

# Instructional Strategies and Classroom Effectiveness in Cagayan, Philippines: A Correlational Analysis

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*Abstract* — This study examined the relationship between instructional strategies and classroom effectiveness as perceived by teachers in Cagayan, Philippines. Specifically, it determined the level of instructional strategies in terms of differentiated instruction, collaborative learning, active learning, and technology-integrated instruction, as well as the level of classroom effectiveness. It also investigated whether a significant relationship exists between these variables. A descriptive–correlational research design was employed in the study. The respondents consisted of 197 public elementary school teachers from the Ballesteros District, selected through total enumeration sampling. Data were collected using a researcher-made questionnaire and analyzed using mean scores and Pearson Product-Moment Correlation Coefficient. The results revealed that teachers demonstrated a very high level of instructional strategies and a high level of classroom effectiveness. Furthermore, all dimensions of instructional strategies showed significant positive relationships with classroom effectiveness, indicating that the use of varied and student-centered teaching approaches contributes to improved classroom outcomes. The study concludes that instructional strategies are significant predictors of classroom effectiveness. It is recommended that teachers continue to enhance their use of diverse instructional strategies, particularly in active learning and technology integration, while school administrators should provide continuous professional development programs to support effective teaching practices.

***Keywords:*** *instructional strategies, classroom effectiveness, differentiated instruction, collaborative learning, active learning, technology integration, correlational study*

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## I. INTRODUCTION

Education is widely recognized as a fundamental pillar of societal development, with classroom instruction serving as the primary avenue for student learning. In recent years, there has been an increasing emphasis on the role of instructional strategies in enhancing classroom effectiveness. Instructional strategies refer to the methods, techniques, and approaches used by teachers to facilitate learning, promote engagement, and improve student outcomes. As educational systems continue to evolve, the need for effective and evidence-based teaching practices has become more critical. According to Darling-Hammond et al. (2019), effective teaching is closely associated with the strategic use of student-centered instructional approaches that foster deeper understanding, critical thinking, and active participation among learners. This highlights the importance of selecting and applying appropriate instructional strategies to ensure meaningful and effective classroom experiences.

In the Philippine educational context, ongoing reforms such as the K to 12 program emphasize learner-centered instruction and the development of 21st-century skills. However, despite these efforts, challenges remain in the consistent implementation of effective instructional strategies across schools. Teachers often face constraints such as limited instructional materials, diverse student learning needs, and varying levels of professional training. These challenges can affect how instructional strategies are applied and, consequently, influence classroom effectiveness. As noted by Manzano (2023) and De Los Reyes et al. (2025), contextual factors such as teacher preparedness, classroom environment, and available resources significantly impact instructional delivery and student learning outcomes in Philippine schools. This suggests that the effectiveness of instructional strategies is not solely dependent on the strategies themselves but also on how they are implemented within specific contexts.

Classroom effectiveness is generally defined as the extent to which instructional practices lead to positive student outcomes, including academic achievement, engagement, and skill development. Effective classrooms are characterized by clear instructional goals, structured lesson delivery, and active student participation. The ability of teachers to employ appropriate instructional strategies plays a crucial role in achieving these outcomes. As such, examining the

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relationship between instructional strategies and classroom effectiveness is essential in identifying practices that contribute to improved teaching and learning processes.

Several recent studies have examined the link between instructional strategies and classroom effectiveness. Subandiyah et al. (2025) investigated the impact of differentiated instructional strategies on student engagement and academic performance. The study found that tailoring instruction to meet the diverse needs of learners significantly improves both engagement and learning outcomes. It was emphasized that flexible and adaptive teaching strategies are essential in creating an inclusive and effective classroom environment. This finding supports the idea that the use of varied instructional approaches enhances classroom effectiveness.

