

Learners' Academic Achievement as Influenced by Differentiated Instruction Strategies

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Abstract. This study examined the extent to which differentiated instruction strategies influence learners' academic achievement. Guided by the frameworks of Differentiated Instruction Theory, Communities of Practice, and Collaboration Theory, the study employed a quantitative-descriptive correlational design. Data were gathered from 138 elementary school teachers in the Mati Northeast District, Mati City Division, through a structured survey instrument measuring both the extent of differentiated instruction practices—namely scaffolded writing, grammar instruction, technology integration, and adapted assessment—and the corresponding levels of academic achievement. Descriptive statistics, Pearson correlation, and multiple regression analysis were utilized to analyze the data. Findings revealed that both differentiated instruction strategies and learners' academic achievement were rated as very extensive. A weak but statistically significant positive relationship was found between differentiated instruction and academic achievement. However, no individual instructional strategy was found to significantly predict academic outcomes. The study concludes that while differentiated instruction contributes positively to student achievement, its effectiveness is enhanced when applied holistically and in conjunction with inclusive, data-driven, and collaborative practices. Recommendations emphasize the need for sustained teacher training, integrated instructional planning, and further research on contextual variables influencing instructional outcomes.

KEY WORDS

1. differentiated instruction 2. academic achievement 3. scaffolded writing

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1. Introduction

Integrating differentiated instruction into English teaching presents educators with numerous challenges. Among these hurdles, a prominent issue is effectively addressing the diverse learning needs within a single classroom. Students exhibit varying proficiency levels, learning styles, and abilities, necessitating meticulous planning and adaptability to tailor instruction accordingly. Moreover, logistical constraints, including time limitations and sizable class sizes, compound the difficulty of delivering personalized learning experiences to each student. Throughout the world, evaluating and monitoring the advancement of students following unique learning trajectories poses intricate challenges, necessitating continuous formative assessments and adaptations to teaching methodologies. Educators may encounter resistance from learners who find varied approaches unfamiliar or challenging. Additionally, con-

straints such as limited resources and technology can hinder the smooth execution of personalized instruction. Juggling the requirements of standardized testing alongside catering to individualized learning needs remains an ongoing hurdle. Despite its efficacy, implementing differentiated instruction calls for ongoing professional growth and meticulous planning to guarantee an inclusive and impactful English language learning journey for every student (Am, et al., 2023). Elevating the teaching proficiency of educators stands as a promising solution for addressing the obstacles linked with differentiated instruction in English education. In Florida, USA, Williams (2023) shared that tailored professional development programs aimed at enhancing teachers' mastery of differentiated instruction can empower them to adeptly navigate the intricacies of diverse classrooms. By delving into a comprehensive understanding of diverse learning styles, proficiency levels, and instructional methodologies, educators gain the tools necessary to customize their teaching to meet the unique needs of each student. Conversely, continuous training initiatives can effectively address logistical barriers by furnishing educators with practical methodologies and time-management techniques tailored to implement differentiated instruction within the confines of a standard classroom. Furthermore, as Djatmika (2023) suggests, bolstering teachers' expertise can cultivate a sense of assurance in leveraging technology and diverse resources, thus alleviating challenges stemming from resource limitations. Augmenting teachers' proficiency also cultivates a positive disposition toward inclusive teaching, enabling them to surmount potential student resistance and cultivate a more supportive learning milieu. Ultimately, investing in the ongoing professional development of teachers not only enriches their skill set but also engenders a more equitable, vibrant, and efficacious English language learning journey for every student. In the Philip-

ines, Gesta (2023) shared that public school teachers face a myriad of needs and issues that require thoughtful attention and proactive solutions. Adequate compensation remains a persistent concern, with many educators grappling with salaries that may not align with the demands and responsibilities of their roles. Access to professional development opportunities is crucial for continuous growth, but budget constraints and limited resources can hinder teachers' ability to access training that enhances their skills. Additionally, large class sizes in public schools contribute to the challenge of providing personalized attention to each student. However, in Pasig City schools, insufficient infrastructure, outdated teaching materials, and limited access to technology further impede effective instruction. Teachers often confront issues related to student diversity, including varying proficiency levels, socio-economic backgrounds, and learning styles, necessitating strategies like differentiated instruction. By addressing these challenges, policymakers can create an environment that supports educators and, in turn, enhances the quality of education for students in public schools (Glover, 2023). Bal (2023) acknowledges that students vary not only in their proficiency levels but also in their preferred learning styles and interests. Differentiated instruction aims to establish an inclusive and responsive learning environment by customizing teaching methods, materials, and assessments to address these diverse needs. For example, educators may offer a variety of reading materials to accommodate differing reading levels or implement flexible grouping strategies to meet specific learning preferences. Differentiated instruction is crucial for inclusive education in the Mati City Schools Division, especially in the Northeast District. By tailoring learning experiences to meet the diverse needs and styles of learners, this approach ensures that all students have opportunities to thrive academically. Educators engage with current research to refine

strategies and create responsive learning environments. Recognizing the impact of differentiated instruction, expanding research is essential. Future studies should explore its application in online learning and the use of technology to enhance effectiveness. Investigating these areas will deepen understanding and provide practical insights for more inclusive teaching practices. Advancing knowledge in differentiated instruction promotes a just educational landscape, ensuring no learner is left behind. It equips educators with strategies to meet diverse needs, fostering engaged and successful students. Continued inquiry can position differentiated instruction as a powerful tool for equal access to quality education and closing learning gaps among students.

