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Edukasyong Pantahanan at Pangkabuhayan (EPP) Modular Distance Learning Amid Class Suspensions: Perspectives and Learning Outcomes

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Abstract

This study examined the effectiveness of Edukasyong Pantahanan at Pangkabuhayan Modular Distance Learning (EPP-MDL) during class suspensions and its relationship to Grade V pupils' competencies and academic performance in the Bohol Division for the school year 2025–2026. Anchored on Pragmatist Theory, Spiral Progression Theory, and Social Efficiency Theory, the study employed a descriptive-correlational research design using a modified and adapted questionnaire based on established module evaluation tools and MELC guidelines. Respondents included school heads, teachers, home learning facilitators, and learners selected through proportionate stratified sampling. Data were analyzed using weighted mean, percentage, and Pearson correlation. Findings revealed that EPP-MDL implementation was generally "moderately implemented" across delivery, instructional quality, monitoring, and policy management. Teachers were found to have adequate qualifications and training, while home learning facilitators primarily provided supervisory support. Resource availability was moderate, with both printed and digital modules utilized. Learners demonstrated competent skill levels, with stronger performance in home-based tasks and weaker outcomes in entrepreneurship and ICT areas. Academic performance showed gradual improvement across quarters, indicating sustained learning despite disruptions. Significant relationships were found between implementation, competencies, and grades, with competencies showing the strongest link to academic performance. The study concludes that modular learning supports continuity of education but requires improvements in instructional support, resource provision, and monitoring systems. It recommends strengthening capacity-building initiatives, enhancing parental involvement, and improving module design and distribution. This study aligns with SDG 4 (Quality Education) by promoting inclusive and continuous learning and supports SDG 8 (Decent Work and Economic Growth) through the development of practical livelihood skills. The findings contribute to educational and socio-economic sustainability by informing policy and improving instructional systems for resilient learning environments.

Keywords: Competencies, EPP Modular Distance Learning, Instructional Quality, Modular Learning, Monitoring and Support, Pupil Performance, Resource Distribution

1. Introduction

This study examines the effectiveness of Edukasyong Pantahanan at Pangkabuhayan Modular Distance Learning (EPP-MDL) during class suspensions, focusing on learner competencies, performance, and stakeholder perspectives in the Bohol Division. It addresses challenges in delivering skill-based instruction under modular learning and evaluates how instructional quality, support systems, and contextual factors influence learning outcomes. The study also situates EPP-MDL within national education policies and theoretical frameworks to determine its effectiveness and areas for improvement.

1.1 Background of the Study

Frequent disruptions such as weather disturbances, natural calamities, and health emergencies have significantly affected the Philippine educational system, prompting the Department of Education (DepEd) to implement Modular Distance Learning (MDL) under the Basic Education Learning Continuity Plan (BE-LCP) to ensure uninterrupted learning. This modality aligns with global education shifts toward flexible and remote learning delivery. Edukasyong Pantahanan at Pangkabuhayan (EPP), a skill-based subject covering home economics, agriculture, industrial arts, and entrepreneurship, faces challenges under MDL due to its emphasis on hands-on learning. Despite the flexibility of modular instruction, the absence of direct supervision limits experiential learning opportunities. Policies such as Republic Act No. 10533, DepEd Order No. 012, s. 2020, and DepEd Order No. 10, s. 2024 emphasize the need for a responsive and relevant curriculum, reinforcing the importance of evaluating MDL effectiveness in delivering EPP competencies. Modular learning has been identified as effective when materials are well-designed and support independent learning (Bernardo, 2021), yet its implementation in skill-based subjects requires further assessment.

1.2 Themes and Insights from Related Literature

Literature indicates that MDL supports learning continuity but presents varied effectiveness. While students can complete modules, mastery of competencies is often lower compared to face-to-face instruction, especially in skill-based subjects (Gatcho and Asio, 2021). Learning outcomes improve when modules are supplemented with teacher feedback, video resources, or parental assistance (Cruz, 2022). Parental involvement is critical in MDL, as learners perform better when guided and supported at home (Medina, 2020). However, disparities in resources and parental capacity affect learning outcomes. Teachers also face challenges, including time-intensive module preparation and difficulty assessing authentic skill performance (Almerino et al., 2021; Llego, 2021). International studies echo similar findings. Modular learning enhances theoretical understanding but is less effective for practical skills without guided demonstrations (Putra, 2020; Basak, 2021). Locally, studies report improved reading comprehension but limited development of practical competencies in EPP/TLE (Garcia, 2021; Domingo, 2022). Clear instructions and strong parental support remain key determinants of success (Santiago and David, 2021). Overall, MDL promotes flexibility and learner autonomy but requires structured support systems, effective instructional design, and strong communication among stakeholders (Gonzales & Corpuz, 2021).

