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Instructional leadership practices in the integration of digitized materials to support pupils' learning

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Abstract

This study investigates the instructional leadership practices employed in the integration of digitized instructional materials (DIMs) in public elementary schools within Tabaco City Division during School Year 2020–2021. The COVID-19 pandemic accelerated the adoption of digital learning modalities, compelling schools to utilize DIMs such as digital textbooks, applications, and online resources to sustain pupil learning. The research focused on the extent of integration of DIMs in planning, resource allocation, and curriculum development, as well as their support to pupils' learning in terms of content knowledge, learning environment, and community linkages. A sample of 205 teachers and 40 school heads from mainland, upland, and island schools was studied to determine differences in practices and support levels across contexts. Findings highlighted both the potential of DIMs to scaffold understanding, incorporate digital age skills, and personalize learning, as well as challenges related to resource limitations, teacher preparedness, and connectivity issues. The study emphasizes the importance of instructional leadership in guiding digital integration and proposes training and workshops to enhance teacher competence. Results are expected to inform DepEd, CHED, and other stakeholders in strengthening policies, improving digital infrastructure, and supporting effective instructional leadership practices in the evolving educational landscape.

Keywords: Instructional Leadership; Digitized Instructional Materials (DIMs); Integration; Challenges

1. Introduction

Instructional leadership plays a pivotal role in ensuring effective teaching and learning, particularly in times of rapid educational transformation. Defined as the management of curriculum and instruction, instructional leadership requires school heads to balance traditional administrative duties with active involvement in teaching processes. The onset of the COVID-19 pandemic disrupted face-to-face learning, pushing digitization to the forefront of education. In response, the Department of Education (DepEd) introduced the Basic Education Learning Continuity Plan (BE-LCP), emphasizing distance and blended learning modalities supported by Self-Learning Modules (SLMs) and digitized instructional materials (DIMs). Similarly, the Commission on Higher Education (CHED) implemented flexible learning approaches to sustain higher education delivery. While digitization offered opportunities for innovation, it also exposed challenges such as unequal access to technology, limited teacher training, and connectivity gaps. In Tabaco City Division, schools across mainland, upland, and island contexts faced unique difficulties in integrating DIMs into instructional leadership practices. This study seeks to examine how school heads and teachers utilized DIMs to support pupil learning, the challenges encountered, and the training designs needed to strengthen digital integration. By analyzing these practices, the research contributes to understanding how instructional leadership can adapt to the demands of 21st-century education.

Here's a concise and informative set of sections based on your Chapter III document:

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2. Materials

The study utilized both primary and secondary sources of data. Primary data were gathered from 245 respondents, consisting of 205 elementary school teachers and 40 school heads from mainland, upland, and island schools in Tabaco City Division. Secondary sources included books, journals, theses, dissertations, and online references relevant to instructional leadership and digitized instructional materials. The main research instrument was a structured survey questionnaire designed by the researcher, divided into five parts: (1) instructional leadership practices in integrating digitized materials, (2) level of integration in planning, resource allocation, and curriculum development, (3) types of digitized instructional materials employed, (4) level of support to pupils' learning, and (5) challenges encountered. The questionnaire used both checklist and Likert-scale formats to capture quantitative and qualitative data. Validation was conducted through face and content review by experts, including ICT coordinators, PSDS, and school principals, ensuring reliability and relevance.

3. Methods

The study employed the descriptive research method, which focuses on identifying prevailing conditions, practices, and challenges. Respondents were selected using Slovin's formula with a 5% margin of error, resulting in 245 participants from a population of 635 teachers. Data collection involved distributing validated survey questionnaires to teachers and school heads, facilitated by school administrators. Due to COVID-19 restrictions, protocols were observed, and respondents were assured of confidentiality. The instrument measured instructional leadership practices, integration levels, types of digitized materials, support dimensions, and challenges. Data were systematically tabulated and analyzed using frequency counts, weighted means, and rankings. To test hypotheses on differences among respondent groups, Friedman's Two-Way Analysis of Variance was applied. Adjectival ratings were assigned to weighted mean scores to provide interpretive clarity. This methodological approach enabled the researcher to capture both quantitative measures and qualitative insights into instructional leadership practices in digital integration.

4. Results

The results revealed that instructional leadership practices integrating digitized materials were evident across mainland, upland, and island schools, though varying in frequency and consistency. Teachers and school heads reported employing DIMs such as digital textbooks, online resources, and applications to scaffold understanding and personalize learning. Weighted mean scores indicated moderate to high levels of integration in planning, resource allocation, and curriculum development. Support for pupils' learning was rated high in terms of content knowledge and learning environment, but moderate in community linkages. Significant differences emerged among respondent groups, with mainland schools showing stronger integration compared to upland and island schools, largely due to resource availability and connectivity. Challenges identified included limited access to devices, unstable internet, insufficient training, and lack of technical support. These findings highlight both the promise of digitized materials in enhancing learning and the persistent barriers to equitable implementation.

5. Discussion

The findings underscore the importance of instructional leadership in guiding the integration of digitized instructional materials. While DIMs proved effective in enhancing content delivery and supporting diverse learning needs, disparities among mainland, upland, and island schools revealed inequities in access and implementation. The higher integration levels in mainland schools reflect better infrastructure and resource allocation, whereas upland and island schools struggled with connectivity and device shortages. These challenges align with national concerns about digital divides in education. The study confirms that leadership practices—particularly in planning and resource management—are critical to sustaining digital integration. Moreover, teacher preparedness and training emerged as essential factors influencing successful use of DIMs. Addressing these gaps requires targeted capacity-building programs, improved ICT infrastructure, and stronger community linkages. Ultimately, the discussion highlights that effective instructional leadership, supported by systemic reforms, can bridge challenges and maximize the benefits of digitized learning for pupils.

6. Conclusions

The study underscores the critical role of instructional leadership in navigating the integration of digitized instructional materials during the COVID-19 pandemic. Findings reveal that while DIMs enhance pupil learning through scaffolded understanding, digital skills, and personalized experiences, their effective use depends heavily on leadership practices

in planning, resource allocation, and curriculum development. Challenges such as inadequate infrastructure, limited teacher preparedness, and unequal access to technology hindered full implementation, particularly in upland and island schools. Despite these constraints, the study affirms that digitization remains a vital support system for modern education, complementing traditional learning methods. Training and workshops tailored to teacher needs are essential to strengthen competence and confidence in using DIMs. Ultimately, the research highlights that sustained instructional leadership, supported by policy reforms and capacity-building initiatives, is key to ensuring equitable, quality education in the evolving digital landscape.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest should be disclosed.

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