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Research Article

Kaalaman at Kasanayan Sa Edukasyong Pantahanan at Pangkabuhayan (EPP) of Pre-Service Teachers in A State University: A Basis for Curriculum Enhancement

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ABSTRACT

A competent teacher demonstrates purpose in making teaching and learning meaningful. Edukasyong Pantahanan at Pangkabuhayan (EPP) requires mastery of both content knowledge and pedagogical skills across its five learning areas. Teacher expertise significantly influences instructional quality, often surpassing the impact of physical learning resources. In Technology and Livelihood Education (TLE), where theory meets hands-on application, both knowledge and skills are essential. Teachers must be well-prepared to demonstrate key concepts, model practical skills, and guide students toward meaningful, real-world learning experiences laying the foundation for future livelihood opportunities. The study used a mixed-method research design, specifically a sequential explanatory approach, to collect data in assessing the knowledge and skills competencies of pre-service teachers in EPP. The data was gathered from 20 Pre-service teachers at President Ramon Magsaysay State University – San Marcelino Campus through survey questionnaires and qualitative responses. Descriptive statistics was used to determine competency levels, while thematic analysis was applied to qualitative data. The findings revealed Pre-service teachers were proficient in Home Economics and ICT but developing in Agriculture, Industrial Arts, and Entrepreneurship. The challenges included limited access to tools and materials, insufficient hands-on learning opportunities, inadequate instructional resources, and time constraints affecting effective course implementation. To address these issues, the researchers recommend integrating curriculum enrichment strategies such as resource speakers who are experts in their respective fields, workshops, project-based learning, experiential and collaborative activities, and strengthened school-community partnerships.

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These enhancements aim to bridge competency gaps and better prepare Pre-service teachers for effective EPP instruction.

Keywords: *Competency, Curriculum enhancement, Edukasyong Pantahanan at Pangkabuhayan (EPP), Pre-service teachers*

Introduction

It is often said that one cannot pour knowledge into others if their own cup is empty which emphasizes the significance of subject mastery among teachers. Teachers must possess a great understanding of the content themselves before can teach specific competencies effectively. They must be equipped with the skills and knowledge of the subject they are teaching to teach basic to complex learning competencies. Mastery is not limited to content knowledge alone rather it encompasses the development of significant teaching skills.

The teacher's role is essential in creating effective teaching and learning. Teachers are the source of knowledge that pupils need to obtain. Hence, they should be knowledgeable on what they are teaching. This applies to Edukasyong Pantahanan at Pangkabuhayan wherein it composes the five learning areas namely Home Economics, Agriculture, Industrial Arts, Information and Communication Technology (ICT) and Entrepreneurship. EPP Teachers should possess competencies in terms of the concepts, principles, techniques, and most importantly the ability to apply these knowledge as to practical skills in various learning areas of EPP. According to Omar et al. (2020), a teacher must have the competencies first before implementing it to the pupils. Teachers who are competent to teach the content and skills lead to meaningful learning outcomes to the pupils. Also, Ajayi et al. (2020) The Philippine Professional Standards for Teachers (PPST) Domain 1: Content Knowledge and Pedagogy, emphasizes that teachers must have knowledge about the subject matter and put it in a practice which may lead to pupil's meaningful learning experiences. Teachers are expected to exhibit mastery of both content and skills before imparting them to pupils, assuring that these competencies connect pupil's needs and experiences. Mastery begins with the teacher before it is passed on to the pupils. Mastering and

gaining these competencies are important for preservice teachers especially in training years which will prepare in the actual field of teaching.

The study assessed the competencies of Pre-service teachers in Edukasyong Pantahanan at Pangkabuhayan (EPP) in a state university and to provide suggestions for Bachelor of Elementary Education (BEEd) curriculum enhancement.

Methodology

The study used mixed method research design, specifically the Mixed Sequential Explanatory design. Creswell and Plano (2018) stated that Mixed Sequential Explanatory design involves collecting and analyzing quantitative data first then followed by a qualitative data to explain the findings thoroughly. It involved 20 pre-service teachers enrolled in the Bachelor of Elementary Education program at President Ramon Magsaysay State University, San Marcelino Campus.

A survey questionnaire served as the primary instrument in data gathering with the use of Google form (<https://forms.gle/PmYbmtYYdgqfej4p9>). The survey questionnaire was composed of two (2) parts. The first part of the questionnaire was a checklist type with a four-point scale to assess the competency level of pre-service teachers both contents and skills in the five areas of EPP. The second part is a two (2) open-ended questions about the challenges or difficulties encountered in EPP 1 and 2 subjects and the proposed curricular activities for Bachelor of Elementary Education (BEEd) curriculum enhancement.

The research instrument underwent construct and content validity, to guarantee the credibility and ensuring that it covers the EPP competencies thoroughly. The validated survey questionnaire was subjected to a pilot test to ten (10) Teacher Education students from

PRMSU-Castillejos. To ensure the reliability of the instrument, the results were processed using Cronbach Alpha. The computed Cronbach's Alpha value of 0.98 indicated excellent reliability, implying that the instrument had strong internal consistency across the five areas of EPP. This result proved that the questionnaire accurately measured the intended competencies and was suitable for actual data collection.

The quantitative data were analyzed using mean, standard deviation, frequency, and percent distribution, while thematic analysis was applied to open-ended responses to identify common challenges and proposed curricular activities in EPP.

Results and Discussion

Competency on Knowledge and Skills on EPP among Pre-service Teachers Home Economics as a Learning Area in EPP

Home Economics competency is the knowledge and understanding in domestic science specifically home and household management and family life studies. It includes the ability to classify tools used in food preparation and clothing and textiles, and as well as to explain important concepts when it comes to home management and family life. Table 1 presents the competency level of pre-service teachers in terms of knowledge in Home Economics.

Table 1. Competency Level of Pre-service Teachers in terms of Knowledge in Home Economics

Indicators	Mean (\bar{x})	SD (σ)	Verbal Description	Rank
1. Identifies hand sewing tools, usage and care	2.85	0.59	P	5
2. Classifies tools, utensils, and ingredients used in food preparation, cooking and preservation	2.90	0.64	P	4
3. Recognizes basic washing principles and ironing techniques	3.25	0.64	P	1
4. Determines child care for infants to toddlers	3.00	0.65	P	2
5. Defines budgeting terms such as income, expenses, savings and budgeting methods	2.95	0.83	P	3
Total	2.99	0.67	P	

Legend: Skilled (S) (3.26- 4.00), Proficient (P) (2.51-3.25), Developing (D) (1.76-2.50), Beginning (B) (1.00-1.75)

The table shows that among the indicators in terms of knowledge in Home Economics, indicator 3, recognizes basic washing principles and ironing techniques got the first rank ($x = 3.25$ and $\sigma = 0.64$) suggests that washing and ironing are regular tasks in household. The result is supported by Humphries and Thomas as cited in Villacorta and Arnado (2023), state that the need for washing and ironing services is steadily increasing around the world as more people rely on them for convenience and practicality. Meanwhile, indicator 1, identifies hand sewing tools, usage and care got the last rank ($x = 2.85$ and $\sigma = 0.59$) which means hand sewing is not a common household activity, since many people rely on ready-made clothing and machine stitching, leading to minimal hands-on experience with sewing tools. The result is supported by Hackett (2021), underscores how home sewing has become less common over

time, as more people choose to by ready-made clothing instead of making their own. Both indicators perceived as proficient (P) competency on knowledge among the pre-service teachers.

Home Economics Skills Competency

Home economics competency in skills includes a range of practical skills related to kitchen operations, household management, and family life that are essential for everyday living. This includes hands-on activities and the ability to perform tasks such as preparing, serving and preserving food, sewing with use of appropriate tools and materials and demonstrating the proper techniques in laundry care and as well home management and family life skills. Table 2 presents the competency level of pre-service teachers in terms of skills in Home Economics.

