

IMPLEMENTATION OF BLENDED LEARNING MODALITY IN THE FIRST CONGRESSIONAL DISTRICT

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Abstract

This study determined the level of implementation and challenges encountered in the blended learning modality among public elementary school teachers in the First Congressional District of the Schools Division Office I, Pangasinan, during the new normal of education. Employing a descriptive-correlational research design, data were gathered from 330 teachers selected through Slovin's formula from a population of 1,919. A researcher-prepared survey questionnaire and interview guide served as the primary instruments for data collection. Descriptive statistics, weighted mean, frequency counts, percentages, and Pearson's correlation coefficient were used for data analysis.

Findings revealed that the blended learning modality was highly implemented in the areas of curriculum and instruction (overall mean = 3.76) and materials and resources (overall mean = 3.77), sufficiently implemented in technology-aided learning platforms (overall mean = 2.77), and poorly implemented in manpower training (overall mean = 2.49). The most common challenges identified were poor internet connectivity (91.21%), limited access to ICT devices at home (82.12%), and inadequate supply of materials from the Department of Education (79.70%). Correlation analysis indicated a significant relationship between respondents' age and the implementation of curriculum and instruction ($p = 0.005$). In contrast, no significant relationships were found between other profile variables and the level of implementation across all dimensions.

The study underscores the need for improved ICT infrastructure, targeted manpower training, and broader access to resources to enhance the effectiveness of blended learning in public elementary schools.

Keywords: Blended Learning Modality, Implementation Level, Challenges, Curriculum And Instruction, Technology-Aided Learning, Manpower Training, Public Elementary Teachers

1. Introduction

The sudden disruption of traditional face-to-face classes brought about by the COVID-19 pandemic in 2020 posed significant challenges to educational systems worldwide, compelling governments and institutions to reimagine instructional delivery. In the Philippines, the Department of Education (DepEd) implemented alternative learning delivery modalities, among which the blended learning approach emerged as a primary strategy for ensuring the continuity of education. Blended learning, which combines face-to-face and distance learning methods, seeks to integrate the strengths of traditional classroom interaction with the flexibility and accessibility of technology-based instruction (Nofiana et al., 2022). In the context of the "new normal," this modality has become a cornerstone of basic education delivery, particularly in public schools where resources, infrastructure, and access to technology vary significantly.

In Pangasinan, specifically in the First Congressional District of the Schools Division Office I, the adoption of blended learning required substantial adjustments from both educators and learners. Teachers were tasked with redesigning lesson plans, developing self-learning modules, and incorporating various learning delivery modalities such as online learning, modular learning,

and other combinations suited to their school context (Ainin et al., 2025). These efforts, however, were shaped by the availability of resources, the level of training received, and the existing technological infrastructure. The shift demanded not only pedagogical adaptation but also resilience in navigating new teaching environments amid health and safety restrictions (Galut, 2025).

While blended learning offers flexibility and the potential to cater to diverse learning needs, its effectiveness is contingent upon multiple factors. Curriculum alignment, access to instructional materials, utilization of technology-aided platforms, and adequacy of manpower training are critical dimensions that determine the success of its implementation. In addition, the profile of teachers—including age, sex, educational attainment, position, length of service, and training attended—may influence how effectively they can adopt and sustain blended learning practices (Mintii, 2023). However, despite DepEd's nationwide policy directives and the rollout of the Learning Delivery Modalities (LDM) training, variations in implementation and persistent challenges remain evident across schools and districts.

Globally, literature points to both the promise and pitfalls of blended learning. Studies have underscored its potential to enhance learner engagement, promote self-directed learning, and improve academic performance when implemented effectively (Sareen & Mandal, 2024). However, successful adoption requires robust infrastructure, adequate teacher preparation, and supportive policy environments. In developing countries, challenges such as poor internet connectivity, insufficient access to digital devices, limited teacher proficiency in educational technology, and inadequate resource allocation have hindered optimal implementation (Awang et al., 2025). These global patterns resonate strongly in the Philippine context, particularly in rural and geographically isolated areas such as some parts of Pangasinan.

Local studies echo these concerns, emphasizing that teachers often grapple with a lack of ICT resources, inconsistent internet access, and limited opportunities for professional development in blended learning pedagogy (Torres et al., 2024). Moreover, the preparation of instructional materials for multiple modalities is time-consuming, adding to teachers' workload and affecting their capacity to innovate and personalize instruction. Such challenges not only influence the quality of lesson delivery but also impact learner participation, motivation, and achievement (Bumagat et al., 2023).

In the First Congressional District of SDO I Pangasinan, these issues are particularly pressing given the district's diverse geographical landscape, which includes coastal, lowland, and upland barangays. Schools located in remote and mountainous areas face greater difficulty in establishing reliable internet connectivity, limiting opportunities for synchronous online learning and timely communication between teachers and learners. The disparity in access to technology among households further exacerbates the inequity in educational opportunities, as not all students have access to computers, tablets, or smartphones needed for the online components of blended learning (Lufungulo et al., 2023).

