



RESEARCH-BASED INSTRUCTIONAL STRATEGIES, PROFESSIONAL COMPETENCE, AND PEDAGOGICAL APPROACHES

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ABSTRACT

This study examines the effectiveness of research-based instructional strategies, professional competence, and pedagogical approaches among elementary teachers in the Schools Division of Iloilo, Philippines, during the 2023-2024 school year. The research employs a descriptive-correlational design to explore the relationships between these variables, with a focus on how teachers' demographic profiles—such as age, sex, educational attainment, length of service, and position—influence their instructional methods and professional effectiveness. A total of 391 elementary teachers participated in the study, representing a diverse cross-section of the teaching workforce in Iloilo. The study utilized a validated and reliable questionnaire to gather data, which was then analyzed using various statistical tools, including frequency counts, percentages, means, T-tests, ANOVA, and Pearson correlation. The findings reveal that while there is a general uniformity in pedagogical approaches across different age groups, sexes, and levels of teaching experience, significant differences emerge when these approaches are classified by educational attainment and professional position. Younger teachers and those with less experience tend to prioritize active learning strategies and inquiry-based learning, while more experienced teachers and those in higher positions emphasize collaboration, continuous improvement, and differentiation in their teaching methods. The study also identifies a positive correlation between the use of research-based instructional strategies and professional competence, suggesting that teachers who engage with research tend to be more effective in their roles. However, the findings indicate that tailored professional development programs are necessary to address the specific needs and strengths of different teacher groups, particularly concerning their educational background and professional roles. Overall, this research contributes to the ongoing efforts to enhance the quality of education in the Philippines by providing insights into how teachers' instructional strategies and professional competencies can be improved to better meet the diverse needs of their students. The study's recommendations focus on fostering collaboration, promoting continuous professional development, and ensuring that teaching practices remain relevant and effective in an ever-evolving educational landscape.

Keywords: research-based instructional strategies, professional competence, pedagogical approaches, elementary education, teacher development, educational attainment, teaching experience, classroom practices, student engagement, Philippines education system

INTRODUCTION

The study explores the critical role of research-based instructional strategies (RBISs) and teacher competence in enhancing the educational experiences of learners in the Schools Division of Iloilo, Philippines. As education evolves to meet the demands of the 21st century, teachers are increasingly required to adopt innovative and research-based approaches to equip students with the skills and knowledge necessary to face future challenges. Research highlights that RBISs significantly impact students' cognitive abilities, including analytical and creative thinking. For instance, Wahyuni (2020) found that implementing RBISs enhanced creative thinking among elementary school students, emphasizing their effectiveness across various educational levels.

Despite the proven benefits of RBISs, many teachers hesitate to fully integrate these strategies into their classrooms. This reluctance often stems from a lack of ongoing professional development and support. Wachidi (2020) identified gaps in teachers' professional competence as a significant barrier to implementing RBISs, particularly in aligning instructional practices with modern curricula. Addressing these gaps through targeted training programs and leadership support is critical for ensuring the successful integration of research-based strategies into teaching practices.

The Department of Education (DepEd) in the Philippines has consistently prioritized improving the quality of education through innovative teaching strategies. However, in Iloilo, teachers often encounter challenges such as limited access to resources and inadequate training. These issues are compounded by the need for instructional leadership that fosters teacher competence and aligns teaching practices with academic goals. Putri (2023) highlighted the importance of instructional leadership in enhancing teacher professional competence and motivating staff to adopt research-based teaching approaches.

By identifying the barriers to the effective use of RBISs and examining their impact on student academic performance, this study seeks to provide insights that can improve instructional

methods in the classroom. Grounded in Jean Piaget's Constructivist Learning Theory and supported by Cognitivism and Social Cognitive Theory, the research emphasizes the importance of hands-on, activity-based learning experiences. These theories underscore the need for strategies that enable students to construct knowledge through exploration and discovery, aligning with Suyatman's (2022) findings on the effectiveness of research-based learning models in improving analytical thinking skills.

Ultimately, the study aims to empower teachers with the knowledge and skills necessary to implement RBISs effectively, thereby fostering a conducive learning environment. The insights gained will contribute to the continuous improvement of teaching practices in Iloilo, supporting DepEd's mission to deliver quality education that prepares students for the demands of the modern world.

OBJECTIVES OF THE STUDY

This study aimed to:

1. Assess the effectiveness of research-based instructional strategies, professional competence, and pedagogical approaches employed by elementary teachers in the Schools Division of Iloilo, Philippines, and analyze their impact on student academic performance and engagement.
2. Evaluate the current research-based instructional strategies utilized by elementary teachers in the Schools Division of Iloilo and determine their effectiveness in enhancing student learning outcomes.
3. Analyze the relationship between teachers' professional competence, including their educational attainment and length of service, and the successful implementation of research-based instructional strategies.
4. Investigate the influence of teachers' pedagogical approaches on student engagement and academic performance, and identify any significant differences based on teachers' demographic profiles.