Table 2. Competency Level of Pre-service Teachers in terms of Skills in Home Economics

Indicators	Mean (\bar{x})	SD (σ)	Verbal Description	Rank
1. Sews household linens using appropriate tools and materials	2.65	0.67	P	5
2. Prepares and preserves food using appropriate tools, utensils and ingredients	2.85	0.75	P	3.5
3. Implements proper techniques for washing, removing stains, and ironing clothes	3.10	0.72	P	1.5
4. Employs proper techniques for infant care (diapering, bathing, feeding, and dressing)	3.10	0.72	P	1.5
5. Applies principles in managing family resources (money, time, and energy)	2.85	0.81	P	3.5
Total	2.91	0.73	P	

Legend: Skilled(S) (3.26-4.00), Proficient (P) (2.51-3.25), Developing (D) (1.76-2.50), Beginning (B) (1.00-1.75)

The table reveals that among the indicators in terms of skills in Home Economics, indicator 8, implements proper techniques for washing, removing stains, and ironing clothes and indicator 9, employs proper techniques for infant care (diapering, bathing, feeding, and dressing) both got the 1.5 rank ($x = 3.10$ and $\sigma = 0.72$) which means that laundry care are practiced frequently with readily available materials and many preservice teachers have firsthand experiences caring for younger siblings, relatives, or even their own children. Gyimah and Sampson (2019) claim that students frequently helped out with everyday tasks like running errands, preparing meals, ironing clothes, taking care of younger siblings, and doing minor home repairs. In addition, Gubat et al. (2025), point out that students in remote settings demonstrated basic procedural skills in common household chores, with dishwashing being the most frequently performed. On the other hand, indicator 6, sews household linens using appropriate tools and materials got the last rank ($x = 2.65$ and $\sigma = 0.67$) suggest that sewing requires consistent hands-on experience, and pre-service teachers may have had minimal exposure to actual sewing tasks. The claim is supported by Chirapa and Mberengwa (2021), emphasize that students often struggle with the necessary

skills for the clothing industry due to lack of exposure to key areas like garment design, pattern making, and construction. Furthermore, Valenzuela et al. (2025) mention that students were becoming skilled in using tools like scissors and needles, though their understanding still needed improvement. However, they struggled with tools such as thimbles and seam rippers because this required more refined motor skills. Both indicators perceived as proficient (P) skill among the pre-service teachers.

Home Economics Knowledge and Skills Competencies

Home economics competency in knowledge and skill are competencies where preservice teachers have the essential understanding and at the same time can apply or demonstrate this understanding in terms of kitchen operation, clothing and home management, and family life. A balanced combination of content in knowledge and practical skills in Home Economics offers students with the necessary tools in managing daily life, promoting responsible decision-making and enhancing overall quality of life. Table 3 presents the competency level of pre-service teachers in both knowledge and skill in Home Economics.

Table 3. Competency Level of Pre-service Teachers in Knowledge and Skills in Home Economics

	Mean (\bar{x})	SD (σ)	Verbal Description
Knowledge	2.99	0.67	P
Skills	2.91	0.73	P

Total	2.95	0.70	P
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Legend: Skilled(S) (3.26-4.00), Proficient (P) (2.51-3.25), Developing (D) (1.76-2.50), Beginning (B) (1.00-1.75)

The table presents the overall grand mean of knowledge and skill in home economics. In content knowledge the grand \bar{x} = 2.99 and σ = 0.67, meanwhile the skill grand \bar{x} = 2.91 and σ = 0.73, with an overall grand \bar{x} = 2.95 and σ = 0.70, both perceived as proficient. This suggests that they are knowledgeable and competent enough both content and skills, which implies that pre-service teachers have an efficient understanding of the essential concepts and at the same time can perform hands-on activities related to household chores and family life. The result is supported by Elli and Ricafort (2020), teachers have a solid grasp of the learning competencies in home economics, meaning they possess a good understanding of some skills in managing family resources. Additionally, this suggests that they are knowledgeable about the fundamental concepts of food preservation and sewing household linens both essential skills in home economics.

Both knowledge and skills in home economics together enhance competency which reveals that pre-service teachers not only know what to do but also how to do it effectively. By integrating content knowledge into practical skills, they will become competent on Home Economics. The result shows that Pre-service teachers are proficient in both knowledge and skills in home economics and shows that there

is parallelism between indicator 3 in knowledge, and indicator 8 in skill. This indicates that Pre-service teachers are highly proficient in knowledge and skill, as they are able to have an understanding and at the same time perform or apply this knowledge of basic washing principles and ironing techniques. It also shows that indicator 1 is parallel to indicator 6 both knowledge and skills in sewing. This indicates that the competency level of preservice teachers in knowledge is high, likewise to their competency level in skills.

Agriculture as a Learning Area in EPP

Agriculture, as a component of Edukasyong Pantahanan at Pangkabuhayan (EPP), equips learners with knowledge and skills in food production and sustainable farming. This includes crop cultivation, animal raising and breeding, and agribusiness which develops environmental responsibility among pupils.

Agriculture competency in content covers the knowledge needed for growing crops, raising livestock and managing fish farms. It also includes knowledge of modern technology practices that enhance productivity and ensure the long-term sustainability of agriculture. Table 4 shows the competency level of pre-service teachers in terms of knowledge in Agriculture.

Table 4. Competency Level of Pre-service Teacher in terms of Knowledge in Agriculture

Indicators	Mean (\bar{x})	SD (σ)	Verbal Description	Rank
1. Lists principles and practices in crop and animal production	2.10	0.72	D	4
2. Categorizes common agricultural tools and equipment, focusing on safety and proper usage	2.20	0.83	D	1
3. Describes methods of plant propagation such as potting and layering/marcotting/budding/rafting	2.10	0.72	D	4
4. Differentiate various animal housing system and their suitability for different climates and animal types	2.10	0.79	D	4
5. Discusses the principles of fish nutrition and importance of proper feeding	2.00	0.86	D	5
Total	2.10	0.78	D	

Legend: Skilled(S) (3.26-4.00), Proficient (P) (2.51-3.25), Developing (D) (1.76-2.50), Beginning (B) (1.00-1.75)

The table reveals that among the indicators in terms of knowledge in Agriculture, Indicator 2, categorizes common agricultural tools and equipment, focusing on safety and proper usage got the first rank ($\bar{x} = 2.20$ and $\sigma = 0.83$) suggests that Pre-service teachers know the tools and equipment since these are commonly used in various farming activities. The result is supported by Sagario and Versano (2023), experiential learning enhanced students' agricultural skills and fostered a positive attitude toward farming activities. Meanwhile, Indicator 5, discusses the principles of fish nutrition and importance of proper feeding got the last rank ($\bar{x} = 2.00$ and $\sigma = 0.86$) implies that Pre-service teachers had limited exposure to aquaculture compared to other agricultural topics. The result is supported by Maurer et al. (2023) describe that Pre-service teachers could correctly define aquaculture terms, but they had limited

understanding of how aquaculture systems work and how its products are consumed. This variation suggests that some areas still need more practical experience to strengthen their knowledge. The two indicators perceived as both Developing (D) skills among the pre-service teachers.

Agricultural Skills Competency

Agricultural skills competency is essential for effectively managing farming activities. This includes understanding how to grow crops, care livestock, maintain soil quality, operate irrigation system, and use farming equipment. It also involves problem solving, making informed decisions, and adapting to changing environmental conditions to ensure sustainable and efficient agricultural practices. Table 5 presents the competency level of pre-service teachers in terms of agricultural skills.

