

ASSESSING THE CHALLENGES IN APPLYING HOME ECONOMICS LEARNING COMPETENCIES: FOUNDATIONS FOR DESIGNING AN INTERVENTION PROGRAM

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ABSTRACT: *The study aimed to identify the reasons and level of difficulty faced by fourth-year BTLED students from NORSU Main Campus I and Guihulngan Campus in applying Home Economics competencies in Bread and Pastry, Housekeeping, Cookery, and Dressmaking. It also sought to design an intervention program. A mixed-method approach was used to validate the findings, with a self-made questionnaire based on TESDA competencies and open-ended questions to gather qualitative data, ensuring comprehensive results. The entire fourth-year student population from both campuses was included in the study. The statistical tool used in the study was the weighted mean to assess the students' perceptions of the difficulty level of the respondents in applying home economics learning competencies and the challenges they face in utilizing the identified competencies. Key findings showed that students from both campuses had undecided competency in preparing gateaux, tortes, cakes, and petit fours within the Bread and Pastry Production (BPP) area. In Cookery, students demonstrated intermediate skills in preparing seafood dishes and starch products. For the Housekeeping program, students showed undecided knowledge and skills, particularly in providing valet/butler services. Finally, in Dressmaking, students exhibited intermediate skills in drafting and cutting patterns for casual apparel and sewing casual apparel. When it comes to the challenges encountered in achieving the required learning competencies, Guihulngan and Main campuses differ noticeably. Enhancing teacher professional development, particularly regarding obtaining TESDA-related qualifications, is highly advised to ensure that students' acquired knowledge and skills are relevant. This can be achieved by strengthening curriculum integration, ensuring compliance with TESDA's desired learning competencies, improving program resources, and fostering strong industry partnerships and collaborations that allow students to gain real-world experience.*

Keywords: Difficulty level, application of skills, learning competencies, Home Economics

1. INTRODUCTION

Home Economics education plays a vital role in equipping students with essential life skills, promoting self-sufficiency, and enhancing overall well-being [1]. These programs are structured to provide students with practical knowledge and skills in areas such as cooking, sewing, budgeting, and household management, which are vital for personal and familial success. Despite the significance of these skills, students frequently encounter challenges in acquiring and effectively applying them [2].

Home Economics education is indispensable for both individual and societal development. It not only equips learners with practical skills and knowledge that significantly contribute to their personal and social growth but also prepares them for diverse career paths. By integrating both theoretical and practical aspects of everyday life, Home Economics empowers learners to become well-rounded individuals.

In today's increasingly technological society, a solid foundation in Home Economics curricula is essential. Cooking, for instance, is a fundamental life skill often linked to improved diet quality [3]. Over the past decade, there has been a growing emphasis on home cooking as a strategy to prevent poor dietary habits and reduce chronic diet-related illnesses [4].

Cooking skills refer to the physical and mechanical abilities needed to efficiently combine ingredients to create nutritious meals, encompassing various cooking methods and food preparation techniques [5]. The concept of cooking involves a range of skills related to meal preparation within one's food environment, considering time and budget constraints [6]. Although there is no universally agreed-upon definition of cooking skills, they are generally described as the ability to

perform tasks necessary for preparing a nutritious meal, including basic techniques such as washing, peeling, and chopping ingredients [7].

In the context of higher education, institutions such as Negros Oriental State University (NORSU) aim to produce competent graduates who are well-prepared for the demands of modern society. However, there is growing concern about the effectiveness of Home Economics programs at NORSU MC1 and NORSU-Guihulngan Campus in terms of practical skills development. Preliminary observations and anecdotal evidence suggest that students encounter various obstacles that hinder their ability to fully benefit from these programs.

Several studies have highlighted issues such as inadequate resources, outdated facilities, and insufficient practical exposure as common barriers to effective Home Economics education [8; 9]. Additionally, instructional methods and teacher competencies have been identified as critical factors that influence students' learning outcomes [10]. However, these studies often focus on urban settings or well-funded institutions, leaving a gap in the literature regarding the experiences of students in more resource-constrained environments like NORSU MC1 and NORSU-Guihulngan Campus.