1.3 Local, National, and Global Context

At the national level, DepEd policies such as the BE-LCP (D.O. No. 12, s. 2020) and MELCs (DepEd, 2020) institutionalized modular learning as a response to educational disruptions. The Philippine Constitution (1987) and Republic Act No. 9155 mandate accessible and quality education, reinforcing the adoption of flexible learning modalities. Globally, modular and distance learning approaches have been widely implemented during emergencies, highlighting both opportunities and limitations in delivering quality education. Studies show that modular learning is effective when supported by appropriate instructional strategies, technological resources, and stakeholder engagement. In the local context, particularly in elementary education, EPP instruction under MDL requires adaptation to ensure skill acquisition despite limited physical interaction and resources. Socioeconomic conditions, access to materials, and home learning environments significantly influence learner performance.

1.4 Theoretical or Conceptual Basis

This study is grounded in several learning theories. Pragmatist Theory emphasizes “learning by doing,” where knowledge is constructed through active engagement in meaningful tasks (Dewey, 1950). This is essential in EPP, where experiential learning is central. Dewey, as cited by Wilson & Peterson (2006), further highlights the importance of self-activity and participation in learning. Spiral Progression Theory suggests that concepts are revisited with increasing complexity as learners progress (Bruner, 1960; Kapfer & Swenson, 2015), supporting the structured development of EPP competencies across grade levels. The Theory on Social Efficiency emphasizes the role of appropriate and accessible instructional media in enhancing learning outcomes (Shedden, 2011). This is particularly relevant in MDL, where learning relies heavily on modules and available resources. These theories collectively support the study’s framework, which examines the relationship between EPP-MDL implementation, learner competencies, and performance outcomes.

1.5 Research Gaps and Rationale

Although existing studies highlight the benefits and challenges of MDL, there remains limited research specifically focused on EPP as a skill-based subject during class suspensions. Prior studies indicate reduced mastery of practical skills and challenges in independent learning, yet comprehensive evaluation of EPP-MDL implementation, stakeholder perspectives, and learner outcomes is insufficient. This study addresses these gaps by examining the effectiveness of EPP-MDL, assessing learner competencies and performance, and analyzing the role of teachers and home learning facilitators. It aims to generate evidence-based insights to improve instructional strategies and policy implementation.

1.6 Alignment with Relevant Sustainable Development Goals (SDGs)

This study aligns with several Sustainable Development Goals. SDG 4 (Quality Education) is directly addressed by evaluating the effectiveness of modular learning in ensuring inclusive and equitable education during disruptions. SDG 8 (Decent Work and Economic Growth) is supported through EPP’s focus on livelihood skills and entrepreneurship development. Additionally, SDG 9 (Industry, Innovation and Infrastructure) is relevant as the study examines innovative learning modalities and instructional strategies in response to educational challenges. The research contributes to strengthening resilient education systems that adapt to emergencies and evolving learning environments.

1.7 Importance of the Study to Multidisciplinary Sustainability

This study contributes to socio-economic and educational sustainability by improving the delivery of skill-based education essential for livelihood and community development. It supports educational sustainability by enhancing instructional practices in modular learning and ensuring continuity of quality education. The findings also contribute to policy and institutional sustainability by providing evidence-based recommendations for DepEd and school administrators. Furthermore, the study promotes community sustainability by highlighting the roles of teachers and home learning facilitators in supporting learners. By addressing challenges in EPP-MDL, the research advances sustainable education

practices that integrate flexibility, inclusivity, and competency-based learning, ensuring learners remain productive and adaptable in changing educational contexts.

2. Material and methods

2.1 Research Design

The study utilized a descriptive-correlational research design to describe the characteristics of respondents and determine the relationship between EPP-MDL implementation and pupils' learning outcomes. The descriptive aspect identified the profile of respondents, including teachers, home learning facilitators, and pupils, and assessed the status and effectiveness of EPP-MDL implementation as well as learners' competency levels. A survey method using a Likert-scale questionnaire served as the primary data collection tool. The instrument was a modified and adapted checklist questionnaire based on the standard module evaluation form by Talimodao & Madrigal (2021) and the DepEd Feedback Form on Self-Learning Modules. Items measuring competencies were aligned with the MELC Guide 2020 under the BE-LCP program. The questionnaire underwent expert review and pilot testing with Grade V teachers at Biking Elementary School, Dauis, Bohol to ensure clarity, relevance, and readability (Anzaldo, 2020).