Table 5. Competency Level of Pre-service Teachers in terms of Skills in Agriculture

Indicators	Mean (\bar{x})	SD (σ)	Verbal Description	Rank
1. Displays knowledge of basic agriculture skills (cultivating seedling, planting)	2.45	0.89	D	3
2. Utilizes farm tools efficiently	2.60	0.75	P	1
3. Performs sexual and asexual propagation	2.20	0.83	D	4
4. Shows competence in basic animal care task like feeding, watering, and cleaning	2.50	0.69	D	2
5. Designs and manages an effective fishpond or tank system, considering water quality and stocking	2.15	0.81	D	5
Total	2.38	0.79	D	

Legend: Skilled (S) (3.26- 4.00), Proficient (P) (2.51-3.25), Developing (D) (1.76-2.50), Beginning (B) (1.00-1.75)

The table exhibits that among the indicators in terms of skills in Agriculture, Indicator 7, utilizes farm tools efficiently got the first rank ($\bar{x} = 2.60$ and $\sigma = 0.75$) denotes that Preservice teachers are familiar in tools used in farming since some tools are introduced in schools and they use it for simple gardening at home. Meanwhile Indicator 10, designs and manages an effective fishpond or tank system, considering water quality and stocking got the last rank ($\bar{x} = 2.15$ and $\sigma = 0.81$) shows that Pre-service teachers lack hands-on experience with aquaculture because training focuses more on theory than practical skills. This is true because very

few engage in fish farming. The result is supported by Khademi Vidra et al. (2024), state the importance of providing pre-service teachers with practical training opportunities to enhance their competencies in aquaculture field.

Agriculture Knowledge and Skills Competencies

Agriculture competency in both knowledge and skills are competencies where Preservice teachers have the knowledge and at the same time apply this knowledge in performing agricultural activities. The combination of content knowledge and skills in agriculture enhances

the proficiency of Pre-service teachers, enabling them to develop expertise and competency in agriculture. Table 6 displays the

competency level of preservice teachers in both content and skills in Agriculture.

Table 6. Competency Level of Pre-service Teachers in Knowledge and Skills in Agriculture

	Mean (\bar{x})	SD (σ)	Verbal Description
Knowledge	2.10	0.78	D
Skills	2.38	0.79	D
Total	2.24	0.79	D

Legend: Skilled(S) (3.26- 4.00), Proficient (P) (2.51-3.25), Developing (D) (1.76-2.50), Beginning (B) (1.00-1.75)

The table shows that Pre-service teachers' knowledge and skills in Agriculture are both under Developing (D) competency level ($x = 2.24$ and $\sigma = 0.79$) which means they have a basic understanding of agricultural concepts and skills but still need to enhance to be proficient. The result is supported by Wells et al. (2024) emphasize that Pre-service teachers feel unprepared when it comes to teaching hands-on laboratory-based activities. This suggests that their understanding of both knowledge and skills is still developing and needs further enhancement.

The integration of content knowledge and skills in agriculture strengthens the competency of Pre-service teachers. It is not just about knowing the different concepts, but it is about how to put this knowledge into practice. By incorporating theory and practical experiences, pre-service teachers enhance their proficiency in agriculture. The results reveal that Pre-service teachers are still in developing both

knowledge and skills. Their familiarity in agricultural tools and equipment help their skills to do planting task, emphasize the importance learning the proper use of tools.

Industrial Arts as a Learning Area in EPP

Industrial Arts, a basic component of Edukasyong Pantahanan at Pangkabuhayan (EPP), provides technical and vocational knowledge to the pupils. This area promotes creativity and craftsmanship through activities such as indigenous crafts, handicrafts, wood-working, metalworking, and simple machine operations.

Industrial Arts knowledge competency is the understanding and familiarity with tools and machines, fabrication of objects from wood, metal or bamboo craft coconut shell, using hand or power tools. Table 7 presents the competency level of pre-service teachers in terms of knowledge in Industrial Arts.

Table 7. Competency Level of Pre-service Teachers in terms of Knowledge in Industrial Arts

Indicators	Mean (\bar{x})	SD (σ)	Verbal Description	Rank
1. Distinguishes carpentry tools, proper usage and care	2.30	0.80	D	3
2. Examines the protocols in making simple home electrical repair	2.05	0.89	D	4.5
3. Points out the characteristics of various materials, such as bamboo, coconut, and wood for handicraft	2.55	0.83	P	1
4. Decides a project using waste materials to create useful items	2.35	0.81	D	2
5. Assesses the impact of different finishing materials and creative accessories on the marketability of products	2.05	0.60	D	4.5
Total	2.26	0.79	D	

Legend: Skilled(S) (3.26- 4.00), Proficient (P) (2.51-3.25), Developing (D) (1.76-2.50), Beginning (B) (1.00-1.75)

The table reveals that among the indicators in terms of knowledge in Industrial Arts, indicator 3, points out the characteristics of various materials, such as bamboo, coconut, and wood for handicraft got the first rank ($\bar{x} = 2.55$ and $\sigma = 0.83$) signifies that

Pre-service teachers are familiar with these materials due to exposure to local resources and indigenous crafts, which are usually utilized in Philippine handicrafts. The practice of using locally available materials in the community is a response to DepEd Order No. 47, s. 2016. This ensures cultural significance, environmental benefits, economic input leading to the creation of unique products. The result is supported by Renu, et al. (2024) examine different types of bamboo-based handicrafts created by rural artisans, classifying them into categories such as baskets, furniture, utility items, and other miscellaneous products. However, indicator 2, examines the protocols in making simple home electrical repair and indicator 5, assesses the impact of different finishing materials and creative accessories on the marketability of products both ranked last ($\bar{x} = 2.05$ and $\sigma = 0.89$ and $\sigma = 0.60$) respectively. In indicator 2, pre-service teachers lack clarity on technical detail. Manjunatheshwara and Vinodh (2021)

explore sustainable approaches to designing and manufacturing electronic products, emphasizing the need to follow key protocols throughout the process, while indicator 5, they require a deeper understanding of both technical and business aspects. The result is supported by Lafrance (2022), explains that choosing the right colors, materials, and finishes carefully can make a product more attractive and unique. This helps increase sales because people are more likely to buy products that look good and stand out. Indicator 3 is regarded as proficient, while Indicators 2 and 5 both are developing skills.

Industrial Arts Skills Competency

Industrial Arts competencies focus on practical knowledge and skills needed to work with tools, machines, and materials to build, create, or repair various projects. These competencies provide individuals with hands-on experience in different manual skills particularly handicraft and technical fields, allowing them to develop mastery in Industrial applications through direct practice and experiences. Table 8 presents the competency level of pre-service teachers in terms of skills in Industrial Arts.

Table 8. Competency Level of Pre-service Teachers in terms of Skills in Industrial Arts

Indicators	Mean (\bar{x})	SD (σ)	Verbal Description	Rank
1. Executes carpentry tools in different handicraft projects	2.55	0.83	P	1
2. Carries out simple home electrical repair	2.15	0.81	D	3
3. Crafts projects or items out of bamboo, coconut and wood	2.40	0.88	D	2
4. Constructs project plan for recycling	2.05	0.83	D	4.5
5. Exemplifies skills in applying finishing materials to different handicrafts projects (weaving, woodworking and pottery)	2.05	0.83	D	4.5
Total	2.24	0.84	D	

Legend: Skilled(S) (3.26- 4.00), Proficient (P) (2.51-3.25), Developing (D) (1.76-2.50), Beginning (B) (1.00-1.75)

The table exhibits that among the indicators in terms of skills in Industrial Arts, indicator 6, executes carpentry tools in different handicraft projects got the first rank ($\bar{x} = 2.55$ and $\sigma = 0.83$) which means that it focuses on both mastery and practical application. These tools are used for practical reason at home like

simple home repairs and many students grow up around handicrafts and small construction projects, and this early exposure helps them more comfortable using tools and working with materials. The outcome is supported by Lensjø (2024), emphasizes that engaging with tools and materials early in vocational training,

students were able to strengthen their aspirations of becoming skilled craftsmen. Meanwhile, indicator 9, constructs project plan for recycling and indicator 10, exemplifies skills in applying finishing materials to different handicrafts projects (weaving, woodworking and pottery) both ranked last ($x = 2.05$ and $\sigma = 0.83$), respectively. Indicator 9, Pre-service teachers, primarily focus on planning rather than hands-on execution. The reason behind this is Pre-service teachers lack hands-on experience with recycling that makes it hard for them to create project plans that are practical and realistic. The result is supported by Yüksel (2021), mentions that Pre-service teachers struggle to apply what they learn about recycling because their classes are mostly theoretical and offer few opportunities for hands-on practice. While Indicator 10, means that pre-service teachers have limited exposure to more advance stages of craftsmanship such as

applying finishing materials, which require precision and artistic detail. The outcome is supported by Koca et al. (2018), point out that it provides practical support for the significance of applying finishing materials skillfully, presenting their role in producing high-quality handicrafts. Indicator 6 is recognized as proficient, while indicators 9 and 10 are both perceived developing.