1.1. Theoretical/Conceptual Framework of the Study—This study focuses on implementing differentiated instruction strategies, which notably impact teacher proficiency. This is achieved by recognizing and addressing students' diverse learning needs in the classroom. As teachers implement differentiated instruction, they personalize their teaching methods, study materials, and assessments to match each student's individual readiness levels, interests, and learning styles. According to Nguyen and Wargo (2023), teachers must develop a deep understanding of their students' individual strengths, challenges, and learning profiles to effectively deliver differentiated instruction. Strategies such as flexible grouping, tiered assignments, and formative assessments allow ed-

ucators to adapt to diverse learning needs and foster a dynamic and inclusive classroom environment. Consistent use of these practices enhances student engagement, supports academic success, and demonstrates the teacher's ability to manage instructional complexity. Moreover, differentiated instruction principles are equally valuable in teacher professional development, where personalized learning pathways can help educators address their own learning needs and build targeted competencies (Johnson Stewart, 2022). Teachers can demonstrate their understanding by using flexible grouping. This allows them to address varying proficiency levels, ensuring that professional development activities are both challenging and accessible. Differentiated instruction recognizes that teachers have different strengths and areas for growth, allowing for personalized support and targeted interventions. This approach acknowledges teachers' individuality and fosters a more inclusive and effective learning environment. It aligns seamlessly with the multifaceted nature of professional development among educators (Bal, 2023). Djatmika et al. (2023) suggest collaborative professional development can enhance teachers' growth. This study's framework offers insights into how teachers can collectively contribute to their and each other's development. The Communities of Practice (CoP) theory offers a meaningful lens for examining professional development among elementary school teachers in the Mati Northeast District.

2. Methodology

This chapter delineates the study's processes and procedures, encompassing the selection of the research design, identifying respondents and the employed sampling method, determining research instruments for data collection, outlining the procedural steps and ethical considerations, and culminating in the data analysis. These sequential steps are deemed indispensable, ensuring the appropriateness and accuracy of the data collection, analysis, and interpretation processes to yield robust and reliable results.

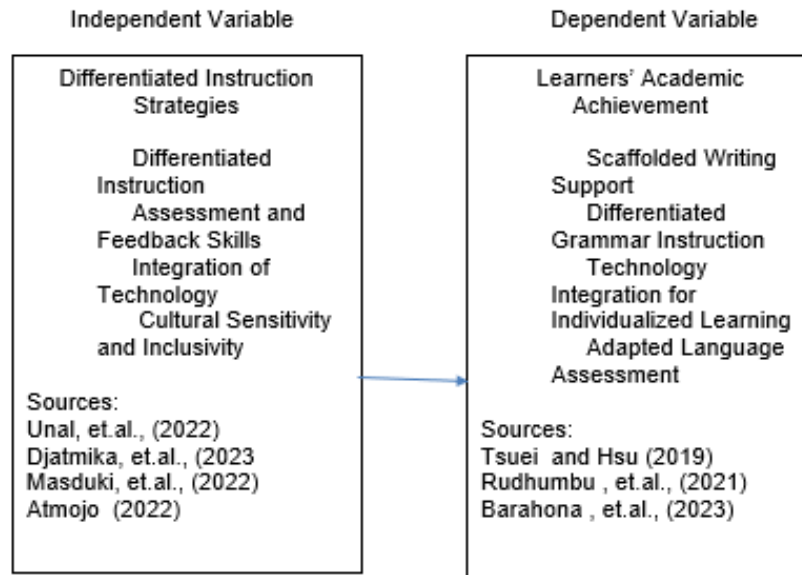


Fig. 1. Theoretical/Conceptual Framework

2.1. Research Design—The research utilized a descriptive-correlational research design, a non-experimental approach outlined by Creswell (2020). This design helps explore the relationships between two or more variables without intervening or manipulating them. Instead, it focuses on observing and analyzing the existing associations between these variables. The descriptive-correlational research design is employed to elucidate and clarify the relationships between variables and uncover connections between variables that can predict future events. This design proves valuable for its capacity to illuminate associations among variables without resorting to experimental manipulation, and it is typically applied in exploratory studies or when researchers seek to establish relationships between variables. The study employs a descriptive-correlational research design, which involves a non-experimental approach to systematically examining and exploring relationships among variables without manipulating them. This design is particularly suitable for investigating the existing conditions, characteristics, and correlations among various factors. The researcher's focus in this study is to describe the current state of professional

development among Elementary School Teachers in Mati Northeast District, Mati City. The study aims to gather comprehensive data on the professional development status of teachers through surveys or questionnaires. This data includes factors like training, resources, and support systems. The research design is descriptive-correlational, which allows the researcher to analyze the associations between different variables and unveil potential patterns and connections. For instance, the study might explore whether there is a correlation between the availability of Wi-Fi connections and the participation levels in professional development activities. By adopting this research design, the study aims to provide a detailed portrayal of the current scenario while uncovering potential interrelationships among the identified variables. This will offer valuable insights for enhancing the professional development landscape among the teachers in the specified district.

