025) that teachers require ongoing support and training to overcome implementation challenges, suggesting that workshops provide the necessary practical skills to select and modify Content accurately and vary Product assessment effectively. Furthermore, the effectiveness of workshops is rooted in the idea put forth by Gentry (2021): successful differentiation requires ongoing training and monitoring. This indicates that the focused, hands-on learning gained from these professional advancements directly reinforces the teachers' understanding of how to tailor materials and how to design varied assessment products, leading to the observed higher implementation fidelity in both the Content and Product components.

Position, grade level taught, and teaching experience did not show significant association with the teachers' fidelity implementation of the differentiated instruction as evidenced by p-values which are greater than the .05 level of significance set for analysis. This implies that fidelity implementation of the differentiated instruction is more associated with teacher mindset, training relevance and exposure to more learning activities than position or years of teaching experience.

While the provided literature does not explicitly state that these variables are irrelevant, the support for the mindset and training argument is strong. The literature emphasizes that successful differentiation requires ongoing training, assessment, and monitoring to ensure that instructional practices are effectively meeting students' needs (Gentry, 2021). This suggests that high implementation fidelity is driven by a teacher's proactive mindset and their continuous engagement with professional learning rather than passive factors like how long they have taught or their administrative rank. Furthermore, the significant findings for Training Workshops and Online Courses (as shown in the study) reinforce the literature's emphasis on targeted learning activities as the key determinant of DI competence, rather than the general accumulation of teaching experience. The non-significant results indicate that DI fidelity is a learned skill maintained through continuous professional development, independent of position or years in the classroom.

Test of Significant Relationship in the Level of Implementation Fidelity of Differentiated Instruction and the Level of Academic Performance of the Learners

Table Correlation analysis between the level of implementation fidelity of differentiated instruction and the level of academic performance of the learners

The result of the Sparman correlation analysis above shows that not any of the indicators of implementation fidelity of differentiated instruction has a significant association with the level of academic performance of the learners.

Thus, the null hypothesis is not rejected. It can be recalled that the teachers claimed to have generally almost always implemented the differentiated instruction in their classrooms. However, statistical data indicate that this had not gained favorable results in terms of the learners' academic performance which was generally in the moving towards mastery level only.

Table 2

Correlation analysis between the level of implementation fidelity of differentiated instruction and the level of academic performance of the learner

			Level of Learners' performance
Spearman's rho	Content	Correlation Coefficient	.035
		p-value	.791
		Decision on H_o	Do not reject H_o
		Interpretation/Remarks	Not significant
	Process	Correlation Coefficient	.202
		p-value	.121
		Decision on H_o	Do not reject H_o
		Interpretation/Remarks	Not significant
	Product	Correlation Coefficient	-.023
		p-value	.860
		Decision on H_o	Do not reject H_o
		Interpretation/Remarks	Not significant
	Environment	Correlation Coefficient	-.139
		p-value	.288
		Decision on H_o	Do not reject H_o
		Interpretation/Remarks	Not significant

The content and process aspects of the differentiated instruction approach have both very weak correlation values with the academic performance of the learners, having p-values which are not within the level of significance set for analysis. Both product and environment aspects of the differentiated instruction approach have negative and very weak correlation values with academic performance of the learners indicating that while the teachers did differentiated instruction in the classroom, this approach did not show positive tendencies for the learners to master their lessons. This association, though, is not significant as evidenced by p-values beyond the .05 level of significance set for analysis.

The non-significant correlation between the teachers' high DI fidelity and the learners' academic performance directly aligns with literature that points to implementation challenges. Thaver (2025) explicitly highlighted that the effective application of DI can be challenging due to factors such as limited resources and insufficient professional development, suggesting that the high frequency of DI is likely superficial or hindered. Furthermore, this finding supports the implicit claim of Gentry (2021) that successful differentiation requires ongoing monitoring and effectiveness checks the lack of significance proves that the instruction is not *effectively* meeting student needs to drive mastery.

Conclusions

The findings of the study lead to the conclusion that the implementation fidelity of Differentiated Instruction (DI) is not significantly influenced by teachers' position, grade level taught, or years of teaching experience, but is instead more strongly associated with purposeful professional development and advanced educational attainment. Teachers who participated in training workshops, as well as those with higher academic qualifications, demonstrated stronger fidelity in selected components of DI, particularly in content modification, product design, and the creation of supportive learning environments. However, despite teachers reporting high levels of DI implementation, no significant relationship was found between implementation fidelity and learners' academic performance. This suggests that frequent or claimed use of differentiated strategies does not automatically result in improved academic mastery. Therefore, effective DI requires not only implementation but also depth, quality, sustained professional support, and continuous monitoring to ensure that instructional practices meaningfully enhance learner outcomes. Teachers may strengthen their implementation of Differentiated Instruction by engaging in continuous and targeted professional development to deepen the quality and effectiveness of their strategies; students may actively participate in differentiated activities and communicate their learning needs to maximize instructional support; and school heads may provide sustained training, instructional monitoring, and coaching systems to ensure that differentiated practices are meaningfully implemented and aligned with improved learner achievement.

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