Industrial Arts Knowledge and Skills Competencies

Knowledge and skills in Industrial Arts work together to build competency. This means that while pre-service teachers have a basic understanding and some hands-on experience, they still need more training to become fully proficient. Table 9 displays the competency level of pre-service teachers both content and skills in Industrial Arts.

Table 9. Competency Level of Pre-service Teachers in Knowledge and Skills in Industrial Arts

	Mean (\bar{x})	SD (σ)	Verbal Description
Knowledge	2.26	0.79	D
Skills	2.24	0.84	D
Total	2.25	0.82	D

Legend: Skilled(S) (3.26-4.00), Proficient (P) (2.51-3.25), Developing (D) (1.76-2.50), Beginning (B) (1.00-1.75)

The table shows the Pre-service teachers' competency in both knowledge and skills in Industrial Arts are still under developing competency ($x = 2.26$ and $\sigma = 0.79$) in content knowledge and ($x = 2.24$ and $\sigma = 0.84$) in practical skills. These mean they have a basic understanding of industrial arts concepts but it is difficult to implement them in hands-on situations. While they can identify tools, materials, and processes, translating that knowledge into practical work still remains a challenge. The slight gap between what they know and what they can do emphasizes the need for more hands-on training, helping them gain confidence and improve their skills through real-world practice. This finding aligns with the study conducted by Angeles et al., (2023), which developed a Massive Open Online Course (MOOC) for pre-service to enhance their competencies in Industrial Arts. Similar to the results, their study showcases the need for structured and interactive learning approaches

to bridge gaps in both theoretical knowledge and hands-on skills. The competency gaps identified in the study, such as proficiency in electrical gadget protocols and finishing materials, reflect the same challenges addressed in their MOOC, which utilized multimedia and structured instructional design to improve skill acquisition.

Furthermore, the result shows that they are improving in both knowledge and practical skills, particularly in identifying materials and performing basic construction tasks and shows that there is parallelism between indicator 5 in content (assesses the impact of different finishing materials and creative accessories on the marketability of products) and indicator 10 in skills (exemplifies skills in applying finishing materials to different handicrafts projects). However, they still need further enhancement in more technical areas like electrical work and finishing techniques. This stresses the importance of blending theory with real-world

practice to better prepare them for teaching Industrial Arts effectively.

Information and Communication Technology (ICT) as a Learning Area in EPP

ICT competencies are the knowledge and skills needed to use information and

communication technologies (ICT) efficiently. The use of digital tools enables pre-service teachers to effectively access, process, and apply knowledge in their teaching practice. Table 10 shows the competency level of pre-service teachers in terms of knowledge in Information and Communication Technology (ICT).

Table 10. Competency Level of Pre-service Teachers in terms of Knowledge in Information and Communication Technology (ICT)

Indicators	Mean (\bar{x})	SD (σ)	Verbal Description	Rank
1. Explains the fundamental concepts of information and communication technology (ICT) and its role in society	2.85	0.75	P	5
2. Names various types of digital communication tools	3.05	0.83	P	4
3. Recognizes common productivity software such as Microsoft Office (Word, Excel, PowerPoint)	3.30	0.80	S	2
4. States the advantages and disadvantages of using online tool to gather data	3.40	0.68	S	1
5. Selects ICT tools and platforms for teamwork	3.10	0.79	P	3
Total	3.14	0.77	P	

Legend: Skilled (S) (3.26- 4.00), Proficient (P) (2.51-3.25), Developing (D) (1.76-2.50), Beginning (B) (1.00-1.75)

The table reveals that among the indicators in terms of knowledge in Information and Communication Technology (ICT), Indicator 4, states the advantages and disadvantages of online tools to gather data got the first rank ($\bar{x} = 3.40$ and $\sigma = 0.68$) implies that they are Skilled, means that the Pre-service teachers are knowledgeable on the advantages and disadvantages of online tools for gathering data requires a comprehensive understanding of digital research methods. With the constant practice in the use of online tools in their daily schoolwork proves that they are really aware of its advantages. The result is supported by Taherdoost (2021) points out a comprehensive overview of various data collection methods, including online tools, and discusses their respective advantages and disadvantages. Meanwhile, Indicator 1, explains the fundamental concepts of Information and Communication Technology (ICT) and its role in society got the fifth rank ($\bar{x} = 2.85$ and $\sigma = 0.75$), which indicates it focuses on basic recognition and recall rather than deeper understanding or critical evaluation. The findings are supported by Royackers et al (2018), the social and ethical

emphasize issues arising from digitization, focusing on technologies like the Internet of things, robotics, biometrics, persuasive technology, virtual & augmented reality, and digital platforms. Both indicators perceived as proficient (P) skill among the pre-service teachers.

Information and Communication Technology (ICT) Skills Competency

The proficiency of pre-service teachers in ICT skills, reflects their ability to apply digital proficiently in their training and academic activities, adaptability to technological advancement, and preparedness for modern classroom setting. It emphasizes their ability to utilize technology efficiently in their learning and training for educational purposes, ensuring smooth integration of ICT in classroom direction. Their skills allow them to make an interactive learning experiences, communicate through digital platforms, and adjust to new technological educational development. Table 11 presents the competency level of pre-service teachers in terms of skill in Information and Communication Technology (ICT).

Table 11. Competency Level of Pre-service Teachers in terms of Skills in Information and Communication Technology (ICT)

Indicators	Mean (\bar{x})	SD (σ)	Verbal Description	Rank
1. Operates a computer system	2.95	0.76	P	5
2. Communicates online through audio, video conferencing, and e-group	3.10	0.72	P	3
3. Produces digital content using various multi-media tools such as Video and Audio Editing, Presentation Software, Graphic Software	3.20	0.83	P	2
4. Posts content on blogs in a safe and responsible manner	3.30	0.73	S	1
5. Edits digital Content including text, images, audio, and video	3.05	0.76	P	4
Total	3.12	0.76	P	

Legend: Skilled(S) (3.26-4.00), Proficient (P) (2.51-3.25), Developing (D) (1.76-2.50), Beginning (B) (1.00-1.75)

The table indicates that among the indicators in terms of skills in Information and Communication Technology (ICT), indicator 9 posts content on blogs in a safe and responsible manner got the highest rank ($x = 3.30$ and $\sigma = 0.73$) which represent that the Pre-service teachers are Skilled in content creation, digitally literate, critical thinker, and ethically aware. The reason behind this is they want to share their insights, experiences with a broader audience. The result is supported by Von Gillern et al. (2024) emphasize the relevance of integrating digital citizenship into instructional training program, indicating that pre-service teachers recognize the significance of engaging ethically in digital spaces. In contrary, Indicator 6 operates a computer system got the last rank ($x = 2.95$ and $\sigma = 0.76$) which means that they can operate a computer system typically refers to tasks like navigating an operating system, using software applications, and managing files. This is because they lack self-confidence due to limited tech-

nical skills and unfamiliarity of complex software and afraid of troubleshooting leading to frustration. The findings are supported by Novak et al. (2023) revealed that dissatisfaction with online learning materials mostly originates from concerns with the e-text interface, technical issues, and poor curriculum integration.