This study seeks to fill this gap by systematically investigating the specific problems encountered by Home Economics students at these campuses in developing their practical skills. By identifying and analyzing these challenges, the research aims to provide insights that can inform policy and practice, ultimately enhancing the effectiveness of Home Economics education in these contexts. Specifically, this research seeks to address the following questions:

1. What is the difficulty level of the respondents in applying the following level of competencies?
 - 1.1 Bread and pastry;
 - 1.2 Housekeeping;
 - 1.3 Cookery;
 - 1.4 Dressmaking?
2. What are the reasons for the difficulty in applying the following level of competencies?
 - 2.1 Bread and pastry;
 - 2.2 Housekeeping;
 - 2.3 Cookery;
 - 2.4 Dressmaking?
3. What intervention program can be designed based on the findings of the study?

THEORETICAL FRAMEWORK

This study draws upon the triangulation of three influential learning theories Experiential Learning [11], Social Cognitive Theory [12], and Constructivist Learning Theory [13]—to provide a comprehensive understanding of the learning process. By integrating the cyclical, hands-on approach of Kolb's [11] experiential learning, the social interaction and observational learning emphasized by Bandura [12], and the active knowledge construction process articulated by Piaget [13], this framework underscores the dynamic and interactive nature of learning. It posits that learners actively engage with their environment, reflect on experiences, observe and model behaviours, and construct knowledge in social and cognitive contexts. This triangulation allows for a holistic view of how individuals learn, adapt, and apply their learning in real-world settings, highlighting the importance of both personal experience and social influence in the learning journey.

Kolb's [11] theory on experiential learning emphasizes learning as a process that involves direct experience, reflection, conceptualization, and active experimentation. It operates in a cyclical manner where learners are engaged in real-world experiences, then reflect on them, form abstract concepts based on those reflections, and apply them in new situations. Kolb's model closely aligns with Constructivist and Social Cognitive learning theories because it sees learners as active participants who build knowledge through experience and reflection. Just as Piaget [13] emphasized active learning through exploration and Bandura highlighted learning through observation and imitation, Kolb's model underscores the importance of real-life experience as the foundation for learning. In home economics, many competencies require practical, hands-on experiences, such as cooking, sewing, budgeting, or household management. Kolb's theory suggests that these competencies can be developed through a cycle of concrete experience (e.g., cooking a meal), reflective observation (thinking about what worked or didn't work), abstract conceptualization (understanding the principles of nutrition or time management), and active experimentation (trying a new recipe or improving efficiency in household tasks). The difficulty many students face in applying home economics competencies may arise when they lack sufficient hands-on experience or do not have adequate opportunities for reflection and experimentation. For example, students might struggle to apply cooking techniques if they haven't had the chance to practice in a real-world setting. Reflecting on and

conceptualizing the experience could be hindered by a lack of proper guidance or support.

Bandura's [12], Social Cognitive Theory focuses on the interaction between the individual, their behaviors, and their environment. The core concept here is that learning occurs through observational learning (or modeling), where individuals learn by watching others, and through the social context (such as feedback, reinforcement, and motivation). Social Cognitive Theory is closely related to Experiential Learning in that both emphasize the importance of learning through doing. However, Bandura [12] highlights that this can also be achieved through observation and interaction with others. This connects to Piaget's and Kolb's emphasis on learning through experiences, albeit with a social or observational dimension included. For example, learners might model the actions of others and then reflect on those actions (as in Kolb's cycle) to deepen their understanding. In home economics, students may face challenges in applying learned competencies if they have not observed or interacted with effective role models. For example, students may struggle to manage household finances or follow a healthy eating plan if they lack real-world role models who demonstrate these competencies in action. The theory suggests that students are more likely to succeed in applying home economics competencies if they can observe others performing tasks successfully, receive feedback, and experience social reinforcement. A challenge in applying competencies may arise when students have limited exposure to positive role models or feedback within their community, school, or home. If students are not surrounded by environments that promote and model home economics competencies, they may have difficulty translating their theoretical knowledge into real-world actions. Additionally, if students have low self-efficacy (belief in their ability to succeed), they may hesitate to try out or apply new skills, especially in tasks like budgeting or cooking.

Piaget's [13] Constructivist Learning theory or constructivism is based on the idea that learners actively construct their knowledge through experiences and cognitive processes. According to Piaget, children go through different stages of cognitive development, and they build knowledge by interacting with their environment and making sense of their experiences. Like Kolb, Piaget stresses that learning is an active process where learners are not passive receivers of information, but actively engaged in the process. Similarly, Social Cognitive Theory's emphasis on the social aspects of learning complements Piaget's ideas, as learning in social environments (e.g., through peer interaction or observation) is integral to how learners develop. Both Kolb and Piaget's theories recognize the critical role of reflection and assimilation in cognitive development. In the context of home economics, learners are not passive recipients of information but active participants in constructing their understanding of how to apply competencies like cooking, budgeting, or managing household tasks. Piaget's theory emphasizes that learning happens most effectively when students are actively involved in problem-solving and real-world scenarios, rather than just passively receiving knowledge. One challenge in applying home economics competencies is when students have not yet developed the cognitive structures necessary to

understand or apply certain concepts. For example, a student might struggle to make decisions about meal planning or budgeting because they have not yet fully assimilated the related concepts of nutrition, cost efficiency, or time management. Furthermore, students at different stages of cognitive development might face varying degrees of difficulty in mastering these competencies.