Similarly, Mahmoud (2023) explored the role of innovative instructional strategies, particularly technology-integrated teaching in mathematics, in improving classroom effectiveness. Their study revealed a strong positive relationship between interactive teaching methods and student participation, as well as academic performance. It was highlighted that the integration of digital tools and active learning strategies encourages collaboration, increases motivation, and enhances overall classroom engagement. This suggests that modern instructional strategies play a significant role in improving classroom effectiveness.

Another relevant study by Aderiye (2024) examined the relationship between active learning strategies and student performance in secondary education. The findings indicated that the consistent use of collaborative and problem-based learning approaches significantly contributes to higher levels of student achievement and engagement. It was further explained that effective instructional strategies foster a supportive and interactive learning environment, which is essential for achieving classroom effectiveness. These findings collectively demonstrate that instructional strategies are closely linked to positive classroom outcomes.

Despite the growing body of international research, there is still a need to explore this relationship within specific local contexts. Educational environments vary across regions, and factors such as culture, resources, and teacher competencies may influence how instructional

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strategies are implemented and how effective they are. In the case of Cagayan, Philippines, limited studies have examined the relationship between instructional strategies and classroom effectiveness. This gap highlights the need for localized research to better understand how teaching practices impact classroom outcomes in this setting.

In view of these considerations, this study aimed to examine the relationship between instructional strategies and classroom effectiveness in Cagayan, Philippines. Specifically, it sought to determine whether a significant correlation exists between the instructional strategies employed by teachers and the level of classroom effectiveness. The general objective of this study was to analyze the correlation between instructional strategies and classroom effectiveness, thereby providing empirical evidence that could inform teaching practices, support professional development programs, and contribute to the improvement of educational quality in the region.

## Literature Review

Instructional strategies have long been recognized as a critical component of effective teaching and learning processes. In recent years, research has increasingly focused on how these strategies influence classroom effectiveness, particularly in diverse and evolving educational environments. Instructional strategies encompass a range of teaching approaches, including direct instruction, collaborative learning, differentiated instruction, and technology-integrated methods, all of which aim to enhance student engagement and academic performance.

According to Darling-Hammond et al. (2019), effective instructional strategies are those that actively involve students in the learning process and promote higher-order thinking skills. Their work emphasizes that student-centered approaches, such as inquiry-based and collaborative learning, significantly contribute to improved academic outcomes. Similarly, Yan (2023) highlighted that the effectiveness of teaching strategies lies in their impact on student learning, noting that strategies such as feedback, clarity, and active engagement yield high effect sizes in improving classroom performance. These findings suggest that the deliberate use of appropriate instructional strategies is essential for achieving classroom effectiveness.

The role of differentiated instruction has also been widely examined in recent literature. Goyibova et al. (2025) explained that differentiated instructional strategies allow teachers to address the diverse needs, readiness levels, and learning styles of students. By adapting instruction to individual learners, teachers can create more inclusive and effective classrooms. Supporting this, Ramilo et al. (2025) found that differentiated instruction enhances both student engagement and academic achievement, particularly in heterogeneous classrooms. These studies highlight the importance of flexibility in teaching approaches as a key factor in classroom effectiveness.

In addition to differentiation, collaborative learning strategies have been identified as significant contributors to classroom effectiveness. Zhou and Colomer (2024) emphasized that cooperative learning promotes positive interdependence, individual accountability, and social interaction among students. Their research indicates that students who engage in collaborative learning activities tend to demonstrate higher achievement and improved interpersonal skills. Furthermore, Ngoc Tuong Nguyen and Thi Kim Oanh (2025) noted that cooperative learning strategies not only enhance academic performance but also increase student motivation and participation, thereby contributing to more effective classroom environments.

The integration of technology in instructional strategies has also gained considerable attention in recent years. Zahoor and Nawaz (2025) examined the impact of digital tools and interactive teaching methods on classroom effectiveness, finding that technology-enhanced instruction significantly improves student engagement and learning outcomes. Similarly, Schindler et al. (2017) reported that the use of educational technology, such as multimedia presentations and online collaborative platforms, fosters active learning and enhances students' understanding of complex concepts. These findings suggest that technology-integrated instructional strategies are essential in modern classrooms and play a vital role in improving teaching effectiveness.