Information and Communication Technology (ICT) Knowledge and Skills Competencies

The knowledge and skills in ICT complement each other to enhance the proficiency of Pre-service teachers, allowing them to integrate technology effectively into instruction. This proves that pre-service teachers retain a strong foundation in ICT concepts and sustain hands-on expertise in utilizing digital tools for teaching and learning. Table 12 exhibits the competency level of pre-service teachers in both content and skills in Information and Communication Technology (ICT).

Table 12. Competency Level of Pre-service Teachers in Knowledge and Skills in Information and Communication Technology (ICT)

	Mean (\bar{x})	SD (σ)	Verbal description
Knowledge	3.14	0.77	P
Skills	3.12	0.76	P
Total	3.13	0.77	P

Legend: Skilled(S) (3.50-4.00), Proficient(P) (2.50-3.59), Developing(D) (1.50-2.49), Beginning(B) (1.00-1.49)

The table reveals the overall grand mean of Pre-service teachers in Information and Communication Technology (ICT) perceived as proficient (P) competency, ($\bar{x} = 3.14$ and $\sigma = 0.77$) in content knowledge and ($\bar{x} = 3.12$ and $\sigma = 0.76$) in practical skills. This signifies that pre-service teachers are proficient in both mastery of the subject matter and practical ICT skills. Their mastery in digital competencies equip them to be competent enough to fuse technology into educational settings, fostering innovative teaching and learning experiences. This proficiency reflects their readiness to adapt to the evolving demands of the digital age and positively contribute to modern education. The opportunities for Pre-service Teachers to learn to integrate ICTs into science teaching during their teaching placements. Dantic et al. (2025) reveal that future teachers showed a developing level of skills in using most educational technology, such as graphic tools, games, simulations, and software for publishing or authoring content. However, they were already proficient with utility software and pre-packaged courseware. The study found that these experiences contributed significantly to their ICT proficiency, enabling them to integrate

technology into their instructional practices (Jita, 2018).

The study concludes by showing Pre-service Teachers' competence in information and communication technology (ICT), both in terms of cognition and practical skills, they are in a good position to incorporate technology into a learning environment because of their proficiency with the digital tools and responsible use of online platforms. This preparedness not only encourages creative teaching methods but also equips them to handle the changing needs of the digital age, making a significant contribution to the development of contemporary education.

Entrepreneurship as a Learning Area in EPP

Entrepreneurship competency is the combination of skills, mindset, and behaviors that help pre-service teachers start, build, and grow self-owned business. Knowledge on entrepreneurship involves understanding key concepts like identifying opportunities, taking risks, and starting businesses as well as exploring different types of businesses. Table 13 displays the competency level of pre-service teachers in terms of knowledge in Entrepreneurship.

Table 13. Competency Level of Pre-service Teachers in terms of Knowledge in Entrepreneurship

Indicators	Mean (\bar{x})	SD (σ)	Verbal Description	Rank
1. Interprets the concepts of entrepreneurship	2.80	0.70	P	1
2. Explores different types of businesses	2.30	0.80	D	5
3. Compares and contrasts products from services	2.50	0.69	D	2.5
4. Outlines the steps in creating a simple business plan	2.35	0.68	D	4
5. Enumerates businesses that can be started at home	2.50	0.61	D	2.5
Total	2.49	0.70	D	

Legend: Skilled (S) (3.26-4.00), Proficient (P) (2.51-3.25), Developing (D) (1.76-2.50), Beginning (B) (1.00-1.75)

The table shows that among the indicators in terms of knowledge in Entrepreneurship, indicator 1, interprets the concepts of entrepreneurship got the first rank ($\bar{x} = 2.80$ and $\sigma = 0.70$) which means that the pre-service teachers have a strong entrepreneurial knowledge in starting businesses. This outcome is supported by Ndofirepi (2020), claims that a strong understanding of entrepreneurial concepts, fostered through education, can lead to higher confidence and competence among learners.

Meanwhile, indicator 2, explores different types of businesses got the last rank ($\bar{x} = 2.30$ and $\sigma = 0.80$), which reveals that the pre-service teachers struggled to understand or explore different types of businesses. This result is supported by Galvão et al. (2020), emphasize that entrepreneurship education programs help develop students' entrepreneurial mindset and skills, making them more independent and better prepared to create new businesses.

Both indicators received a proficient (P) skill among the pre-service teachers.

Entrepreneurship Skills Competency

Entrepreneurship requires a range of skills that help individuals identify opportunities, create solutions, and manage successful

businesses. Mastering these skills strengthen the preparedness of pre-service teachers to create and grow businesses that address diverse needs of the students and the community. Table 14 reveals the competency level of pre-service teachers in terms of skill in Entrepreneurship.

Table 14. Competency Level of Pre-service Teachers in terms of Skills in Entrepreneurship

Indicators	Mean (\bar{x})	SD (σ)	Verbal Description	Rank
1. Develops a product or service that aligns with local community needs	2.55	0.83	P	1
2. Exhibits effective communication skills when promoting products or services	2.30	0.73	D	4
3. Demonstrates the ability to categorize various examples of products and services by sorting them into groups	2.30	0.57	D	5
4. Creates basic plans for a small business, including the target customers and outlining costs	2.40	0.75	D	3
5. Organizes a simple home-based business setup	2.45	0.76	D	2
Total	2.40	0.73	D	

Legend: Skilled (S) (3.26- 4.00), Proficient (P) (2.51-3.25), Developing (D) (1.76-2.50), Beginning (B) (1.00-1.75)

The table shows that among the indicators in terms of skills in Entrepreneurship, indicator 6, develops a product or service that aligns with local community needs got the first rank ($x = 2.55$ and $\sigma = 0.83$), shows that Pre-service teachers performed well in meeting the needs of the community and have deeper perspective on the concept in entrepreneurship. This result is supported by Teng-Calleja et al. (2023), find out that the entrepreneurial skills are most valuable when entrepreneurs can develop solutions that meet the unique needs of their local communities. It emphasizes the importance of recognizing these needs as a key factor in achieving entrepreneurial success. On the other hand, indicator 8, demonstrates the ability to categorize various examples of products and services by sorting them into groups got the last rank ($x = 2.30$ and $\sigma = 0.57$), which implies that categorizing products or services often leads to critical decisions on how to allocate resources, design offerings, or focus on certain market segments. These findings are

supported by Almeida (2018) stresses that entrepreneurship education usually prioritizes practical skills like identifying opportunities, analyzing markets, and engaging with customers, rather than focusing on the ability to categorize products and services.

Entrepreneurship Knowledge and Skills Competencies

Entrepreneurship is a significant skill of pre-service teachers as it helps them develop creativity, problem-solving, and resourcefulness. Knowing basic business concepts allows them to explore different opportunities, like making learning materials or starting small businesses. Pre-service teachers should build their mastery and capabilities in entrepreneurship to discover new opportunities and grow in their future careers. Table 15 presents the competency level of pre-service teachers' knowledge and skills competencies in Entrepreneurship.

Table 15. Competency Level of Pre-service Teachers in terms of Knowledge and Skills in Entrepreneurship

	Mean (\bar{x})	SD (σ)	Verbal Description
Knowledge	2.49	0.70	D
Skills	2.40	0.73	D
Total	2.45	0.72	D

Legend: Skilled (S) (3.26- 4.00), Proficient (P) (2.51-3.25), Developing (D) (1.76-2.50), Beginning (B) (1.00-1.75)

The overall grand $x = 2.45$ and $\sigma = 0.72$ perceived that the pre-service teachers in entrepreneurship are developing (D). This reveals that pre-service teachers have learned some basic ideas about entrepreneurship, but they still need to improve a lot. In the study of Arruti et al. (2023) reveals about 45% of pre-service teachers did not know important ideas about entrepreneurship, showing that better education in this area is needed. On the other hand, Saranza et al. (2022) found that things like training and teaching methods affect how well teachers learn entrepreneurial skills. These studies show that while some pre-service teachers have basic knowledge of entrepreneurship, there are big differences in their skills. This highlights the need for special training programs to help close these gaps.