Active learning: All three theories emphasize that learning is not passive. Kolb’s cycle of experience, reflection, conceptualization, and experimentation fits well with Piaget’s idea of active exploration and Bandura’s focus on learning through observation and social interaction.

Interaction with the environment: Each theory acknowledges that learners construct their knowledge through interaction with their environment. Piaget focuses on individual cognitive interaction, Kolb highlights the importance of real-world experience, and Bandura underscores the social context of learning.

Reflection and adaptation: Kolb’s cyclical process, Piaget’s concept of accommodation and assimilation, and Bandura’s idea of self-reflection and self-regulation all highlight the importance of learners reflecting on and adapting their behaviours and understanding.

Constructivist nature: Piaget and Kolb are both seen as constructivist theorists, with Kolb emphasizing experience-based learning and Piaget focusing on the individual’s cognitive development. Bandura’s Social Cognitive Theory adds a social dimension to constructivism, illustrating that knowledge construction is also influenced by observing and interacting with others.

All three theories—Experiential Learning, Social Cognitive Theory, and Constructivist Learning Theory—argue that learning is a process that involves active engagement, reflection, and interaction with the environment and others. The key similarities lie in the active role of the learner, the importance of reflection, and the notion that knowledge is constructed through experience, whether it’s firsthand (Kolb and Piaget) or through social observation [12]. Together, these theories create a robust framework for assessing the challenges students face and provide a foundation for designing an intervention program that incorporates practical experience, social learning, and cognitive development to enhance the application of home economics competencies.

REVIEW OF RELATED LITERATURE

Home Economics (HE) education is an integral part of curricula worldwide, offering students essential skills in practical subjects such as bread and pastry, housekeeping, cookery, and dressmaking. Despite its importance, students often face challenges when applying these competencies, which can hinder the effectiveness of learning and affect real-world application. These challenges not only impact student learning outcomes but also emphasize the need for targeted intervention programs to enhance competency application. This section explores the literature surrounding these challenges and offers insights for designing intervention programs.

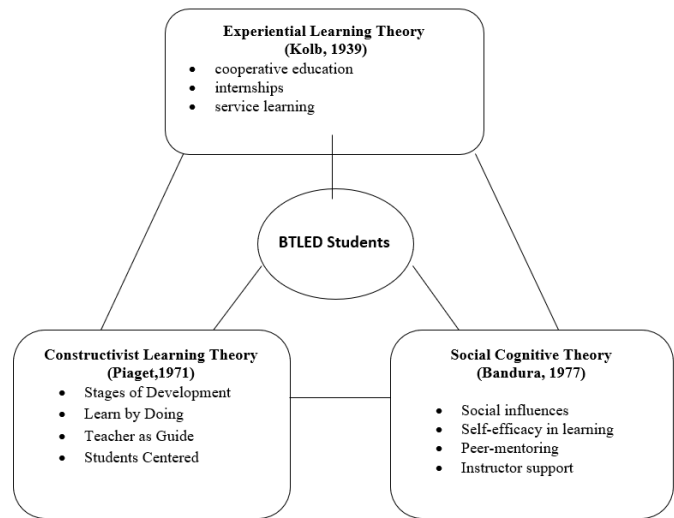


Figure 1: Schematic Diagram of the Framework of the Study

Challenges in Applying Home Economics Learning Competencies

Bread and Pastry requires technical skills such as proper ingredient measurement, time management, and an understanding of chemical reactions during baking. Several studies have highlighted that students often struggle with mastering these skills, particularly in handling yeast-based recipes and maintaining correct oven temperatures. According to Santillan et al. [14], students frequently encounter difficulties with the technical precision needed in baking, such as knowing the correct kneading technique and adjusting baking times for different products. This can lead to inconsistent results, affecting their confidence and competence in bread and pastry.