The role of teachers, therefore, becomes pivotal in bridging these gaps. Their ability to implement curriculum and instruction effectively, maximize available materials and resources, utilize technology-aided platforms, and engage in continuous professional growth determines the degree to which blended learning can meet its intended outcomes (Mintii, 2023). However, the success of these efforts also depends on systemic support from DepEd in terms of training, resource provision, and policy guidance. While national and divisional training programs have been conducted, there is limited empirical evidence assessing whether such interventions translate into improved implementation at the school level in this district (Tupas & Noderama, 2020).

Furthermore, understanding the relationship between teachers' demographic and professional profiles and their level of implementation of blended learning can provide valuable insights for targeted capacity-building programs. For instance, age and length of service may

influence adaptability to new instructional technologies, while training exposure may determine the breadth and depth of blended learning strategies employed (D. & Baliya, 2023). Conversely, some factors, such as sex or educational attainment, may have less bearing on implementation effectiveness but could still inform differentiated professional development approaches (Riyantini et al., 2022).

Despite the growing body of literature on blended learning in the Philippine setting, there remains a scarcity of localized studies focusing on specific divisions and districts, especially in rural and mixed urban-rural contexts like the First Congressional District of SDO I Pangasinan. Such localized investigations are crucial for capturing contextual realities and generating evidence-based recommendations that are responsive to the unique challenges faced by teachers in these areas.

It is within this context that the present study seeks to determine the level of implementation of the blended learning modality across four key dimensions—curriculum and instruction, materials and resources, technology-aided learning platforms, and manpower training—and to identify the challenges encountered by public elementary school teachers in the district. Additionally, it examines whether significant relationships exist between the level of implementation and selected profile variables of the respondents. By doing so, this research aims to contribute to the understanding of blended learning implementation in rural Philippine settings and to provide empirical data that can guide policymakers, school administrators, and teacher-trainers in enhancing instructional delivery during and beyond the new normal of education.

2. Method

2.1 Research Design

This study employed a descriptive-correlational research design to examine the level of implementation and challenges encountered in the blended learning modality among public elementary school teachers in the First Congressional District of the Schools Division Office I, Pangasinan. The descriptive component was utilized to present the respondents' demographic and professional profiles systematically, as well as to assess the extent of implementation across four key dimensions—curriculum and instruction, materials and resources, technology-aided learning platforms, and manpower training—during the new normal of education. Meanwhile, the correlational component sought to determine whether significant relationships existed between the respondents' profile variables, namely age, sex, educational attainment, position, length of service, and training attended, and their reported level of implementation of the blended learning modality. This research design was deemed appropriate as it allowed for both the detailed description of existing conditions and the statistical analysis of potential associations between variables, thereby providing a comprehensive understanding of the implementation status and influencing factors in the local educational context.

2.2 Participants

The participants of this study were 330 public elementary school teachers selected from the 10 districts comprising the First Congressional District of the Schools Division Office I, Pangasinan, for School Year 2021–2022. They were drawn from a total population of 1,919 teachers using Slovin's formula to ensure a representative sample with an acceptable margin of error. The selection process considered the proportional distribution of respondents per district to maintain equitable representation across the division. These teachers, who directly implemented the blended learning modality during the new normal of education, served as primary sources of data regarding the extent of implementation and the challenges they encountered, making them well-positioned to provide reliable and context-specific insights for the study.

2.3 Instrumentation

The study utilized a researcher-developed survey questionnaire and an interview guide as the primary instruments for data collection. The questionnaire was designed to elicit comprehensive information on the respondents' demographic and professional profiles, the level of implementation of the blended learning modality across four dimensions—curriculum and instruction, materials and resources, technology-aided learning platforms, and manpower training—and the specific challenges encountered in its execution. The interview guide was employed to gather qualitative insights that would supplement and clarify the quantitative data obtained from the survey. The instruments underwent content validation by experts in education and research to ensure relevance, clarity, and alignment with the study's objectives. At the same time, a pilot test was conducted to establish reliability and make necessary refinements before full-scale administration.

2.4 Data Analysis

This study was analyzed using both descriptive and inferential statistical techniques facilitated by the Statistical Package for the Social Sciences (SPSS). Descriptive statistics, including frequency counts, percentages, and weighted means, were employed to summarize the respondents' profile variables, assess the level of implementation of the blended learning modality across the four dimensions, and identify the challenges encountered. The weighted mean was interpreted using a predetermined scale to categorize the extent of implementation, while frequency counts and percentages were used for ranking the reported challenges. For inferential analysis, Pearson's correlation coefficient was applied to determine the significance and strength of the relationship between the respondents' profile variables—namely age, sex, educational attainment, position, length of service, and training attended—and their reported level of implementation in each dimension. A significance level of 0.05 was adopted to guide the acceptance or rejection of the null hypotheses.

