

## Diagnostic-Evidence-Based Remediation in Elementary Practical Education: Development and Expert Validation of a Grade 4 EPP Support Learning Module

Kathleen Nicole C. Villanueva<sup>1</sup>, Josephine I. Rosario<sup>2</sup>, Priscilla R. Castro<sup>3</sup>

kathleennicolevillanueva51@gmail.com<sup>1</sup>, rosario.josephine.i@lnu.edu.ph<sup>2</sup>,

castro.priscilla.r@lnu.edu.ph<sup>3</sup>

Lyceum Northwestern University

### Abstract

*This study developed and evaluated a support learning module for Grade 4 Edukasyong Pantahanan at Pangkabuhayan (EPP) learners in Central I Elementary School, San Carlos City Division, Philippines. Anchored in learner-centered, experiential, and multimedia learning perspectives, the study addressed low mastery of practical life-skills competencies through a diagnostic, evidence-based instructional resource. A descriptive-developmental design was employed. Participants included 68 Grade 4 learners from two sections and 10 expert evaluators, comprising EPP teachers, master teachers, a school head, and an EPP education program supervisor. Learner performance was analyzed through Mean Percentage Score and Percentage of Correct Response, while module acceptability was determined through the Learning Resources Management and Development System evaluation tool using the average weighted mean. Results revealed very poor overall diagnostic performance (MPS = 36.64), with two competencies not mastered: explaining the meaning and importance of entrepreneurship (30.82%) and performing skills in planting ornamental plants as an income-generating activity (45.76%). Expert evaluation indicated very satisfactory acceptability, particularly in visual/audio presentation, content relevance, format, and practicality. The findings affirm that targeted support modules can address competency gaps, strengthen learner engagement, and provide teachers with remediation resources for practical elementary education. It is recommended for classroom use, refinement, and future impact evaluation.*

**Keywords:** *Edukasyong Pantahanan at Pangkabuhayan, Support learning module, Diagnostic assessment, Least learned competencies, Learner engagement, Instructional materials, Expert validation, elementary education*

### INTRODUCTION

Elementary education plays a foundational role in developing learners' functional knowledge, practical skills, work values, and readiness for lifelong learning. In the Philippine curriculum, Edukasyong Pantahanan at Pangkabuhayan (EPP) introduces children to basic competencies in home economics, entrepreneurship, agriculture, household management, productivity, and responsible use of resources. These competencies are not merely academic; they prepare learners to connect classroom learning with daily life situations and future livelihood possibilities.

International literature supports the importance of practical life-skills education. Erjavšek and Kostanjevec (2026) emphasized that home economics education develops multidisciplinary

knowledge in areas such as household management, economic literacy, consumption, nutrition, health, and environmental responsibility. Similarly, Taar and Palojoki (2022) argued that home economics activities can support 21st-century skills such as collaboration, communication, creativity, and critical thinking when learners engage in shared tasks and reflective discussion.

However, learners' mastery of practical subjects depends largely on instructional design, resource availability, engagement, feedback, and the suitability of learning materials. Student engagement is widely understood as behavioral, emotional, and cognitive involvement in learning tasks (Fredricks et al., 2004). In EPP, engagement is especially important because competencies often require demonstration, material manipulation, problem-solving, and application. Poorly structured materials may increase cognitive load and reduce learning efficiency, while well-designed instructional resources can help learners focus on essential concepts and procedures (Mayer, 2009; Sweller et al., 2019).

The use of support learning modules is particularly relevant when diagnostic assessment reveals learning gaps. Formative assessment and feedback help learners identify what they know, what they have not yet mastered, and how they can improve (Hattie & Timperley, 2007; Nicol & Macfarlane-Dick, 2006). Support modules may therefore serve as remediation tools by providing guided explanations, sequenced activities, visual aids, practice tasks, and opportunities for independent learning. From a social-cognitive perspective, learners' confidence and persistence can also improve when instructional tasks are structured in manageable steps and supported by clear models (Bandura, 1977).

This study was conducted to develop and evaluate a support learning module in Grade 4 EPP based on diagnostic test results. Specifically, it determined learners' performance levels, identified the least-learned competencies, developed an instructional module to address these competencies, and evaluated the module using expert judgment.

## Methodology

This study employed a descriptive-developmental research design. The descriptive component was used to determine the performance level and least learned competencies of Grade 4 learners in EPP through diagnostic assessment. The developmental component was used to design and validate a support learning module based on the identified learning gaps. This approach is aligned with educational design research, which emphasizes the development and refinement of instructional interventions in authentic educational contexts (McKenney & Reeves, 2025; Scott et al., 2020).

The study was conducted at Central I Elementary School, San Carlos City Division, during School Year 2025–2026. The learner respondents consisted of 68 Grade 4 pupils from two sections: Grade 4-A with 32 learners and Grade 4-B with 36 learners. The expert respondents consisted of 10 education professionals: six Grade 4 EPP teachers, two master teachers, one school head, and one Education Program Supervisor in EPP.

Two major instruments were used. First, a diagnostic test in EPP 4 was administered to determine learners' mastery of selected competencies. Second, the DepEd Learning Resources Management and Development System (LRMDS) evaluation rating tool for print resources was used to assess the proposed support learning module in terms of content, format or instructional design, visual/audio presentation, and practicality/usability.