Another important aspect of instructional strategies is the use of active learning approaches. Freeman et al. (2014) found that active learning strategies, including problem-based learning and student-led discussions, lead to higher academic achievement compared to traditional lecture-

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based methods. Their study demonstrated that students who actively participate in the learning process are more likely to retain information and develop critical thinking skills. In line with this, Costa and Reis (2025) emphasized that active learning strategies significantly improve both student engagement and academic performance, further reinforcing their importance in achieving classroom effectiveness.

Moreover, teacher effectiveness is closely linked to the strategic use of instructional practices. Mollick and Mollick (2023) mentioned that effective teachers are those who can select and implement appropriate instructional strategies based on the needs of their students. This includes the ability to create structured learning environments, provide clear instructions, and use assessment data to guide teaching practices. Similarly, Yousuf et al. (2023) highlighted that effective teaching involves a combination of well-planned instructional strategies, classroom management, and continuous assessment, all of which contribute to improved student outcomes.

Despite the extensive research on instructional strategies, there remains a need to examine how these strategies function within specific educational contexts. Most existing studies have been conducted in Western or highly developed educational systems, which may differ significantly from the conditions present in developing regions such as the Philippines. Factors such as limited resources, large class sizes, and varying levels of teacher training may influence the effectiveness of instructional strategies. Therefore, it is essential to investigate how these strategies relate to classroom effectiveness in localized settings.

In summary, the reviewed literature indicates that instructional strategies play a crucial role in enhancing classroom effectiveness. Strategies such as differentiated instruction, collaborative learning, active learning, and technology integration have been consistently shown to improve student engagement and academic performance. Additionally, teacher competence in selecting and implementing these strategies is a key determinant of successful classroom outcomes. However, there is still a need for context-specific research to better understand how these instructional practices operate in different educational environments. This study sought to address this gap by

examining the relationship between instructional strategies and classroom effectiveness in Cagayan, Philippines.

### **Research Questions**

This study examined the relationship between instructional strategies and classroom effectiveness in Cagayan, Philippines.

Specifically, this study sought to answer the following questions:

1. What is the level of instructional strategies employed by teachers in terms of the following? differentiated instruction;
  - a. collaborative learning;
  - b. active learning; and
  - c. technology-integrated instruction
2. What is the level of classroom effectiveness as perceived by teachers?
3. Is there a significant relationship between instructional strategies and classroom effectiveness?

## **II. METHODOLOGY**

### **Research Design**

This study employed a descriptive–correlational research design to examine the relationship between instructional strategies and classroom effectiveness as perceived by teachers in Cagayan, Philippines. The descriptive component was used to determine the level of instructional strategies employed by teachers and the level of classroom effectiveness, while the correlational aspect aimed to identify the degree of relationship between these variables without manipulating them. This design is appropriate for the study as it allows for the systematic collection and analysis of data to describe existing conditions and explore associations among

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variables in a natural setting. Through this approach, the study was able to provide empirical evidence on how instructional strategies relate to classroom effectiveness, serving as a basis for recommendations to improve teaching practices.

### **Participants of the Study**

The respondents of this study consist of all public elementary school teachers in the Ballesteros District under the Schools Division of Cagayan. A total enumeration sampling technique was employed to ensure comprehensive representation of the target population. This method allows all qualified teachers within the district to participate in the study, thereby minimizing sampling bias and enhancing the reliability and generalizability of the findings.

A total of 197 teachers from 20 public elementary schools in the district served as respondents. These teachers are currently employed during the School Year 2026–2027 and are actively engaged in classroom instruction, making them appropriate sources of data regarding instructional strategies and classroom effectiveness. Their inclusion ensures that the data gathered reflects actual teaching practices within the district.