Housekeeping: In the field of housekeeping, challenges stem from the diverse set of tasks involved, including cleaning, organizing, and managing resources. Williams [16] emphasized that students often find it difficult to meet the high cleanliness standards expected in professional environments like hotels. Additionally, time management, attention to detail, and multitasking are key competencies that many students struggle to master. This lack of competence can lead to inefficiencies and frustration, both in academic settings and when transitioning to real-world applications.

Cookery encompasses a wide array of skills, from knife handling to complex cooking techniques such as sous-vide or molecular gastronomy. A study by Patel et al. [15] found that students often face difficulties in mastering advanced cooking methods due to the pressure of time, lack of access to specialized equipment, and the need for fine motor skills. The study also pointed out those inconsistent cooking results can demotivate students and reduce their ability to apply learned techniques in practical settings, particularly when working under time constraints.

Dressmaking, a field requiring both technical and creative competencies, presents unique challenges. Smith [1] identified that students often struggle with pattern-making and fabric manipulation, skills that are foundational to dressmaking. The intricacy of fitting garments and the need for creative design adjustments further complicate the

learning process. The lack of adequate practice, especially in developing a sense of proportion and symmetry in garment construction, contributes to difficulties in applying dressmaking competencies.

Reasons Behind the Challenges in Applying Home Economics Learning Competencies

The difficulties mentioned above are not isolated but often stem from several root causes that need to be addressed in an intervention program. (1) Lack of Hands-on Experience. Practical skills are a significant component of home economics learning, and many students face difficulties in applying these skills due to a lack of sufficient hands-on experience. Research by Santillan et al. [14] emphasized that theoretical knowledge alone does not equip students with the necessary skills to handle real-world situations. Without adequate practice, students often lack the confidence to apply what they've learned in a professional setting, (2) Limited Access to Resources and Equipment. The limited availability of resources, such as kitchen equipment, sewing machines, or cleaning supplies, has also been cited as a barrier. Williams [16] noted that students in underfunded programs often do not have access to the equipment necessary for mastering housekeeping or culinary tasks, leading to a disconnection between the competencies learned in the classroom and those required in real-world settings, (3) Time Constraints and Pressure. Both in cooking and housekeeping, students face time constraints that mimic real-world work environments. Patel et al. [15] found that students, when under pressure to produce meals in a limited time, often make errors or fail to execute tasks to the desired standard. Similarly, dressmaking often involves working within tight deadlines, which can cause students to rush through processes, leading to suboptimal results [1], (4) Lack of Proper Training and Mentorship. Another reason for the difficulty in applying home economics competencies is the insufficient quality of training and mentorship. According to Smith [1], many educational programs focus heavily on theoretical knowledge but do not provide enough individualized guidance to help students refine their practical skills. The absence of mentorship makes it difficult for students to develop the confidence needed to apply complex techniques.

Designing an Intervention Program

Given the challenges identified above, an effective intervention program should focus on providing students with more opportunities for hands-on practice, access to better resources, and personalized mentorship. These components will allow students to refine their skills, gain confidence, and improve their competency application. An intervention program should also integrate time management skills and stress-reduction techniques to help students manage the pressure of working within limited timeframes. The challenges in applying home economics learning competencies in bread and pastry, housekeeping, cookery, and dressmaking are multifaceted, involving a mix of skill-related, resource-based, and psychological factors. Addressing these challenges through targeted interventions, such as improving hands-on practice, ensuring access to necessary resources, and offering mentorship, is essential for enhancing competency application. The research suggests

that such interventions are crucial to bridging the gap between classroom learning and real-world applications.

The challenges identified across bread and pastry, housekeeping, cookery, and dressmaking emphasize the need for targeted interventions to improve the application of home economics competencies. Issues such as time constraints, resource limitations, and insufficient practical experience can be addressed through collaborative efforts between educators, policymakers, and communities. Implementing strategies like digital repositories, improved resource allocation, and curriculum adjustments can significantly enhance students' competency application, leading to more effective and immersive learning experiences in home economics education.

4. METHODOLOGY

This section discusses the research design, research environment, research respondents and the instruments of the study.

Research Design

This study determined the level of difficulty by BTLED students under Home Economics in applying the knowledge and skills of Bread and Pastry Production, Cookery, Housekeeping, and Dressmaking. To this purpose, descriptive quantitative methods were used in this study. Descriptive research is a type of quantitative research design that describes the population, situation, or phenomenon being studied. Descriptive research is one in which information is collected without changing the environment. The Office of Human Research Protection (n.d.) defined descriptive study as "Any study that is not truly experimental." The researchers did not intend to employ any intervention in the study, thus, making this paper descriptive. In the context of this study, this design was used to determine the respondents' consensus on the difficulties of applying the knowledge and skills in the above learning competencies under the four areas in Home Economics.