METHODOLOGY

The study utilized a descriptive-correlational design to explore the relationships among research-based instructional strategies, professional competence, and pedagogical approaches among elementary teachers in the Schools Division of Iloilo for the 2023-2024 school year. The independent variables included respondents' factors such as age, sex, educational attainment, length of service, and position, while the dependent variables focused on research-based instructional strategies, professional competence, and pedagogical approaches.

The study's respondents included 391 elementary teachers distributed across five congressional districts in Iloilo. The representation was evenly spread among the districts, ensuring a comprehensive assessment of the variables under study. The respondents were selected to provide a broad view of the teaching strategies and competencies across different educational levels and districts within the region.

A researcher-revised questionnaire served as the primary data-gathering instrument. The questionnaire was divided into three parts: Part I focused on the respondents' demographic profiles, Part II assessed research-based instructional strategies, and Part III evaluated teachers' professional competence and pedagogical approaches. The responses were measured on a Likert scale, with detailed intervals provided to interpret the scores.

The validity of the research instrument was established through panel validation involving experts in the subject matter. The questionnaire was revised based on feedback from the panel, ensuring clarity, appropriateness, and inclusivity of the questions. The reliability of the instrument was tested through a pilot study involving 30 elementary teachers, with high-reliability scores obtained using Cronbach's Alpha, indicating the questionnaire's consistency in measuring the intended variables.

The data-gathering procedure involved seeking approval from relevant educational authorities and personally distributing the questionnaires to the teachers with the assistance of school heads. The researcher ensured that

respondents' privacy and confidentiality were protected, and a dual approach was used for data collection, offering both online and printed questionnaires. The completed questionnaires were retrieved promptly for data processing.

Statistical analysis was conducted using the Statistical Package for Social Sciences (SPSS), with various tools employed to analyze the data. These tools included frequency count, percentage, mean, rank, T-test, ANOVA, and Pearson r , each serving a specific purpose in interpreting the data. The frequency count and percentage described the distribution of respondents, while the mean provided insights into the level of instructional strategies and competence. T-tests and ANOVA were used to compare differences between variables, and Pearson R assessed the correlation between the studied variables.

Overall, the research methodology was carefully structured to ensure the accuracy and reliability of the findings. The use of a descriptive-correlational design allowed for a detailed exploration of the relationships among the variables, providing valuable insights into the instructional strategies and professional competence of elementary teachers in Iloilo. The statistical tools employed ensured a robust analysis of the data, supporting the study's objectives and hypotheses.

RESULTS AND DISCUSSION

1. Demographic Profile of Respondents

The respondents' demographic profile revealed that the majority (74.9%) were 40 years old and below, indicating a younger teaching workforce that may be more open to adopting innovative teaching strategies. Female teachers comprised 92.1% of the respondents, highlighting a significant gender imbalance in the Schools Division of Iloilo. Most respondents held bachelor's degrees (76.2%), while 23.0% had master's degrees, and only 0.8% had doctorate degrees. This distribution suggests a need for professional development opportunities to encourage advanced qualifications. In terms of length of service, 66.8% of teachers had 15 years or less of

experience, and the majority held Teacher I-III positions (66.0%), with only 34.0% occupying Master Teacher I-III roles.

2. Research-Based Instructional Strategies (RBISs) Across Demographics

The implementation of RBISs showed distinct trends among demographic groups. Younger teachers (40 years and below) expressed confidence in implementing RBISs, actively collaborated with colleagues, and recognized their positive impact on student outcomes. Older teachers (41 years and above), while equally supportive of RBISs, placed greater emphasis on proven effectiveness and collaboration. Gender differences were evident, with male teachers focusing on confidence and collaboration, while female teachers prioritized aligning practices with research findings and professionalism. Teachers with bachelor's degrees valued staying informed and self-reflection, while those with master's and doctorate degrees emphasized advanced skills and practical application but were less involved in professional networks. Similarly, teachers with less experience prioritized feedback and ethical standards, whereas those with more experience focused on professionalism and collaboration.

The study of Suyatman (2022) demonstrated that the Research-Based Learning (RBL) model enhances analytical thinking in science education, while Wahyuni (2020) found that RBISs foster creative thinking among elementary students. These findings underline the broad applicability of RBISs in enhancing cognitive skills and the necessity of integrating these strategies into diverse educational levels.

3. Pedagogical Approaches by Demographic Factors

Pedagogical approaches varied significantly based on demographic factors. Younger teachers prioritized active learning strategies, inquiry-based learning, and integrating real-world applications into their lessons. In contrast, older teachers emphasized collaboration with colleagues and continuous improvement in their teaching practices. Male teachers ranked student

autonomy, professional development, and collaboration as their primary pedagogical priorities, while female teachers placed a stronger focus on fostering critical thinking skills and collaboration. Educational attainment also influenced approaches, with bachelor's degree holders focusing on inquiry-based learning and adaptability to diverse learners, master's degree holders emphasizing real-world applications and continuous improvement, and doctorate holders integrating active learning and aligning teaching with diverse learning styles. Less experienced teachers prioritized student autonomy and real-world applications, while those with more experience emphasized differentiation and addressing student diversity. Teachers in Teacher I-III positions highlighted inquiry-based learning and supportive classroom environments, while Master Teachers emphasized critical thinking and real-world applications.