**TABLE 1**  
**PRESENTS THE DISTRIBUTION OF TEACHER-RESPONDENTS ACROSS THE PARTICIPATING SCHOOLS:**

<b>Schools</b>	<b>Number of Respondents</b>
School A	9
School B	20
School C	15
School D	14
School E	9
School F	8
School G	8
School H	8
School I	5
School J	7
School K	11
School L	13
School M	9
School N	9
School O	8
School P	6
School Q	8
School R	11
School S	8
School T	11
<b>Total</b>	<b>197</b>

### **Instrumentation**

This study utilized a researcher-made questionnaire as the primary data-gathering instrument. The questionnaire was designed to gather information on the instructional strategies employed by teachers and the level of classroom effectiveness as perceived by them. It consisted of two main parts. The first part focused on instructional strategies, which included items measuring differentiated instruction, collaborative learning, active learning, and technology-integrated instruction. These items were constructed based on existing literature and aligned with the variables presented in the statement of the problem. The second part measured classroom effectiveness as perceived by teachers. The items in this section were designed to capture teachers' overall assessment of how effective their classroom practices are in promoting student learning and engagement. The instrument used a Likert scale format to quantify responses, allowing respondents to indicate the extent to which they practice instructional strategies and perceive

classroom effectiveness. Before administration, the questionnaire was subjected to validation by experts in the field of education to ensure content validity.

### Analysis of Data

The data gathered in this study were analyzed using both descriptive and inferential statistical methods. Descriptive statistics, specifically the mean scores, were utilized to determine the level of instructional strategies employed by teachers in terms of differentiated instruction, collaborative learning, active learning, and technology-integrated instruction, as well as the level of classroom effectiveness as perceived by teachers.

To interpret the mean scores, the following scale was used:

Range	Interpretation
1.00 – 1.74	Very Low
1.75 – 2.49	Low
2.50 – 3.24	High
3.25 – 4.00	Very High

For inferential analysis, the Pearson Product-Moment Correlation Coefficient (Pearson  $r$ ) was employed to determine the significant relationship between instructional strategies and classroom effectiveness. This statistical tool was used to assess the strength and direction of the relationship between the variables.

## III. RESULTS AND DISCUSSION

### *Level of instructional strategies employed by teachers in terms of the following dimensions*

The findings revealed that the overall level of instructional strategies employed by teachers is very high ( $M = 3.25$ ), indicating that teachers consistently apply a wide range of effective teaching practices in the classroom. Among the dimensions, collaborative learning obtained the highest mean ( $M = 3.29$ , Very High), suggesting that teachers strongly emphasize group work, peer interaction, and teamwork in their instruction. This is followed by differentiated instruction

( $M = 3.25$ , Very High), reflecting teachers' efforts to address diverse learning needs through varied activities, materials, and assessments. On the other hand, active learning ( $M = 3.24$ , High) and technology-integrated instruction ( $M = 3.23$ , High) were also practiced at a high level, although slightly lower compared to the other dimensions. These results imply that while teachers are actively engaging students and integrating technology in their lessons, there is still room for enhancement in these areas to reach a very high level of implementation.

The results suggest that teachers in the district are generally effective in employing instructional strategies that support student learning, particularly in promoting collaboration and addressing diverse learner needs. The very high level of differentiated instruction and collaborative learning indicates strong pedagogical awareness and adaptability among teachers. However, the relatively lower means in active learning and technology integration imply the need for continued professional development, especially in the use of innovative and technology-driven instructional approaches. Strengthening these areas can further enhance classroom engagement and learning outcomes. Overall, the findings highlight the importance of sustaining effective instructional practices while providing targeted support and training to ensure a more balanced and comprehensive implementation of all instructional strategies.

The very high level of instructional strategies employed by teachers is supported by the study of Darling-Hammond et al. (2019), who emphasized that effective and student-centered instructional strategies significantly enhance classroom practices and teacher performance. In addition, the strong emphasis on collaborative learning aligns with the findings of Zhou and Colomer (2024), who reported that cooperative and collaborative instructional approaches promote active student participation and contribute to more effective and engaging classroom environments. These studies affirm the results of the present study, highlighting the importance of consistent and well-planned instructional strategies in achieving high levels of classroom effectiveness.