Research Environment

The study was conducted to students enrolled in BTLED Home Economics majors in Negros Oriental State University Dumaguete, Main Campus I and NORSU Guihulngan campus. Main Campus I and Guihulngan Campus are members under the Negros Oriental State University System. NORSU is the premier school in Negros Oriental offering Technological Education and Vocational Courses. NORSU is located in the heart of the city. Dumaguete City is a booming city where industries are sprouting in any part of the city that creates jobs relevant to BPP, Cookery, Housekeeping, and Dressmaking.

Research Respondents

The research respondents in this study are the fourth (4th) students enrolled in the Bachelor of Technological Education (BTLED) major in Home Economics. Respondents are both from Guihulngan NORSU campus, and NORSU Main Campus 1. Fourth-year students were considered in this research since most of them have gone through all the four specializations on BPP, Cookery, Housekeeping, and Dressmaking. Their direct experiences are vital in establishing the veracity and acceptability of the findings, conclusions, and recommendations of the study.

Research Instruments

The instrument used to collect data for the research on the perceptions of 4th-year students from both Guihulngan Campus and Main Campus 1, under the Bachelor of Technology and Livelihood Education (BTLED) program majoring in Home Economics, was a self-made or modified questionnaire. This questionnaire was specifically designed by the researchers to capture the students' insights regarding the challenges they face in applying their knowledge and skills in Home Economics. The questionnaire was developed by adapting the TESDA (Technical Education and Skills Development Authority) Training Regulations (TR) standards for the four qualifications relevant to the study: BPP NC II (Bread and Pastry Production), Cookery NC II, Housekeeping NC II, and Dressmaking NC II.

These TESDA qualifications outline the core competencies required in each area, and the researchers used these as a basis for the questionnaire. However, to make the tool more suitable for the specific context of the study and its participants, the researchers modified the language and descriptions within the questionnaire. The modifications included choosing specific verbal descriptions that were contextually relevant to the student's experiences and their local environment, thus ensuring the perceptions of the respondents could be captured more accurately. The intention behind these modifications was to focus on how the students perceive the difficulties in applying the knowledge and skills they have learned in the Home Economics Program

By contextualizing the questionnaire in this manner, the researchers ensured that the instrument was both relevant and clear to the students, thus allowing for a more meaningful and precise understanding of the challenges faced by the respondents when it comes to applying their home economics competencies in real-world situations. This also provided a more localized approach, ensuring that the respondents' specific experiences in their respective campuses were considered when gathering data on their perceptions.

RESULTS AND DISCUSSION

Table 1: The difficulty level of the respondents in applying the following level of competencies in Bread and Pastry Production

Bread Making	Wx	Verbal Description	Verbal Interpretation
Prepare bakery products.	3.65	Advance	<i>Able to apply knowledge and skills into practice</i>
Produce bakery products	3.55	Advance	<i>Able to apply knowledge and skills into practice</i>
Present bakery products.	3.61	Advance	<i>Able to apply knowledge and skills into practice</i>
Composite Mean	3.60	Advance	<i>Able to apply knowledge and skills into practice</i>
Pastry Making			
Prepare pastry products.	3.57	Advance	<i>Able to apply knowledge and skills into</i>

			<i>practice</i>
Produce pastry products.	3.51	Advance	<i>Able to apply knowledge and skills into practice</i>
Present pastry products.	3.45	Advance	<i>Able to apply knowledge and skills into practice</i>
Composite Mean	3.51	Advance	<i>Able to apply knowledge and skills into practice</i>
Cake Making			
Prepare gateaux, tortes, and cakes.	3.39	Intermediate	<i>Able to apply knowledge and skills as required</i>
1. Present cake.	3.45	Advance	<i>Able to apply knowledge and skills into practice</i>
Composite Mean	3.42	Advance	<i>Able to apply knowledge and skills into practice</i>
Petit Fours Making			
Prepare petites fours.	3.20	Intermediate	<i>Able to apply knowledge and skills as required</i>
Display petites fours	3.25	Intermediate	<i>Able to apply knowledge and skills as required</i>
Composite Mean	3.23	Intermediate	<i>Able to apply knowledge and skills as required</i>
General Mean	3.44	Advance	<i>Able to apply knowledge and skills into practice</i>

Legend:

Scale	Interval	Verbal Description
5	4.20-5.00	Expert (<i>Recognized authority in performing the knowledge and skills in problem-solving and actual practice</i>)
4	3.40-4.19	Advanced (Able to apply knowledge and skills into practice)
3	2.60-3.39	Intermediate (Able to apply knowledge and skills as required)
2	1.80-2.59	Novice (Limited Knowledge and Skills)
1	1.00-1.79	Fundamental Awareness (Acquired basic knowledge and Skills)

Table 1 indicates the perceptions of the student respondents on the difficulty in applying the following level of competencies in Bread and Pastry Production NC II. Most of the respondents believed that they have advance knowledge and skills in preparing, producing, and presenting bakery products with a composite mean value of 3.60 (Advance) which means that most of them can apply knowledge and skills into practice. In the same manner, respondents

believed that they have advanced knowledge and skills in Pastry making with a composite mean of 3.51 (Advanced) which also means that most of them can apply knowledge and skills into practice. On the other hand, most of the respondents had intermediate (Wx=3.39) or were able to apply knowledge and skills as required in Cake Making specifically for preparing gateaux, tortes, and cakes and an intermediate (Wx=3.20) in preparing petit fours and intermediate (Wx=3.25) knowledge and skills in displaying petites fours which means that most of them can apply knowledge and skills as required. These findings show that the respondents need to develop knowledge and skills in cake and Petit fours making with supervision and guidance from the instructors. To develop and increase the degree of independence, more practice and actual experiential learning shall be facilitated. This can be done through constant practice, and more time devoted to developing consistency and precision to acquire confidence and creativity.

These findings are relevant to the following statements from the participants:

P1: During bread and pastry, the challenges that I encountered is that, we have lack of facilities.

P2: The only challenge I encountered is the lack of tools and equipment in the laboratory.

P15: I don't know how to measure the exact amount of the ingredients, and also the techniques on baking.

P20: Limited resources for practicing Bread and Pastry skills.

P24: Lack of money to buy some ingredients for baking. Also, the school doesn't have enough resources to cater to all the students.

P4: The challenge that I encountered while performing bread and pastry was how to measure the ingredients to perfect the taste of the cake or any desserts.

P7: Consistency of the cale mixture and the proper heat index of the oven.

P17: The Challenge that I've encountered during baking is the measurements of the ingredients.

P32: Challenges include mastering techniques like kneading and proofing, managing time effectively for baking schedules, and dealing with ingredient variations that affect the final product.

P33: In our previous lesson we just tackled discussion only but we didn't experience performing it due to the pandemic

P47: Lack of bread and pastry skills.

The findings above are also relevant to several studies that highlighted that students often struggle with mastering these skills, particularly in handling yeast-based recipes and maintaining correct oven temperatures. According to Santillan et al. [14], students frequently encounter difficulties with the technical precision needed in baking, such as knowing the correct kneading technique and adjusting baking times for different products. This can lead to inconsistent results, affecting their confidence and competence in bread and pastry. The findings imply that students often face significant challenges in achieving desired learning competencies, largely due to a lack of essential resources such as finances, materials, equipment, and tools. Learning competencies, which encompass the specific skills and knowledge necessary for academic and professional success, are critical across various disciplines. Financial constraints

severely limit access to these resources, creating inequities in educational opportunities. For instance, students from lower socioeconomic backgrounds may struggle to obtain textbooks, laboratory equipment, or technology, which are vital for effective learning. This lack of resources can impede independent learning and experiential learning activities, both of which are essential for fostering critical thinking and practical skills. Without hands-on experiences—like internships, simulations, or return demonstrations—students miss out on valuable real-world applications that enhance their understanding and engagement with the subject matter. Consequently, the long-term effects of these resource limitations can lead to decreased motivation, poor academic performance, and a higher likelihood of dropping out, perpetuating cycles of poverty and underachievement. To address these challenges, educational institutions and policymakers must explore strategies such as seeking grants, forming community partnerships, and implementing resource-sharing programs. By tackling these resource gaps, we can create more equitable learning environments where all students can succeed and achieve their full potential.