2.2 Locale of the Study

The study was conducted in the Bohol Division, which is organized into three congressional cluster districts. These districts served as the basis for grouping respondents and ensuring representation across different school contexts. The division-wide coverage allowed the study to capture variations in EPP-MDL implementation across diverse educational environments.

2.3 Respondents of the Study

The respondents included school heads, teachers, Grade V learners, and home learning facilitators. Grade V learners were selected because they are developmentally capable of expressing their learning experiences while actively engaging in foundational EPP competencies. Their level of independence and consistent exposure to instructional routines makes their feedback reliable for assessing engagement, instructional clarity, and home support. Teachers and home learning facilitators were included to provide complementary perspectives on instructional delivery, monitoring, and learner support. This combination of respondents ensured a comprehensive understanding of EPP-MDL implementation from both school and home contexts.

2.4 Sample and Sampling Procedure

The study employed proportionate stratified sampling combined with quota sampling to ensure balanced representation across the three congressional districts. The total population of 1,687 EPP teachers served as the basis for stratification. Using Slovin's formula with a 5% margin of error, a sample size of 384 respondents was determined and proportionally distributed across the three districts. Data collection was conducted through an online survey system with response controls to maintain proportional representation across districts and respondent categories. The researcher coordinated with the Division Technical Working Group (TWG) for survey dissemination. The online platform regulated responses to prevent overrepresentation, ensuring that only responses meeting the inclusion criteria and within the set limits were accepted. Responses were monitored regularly, organized according to district and respondent type, and cleaned by removing incomplete and duplicate entries. Once the required number of responses per group was reached, additional submissions were excluded. This procedure ensured a balanced and representative dataset despite the constraints of online data collection.

2.5 Research Instrument

The study utilized a modified and adapted checklist questionnaire to collect data on EPP-MDL implementation and learner competencies. The instrument incorporated statements from Talimodao & Madrigal (2021) and the DepEd Feedback Form on Self-Learning Modules to ensure alignment with established evaluation standards. Items assessing pupils' competencies were based on the MELC Guide 2020 used in the BE-LCP program. The questionnaire was designed using clear and simple language to ensure ease of understanding among respondents. It was reviewed by the researcher's adviser and panel members for validation and refinement. A pilot test was conducted with teachers and pupils outside the actual respondents to evaluate clarity, reliability, and usability (Anzaldo, 2020). Both printed and online versions of the questionnaire were used to accommodate varying levels of accessibility among participants.

2.6 Data Gathering Procedure

The researcher secured permission from the Dean of the College of Advanced Studies and the Campus Director, followed by approval from the Schools Division Superintendent of Bohol, school heads, teachers, and parents. Informed consent was obtained from all participants, particularly learners, prior to data collection. Data were gathered using both electronic questionnaires administered through Google Forms and printed questionnaires for respondents with limited access to digital platforms. The researcher coordinated with the Division Technical Working Group (TWG) to facilitate the distribution of

survey instruments across the division. To maintain adherence to the sampling design, response limits were implemented within the online platform to regulate participation according to district and respondent category. This ensured proportional representation and minimized bias in data collection.

2.7 Data Analysis Techniques

The collected data were analyzed using descriptive and inferential statistical methods. Weighted mean was used to determine the level of learners' competencies, with interpretations ranging from not competent to very competent based on defined scale ranges. Learners' grades were interpreted using proficiency levels aligned with DepEd standards (D.O. No. 73, s.2012), categorizing performance from outstanding to below expectations. The level of implementation of modular distance learning was also measured using a Likert scale with corresponding descriptive interpretations. Percentages were computed by dividing frequency by the total number of respondents and multiplying by 100 to ensure consistency. To determine the relationship between EPP-MDL implementation and pupils' competencies and grades, the Pearson product-moment correlation coefficient was used. The significance of the relationship was tested using a t-test through Microsoft Excel, allowing for the evaluation of the null hypothesis.

3. Results and Discussion

3.1 Stakeholder Profiles and Resource Conditions

3.1.1 Teachers' Professional Background and Training

The findings show that most teachers possess master's degree units, followed by bachelor's degree holders, with only a small number having completed graduate or doctoral studies. In terms of teaching experience, the majority have between one to fifteen years of experience, indicating a relatively young to moderately experienced workforce. A large proportion also reported having attended Modular Distance Learning (MDL) training. These results suggest that teachers are actively engaged in professional development and are generally prepared to implement modular learning. This aligns with Republic Act No. 10533, which emphasizes teacher competence, and Republic Act No. 10912, which promotes lifelong learning. The presence of early- to mid-career teachers may also support adaptability to new instructional modalities, consistent with findings by Darling-Hammond et al. (2017).

