

# **Pedagogical Practices and Learner Engagement Among Public Elementary Schools in the Division of Tarlac Province: Basis for a Technology-Enhanced Instructional Program**

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## **ABSTRACT**

This study investigated the pedagogical practices and learner engagement among public elementary schools in the Division of Tarlac Province to serve as the basis for a Technology-Enhanced Instructional Program. The study explored four categories of pedagogical practices: interaction-based, personalized and inclusive teaching, innovative and technology-enhanced methods, and experiential and inquiry-based learning. Learner engagement was also assessed, focusing on behavioral, emotional, and cognitive aspects. Using quantitative analysis, the study examined the level of practice and the statistical association between teaching strategies and learner engagement. Results showed that teachers actively use interaction-based and experiential teaching methods, while personalized teaching is moderately applied and the

use of advanced technology remains limited. Learners demonstrated high engagement in motivation and critical thinking but showed moderate to low consistency in behavioral aspects like task submission and class attendance. Statistical analysis revealed that most pedagogical practices significantly influence learner engagement, except for current technology use, which lacks strong association due to underutilization and limited innovation. The study concluded that while foundational pedagogical practices are strong, there is a need to enhance personalization, technological integration, and learner independence. It recommends targeted teacher training, reflective learning strategies, and more impactful technology use in the classroom. The proposed instructional program aims to bridge these gaps and create a more inclusive, engaging, and future-ready learning environment for elementary learners in the province.

**Keywords:** *Pedagogical Practices, Learner Engagement, Technology-Enhanced Instruction*

## **INTRODUCTION**

This research was rooted in the heightened awareness of the pivotal role pedagogical methods and learner engagement have in affecting learners' education in public grade schools. A decade ago, there was growing

evidence pointing towards the significance of involving learners in their learning experience to improve achievement and school performance (Axelson & Flick, 2011; Jimerson, Campos, & Greif, 2023). But most of these studies have been centered mainly on older learners while the question remains on how these associations affect younger learners in elementary schools (Davies, Newton, & Newton, 2021).

For the Division of Tarlac Province, public elementary schools have struggled to adopt effective pedagogical practices that address various needs of learners. The conventional instructional methods have frequently been faulted for failing to actively engage learners, resulting in poor academic performance and high dropout rates. Some recent research has indicated that technology-enhanced instruction strategies may provide effective solutions to these problems through the creation of interactive and immersive learning environments (Odum, Meaney, & Knudson, 2021).

This research focused on filling the said gap by looking into the present pedagogic practices and how they contribute to learner motivation in public primary schools in the Division of Tarlac Province. In the process, it attempted to offer empirical support that can guide the construction of a technology-facilitated instructional program based on the specifications of such schools. The long-term aim was to improve not only teaching quality and learner involvement but ultimately educational

performance as well, and to create a more inclusive and supportive learning culture.

This study rested on the importance of investigating and enhancing the instructional approaches and learner engagement in public primary schools. With the help of technology-infused instructional techniques, the research aspired to help enrich the larger educational agenda and offer implementable solutions to problems confronting the learners and instructors of the Division of Tarlac Province.

This study measured pedagogical practices and learner engagement among public elementary schools in the division of Tarlac Province. Results were used as basis for a technology-enhanced instructional program.

What are the pedagogical practices of the teachers in public elementary schools in the Division of Tarlac Province? This study aimed to examine the pedagogical practices of public elementary school teachers in the Division of Tarlac Province and assess the level of learner engagement in terms of behavioral, emotional, and cognitive aspects. It further sought to determine the relationship between teaching practices and learner engagement and to develop a Technology-Enhanced Instructional Program that addresses gaps in personalization, technology integration, and learner independence.

## **METHODS**

### **Research Design**

The research design used in this study was quantitative in approach, utilizing both descriptive and causal-comparative (ex post facto) designs. These were utilized to systematically describe the existing pedagogical practices and levels of learner engagement in public elementary schools in the Division of Tarlac Province, as well as to explore the possible causal relationship between these variables.

### **Participants and Locale**

The study involved a total of 150 teachers and 1,200 learners from various public elementary schools in the Division of Tarlac Province. These participants were selected to provide a comprehensive understanding of the pedagogical practices and learner engagement within the region.