Table 2: Difficulty level of the respondents in applying the following level of competencies in Cookery

Prepare and Cook Hot Meals	Wx	Verbal Description
Clean and maintain kitchen premises	4.20	Expert
Prepare stocks, sauces, and soups.	3.96	Advance
Prepare meat dishes.	3.80	Advance
Prepare vegetable dishes.	3.94	Advance
Prepare egg dishes.	4.04	Advance
Prepare poultry and game dishes.	3.69	Advance
Prepare seafood dishes.	3.37	Intermediate
Prepare starch products.	3.35	Intermediate
Package prepared food.	3.65	Advance
Composite Mean	3.78	Advance
Prepare Cold Meals		
Clean and maintain kitchen premises	4.06	Advance
Prepare appetizers.	3.88	Advance
Prepare salads and dressing.	3.75	Advance
Prepare sandwiches.	3.92	Advance
Package prepared food.	3.86	Advance
Composite Mean	3.89	Advance
Prepare Sweets.		
Clean and maintain kitchen premises	4.12	Advance
Prepare desserts.	3.82	Advance
Package prepared food.	3.78	Advance
Composite Mean	3.91	Advance
General Mean	3.86	Advance

Legend:

Scale	Interval	Verbal Description
5	4.20-5.00	Expert (<i>Recognized authority in performing the knowledge and skills in problem-solving and actual practice</i>)
4	3.40-4.19	Advanced (Able to apply knowledge and skills into practice)
3	2.60-3.39	Intermediate (Able to apply knowledge and skills as required)
2	1.80-2.59	Novice (Limited Knowledge and Skills)
1	1.00-1.79	Fundamental Awareness (Acquired basic knowledge and Skills)

Table 2 indicates the perceptions of the student respondents on the difficulty in applying the following level of competences in Cookery NC II. Majority of the respondents

have Advance knowledge and skills in Preparing and Cook Hot Meals ($W_x=3.78$, Advance), Preparing Cold Meals ($W_x=3.89$, Advance), and Preparing Sweets ($W_x=3.91$, Advance). While the general mean is 3.86 (Advance) which means that most of the respondents in all the competencies as prescribed by TESDA as implemented by NORSU can apply knowledge and skills into practice. These findings farther elucidates that the students under BTLED-Home Economics program can apply the knowledge and skills acquired in NORSU and is able to observed and improved practices beyond the standard making and innovating services according to the demands of time. These findings are relevant to the study by Patel et al. [15] found that students often face difficulties in mastering advanced cooking methods due to the pressure of time, lack of access to specialized equipment, and the need for fine motor skills. The study also pointed out those inconsistent cooking results can demotivate students and reduce their ability to apply learned techniques in practical settings, particularly when working under time constraints.

The following statements will support the findings above:

P17: The Challenges that I've encountered in cooking is so far in my experienced I'm fun on cooking I like cooking I usually cook any dishes I think in washing the dishes and borrowing the things in our laboratory because if we broke some tools we will need to buy and another and also the lost items that we use.

P32: Challenges often arise from understanding flavor combinations, managing cooking times for different dishes simultaneously, and adapting recipes to accommodate dietary restrictions.

P33: We actually perform this by group presenting our own menu.

P43: My experienced in cookery is when performing in school is fun and excited.

P52: I don't have any challenges here because I know my level of expertise in this field.

P27: In terms of my skills I can perform but because lack of facilities/materials that hinders or a challenge for us.

On the other hand, the students can perform all desired competencies according to the standards. Students can apply knowledge and skills while observing the standard practice in the industry. However, demonstrations and return demonstration while having experiential learning will be hampered due to lack of resources.

Table 3: Difficulty level of the respondents in applying the following level of competences in Housekeeping NC II

Provide Valet/Butler Service	W_x	Verbal Description
Provide Valet/Butler services.	3.10	Intermediate
Deal with/Handle Intoxicated guests.	3.14	Intermediate
Composite Mean	3.12	Intermediate
Provide Housekeeping to Guests		
Provide housekeeping services to guests.	3.45	Advance
Clean and prepare rooms for incoming guests.	3.57	Advance
Deal with/Handle intoxicated guests.	3.39	Intermediate
Composite Mean	3.47	Advance
Clean Public Areas		
Clean public areas, facilities, and	3.84	Advance

equipment.		
Deal with/Handle intoxicated guests.	3.44	Advance
Composite Mean	3.64	Advance
Provide Laundry Service		
Laundry linen and guests' clothes	3.35	Intermediate
Deal with/Handle intoxicated guests.	3.31	Intermediate
Composite Mean	3.33	Intermediate
General Mean	3.39	Intermediate

Legend:

Scale	Interval	Verbal Description
5	4.20-5.00	Expert (<i>Recognized authority in performing the knowledge and skills in problem solving and actual practice</i>)
4	3.40-4.19	Advanced (Able to apply knowledge and skills into practice)
3	2.60-3.39	Intermediate (Able to apply knowledge and skills as required)
2	1.80-2.59	Novice (Limited Knowledge and Skills)
1	1.00-1.79	Fundamental Awareness (Acquired basic knowledge and Skills)