The findings shows that pre-service teachers are still in developing competency knowledge in entrepreneurship, describes they are gaining knowledge in entrepreneurship because they are learning important ideas and skills related to business. They are taught how to start and run a business. However, when it

comes to skills, their competency is still developing. This means they understand the concepts but lack the experience or ability to apply them in real-world situations. Categorizing products and adapting to community needs are areas where they still need more practice. Their skills are still in the developing stage, suggesting they need more hands-on experience to effectively apply what they've learned.

Challenges or Difficulties Encountered in Subjects EPP 1 and EPP 2

Mastery and development of skills in teaching-learning process often marked by various challenges. In Edukasyong Pantahanan at Pangkabuhayan (EPP), these challenges arise because EPP is a technical and vocational subject that need continuous support, updated resources, and structured hands-on learning. Unfortunately, these requirements are not always prioritized in schools. Table 16 presents the challenges identified through qualitative responses of pre-service teachers in their EPP 1 and EPP 2 subjects.

Table 16. Challenges or Difficulties Encountered in Subjects EPP 1 and EPP 2

Themes	Direct Statement	f (n=20)	%
Limited Access to Materials, Tools, and Equipment	"Lack of tools and equipment" (PST12)	8	40
Lack of Hands-on Learning Experiences	"We don't get the chance to try the tasks ourselves" (PST17)	6	30
Time Constraints	"There was not enough time to discuss the lessons in EPP" (PST18)	2	10
Insufficient Learning Resources	"The challenge I faced in our subject EPP 1 and EPP 2 is the limited learning resources like books" (PST13)	4	20
Total		20	100

Limited Access to Materials, Tools, and Equipment

In performing practical tasks in the five learning areas of EPP, it is necessary to have access to various materials, tools, and equipment. Materials which are consumable items used in the process like fabrics, wood, and ingredients in cooking. Tools such as shovels, knives, hammers, and other handheld tools used in completing a project. For difficult and challenging tasks, equipment or complex devices are needed. These tools and equipment are essential in order to perform tasks in the operations to different materials leading to the creation of projects in the different learning area. However, many schools, struggles to provide these resources due to insufficient budget, high cost of the equipment and poorly equipped facilities because of limited budget for maintenance, old and not functional or inadequate equipment, and as well as the ratio of tools, equipment to the large number of students. One participant shared, *"Some tools and equipment are not available and not functioning properly"*, (PST6). These limitations make it difficult for them to perform practical tasks in five learning areas. The study of Ancho et al. (2025), supports the idea that inadequate tools and equipment as well as unequipped laboratory hinders the development of practical skills among the students. Furthermore, Catig et al. (2022), state that students faced difficulties in performing activities due to the insufficient supplies and tools that make them rely on watching online videos.

Lack of Hands-on Learning Experiences

Doing actual tasks makes learning more meaningful. Hands-on learning experiences contributes to the improvement of practical skills within pre-service teachers that are necessary for real-life application which can be done through exposure to activities like cooking, sewing, farming, crafting, and digital operations. However, due to factors like limited resources and facilities, Pre-service teachers seen this as a challenge in their subject EPP 1 and EPP 2. One participant mentioned, *"I would say one of the challenges I've experienced/encountered especially in EPP 2 is that we didn't experience hands-on activities where we can*

actually see and use farm tools and practical activities like planting and gardening", (PST8). Thiri et al. (2024), emphasize that hands-on learning opportunities enhance students' engagement, interest and at the same time it enhances their learning outcomes. On the other hand, Urizza (2024), claims that hands-on learning experience could be a problem in schools especially in rural areas with inadequate facilities and equipment making it difficult for providing the student the hands-on experiences in EPP areas.

Time Constraints

Time is the allocated period for teaching and learning activities within the subject. Insufficient time allocated in EPP subject is one of the challenges encountered by the preservice teachers. EPP subject covers wide range of practical activities or tasks that needs sufficient time in order to perform activities like sewing, gardening, woodworking and digital operations. However, three hours per week or 54 hours in a semester is not enough to perform these tasks in EPP specially the laboratory part if any. One pre-service teacher shared, *"The primary challenges that I encountered during EPP subjects is lack of allotted time that hindered the understanding and learning of the subject"*, (PST20). Barcelona (2023) points out that limited time for practical learning deals with instructional quality. This suggests that due to the broad scope of the curriculum and the need for hands-on activities the teachers handling EPP subjects often struggles allocating the time in teaching EPP subject. Furthermore, time constraints make it hard for students to perform tasks that affects their ability to develop and master the necessary skills in EPP subject (Rosal, 2024).

Insufficient Learning Resources

In the attainment of mastery both knowledge and skills, students must have access to learning resources like textbooks, e-books, journals, modules, and other teaching and learning resources which are designed to support academic development. Effective learning resources in EPP are necessary as it gives structured content, practical examples, and hands-on activities for enhancement of students' understanding.

Insufficient learning materials is seen as one of the problems encountered by the pre-service teachers, however, there are the downloadable digital resources but presentation on the class is difficult due to limited number of projectors. As one participant stated, “*Lack of availability of learning resources*”, (PST19). Roble (2021), reveals that the insufficiency of learning materials holds back students’ performances.

Proposed Curricular Activities to Enhance the Competencies of Pre-Service Teachers in EPP

Pre-service teachers must be competent in teaching EPP subject as this is a practical subject and covers a wide range of areas, that needs to be taught with enough knowledge and competency. Table 17 exhibits the proposed curricular activities to enhance competencies of pre-service teachers.

Table 17. Proposed Curricular Activities to Enhance the Competencies of Pre-Service Teachers in EPP

Themes	Direct Statement	F (n=20)	%
Hands-on Workshops, Seminars and Training	“To enhance the competencies of pre-service teachers in Edukasyong Pantahanan at Pangkabuhayan (EPP), hands-on workshops are essential” (PST4)	9	45
Project-Based Learning	“Selling of products made by the college students in their EPP subject (Project)” (PST10)	4	20
Real-Life Application	“Real-life Application of content and lesson focus” (PST13)	3	15
Experiential and Collaborative Learning	“Let them experience the tasks and do collaborative learning activities” (PST19)	4	20
Total		20	100

Hands-on Workshops, Seminars and Training

In developing the skills, understanding and mastery on the five learning areas under EPP, hands-on workshops, seminars, and training is a must to all. Hands-on workshops are applicable to practical application such as laboratories, farms, kitchen or industrial arts. Settings like conference halls, auditoriums, as well community centers could be a place to conduct seminars among pre-service teachers. Meanwhile, trainings are done in places such as training centers and field sites. These learning experiences are especially valuable, helping pre-service teachers build skills in crafting, design, entrepreneurship, and technology, while balancing both theory and hands-on application. As one of the participants suggested, “*Hands-on workshops about different topics in EPP*”, (PST2). Participating in workshops and seminars through hands-on experience and practical strategies will enhance teaching effectiveness (Antipolo & Rogayan, 2021).

Project-based Learning

Pre-service teachers must develop their critical thinking, collaboration, as well as their problem-solving skills before they enter the actual teaching. These skills could be done by applying project-based learning as a component of training, as they work on real-life projects like making handmade crafts, designing useful products, and preparing nutritious meals. As one participant suggested, “*Project-based like mini-business*”, (PST9). Taşkıran (2021) points out that through project-based learning, learners are provided with various skills such as problem-solving, decision-making, as well as collaboration skill. Furthermore, Chimwayange (2024) created a model called Problem-Based Learning as a Service-Based Skills Development (PBL-SBSD). This model helps students learn important skills for life while also solving real problems in their communities. This approach is proposed by the participants, which involves students working on real-world projects to develop skills and entrepreneurial mindsets.