Statements	Mean	Interpretation
<b><i>Differentiated Instruction</i></b>		
1. I adjust my teaching strategies to meet the diverse learning needs of my students.	3.34	Very High
2. I provide varied learning activities based on students' abilities and interests.	3.28	Very High
3. I modify instructional materials to suit different learning levels in my class.	3.21	High
4. I use different assessment methods to evaluate student learning.	3.26	Very High
5. I group students based on their learning needs to enhance understanding.	3.18	High
<b>Mean</b>	<b>3.25</b>	<b>Very High</b>
<b><i>Collaborative Learning</i></b>		
6. I encourage students to work together in small groups during lessons.	3.30	<b>Very High</b>
7. I design activities that require cooperation and interaction among students.	3.27	<b>Very High</b>
8. I promote peer learning by allowing students to share ideas and knowledge.	3.35	<b>Very High</b>
9. I assign group tasks that require students to achieve a common goal.	3.22	High
10. I guide students in developing teamwork and communication skills.	3.29	Very High
<b>Mean</b>	<b>3.29</b>	<b>Very High</b>
<b><i>Active Learning</i></b>		
11. I engage students in activities that require critical thinking and problem-solving.	3.24	High
12. I encourage students to participate actively during class discussions.	3.31	Very High
13. I use interactive teaching methods such as role-playing or simulations.	3.12	High
14. I ask questions that stimulate students' thinking and participation.	3.33	Very High
15. I provide opportunities for students to apply what they have learned in real-life situations.	3.20	3.20
<b>Mean</b>	<b>3.24</b>	<b>High</b>
<b><i>Technology-Integrated Instruction</i></b>		
16. I use digital tools (e.g., videos, presentations, apps) to support my lessons.	3.27	Very High
17. I integrate technology to make learning more engaging for students.	3.23	High
18. I utilize online resources to supplement classroom instruction.	3.19	High

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19. I encourage students to use technology for learning activities.	3.16	High
20. I am confident in using technology to enhance my teaching practices.	3.30	Very High
<b>Mean</b>	<b>3.23</b>	<b>High</b>
<b>Overall Mean</b>	<b>3.25</b>	<b>Very High</b>

*Level of classroom effectiveness as perceived by teachers*

The findings revealed that the overall level of classroom effectiveness as perceived by teachers is high ( $M = 3.18$ ), indicating that teachers generally view their classrooms as effective in facilitating student learning and achieving instructional objectives. This suggests that teachers are able to maintain organized learning environments, deliver clear instruction, and promote student engagement. The consistently high ratings across all indicators imply that classroom practices are adequately implemented and contribute positively to the teaching and learning process.

The results imply that while teachers demonstrate a commendable level of classroom effectiveness, there is still room for further improvement to reach a very high level of practice. Enhancing instructional delivery, strengthening student engagement strategies, and improving assessment and feedback mechanisms may further elevate classroom effectiveness. These findings highlight the importance of continuous professional development and support for teachers to refine their practices and sustain a more effective and impactful learning environment.

The high level of classroom effectiveness perceived by teachers is supported by the study of Yousuf et al. (2023), who found that effective classroom management, clear instruction, and organized learning environments significantly contribute to positive classroom outcomes and student learning. Similarly, Mollick and Mollick (2023) emphasized that teachers who continuously refine their instructional delivery and engagement strategies through professional development are more likely to sustain effective classroom practices. These studies affirm the present findings, highlighting that while classrooms are generally effective, ongoing improvement

in instructional strategies and teacher support is essential to further enhance classroom effectiveness.