4. Implications for Professional Development

The findings suggest that while some pedagogical strategies are consistent across demographic groups, significant variations exist based on educational attainment and position. Professional development programs should address these differences by offering tailored support to teachers at different stages of their careers. For less experienced teachers, programs could focus on fostering collaboration and enhancing inquiry-based learning, while more experienced educators and Master Teachers may benefit from advanced training in differentiation and real-world applications. By addressing these varied needs, professional development initiatives can ensure that teachers are equipped to meet diverse student needs and enhance their instructional effectiveness.

Similarly, Professional competence among teachers is a significant factor influencing the success of RBIS adoption. Wachidi (2020) emphasized the need for focused training to align teacher skills with modern curricula, while Ilanlou (2011) highlighted a positive correlation between professional competence and engagement in qualitative evaluation methods. These studies emphasize the importance of professional

development programs to enhance teachers' competencies and evaluative skills.

CONCLUSIONS

Based on the findings of the study, the following conclusions are drawn:

1. The study revealed a general uniformity in pedagogical approaches across different age groups, sexes, and teaching experiences, suggesting that these factors do not significantly influence teaching methods among educators in the Schools Division of Iloilo.
2. Educational attainment significantly influenced teachers' pedagogical approaches, with those holding higher degrees emphasizing more advanced and research-based teaching strategies.
3. Teachers' professional positions (Teacher I-III vs. Master Teacher I-III) also significantly influenced their pedagogical approaches, reflecting the varied responsibilities and experiences associated with different roles.
4. Younger educators (40 years and below) and those with less teaching experience prioritized active learning strategies and inquiry-based learning, indicating a preference for dynamic and student-centered teaching methods.
5. Older educators and those in higher positions (Master Teacher I-III) emphasized collaboration with colleagues and continuous improvement, reflecting a focus on professional development and sharing best practices.
6. Across all demographic categories, there was a strong emphasis on promoting student autonomy and integrating real-world applications into teaching, underscoring the importance of preparing students for practical, real-life challenges.
7. Teachers with more experience (16 years and above) and those in higher positions valued differentiation in teaching more,

indicating a greater awareness of the need to address diverse student needs.

8. Both male and female educators ranked professional development highly, highlighting the importance of continuous learning and skill enhancement in their professional lives.
9. The study found a positive correlation between the use of research-based instructional strategies and professional competence, suggesting that teachers who engage with research tend to be more competent in their roles.
10. The variations in pedagogical approaches based on educational attainment and professional position indicate a need for tailored support and professional development programs to address the specific needs of different teacher groups.

RECOMMENDATIONS

Based on the conclusions of the study, the following are recommended:

1. Create professional development programs that are tailored to the educational attainment and professional positions of teachers, ensuring that all educators receive relevant and effective training.
2. Foster a culture of collaboration among teachers across different age groups, experience levels, and positions to share best practices and enhance teaching methods.
3. Continue to promote active learning and inquiry-based strategies, particularly among younger and less experienced teachers, to maintain dynamic and student-centered classrooms.
4. Provide additional resources and training on differentiation strategies, especially for more experienced teachers, to help them better address the diverse needs of their students.
5. Encourage teachers to integrate more real-world applications into their lessons to enhance student engagement and relevance, preparing students for practical challenges outside the classroom.

6. Support initiatives that encourage student autonomy and independence in learning, helping students to develop critical thinking and problem-solving skills.
7. Emphasize the importance of continuous improvement and innovation in teaching practices, particularly among older educators and those in leadership roles, to ensure that teaching methods remain current and effective.
8. Provide teachers with greater access to research-based instructional strategies and resources, enabling them to enhance their professional competence and classroom effectiveness.
9. Introduce mentorship programs where experienced teachers can guide and support less experienced colleagues, sharing insights on effective pedagogical approaches and classroom management.
10. Encourage teachers to regularly assess the effectiveness of their pedagogical approaches and make adjustments as needed, ensuring that their teaching methods continue to meet the evolving needs of their students.

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Dr. Maila Escanda is a dedicated educator with the Department of Education (DepEd) and a passionate advocate for transformative learning. Holding a Doctor of Education degree from Guimaras State University (GSU), she integrates innovative teaching methods to inspire and empower her students. Guided by her teaching philosophy, "to help students find their true selves," she fosters a supportive and reflective learning environment where students can explore their potential and develop a deeper understanding of themselves and the world. With a commitment to lifelong learning and educational excellence, Dr. Escanda continues to make a meaningful impact in her field.

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