Real-life Application

Using knowledge and skills in everyday situations is through real-life application. In education, it means linking what students learn in class to real-life experiences. This helps students apply their knowledge in ways that matter to them. Using real-world applications in the EPP curriculum helps pre-service teachers learn important concepts. This approach builds their confidence to use what they learn in their homes, communities, and future jobs. As a result, students become better prepared for personal and economic success. Many participants emphasized that EPP lessons should be directly connected to real-life scenarios to make learning more meaningful, relevant and permanent. One participant pointed, *“Pre-service teachers should do real-life tasks related to EPP”*, (PST17). EPP helps students develop practical life skills and understand socio-economic issues. Integrating knowledge to the class to concrete life situations, students will know and remember the materials better that improves students’ performances in the subject EPP (Tuazon, 2023). In addition, Padagas (2019) suggests that real-life teaching experiences allow pre-service teachers to put theoretical knowledge into practice, strengthening their teaching skills and overall effectiveness in the classroom.

Experiential and Collaborative Learning

Through engagement in real-life situation and collaboration with others, help students achieve a relevant learning outcome. For pre-service teachers, experiential and collaborative learning provide opportunities for them to teach the right concepts and skills to their pupils. As one participant stated, *“I think, they should have more focus on giving more experiential set up. Not just the teacher, but the*

students also will learn from it”, (PST16). The study of Afalla et al. (2019) point out that Experiential Learning Courses (ELCs) give pre-service teachers practical experiences in classroom-based settings, helping them build the practical skills they need for their future careers. Additionally, Catig et al (2022), mention that collaborative work contributes in developing pupils’ socialization skills as they were forced to work among their peers doing hands-on activities.

Proposed Curricular Activities for EPP Curriculum Enhancement Plan

Through curricular activities such as seminar-workshop set-ups, pre-service teachers acquire knowledge and at the same time enhance their competencies, will help them once they are in the field of teaching. To enhance the effectiveness of the training, the researchers sought resource speakers who are experts in Home Economics, Agriculture, Industrial Arts, ICT and Entrepreneurship under the recommendation of their research adviser and at the same time, conducted an interview within their fields of expertise. Faculty members from the PRMSU College of Hospitality Management and PRMSU healthcare staff were consulted. In the field of Agriculture, the researchers interviewed a fishpond owner as well as a specialist from PRMSU College of Agriculture. For Industrial Arts, the researchers reached out to establishments and consulted experts in woodworking, handicraft, and pottery making. In ICT, the researchers spoke to professionals in the field as well as owners of computer shops. Lastly, for Entrepreneurship, interviews were conducted to small business owners. All of them gave the consent to be part of the proposed curricular activities.




PROPOSED CURRICULAR ACTIVITIES IN EDUKASYONG PANTAHANAN AT PANGKABUHAYAN (EPP) FOR BEEed UNDERGRADUATE STUDENTS

Description	Session Objectives	Objectives	Resource Person/Other activities	Target Date/Time
<p>Home Economics focuses on developing students' skills in kitchen operation, clothing and household management and family life, which helps students manage a balanced home environment.</p>	<p>At the end of the session, pre-service teachers will demonstrate essential skills in Edukasyong Pantahanan at Pangkabuhayan (EPP) such as hand sewing, food preparation, laundry, child care, and family resource management using appropriate tools and techniques.</p>	<p>Identify hand sewing tools, usage and care</p> <p>Classify tools, utensils, and ingredients used in food preparation, cooking and preservation</p> <p>Recognize basic washing principles and ironing techniques</p> <p>Determine child care for infants to toddlers</p> <p>Define budgeting terms such as income, expenses, savings and budgeting methods</p> <p>Sew household linens using appropriate tools and materials</p>	<p>Prof. Rosemarie B. San Juan Associate Professor, College of Hospitality Management President Ramon Magsaysay State University - San Marcelino Campus</p> <p>Ms. Karen E. Casuga Instructor, College of Hospitality Management President Ramon Magsaysay State University- San Marcelino Campus</p> <p>Ms. Karla Jane M. Crisostomo Campus Nurse President Ramon Magsaysay State University- San Marcelino Campus</p> <p>Ms. Donna Leah V. Paras Instructor, College of Agriculture President Ramon Magsaysay State</p>	<p>1 hour</p>
		<p>Prepare and preserves food using appropriate tools, utensils and ingredients</p> <p>Implement proper techniques for washing, removing stains, and ironing clothes</p> <p>Employ proper techniques for infant care (diapering, bathing feeding, and dressing)</p> <p>Apply principles in managing family resources (money, time, energy)</p>	<p>University- San Marcelino Campus</p> <p>Visits to market, flower shops, dress making shops, university cafeteria, laundry shop, and barangay health center</p>	



AGRICULTURE

PROPOSED CURRICULAR ACTIVITIES IN EDUKASYONG PANTAHANAN AT PANGKABUHAYAN (EPP) FOR BEED UNDERGRADUATE STUDENTS


Description	Session Objectives	Objectives	Resource Person/Other activities	Target Date/Time
<p>Agriculture education offers students essential knowledge and skills for plant and animal production and sustainable farming. This area includes activities such as plant propagation, soil preparation, and animal care</p>	<p>At the end of the session, pre-service teachers will be able to demonstrate understanding of key principles and apply basic skills in crop and animal production, proper use of agricultural tools, plant propagation, animal care, and fish farming practices in a safe and efficient manner aligned with sustainable agricultural methods.</p>	<p>List principles and practices in crop and animal production</p>	<p>Elisa Ragadio Elisa's Meat Shop</p> 	<p>1 hour</p>
		<p>Categorize common agricultural tools and equipment, focusing on safety and proper usage</p>	<p>Alma Basuel Joanje Meat Stall</p> 	
		<p>Describe the methods of plant propagation such as potting and layering/marcotting/budding/grafting</p>	<p>Jayson Gatus G farm and Private Pool</p> 	
		<p>Differentiate various animal housing systems and their suitability for different climates and animal breeds</p>	<p>Dr. Franklin Bamachea Associate Professor, College of Agriculture</p>	
		<p>Discuss the principles of fish nutrition and</p>		

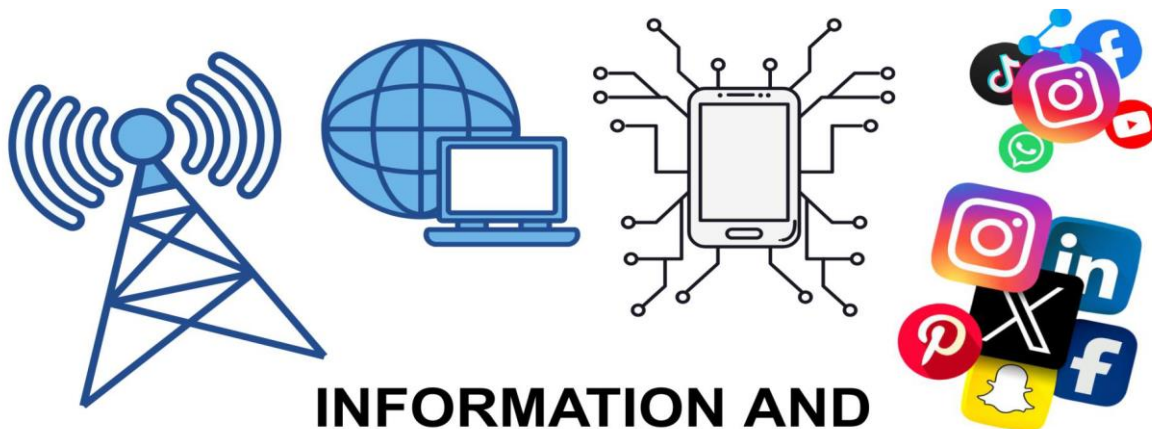
		<p>importance of proper feeding</p> <p>Display knowledge of basic agricultural skill (cultivating seedling, planting)</p> <p>Utilize farm tools efficiently</p> <p>Perform sexual and asexual propagation</p> <p>Show competence in basic animal care task like feeding, watering, and cleaning</p> <p>Design and manages an effective fishpond or tank system, considering water quality and stocking</p>	<p>President Ramon Magsaysay State University - San Marcelino Campus</p> <p>Mr. Ronel S. De Guzman Instructor, College of Agriculture President Ramon Magsaysay State University - San Marcelino Campus</p> <p>Visits poultry farms, fish farms, swine raisers, wet market, orchard owners, nursery farms, crop and animal farmers</p>	
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INDUSTRIAL ARTS