2.2. Ethical Consideration—The ethical consideration section of this study will address the key principles that ensure the protection and well-being of the teacher-respondents involved. This includes adhering to confidentiality, informed consent, and the voluntary nature of

participation, ensuring that the research is conducted with integrity and respect for the rights of all respondents.

Social Value

The social value of this study lies in its potential to enhance teaching practices and improve student learning outcomes by exploring differentiated instruction in the Mati Northeast District, Mati City. The study acknowledges their vital role in shaping inclusive and effective education by involving teachers as respondents. I am committed to ensuring ethical research practices by respecting their professional insights, maintaining confidentiality, and upholding voluntary participation. The findings will contribute to educators' professional growth and support the development of more responsive instructional strategies, ultimately fostering a more equitable and student-centered learning environment.

Informed Consent and Assent

In conducting this study, I uphold the ethical principle of informed consent and assent to ensure that all teacher-respondents participate voluntarily and clearly understand their involvement. Before data collection, I will explain the study's purpose, objectives, procedures, potential risks, and benefits. Respondents will be allowed to ask questions and only participate after providing their voluntary consent. Their right to withdraw at any stage without consequences will be emphasized. Additionally, I will ensure that all responses remain confidential and are used solely for academic purposes. I uphold ethical research standards by securing informed consent and assent while fostering trust and respect among participants.

Vulnerability of Research Respondents

In this study, I recognize the potential vulnerabilities of teacher-respondents, particularly in terms of professional reputation, workload concerns, and the sensitivity of their responses regarding instructional practices. To address these, I will ensure that participation is volun-

tary, with no pressure or obligation to participate. Confidentiality and anonymity will be strictly maintained to protect their identities and professional standing. I will design the research process to minimize any added burden on their responsibilities, ensuring that their participation does not interfere with their teaching duties. Acknowledging and addressing these vulnerabilities, I uphold ethical research standards while fostering a safe and respectful environment for respondents.

Privacy and Confidentiality

I am committed to upholding the privacy and confidentiality of all teacher-respondents throughout the research process. Personal information and responses will be kept strictly confidential, ensuring that no identifying details are disclosed in any reports or presentations. Data will be securely stored and accessible only to authorized individuals for research purposes. To further protect respondents' anonymity, I will use coded identifiers instead of personal names in data analysis. Additionally, any findings will be presented in a way that prevents the identification of individual participants. Safeguarding privacy and confidentiality, this study ensures that respondents can share their insights freely without concern for professional or personal repercussions.

Risk, Benefits and Safety

I acknowledge the ethical responsibility to carefully assess the risks, benefits, and safety of all teacher-respondents participating in this study. The potential risks are minimal, primarily involving the time required for participation and the possibility of discomfort in sharing professional insights. I will ensure a flexible and non-intrusive data collection process to mitigate these. The benefits of this study include contributing to professional development, improving differentiated instruction practices, and fostering a more student-centered learning environment. Respondents' safety both in terms of emotional well-being and professional integrity

will be prioritized by ensuring voluntary participation, confidentiality, and the respectful handling of all responses. The study upholds ethical standards through these measures while maximizing its positive impact on educators and the broader educational community.

Justice

This study upholds the ethical principle of justice by ensuring fairness in all teacher-respondents' selection, treatment, and representation. Participation will be based on clear inclusion criteria, ensuring that no group is unfairly included or excluded. Respondents will have an equal opportunity to share their experiences, and their insights will be valued regardless of their background or teaching experience. Additionally, the study aims to generate findings that benefit individual educators and the broader educational system, promoting equity in teaching practices. This research ensures that its outcomes contribute meaningfully to both teachers' professional growth and student learning by maintaining fairness, transparency, and inclusivity.

Transparency

This study is committed to transparency by ensuring that all aspects of the research process are conducted with honesty, clarity, and openness. Teacher-respondents will receive a clear explanation of the study's objectives, methodology, and expected outcomes before participation. Any potential risks and benefits will be communicated to allow informed decision-making. Data collection and analysis will also be conducted ethically, with findings reported accurately and without bias. Respondents can also seek clarification or request information regarding the study at any stage. By upholding transparency, this research fosters trust, integrity, and credibility, ensuring that its outcomes are both ethical and meaningful.