### **Sampling and Data Collection**

The descriptive design sought to offer a holistic presentation of the state of pedagogical practice and learner involvement. This included gathering detailed data through structured questionnaires and surveys filled out by both learners and teachers. The descriptive design permitted the researcher to count and total up the teaching approaches employed by teachers and how engaged the

learners were in their activities. In presenting a picture of what already exists, the descriptive design facilitated the observation of patterns and trends that would help inform further research.

### **Data Analysis**

To answer the research question regarding how pedagogical practices impacted learner engagement, regression analysis was used. The statistical method enabled the researchers to analyze the connection between the independent variables (pedagogical practices) and the dependent variable (learner engagement). Using Pearson  $r$ , the research determined which precise teaching methods were significant in affecting learner engagement and measured the strength of these effects.

### **Ethical Considerations**

The research design used in this study was quantitative in approach, utilizing both descriptive and causal-comparative (ex post facto) designs. These were utilized to systematically describe the existing pedagogical practices and levels of learner engagement in public elementary schools in the Division of Tarlac Province, as well as to explore the possible causal relationship between these variables.

## RESULTS AND DISCUSSION

1. Using quantitative analysis, the study examined the level of practice and the statistical association between teaching strategies and learner engagement. Results showed that teachers actively use interaction-based and experiential teaching methods, while personalized teaching is moderately applied and the use of advanced technology remains limited.
2. Learners demonstrated high engagement in motivation and critical thinking but showed moderate to low consistency in behavioral aspects like task submission and class attendance.
3. Statistical analysis revealed that most pedagogical practices significantly influence learner engagement, except for current technology use, which lacks strong association due to underutilization and limited innovation. The study concluded that while foundational pedagogical practices are strong, there is a need to enhance personalization, technological integration, and learner independence.
4. According to the data, teachers in the region employ these strategies with varying frequency, with interactive digital tools being the most highly practiced (mean = 4.88), followed by role-playing (mean = 4.84) and peer feedback (mean = 4.83).

5. These results suggest that the teachers in the Division of Tarlac Province actively incorporate interactive and collaborative strategies into their teaching practices.
6. However, as we move down the list, the frequency of practice begins to decrease, with strategies such as collaborative problem-solving (mean = 2.52) and learner-led presentations (mean = 2.85) being slightly practiced.
7. This indicates that while interactive and collaborative strategies are valued, they are not always consistently implemented.
8. The overall general mean score of 3.94 indicates that interaction-based pedagogies are generally practiced in these classrooms, but there is room for improvement in fully incorporating these strategies into daily teaching routines.
9. In interpreting these findings, it is important to consider the implications of the teachers' frequent use of interactive tools, such as digital resources, which are crucial in fostering learner engagement in a technology-driven world.
10. The high use of role-playing and peer feedback suggests that teachers value social learning, where learners learn from each other through dialogue and collaboration.

## **CONCLUSION AND RECOMMENDATIONS**

### **Conclusions**

Interaction-based pedagogy is actively practiced and positively supports learner participation.

Personalized and inclusive teaching strategies are moderately applied, with room for broader differentiation.

Innovative and technology-enhanced pedagogical methods are underutilized, indicating limited integration of advanced educational technology.

Experiential and inquiry-based approaches are strongly used, fostering real-world learning but lacking in reflective depth.

Learners are generally highly engaged, though consistency in behavioral engagement requires reinforcement.

Pedagogical practices, especially personalized and experiential methods, significantly affect learner engagement, while current technology use does not strongly influence engagement outcomes.

### **Recommendations**

1. Strengthen collaborative and learner-led practices in interaction-based pedagogy to deepen engagement and foster leadership in learners.
2. Expand training programs for teachers on differentiated instruction and cultural inclusivity to support personalized teaching.

3. Provide capacity-building workshops and infrastructure upgrades to promote the meaningful use of innovative educational technologies.
4. Encourage reflective and self-directed learning strategies in experiential activities to develop metacognitive skills.
5. Implement behavior reinforcement programs to improve learner consistency in homework submission, attendance, and learning ownership.
6. Redesign technology integration to move beyond access and usage, focusing on impact-driven applications aligned with engagement outcomes.

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