3.1.2 Home Learning Facilitators' Background and Support

The results indicate that most home learning facilitators have high school or tertiary education, are primarily mothers, and are often engaged in household responsibilities. Many manage multiple children and have attended MDL orientation. Their primary support roles include supervising and reminding learners, with fewer directly explaining lessons or assisting with tasks. This suggests that facilitators provide essential but mostly supervisory support rather than instructional guidance. The dominance of maternal involvement supports findings by Epstein (2018), emphasizing the importance of parental engagement in learning. However, limited educational background and multiple responsibilities may restrict their ability to assist with complex tasks, highlighting the need for clear and accessible learning materials.

3.1.3 Availability and Distribution of Learning Resources

The findings reveal that the availability of printed modules is moderate, with most respondents indicating partial availability rather than full access. Module distribution is conducted through a combination of printed and digital formats, with many relying on both methods to reach learners. This indicates that while schools have adapted flexible distribution strategies, resource limitations persist. These findings align with DepEd Order No. 12 s. 2020, which promotes multiple delivery modalities, but also highlight logistical challenges in ensuring equitable access. From a theoretical perspective, this reflects Systems Theory in Education, where insufficient instructional inputs affect overall learning outcomes, and Constructivist Learning Theory, which emphasizes the importance of access to learning materials for active knowledge construction.

3.2 Level of Implementation of EPP-MDL

3.2.1 Delivery and Distribution of Modules

The results show that the delivery and distribution of modules are moderately implemented across all stakeholders, with school heads reporting higher levels compared to teachers, facilitators, and pupils. While module availability and procedures are generally in place, challenges remain in timely distribution, monitoring, and access. This suggests that administrative systems are functional but operational constraints limit efficiency. The findings support DepEd Order No. 12 s. 2020 and Republic Act No. 10533, which emphasize accessibility and quality of learning resources. Consistent with Tria (2020) and Dangle & Sumaoang (2020), teachers face logistical and workload challenges that affect implementation effectiveness.

3.2.2 Instructional Quality and Feedback

The results indicate that instructional quality and feedback are moderately implemented, with pupils and school heads reporting slightly higher perceptions than teachers. Teachers reported difficulties in ensuring learner understanding, independent learning, and skill improvement. This implies that while instructional processes exist, they are not fully

optimized. The findings align with Constructivism and Vygotsky's Social Constructivism, which emphasize the importance of interaction and scaffolding in learning. Limited teacher-learner interaction in modular learning reduces opportunities for feedback and guidance, affecting comprehension and performance. Formative Assessment Theory also supports the need for consistent and timely feedback to enhance learning outcomes.

3.2.3 Monitoring and Support Systems

The findings show that monitoring and support are moderately implemented, with pupils reporting higher levels of perceived support compared to teachers and school heads. Gaps are evident in parental guidance, technical support, and consistent monitoring of learner progress. These results indicate that while support systems are present, coordination between home and school is not fully maximized. This aligns with Bronfenbrenner's Ecological Systems Theory, which highlights the influence of multiple environments on learning, and Parental Involvement Theory, emphasizing the role of family support. Self-Regulated Learning Theory also suggests that learners require structured guidance to develop independence, which remains limited in modular settings.

3.2.4 Policy and School Management

The results reveal that policy implementation and school management are moderately implemented, with home learning facilitators reporting slightly higher perceptions than teachers and school heads. Challenges are observed in resource availability, budget management, and logistical support. This suggests that while policies align with national guidelines, operational inefficiencies affect implementation. The findings are consistent with Systems Theory in Education and Resource Management Theory, which emphasize the importance of coordinated systems and efficient resource allocation. Instructional Leadership Theory further highlights the need for stronger leadership to ensure effective program implementation.

3.2.5 Overall Implementation of EPP-MDL

The results show that overall implementation of EPP-MDL is moderately implemented, with higher perceptions from school heads and pupils compared to teachers and facilitators. Pupils recognize the role of modules in sustaining learning, while teachers report challenges in facilitating instruction and monitoring progress. This indicates that modular learning ensures continuity but is not fully optimized. The findings align with Distance Education Theory and Transactional Distance Theory, which emphasize the importance of structure, interaction, and feedback in remote learning. Self-Directed Learning Theory also explains that while learners develop independence, they still require support and motivation to succeed.