Qualification of the Researcher As the researcher, I recognize the importance of conducting this study with competence, integrity, and

professionalism. My academic background, research experience, and expertise in educational studies equip me with the necessary skills to design, implement, and analyze this research effectively. I am committed to adhering to ethical research standards, ensuring the validity and reliability of findings while safeguarding the rights and well-being of teacher-respondents. I will seek guidance from research mentors and adhere to institutional protocols to uphold the credibility and scholarly rigor of the study. Maintaining high ethical and professional standards, I ensure that this research contributes valuable insights to the field of education.

Conflict of Interest

I acknowledge the importance of maintaining objectivity and integrity throughout this study by avoiding any potential conflict of interest that could compromise the validity of the research. I affirm that no personal, financial, or professional interests could unduly influence the study's design, data collection, analysis, or reporting. Any affiliations or relationships that may pose a perceived conflict will be transparently disclosed. Additionally, I will ensure that all findings are presented honestly, without bias, and solely based on the evidence collected. Upholding these ethical standards, this research remains credible, impartial, and focused on contributing meaningful insights to the field of education.

Adequacy of Facilities

I ensure that this study will be conducted with access to adequate facilities and resources necessary for ethical and efficient research implementation. The availability of appropriate data collection venues, secure research materials storage, and access to relevant academic databases and analytical tools will support the accuracy and credibility of the study. Additionally, I will utilize technology to facilitate data management while ensuring the confidentiality and security of respondents' information. Securing these essential facilities, I uphold the

integrity of the research process and ensure that the study is conducted in a professional, organized, and ethical manner.

Community Involvement

This study values community involvement by recognizing the essential role of teachers as key stakeholders in shaping educational practices and student outcomes. Their participation contributes to the research and fosters a collaborative approach to improving differentiated instruction in the Mati North East District. I will actively engage with teacher-respondents, ensuring that their insights and experiences are acknowledged and respected. Additionally, the findings of this study will be shared with the educational community to promote informed discussions and encourage the implementation of evidence-based strategies.

2.3. Research Respondents—Using Slovin’s formula, the appropriate sample size for a population of 210 elementary school teachers in Mati North East District, Mati City, was determined. Slovin’s formula, expressed as $n = N / (1 + Ne^2)$, allows the researcher to calculate the minimum required sample size while maintaining a reasonable margin of error. Applying a commonly used margin of error of 5% (0.05), the computation resulted in a sample size of 138. This ensures that the sample is statistically representative of the entire population, allowing for more accurate and reliable findings while balancing feasibility in data collection. In selecting the respondents for the study, three key inclusion criteria were established to ensure that the sample accurately represents the target population and provides meaningful insights into the research objectives. First, respondents must be currently employed as elementary school teachers in the Mati Northeast District, Mati City. This criterion ensures that the participants have firsthand experience with the teaching practices, policies, and challenges relevant to the study, allowing for a more precise evaluation of differentiated instruction in their educational setting.

Second, respondents must have at least one year of teaching experience in the district to ensure that they have acquired sufficient familiarity with the curriculum, student learning needs, and pedagogical strategies within their schools. This criterion helps gather responses from educators with practical knowledge and engagement with differentiated instruction, making their insights more reliable and relevant. Lastly, respondents must actively participate in instructional planning and implementing differentiated instruction or related teaching strategies. This criterion guarantees that the participants have direct involvement in modifying their instructional approaches to address diverse learning needs, making their perspectives essential in assessing the effectiveness and challenges of differentiated instruction.

2.4. Research Instrument—The instrument was carefully crafted during the development process to ensure the study’s validity by articulating a set of question items based on key concepts. The items in the survey questionnaire were self-made, and constructs were tailored based on the reviewed literature, as proposed by the authors. The questionnaire consisted of two parts to determine the level of implementation of differentiated instruction strategies. These strategies included scaffolded writing support, differentiated grammar instruction, technology integration for individualized learning, and adapted language assessment. Likewise, the second part of the survey measured the extent to which teachers are proficient in differentiated instruction, assessment and feedback, technology integration, cultural sensitivity, and inclusivity. Further, the survey statements were subjected to a test-retest or validity and reliability testing using Cronbach’s Alpha at a .05 confidence level. They generated an alpha Cronbach’s coefficient of 0.964, indicating a 96.4% confidence level in the validity and reliability of the survey’s constructs (Pallant, 2010).