3 Results

The results of the study revealed that the level of implementation of the blended learning modality in the First Congressional District of SDO I Pangasinan varied across the four assessed dimensions. The highest implementation was recorded in curriculum and instruction with an overall mean of 3.76, interpreted as highly implemented. Among its indicators, the statement "Curriculum-prescribed instructional contents, lessons, and content knowledge are sufficiently taught using the blended learning modality in our school" obtained the highest mean of 4.00. In contrast, "Despite the crisis, our school ensures that the teaching of competencies across learning areas using the blended learning approach still adheres to the provisions of teachers' guides and other curriculum-based reference materials" registered the lowest mean of 3.52. The dimension on materials and resources followed closely, also rated highly implemented, with an overall mean of 3.77, led by the indicator "Our school has standardized assessment tools that can be matched with the utilization of blended learning instruction" with a mean of 4.00.

In contrast, technology-aided learning platforms were perceived as only sufficiently implemented, with an overall mean of 2.77. The highest-rated item under this dimension was "There are sufficient printers, projectors, and other ICT materials that can aid in the design and production of materials" with a mean of 3.14, followed by "There are sufficient computers and laptops accessible for teachers in facilitating blended learning instruction" with a mean of 2.91. These results indicate that while technological tools were available, they were not consistently adequate to support the modality fully. The lowest implementation was found in manpower training, with a general weighted average of 2.49, indicating poor implementation. Notably, the lowest-rated indicator overall was "I am engaged in educational research to seek further knowledge on research-based strategies to support the utilization of a blended learning approach"

with a mean of 1.97, followed by “I have acquired training specifically centered on the blended learning approach and its integration in instruction” with a mean of 2.33, reflecting limited opportunities for targeted professional development and research engagement.

The findings on challenges encountered further contextualize these implementation levels. The most prevalent issue reported was poor internet connectivity, identified by 301 respondents (91.21%), particularly affecting schools and residences in mountainous and remote areas. This was closely followed by limited access to ICT devices at home, such as computers, tablets, and smartphones, cited by 271 respondents (82.12%). Other significant challenges included the limited supply of DepEd-provided materials for blended learning (263 or 79.70%) and the time-consuming nature of preparing instructional materials for multiple modalities (257 or 77.88%). Additionally, 148 respondents (44.85%) acknowledged a lack of proficiency in the use of computers and ICT tools. At the same time, smaller proportions reported the lack of face-to-face instructional guidance from higher offices (84 or 25.45%) and difficulty implementing alternative learning assessments (62 or 18.79%). These results underscore the interplay between infrastructural, resource, and skills-related constraints in shaping the effectiveness of blended learning in the district.

4 Discussion

The findings of the study are consistent with prior literature, underscoring that the success of blended learning largely depends on the effective integration of curriculum and instruction, supported by adequate resources and teacher preparedness. The *high* level of implementation in curriculum and instruction (overall mean = 3.76) corroborates the observations of Mutya and Masuhay et al. (2023), who found that blended learning environments can effectively align with curriculum standards when educators are provided with structured content and clear instructional frameworks. Similarly, Galang (2021) emphasized that adherence to curriculum guides ensures continuity of learning even when delivery modalities change, aligning with the present study's finding that teachers continued to deliver prescribed competencies despite the challenges posed by the new normal.

The *high* implementation rating for materials and resources (overall mean = 3.77) is also supported by Badiuzzaman (2021), who stressed that the availability of learning modules, reference materials, and assessment tools directly facilitates the transition to blended learning. However, the *sufficient* implementation of technology-aided learning platforms (overall mean = 2.77) reflects persistent infrastructural gaps noted by Basilaia and Kvavadze (2020), who reported that inadequate access to ICT devices and inconsistent connectivity remain barriers in many developing country contexts. This limitation is evident in the current study's finding that poor internet connectivity (91.21%) and limited access to ICT devices at home (82.12%) were the most critical challenges.

The *poor* implementation of manpower training (overall mean = 2.49) resonates with Trust and Whalen's (2020) assertion that teacher readiness for blended learning is often constrained by insufficient professional development and limited engagement with research-based instructional strategies. The minimal training specifically focused on blended learning approaches (mean = 2.33) and low engagement in educational research (mean = 1.97) in the present study mirrors the findings of Wiranda and Ciptaningrum (2024), who highlighted that many Filipino teachers during the pandemic lacked sustained capacity-building opportunities tailored to digital and multimodal instruction. Collectively, these corroborations suggest that while teachers in the First Congressional District demonstrate strong curriculum delivery and resource utilization skills, systemic improvements in ICT infrastructure, targeted training, and research engagement are essential to optimizing blended learning outcomes.

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