PROPOSED CURRICULAR ACTIVITIES IN EDUKASYONG PANTAHANAN AT PANGKABUHAAN (EPP) FOR BEEED UNDERGRADUATE STUDENTS



Description	Session Objectives	Objectives	Resource Person/Other activities	Target Date/Time
<p>Industrial Arts provides hands-on activities in crafting, woodworking, carpentry, and electrical work that promotes creativity among students though designing and producing functional products.</p>	<p>At the end of the session, pre-service teachers will be able to demonstrate understanding of basic concepts in industrial arts and apply appropriate skills in carpentry, simple electrical work, handicraft making using indigenous or recyclable materials, and product enhancement, with emphasis on safety, creativity, and functionality.</p>	<p>Distinguish carpentry tools, proper usage and care</p> <p>Examine the protocols in making electrical gadgets</p> <p>Point out the characteristics of various materials, such as bamboo, coconut, and wood for handicraft</p> <p>Decide a project using waste materials to create useful items</p> <p>Assess the impact of different finishing materials and creative accessories on the marketability of products</p> <p>Execute carpentry tools in different handicraft projects</p>	<p>Shyr R. Alvarez FB Page: Arts by Shyr</p>  <p>Arts by Shyr</p> <p>Elmer Ting</p> <p>Rogelyn Cabaltica</p> <p>Visits handicrafts shops, furniture shops, native craft shops, Philippines souvenir shop, and pottery making shop</p>	<p>1 hour</p>
		<p>Carry out simple home electrical repair</p> <p>Craft projects or items out of bamboo, coconut and wood</p> <p>Constructs project plan for recycling</p> <p>Exemplify skills in applying finishing materials to different handicrafts projects (weaving, woodworking and pottery)</p>		



INFORMATION AND COMMUNICATION TECHNOLOGY






POSED CURRICULAR ACTIVITIES IN EDUKASYONG PANTAHANAN AT PANGKABUHAHAN (EPP) FOR BEEed UNDERGRADUATE STUDENTS

Description	Session Objectives	Objectives	Resource Person/Other activities	Target Date/Time
ICT education develops digital literacy and responsible behavior online. This includes training in communication tools, productivity software, and digital creation that develop students critical thinking and prepare for careers in technology	At the end of the session, pre-service teachers will be able to explain key ICT concepts and responsibly apply basic digital skills such as operating computer systems, communicating online, and creating/editing multimedia content using appropriate tools and platforms to support teaching and learning	<p>Explain the fundamental concepts of information and communication technology (ICT) and its role in society</p> <p>Name various types of digital communication tools</p> <p>Recognize common productivity software such as Microsoft Office (Word, Excel, PowerPoint)</p> <p>State the advantages and disadvantages of using online tools to gather data</p> <p>Select ICT tools and platforms for teamwork</p> <p>Operate a computer system</p>	<p>Charmy Corpuz JavaOnline Internet Shop</p>  <p>Francis Mauricio FG Prince Printing Shop</p>  <p>Mr. Ronnel C. Mesia, Program Chair, Computer Science President Ramon Magsaysay State University – San Marcelino Campus</p> <p>Visits computer shop, internet café, printing</p>	1 hour

		<p>Communicate online through audio, video conferencing, and e-group</p> <p>Produce digital content using various multimedia tools such as Video and Audio Editing, Presentation Software, Graphics Software</p> <p>Post content on blogs, social media, or websites in a safe and responsible manner</p> <p>Edit digital content including text, images, audio, and video</p>	<p>shop, and computer laboratory rooms</p>	
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PROPOSED CURRICULAR ACTIVITIES IN EDUKASYONG PANTAHANAN AT PANGKABUHAYAN (EPP) FOR BEED UNDERGRADUATE STUDENTS

Description	Session Objectives	Objectives	Resource Person/Other activities	Target Date/Time
Entrepreneurship education promotes an entrepreneurial mindset by teaching business development, financial management, and marketing. Students engage in practical application like business simulations and market analysis and opportunities for self-employment	At the end of the session, pre-service teachers will be able to demonstrate basic concepts of entrepreneurship and apply them by developing simple business ideas, creating business plans, and practicing effective communication strategies suitable for small or home-based enterprises that meet local community needs.	<p>Interpret the concepts of entrepreneurship</p> <p>Explore different types of businesses</p> <p>Compare and contrasts products from services</p> <p>Outline the steps in creating a simple business plan</p> <p>Enumerate businesses that can be started at home</p> <p>Develop a product or service that aligns with local community needs</p> <p>Exhibit effective communication skills when promoting products or services</p>	<p>Maricel Paje Tathan's Rice and Sari-sari Store</p>  <p>Luz Labio Clyde's Shawarma</p> <p>Crestita Cababaro Fredelicious Kitchenette</p>  <p>Jonathan Gutierrez Memalen Capampangan Cuisine</p> 	1 hour
		<p>Demonstrate the ability to categorize various examples of products and services by sorting them into groups</p> <p>Demonstrate the ability to categorize various examples of products and services by sorting them into groups</p> <p>Organize a simple home-based business setup</p>	<p>Visits eatery (karinderya), rolling stall food cart, sari-sari store, and shoe repair shop</p>	

Conclusions

Pre-service teachers were proficient in both knowledge and skills in Home Economics and Information and Communication Technology and when it comes to Industrial Arts, Agriculture, and Entrepreneurship, they were developing in both knowledge and skills. Limited access to materials, tools, and equipment, lack of hands-on learning experience, time

constraints, and insufficient learning resources are the challenges experienced by the Pre-service teachers in their EPP 1 and 2 subject. To enhance both mastery and abilities of Pre-service teachers in EPP, they proposed curricular activities like hands-on workshops, seminars, and training, project-based learning, real-life application, and experiential and collaborative learning.

Recommendations

Competencies under Proficient (P) competency level, the researchers recommend that it must require the advancement of both EPP knowledge and skills, which may be further developed and may lead to mastery of knowledge and skills. Meanwhile, competencies under the Developing (D) level, pre-service teachers may undergo seminars, workshops, and trainings with experiential and real-life application tasks/activities to further enhance both EPP knowledge and skills.

For the university, the researchers suggest that they may establish partnerships with local governments, agencies like Technical Education and Skills Development Authority (TESDA), Municipal Agriculture and industries for tools, materials, and equipment needed in EPP. Moreover, hands-on learning experiences and laboratory activities may be incorporated in order to enhance practical knowledge and developing digital resources can improve access to learning materials.

The researchers suggest that activities such as hands-on workshop, trainings and seminars with the support of experts and people in the community which will assist preservice teachers in enhancing their competencies in EPP. The Agricultural Technology Education Program (ATEP) model Farm may be used as training grounds for Agriculture. Entrepreneurship and Hospitality Management facilities, BSCS computer laboratories and Teacher Education high breed laboratory may be utilized by the students to further enhance their skills. Furthermore, regular assessment and feedback should be incorporated to make sure that these curricular activities enhance pre-service teachers' knowledge and skills competencies.

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