Scale Descriptive Ratings and Interpretation for Differentiated Instruction Strategies

Scale	Descriptive Rating	Interpretation
4.20 – 5.00	Very Extensive	The differentiated instruction strategies is always manifested
3.40 – 4.19	Extensive	The differentiated instruction strategies is oftentimes manifested
2.60 – 3.39	Moderately Extensive	The differentiated instruction strategies is sometimes manifested
1.80 – 2.59	Less Extensive	The differentiated instruction strategies is rarely manifested
1.00 – 1.79	Not Extensive	The differentiated instruction strategies is not manifested

Scale Descriptive Ratings and Interpretation for Learners' Academic Achievement

Scale	Descriptive Rating	Interpretation
4.20 – 5.00	Very Extensive	The learners' academic achievement is always manifested
3.40 – 4.19	Extensive	The learners' academic achievement is oftentimes manifested
2.60 – 3.39	Moderately Extensive	The learners' academic achievement is sometimes manifested
1.80 – 2.59	Less Extensive	The learners' academic achievement is rarely manifested
1.00 – 1.79	Not Extensive	The learners' academic achievement is not manifested

2.5. *Data Gathering Procedure*—Several crucial steps are involved in the research project's data-gathering procedure, one of which is ethically acquiring permission to conduct the study. This step is essential for upholding fundamental principles such as respect, transparency, and responsible research conduct. The guidelines for this process adhere to the policies of Rizal Memorial Colleges. As part of the formal request, researchers delineate their intentions regarding data collection, analysis, and dissemination, aligning these with the overarching research goals. This communication proactively addresses anticipated concerns or questions from recipients, providing assurances on ethical safeguards, confidentiality measures, and the potential benefits of the study. The formal permission request explicitly seeks authorization to proceed, emphasizing the pivotal role of their support in ensuring the research's success. Permission to conduct the study. In May 2024, before data collection, the researcher

obtained necessary permissions from the relevant authorities, including the research adviser, the Dean of Rizal Memorial Colleges, and the top management of DepEd Mati City Division, through the appropriate channels. This involved submitting a comprehensive research proposal outlining study design, procedures, and potential risks and benefits. The researcher provided detailed information about the study's purpose, goals, and methods for data collection, analysis, and reporting. Furthermore, in June 2024, the researcher took steps to ensure that all partici-

pants were fully informed about the study, their rights, and the nature of their involvement. Informed consent was obtained from each participant before they participated in the study. For distributing and retrieving questionnaires during the first week of July 2024, the researcher maintained a commitment to data accuracy and completeness. These processes were conducted with a standardized and systematic approach, ensuring reliability in the collection of responses from participants.

2.6. Data Analysis—Mean Scores and Standard Deviation were used to address statement problems posed in statement problem number one (1) regarding the extent of learners' academic performance and statement problem number two (2) regarding the extent of differentiated instruction strategies in Mati Northeast District, Mati City Schools Division. Pearson r was used to determine the significant relationship be-

tween in learners' academic achievement a differentiated instruction strategies. Linear Regression Analysis was used to determine significant indicators of differentiated instruction strategies that influence learners' academic achievement (Pallant, 2000) and (Gujarati, 2000). All data processing and analysis were performed using Jeffrey's Statistics Amazing Program (JASP) version 0.12.20. When results were yielded, discussions and interpretations followed.

3. Results and Discussion

This chapter presents the study's results, focusing on the influence of differentiated instruction strategies on learners' academic achievement. The data gathered from the respondents were subjected to appropriate statistical analyses to determine the extent of implementation of differentiated instruction and its relationship to students' academic performance. The findings are systematically discussed and interpreted about the research questions and objectives, concerning relevant literature. This chapter also highlights key patterns and implications arising from the results, providing insights into the effectiveness of differentiated instruction in diverse classroom contexts.

3.1. Differentiated Instruction Strategies—Prta, Todd, and Gaut (2022) examined ways to improve foreign language proficiency among students in non-language higher education programs. Their study highlighted the effectiveness of differentiated instruction in boosting student motivation and learning outcomes. Findings also supported improvements in course design, teaching strategies, and feedback practices,

showing that tailored instructional approaches can enhance language acquisition and promote flexible learning pathways. Assignments and assessments can be customized to enable students to demonstrate their comprehension through various formats, such as written essays, oral presentations, or multimedia projects. By personalizing support and adapting teaching strategies, educators ensure that each student has the oppor-

tunity to engage with English language skills in a way that aligns with their individual strengths and needs. Ultimately, differentiated instruction in teaching English improves the accessibility and effectiveness of language learning, creating

a more inclusive and supportive educational experience for all students (Alhameedyeen, 2024).

Summary on the Extent of Differentiated Instruction Strategies

Table 1. Summary on the Extent of Differentiated Instruction Strategies

No.	Learners' Academic Achievement	Mean	Descriptive Equivalent
1	Differentiated Instruction	4.66	Very Extensive
2	Assessment and Feedback	4.57	Very Extensive
3	Integration of Technology	4.75	Very Extensive
4	Cultural Sensitivity and Inclusivity	4.78	Very Extensive
Overall Mean		4.69	Very Extensive

Table 1 presents a summary of the extent to which various differentiated instruction strategies are implemented in the classroom, based on four key domains: differentiated instruction practices, assessment and feedback, integration of technology, and cultural sensitivity and inclusivity. The overall mean score of 4.69, interpreted as Very Extensive, indicates a consistently high application level across all areas. Among the domains, cultural sensitivity and inclusivity received the highest mean score ($M = 4.78$), suggesting that teachers strongly emphasize creating inclusive and culturally responsive learning environments. This is followed closely by technology integration ($M = 4.75$) and differentiated instruction ($M = 4.66$), reflecting the significant role of technological tools and learner-centered strategies in addressing diverse student needs. Assessment and feedback also rated highly ($M = 4.57$), reinforcing the value of timely, personalized, and formative evaluations in enhancing student progress. These results collectively confirm that teachers extensively implement differentiated instruction strategies, ensuring equitable, engaging, and

supportive learning experiences that promote academic achievement for all learners.