3.3 Learner Competency and Academic Performance

3.3.1 Level of Pupils' Competency in EPP

The results show that pupils demonstrate a competent level of performance across EPP areas, with higher competency in Home Economics and lower competency in Entrepreneurship and ICT-related skills. Home learning facilitators rated learners slightly higher than teachers. This suggests that learners perform better in practical, home-based tasks than in technical or entrepreneurial skills. The findings align with Experiential Learning Theory, which emphasizes learning through hands-on experience, and Constructivist Learning Theory, which highlights active engagement in knowledge construction. Competency-Based Education also supports that learners meet minimum standards but require further development for higher proficiency.

3.3.2 Pupils' Academic Performance in EPP

The results indicate that pupils' grades fall within the developing to approaching mastery level, with gradual improvement observed across quarters. This shows a steady progression in learning outcomes under modular distance learning. This improvement aligns with Bruner's Spiral Curriculum Theory, which emphasizes continuous learning through repeated exposure. Vygotsky's Sociocultural Theory explains the role of scaffolding from teachers and parents in supporting learning progression, while Behaviorism Theory highlights reinforcement through feedback and task completion as factors influencing performance improvement.

3.4 Relationship Between Implementation, Competencies, and Performance

The results show statistically significant relationships among the level of implementation, pupils' competencies, and academic grades. Implementation has a moderate relationship with competencies, a low but significant relationship with grades, and competencies have a stronger relationship with academic performance. These findings indicate that effective implementation supports skill development, which in turn influences academic achievement. This aligns with Constructivist Learning Theory, which emphasizes the importance of structured learning environments, and Ecological Systems Theory, which recognizes the influence of multiple external factors on academic performance. Competency-Based Education further explains that mastery of skills is a strong predictor of academic success. Overall, the results suggest that while modular learning implementation contributes to learning continuity and competency development, improving

instructional quality, support systems, and resource availability is essential to enhance learner performance and maximize outcomes.

4. Conclusion and Recommendations

The study concludes that Edukasyong Pantahanan at Pangkabuhayan Modular Distance Learning during class suspensions is a functional and essential strategy for ensuring learning continuity, with results indicating that its implementation is generally moderate across delivery, instructional quality, monitoring, and policy management. Teachers possess adequate qualifications and training, while home learning facilitators provide primarily supervisory support, contributing to the learning process. Resources are moderately sufficient, though not fully adequate, and module distribution relies on a combination of printed and digital formats. Learners demonstrate satisfactory academic performance with gradual improvement and moderate competency levels, particularly stronger in practical skills and weaker in entrepreneurial and ICT areas. The findings further reveal that effective implementation is associated with improved competencies and academic performance, highlighting the importance of strengthening instructional support, resource availability, and system-wide coordination to achieve higher levels of learning outcomes.

The study recommends strengthening the implementation of modular distance learning through a comprehensive program review to identify gaps and improve policy consistency. Capacity-building initiatives should be conducted for supervisors, school heads, and teachers to enhance instructional delivery, resource management, and quality assurance of modules. Schools should ensure adequate provision, storage, and accessibility of both printed and digital learning materials while improving monitoring systems and feedback mechanisms. Teachers are encouraged to intensify parent orientation and establish clearer monitoring strategies to promote engagement, while home learning facilitators should actively participate in school programs and provide consistent guidance. Learners should also be supported in developing responsibility, time management, and active communication with teachers to improve understanding and performance.

The study is limited to the assessment of EPP Modular Distance Learning implementation in the Bohol Division and focuses on Grade V pupils, teachers, school heads, and home learning facilitators within the specified school year. Data were collected using a questionnaire, which relies on self-reported perceptions that may not fully capture actual performance and implementation conditions. The scope of the study is confined to selected variables such as delivery, instructional quality, monitoring, and policy management, and does not include other potential influencing factors such as socioeconomic conditions, technological access, and broader contextual challenges. Additionally, the use of modular distance learning during class suspensions may vary across different settings, limiting the generalizability of the findings.

Compliance with ethical standards

The authors declare no conflict of interest, and this study received no external funding. The research was conducted in coordination with the Department of Education Bohol Division, with the participation of school heads, teachers, home learning facilitators, and Grade V pupils, all of whom voluntarily took part after providing informed consent. Data were collected using non-invasive survey methods, and all responses were treated with strict confidentiality, with no identifying information disclosed.

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