Data were analyzed using descriptive statistics. The Mean Percentage Score (MPS) was used to determine learners' overall performance level. The percentage of Correct Response (PCR) was used to identify the least learned competencies. The Average Weighted Mean (AWM) was used to determine the acceptability of the proposed module based on expert evaluation. Ethical considerations were observed by securing permission, maintaining confidentiality, and using data solely for academic research purposes.

## Results and Discussion

### *Performance Level of Grade 4 Learners in EPP*

The diagnostic test results showed that Grade 4 learners had low performance in EPP. Grade 4-A obtained an MPS of 32.03, while Grade 4-B obtained an MPS of 41.25. The overall MPS was 36.64, interpreted as very poor. This result suggests that learners had not sufficiently mastered the required competencies in EPP.

The low performance may be attributed to limited prior knowledge, insufficient exposure to practical activities, inadequate reinforcement, and difficulty connecting abstract concepts with real-life applications. In practical subjects such as EPP, learners need more than verbal explanation; they require concrete examples, guided practice, visuals, feedback, and opportunities to perform skills. This supports Mayer's (2009) position that learners benefit from well-designed multimedia and visual-verbal materials, as well as Sweller et al.'s (2019) view that instructional materials should reduce unnecessary cognitive burden.

### *Least Learned Competencies*

Item analysis revealed two competencies categorized as not mastered. The first was "Naipaliliwanag ang kahulugan at kahalagahan ng entrepreneurship" (EPP4IE 0a-1), with a mastery level of 30.82%. This indicates that many learners had difficulty explaining entrepreneurship as a concept and understanding its relevance to daily life and productivity.

The second was "Naisasagawa ang mga kasanayan at kaalaman sa pagtatanim ng halamang ornamental bilang isang pagkakakitaang gawain" (EPP4AG0a-1), with a mastery level of 45.76%. This shows that more than half of the learners experienced difficulty in understanding and applying the skills involved in planting ornamental plants as a possible income-generating activity.

These findings demonstrate the need for targeted remediation. The entrepreneurship competency requires simplified explanations, examples of small-scale enterprise, and contextual activities. The ornamental planting competency requires hands-on demonstrations, visual

sequencing, task-based exercises, and performance activities. Practical and home economics education is most meaningful when learners can apply knowledge in real-life contexts (Erjavšek & Kostanjevec, 2026; Taar & Palojoki, 2022).

### ***Development of the Support Learning Module***

Based on the diagnostic results, a support learning module was developed to address the two competencies not mastered. The module focused on entrepreneurship and ornamental plant production as an income-generating activity. It included introductory explanations, guided activities, practice exercises, visual materials, and learner-friendly instructions.

The module was designed as a remedial and enrichment resource. Its purpose was to help learners revisit difficult concepts, practice skills, and develop confidence in applying EPP competencies. Consistent with formative assessment principles, the module transformed diagnostic evidence into instructional action (Hattie & Timperley, 2007; Nicol & Macfarlane-Dick, 2006). It also supported learner engagement by offering tasks that could promote participation, problem-solving, and independent learning.

### ***Expert Evaluation of the Module***

The proposed module was evaluated by Grade 4 EPP teachers, master teachers, school heads, and an EPP supervisor using the LRMDs criteria. Among Grade 4 teachers and master teachers, all major factors were rated very satisfactory. Content obtained an AWM of 3.63, format obtained 3.44, visual/audio presentation obtained 4.17, and practicality/usability obtained 3.44. The highest rating was given to visual/audio presentation, indicating that the material was perceived as attractive, clear, and capable of sustaining learner interest.

Among school heads and experts, the module was also rated very satisfactory. Content obtained an AWM of 3.19, format obtained 3.72, visual/audio presentation obtained 3.69, and practicality/usability obtained 3.75. The highest rating was given to practicality/usability, showing that the module was considered easy to use, adaptable, safe, and appropriate for classroom implementation.

Overall, the evaluation results suggest that the support learning module is acceptable, relevant, and useful for Grade 4 EPP instruction. Its strengths include learner-friendly presentation, alignment with EPP competencies, practical classroom usability, and potential to improve engagement. However, the relatively low ratings in some content indicators suggest that further refinement may still be needed, particularly to strengthen clarity, contextual examples, and activity sequencing.

These results align with the literature on instructional design. Effective learning materials should combine clear content, learner-centered tasks, engaging presentation, manageable cognitive demands, and opportunities for feedback (Mayer, 2009; Sweller et al., 2019). The findings also affirm the value of expert validation in improving educational resources before classroom-wide implementation (McKenney & Reeves, 2025).

## CONCLUSION

The study concluded that Grade 4 learners at Central I Elementary School demonstrated very poor performance in EPP, as indicated by diagnostic assessment results. Two competencies were identified as not mastered: explaining the meaning and importance of entrepreneurship and performing skills in planting ornamental plants as an income-generating activity. These findings indicate the need for immediate, targeted, and practical instructional support.

The developed support learning module was evaluated as very satisfactory by expert respondents. Its strongest features were visual/audio presentation and classroom usability. The module is therefore a viable instructional intervention for addressing least learned competencies in Grade 4 EPP. It can help teachers provide remediation, strengthen learner engagement, and support the development of practical life skills.

The study recommends the use of the module in EPP instruction, subject to continuous refinement based on teacher feedback and learner performance. Future researchers may conduct experimental or quasi-experimental studies to determine the module's effect on post-test performance, long-term retention, learner engagement, and practical skill development.

## AI DECLARATION STATEMENT

AI-supported tools helped with grammar and structure in creating this article. No AI tools were used to collect, analyze, or interpret data; all authors are credited for their academic contributions.

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