3.2. Learners' Academic Achievement—

Learners' academic achievement is influenced by a multitude of interrelated factors encompassing personal attributes, environmental conditions, and institutional support mechanisms. Recent empirical studies have highlighted the significant impact of school-related factors on academic performance. For instance, a study by Odit et al. (2023) in Uganda demonstrated that school external factors and teacher effectiveness play a crucial role in enhancing learners' academic achievement in government-aided secondary schools. Similarly, research by Brew et al. (2021) emphasized the influence of various factors, including teaching methods and student motivation, on the academic outcomes of senior high school students. These findings underscore the necessity for educational institutions to adopt comprehensive strategies that address both instructional quality and the broader learning environment to foster improved academic performance among learners.

Table 2. Summary on the Extent of Learners' Academic Achievement

No.	Learners' Academic Achievement	Mean	Descriptive Equivalent
1	Scaffolded Writing	4.36	Very Extensive
2	Grammar Instruction	4.59	Very Extensive
3	Technology Integration for Individualized Learning	4.21	Very Extensive
4	Adaptive Language Assessment	4.66	Very Extensive
Overall Mean		4.45	Very Extensive

Summary on the Extent of Learners' Academic Achievement Table 2 summarizes the extent of learners' academic achievement as influenced by four key instructional components: scaffolded writing, grammar instruction, technology integration for individualized learning, and adapted language assessment. The results reveal that all components were rated as Very Extensive, indicating a high level of implementation and perceived effectiveness. Among the domains, adaptive language assessment obtained the highest mean score ($M = 4.66$), suggesting that personalized and flexible assessment practices are the most impactful in supporting academic achievement. This is followed by grammar instruction ($M = 4.59$) and scaffolded writing ($M = 4.36$), consistently applying differentiated strategies to enhance language skills. Technology integration for individualized learning received the lowest mean score ($M = 4.21$), although still within the Very Extensive range, pointing to its significant but relatively less pronounced role than assessment and direct instruction strategies. The overall mean of 4.45 further confirms that differentiated and responsive instructional practices across these four domains are extensively employed and collectively contribute to enhancing learners' academic performance.

3.3. Significant Relationship Between Learners' Academic Achievement and Differen-

tiated Instruction Strategies —Table 3 presents the statistical relationship between learners' academic achievement and the implementation of differentiated instruction strategies. The computed Pearson correlation coefficient ($r = 0.197$) indicates a weak positive correlation, while the p-value ($p = 0.021$) is less than the significance level of 0.05, signifying that the relationship is statistically significant. Consequently, the null hypothesis is rejected, affirming that there is a significant association between the extent of differentiated instruction strategies employed and learners' academic performance. Although the correlation is weak, the positive direction suggests that as differentiated instruction strategies are more extensively implemented, there is a corresponding, albeit modest, increase in learners' academic achievement. The findings underscore the importance of differentiated instruction in enhancing academic outcomes. Ardiawan et al. (2024) conducted a quasi-experimental study demonstrating that students exposed to differentiated learning materials exhibited significantly higher understanding of complex subjects compared to those receiving traditional instruction. Similarly, a study by Vacalares et al. (2023) in the Philippines found a significant positive relationship between differentiated instructional practices and students' performance in mathematics, emphasizing the effectiveness of tailored teaching

methods in diverse classrooms. Furthermore, a meta-analysis by Alsalhi et al. (2021) confirmed that differentiated instruction positively impacts student achievement across various educational settings. These studies collectively reinforce that while the correlation between differentiated instruction and academic achievement may vary in strength, the consistent positive relationship highlights the value of implementing differentiated strategies to support diverse learner needs. The statistically significant relationship between differentiated instruction strategies and learners' academic achievement, as reflected in the results of Table 11, provides important theoretical implications for Communities of Practice (CoP), Collaboration Theory, and the pedagogy of Differentiated Instruction. Firstly, within the framework of Communities of Practice (Wenger, 1998), implementing differentiated strategies supports the idea that learning occurs in socially constructed environments where members, such as teachers and students, engage in shared practices. Differentiated instruction, when embedded in such communities, promotes shared knowledge-building and inclusive engagement, thereby enhancing learner participation and academic achievement. Secondly, the findings affirm principles from Collaboration Theory, which asserts that learning is a so-