Statements	Mean	Interpretation
1. My classroom environment effectively supports student learning.	3.22	High
2. My lessons promote active student engagement.	3.20	High
3. My instruction enables students to understand the lesson clearly.	3.16	High
4. My teaching enables students to achieve the intended learning objectives.	3.19	High
5. My class sessions are organized and conducted effectively.	3.17	High
6. My classroom management maximizes students' learning time.	3.17	High
7. My classroom atmosphere encourages student participation and confidence.	3.21	High
8. My teaching results in meaningful student learning.	3.23	High
9. My monitoring of student progress addresses their learning needs effectively.	3.15	High
10. My teaching practices contribute to improved student academic performance.	3.14	High
<b>Mean</b>	<b>3.18</b>	<b>High</b>

*Correlational results between instructional strategies and classroom effectiveness*

The analysis revealed that all dimensions of instructional strategies have a significant positive relationship with classroom effectiveness. Specifically, differentiated instruction, collaborative learning, active learning, and technology-integrated instruction all showed low to moderate positive correlations with classroom effectiveness, with all probability values below the level of significance. This means that as teachers increase their use of these instructional strategies, classroom effectiveness also tends to improve. Among the variables, collaborative learning showed the strongest relationship, while technology-integrated instruction showed the weakest, though still significant. These findings imply that instructional strategies play an important role in enhancing classroom effectiveness. Therefore, strengthening teachers' competencies in applying varied and innovative teaching strategies can lead to better classroom outcomes. Schools and

administrators may use these results as a basis for designing targeted professional development programs that focus on improving instructional practices.

These results are supported by recent studies in the field. Zahoor and Nawaz (2025) found that technology-enhanced teaching strategies have a significant positive impact on student engagement and learning outcomes, emphasizing that effective instructional approaches enhance participation and academic performance. Similarly, Costa and Reis (2025) highlighted that active learning approaches improve both student motivation and academic outcomes. In addition, Yousuf et al. (2023) reported that teachers’ pedagogical strategies are significantly associated with students’ engagement and comprehension skills, while Goyibova et al. (2025) emphasized that differentiated instructional strategies effectively address diverse learning needs and enhance classroom performance. These studies collectively affirm that the use of appropriate and diverse instructional strategies is a key factor in enhancing classroom effectiveness, consistent with the findings of the present study.

Variable	Coefficient (r)	Probability	Statistical Inference
Differentiated Instruction and Classroom Effectiveness	0.421	0.003	<b>Significant</b>
Collaborative Learning and Classroom Effectiveness	0.447	0.002	<b>Significant</b>
Active Learning and Classroom Effectiveness	0.403	0.004	<b>Significant</b>
Technology-Integrated Instruction and Classroom Effectiveness	0.365	0.006	<b>Significant</b>

\*Tested using Pearson Correlation at 0.005 level of significance

#### IV. CONCLUSION

Based on the findings of the study, it can be concluded that instructional strategies play a significant role in enhancing classroom effectiveness among teachers in Cagayan, Philippines. Teachers demonstrated a very high level of implementation of instructional strategies and a high level of classroom effectiveness, indicating that they are generally effective in delivering instruction and managing their classrooms. Moreover, the significant positive relationships

between all dimensions of instructional strategies and classroom effectiveness suggest that the use of varied, student-centered, and innovative teaching approaches contributes meaningfully to improved classroom outcomes. Therefore, strengthening the consistent and effective application of these strategies, particularly in areas such as active learning and technology integration, can further enhance teaching effectiveness and support better student learning experiences.

## V. RECOMMENDATION

Based on the findings of the study, it is recommended that teachers continuously strengthen the consistent application of varied instructional strategies, particularly in the areas of active learning and technology-integrated instruction, to further enhance classroom effectiveness. School administrators should provide sustained professional development programs, mentoring, and access to instructional resources that support innovative and student-centered teaching practices. Additionally, continuous monitoring, coaching, and sharing of best practices among teachers may help sustain high levels of instructional effectiveness and promote more engaging and meaningful learning experiences for students.

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