cial process influenced by interaction, shared responsibility, and co-construction of knowledge (Dillenbourg, 1999). Differentiated strategies such as flexible grouping, peer learning, and collaborative feedback mechanisms align with this theory by enabling learners to support one another based on readiness levels and learning profiles. The positive correlation, although weak, suggests that collaborative instructional designs contribute to better learning outcomes by leveraging diverse perspectives and mutual scaffolding. Lastly, the results substantiate the core principles of Differentiated Instruction Theory (Tomlinson, 2014), which emphasizes responsiveness to learner variance through flexible content, process, product, and learning environment adaptations. The significant link between these strategies and achievement outcomes confirms the instructional value of tailoring pedagogical practices to meet individual needs. Although the correlation is modest, it reflects the cumulative impact of differentiated practices on learner growth when systematically and contextually applied. In essence, the study's results reinforce that differentiated instruction, supported by collaborative and community-centered learning models, creates a pedagogically sound and inclusive environment where learners are more likely to succeed academically.

Table 3. Significant Relationship between Learners' Academic Achievement and Differentiated Instruction Strategies

Variables		r-value	p-value	Interpretation	Decision
Differentiated Instruction Strategies		0.197	0.021	Significant	Reject Null

*Significant at $p < 0.05$

Interpretation of r-values: Perfect Positive Correlation ($r = 1.0$); Strong Positive Correlation ($0.7 \leq r < 1.0$); Moderate Positive Correlation ($0.3 \leq r < 0.7$); Weak Positive Correlation ($0 < r < 0.3$); No Correlation ($r = 0$)

3.4. Differentiated Instruction Strategies Significantly Influences on Learners' Academic Achievement —Table 4 presents the results of the regression coefficient analysis examining the influence of four differentiated instruction strategies on learners' academic achievement. The intercept-only model (M) shows a statistically significant constant ($B = 4.391$, $p < .001$), representing the baseline mean score of academic achievement when no predictors are included. In Model 1 (M), four predictors were entered: Differentiated Instruction (DI AVE), Assessment and Feedback Strategies (AAFS AVE), Integration of Technology (IOT AVE), and Cultural Sensitivity and Inclusivity (CSAI AVE). Among the predictors, only Assessment and Feedback Strategies (AAFS AVE) yielded a statistically significant coefficient ($B = 0.140$, $p = .030$), indicating a positive and meaningful contribution to learners' academic achievement. This suggests that as the extent of assessment and feedback practices increases, students' academic outcomes also improve. In contrast, Differentiated Instruction (DI AVE) had a negative, non-significant coefficient ($B = -0.064$, $p = .320$), suggesting no meaningful direct influence. Likewise, Integration of Technology (IOT AVE) ($B = 0.064$, $p = .643$) and Cultural Sensitivity and Inclusivity (CSAI AVE) ($B = 0.048$, $p = .580$) also showed no significant impact on academic achievement. These findings indicate that while differentiated instruction strategies are broadly beneficial, not all dimensions exert the same level of influence. The significance of assessment and feedback underscores its central role in guiding learning, setting expectations, and promoting academic growth through timely, targeted responses to student performance. This aligns with findings by Alsalhi, Eltahir, and Al-Qatawneh (2021), who found that formative feedback mechanisms significantly enhance academic engagement and outcomes. Similarly, Safawi and Akay (2022) emphasized that effective feedback practices create meaningful op-

portunities for learner reflection and improvement when aligned with differentiated instruction. Conversely, the non-significant results for other strategies suggest the need for more contextually grounded implementation or the inclusion of additional mediating variables in future models. The regression analysis findings, which revealed that only Assessment and Feedback Strategies significantly influenced learners' academic achievement, carry critical theoretical implications. From the lens of Differentiated Instruction Theory, the result affirms that effective and responsive assessment practices, particularly when formative and student-centered, serve as critical elements of instructional differentiation. Tomlinson (2014) emphasized that assessment and feedback are not merely tools for evaluation but are integral to adjusting instruction based on learners' needs, progress, and readiness. The significant contribution of assessment and feedback to achievement supports this perspective, demonstrating how targeted, timely, and individualized feedback can drive academic growth. In relation to Collaboration Theory, the findings suggest that assessment becomes impactful when it fosters interaction between teachers and learners through dialogic feedback, shared goal-setting, and reflective learning. Dillenbourg (1999) noted that collaborative learning is strengthened through shared understanding and co-construction of meaning, both embedded in formative feedback cycles. Hence, assessment as a collaborative process enhances learner autonomy and academic performance. Finally, from the standpoint of Communities of Practice (Wenger, 1998), the results underscore the value of assessment and feedback in cultivating participatory learning environments. When feedback is grounded in community norms and shared expectations, learners are likelier to engage, reflect, and contribute to collective knowledge-building. Although other differentiated strategies, such as technology integration and cultural inclusivity, were not sta-

tistically significant, their conceptual alignment with CoP suggests that their potential effectiveness may depend on how well they are embedded in the social fabric of classroom interactions and peer engagement. The implications point to the need for instructional designs that elevate assessment and feedback as central components of

differentiated instruction, situated within collaborative and community-driven learning contexts. Educators are encouraged to view assessment not as a terminal step, but as a continuous, interactive process that shapes instructional responsiveness and fosters academic excellence.

Table 4. Regression Coefficient Analysis of Differentiated Instruction Strategies Significantly Influences on Learners' Academic Achievement

Model		Unstandardized Coefficient (B)	Standard Error	Standardized Coefficient (Beta)	t	p	Decision
M ₀	(Intercept)	4.391	0.024	—	185.234	< .001	—
M ₁	(Intercept)	3.513	0.840	—	4.181	< .001	—
	DI AVE	-0.064	0.064	-0.085	-0.998	0.320	Accept Null
	AAFS AVE	0.140	0.064	0.189	2.188	0.030	Reject Null
	IOT AVE	0.064	0.138	0.040	0.465	0.643	Accept Null
	CSAI AVE	0.048	0.087	0.048	0.555	0.580	Accept Null

Note. DI = Differentiated Instruction; AAFS = Assessment and Feedback Strategies; IOT = Integration of Technology; CSAI = Cultural Sensitivity and Inclusivity.

Significance level: *p* < .05

4. Conclusions and Recommendations

This chapter presents the conclusions drawn from the study's findings on the influence of differentiated instruction strategies on learners' academic achievement. Guided by the research objectives and informed by statistical analyses and theoretical frameworks, the conclusions highlight the key insights gained from the data. Furthermore, these findings offer relevant recommendations to inform instructional practices, policy directions, and future research in support of effective and inclusive teaching approaches.

4.1. Findings—The study found that learners' academic achievement was generally perceived to be at a very extensive level. Learners demonstrated strong academic performance across various dimensions, such as scaffolded writing, grammar instruction, technology integration, and adapted language assessment. Similarly, the extent of differentiated instruction strategies employed by teachers was also found to be very extensive. Teachers consis-

tently implemented practices that cater to individual learning styles and readiness levels. These included the use of flexible instruction, formative assessment and feedback, technological tools tailored to learners' needs, and culturally inclusive pedagogies. The study found a statistically significant but weak positive relationship between differentiated instruction strategies and learners' academic achievement, indicating that as the extent of differentiated

practices increases, so does the level of academic performance. However, when examined individually through regression analysis, only the strategy related to assessment and feedback was found to influence learners' academic achievement significantly. Other methods—differentiated instruction, integration of technology, and cultural sensitivity and inclusivity—did not show statistically significant effects when isolated.

4.2. Conclusions—Based on the findings of the study, several key conclusions were drawn regarding the extent of learners' academic achievement and the implementation of differentiated instruction strategies: Learners demonstrated a very extensive level of academic achievement, particularly in areas supported by scaffolded writing, grammar instruction, adapted assessments, and the use of individualized learning technologies. These results affirm that responsive, structured, and learner-centered instructional approaches positively contribute to academic performance. Teachers were found to extensively implement differentiated instruction strategies across multiple domains, including instructional design, assessment and feedback practices, technology integration, and cultural sensitivity. This reflects a strong commitment to inclusive and equitable teaching that addresses diverse learner needs. The study found a weak but significant positive relationship between differentiated instruction strategies and learners' academic achievement. Although the relationship was not strong, it shows that using differentiated instruction helps improve learning outcomes. Among the strategies studied, only assessment and feedback significantly affected students' academic performance. This shows that giving clear, timely, and helpful feedback is vital in improving how well students learn. Other strategies, like using technology, being

culturally inclusive, and varying instruction, did not have a strong influence on their own. This suggests that while these are helpful, they work best with effective assessment and feedback.

4.3. Recommendations—Given the conclusions, the following recommendations are proposed to improve differentiated instruction practices and enhance learners' academic achievement: Schools may continue promoting and institutionalizing differentiated instruction as a core pedagogical approach. Teachers should be encouraged to maintain flexible instructional designs that accommodate the variability of learners' profiles. Educational leaders should provide regular training and learning sessions on differentiated instruction techniques, including scaffolded writing, differentiated grammar instruction, the use of adaptive technologies, and inclusive assessments. Educators should be supported in designing instruction integrating content, process, and assessment differentiation. A cohesive application of these elements is more likely to yield meaningful academic gains than isolated strategies. Given the strong implementation of culturally sensitive teaching, schools are encouraged to further embed inclusive pedagogies by diversifying instructional materials and engaging students in culturally affirming classroom discourse. Future research is recommended to examine variables such as student motivation, teacher readiness, and school-level support to better understand the dynamics influencing academic achievement. Longitudinal and mixed-methods research may offer deeper insights into the effectiveness of differentiated instruction. Teachers should leverage assessment data and learner analytics to personalize instruction effectively. Data-informed instructional decisions can lead to more accurate identification of learner needs and targeted interventions.

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