Table 3 indicates the perceptions of the student respondents on the difficulty in applying the following level of competences in Housekeeping NC II. Majority of the respondents have intermediate knowledge in Providing Valet/Butler Service ($W_x=3.12$, Intermediate), and in providing Laundry Services for guest ($W_x=3.33$, Intermediate) and most specifically in Dealing with or handling intoxicated guests ($W_x=3.31$, Intermediate). More so, the general composite mean is 3.39 (Intermediate). Which means that students don't have an established knowledge and skills on the following competencies such as providing valet/butler services, handling intoxicated guests, and to provide laundry services?

P6: I don't experience housekeeping at all.-

P16: In housekeeping, a challenge that I've faced is who's when I forgot the proper step by step guide in housekeeping.

P17: The Challenges that I've encountered in housekeeping is Cleaning the bed because there are so many process especially in King Size bed or Queen sized bed.

P32: Balancing multiple tasks efficiently, maintaining high cleanliness standards under time constraints, and managing inventory of supplies while ensuring everything is organized.

P33: We didn't experience this also due to pandemic

P47: Lack of training

P48: Lack of hands on experience

P34: We haven't performed housekeeping since we lack resources and also it was pandemic.

The statements are also consistent with in the field of housekeeping, challenges stem from the diverse set of tasks involved, including cleaning, organizing, and managing resources. Williams [16] emphasized that students often find it difficult to meet the high cleanliness standards expected in professional environments like hotels. Additionally, time management, attention to detail, and multitasking are key competencies that many students struggle to master. This lack of competence can lead to inefficiencies and frustration, both in academic settings and when transitioning to real-world applications. The findings also indicates that students often struggle to perform desired competencies because of insufficient experiential learning opportunities, inadequate

training, and a lack of hands-on experiences that are crucial for effective education. Experiential learning, which emphasizes learning through experience and reflection, is essential for developing practical skills and deeper understanding. When students are not exposed to real-world scenarios, they miss the chance to apply theoretical knowledge in meaningful contexts, which can lead to a superficial grasp of concepts. Furthermore, without adequate training, students may find it challenging to build the necessary skills and confidence to perform tasks effectively. The absence of facilities that support actual performance activities—such as laboratories, workshops, or simulation centres—further exacerbates this issue, as students are deprived of environments where they can practice and refine their skills. This combination of factors not only hinders their ability to achieve learning outcomes but also diminishes their readiness for professional environments. Ultimately, to bridge this gap, educational institutions must prioritize the development of robust experiential learning programs, enhance training opportunities, and invest in facilities that foster active participation and practical application, ensuring that all students can successfully acquire the competencies they need for their future endeavors.

Table 4: Difficulty level of the respondents in applying the following level of competences in Dressmaking

Draft and cut pattern for casual apparel	Wx	Verbal Description
Plan garment design	3.35	Intermediate
Take client's body measurements	3.42	Advance
Draft basic/block pattern	3.26	Intermediate
Manipulate pattern	3.10	Intermediate
Composite Mean	3.28	Intermediate
Prepare and cut materials for casual apparel		
Prepare materials (fabric)	3.55	Advance
Lay-out and mark pattern on material	3.37	Intermediate
Cut materials	3.60	Advance
Composite Mean	3.51	Advance
Sew casual apparel		
Prepare cut parts	3.37	Intermediate
Prepare sewing machine for operation	3.41	Advance
Sew and assemble garment parts	3.35	Intermediate
Alter completed garment	3.29	Intermediate
Composite Mean	3.35	Advance
Apply finishing touches on casual		
Apply finishing touches	3.31	Intermediate
Trim excess threads	3.49	Advance
Press finished garment	3.41	Advance
Package finished garment	3.41	Advance
Composite Mean	3.40	Advance
General Mean	3.44	Advance

Legend:

Scale	Interval	Verbal Description
5	4.20-5.00	Expert (<i>Recognized authority in performing the knowledge and skills in problem solving and actual practice</i>)
4	3.40-4.19	Advanced (Able to apply knowledge and skills into practice)
3	2.60-3.39	Intermediate (Able to apply knowledge and skills as required)
2	1.80-2.59	Novice (Limited Knowledge and Skills)
1	1.00-1.79	Fundamental Awareness (Acquired basic knowledge and Skills)

Table 4 signifies the perceptions of the student respondents on the difficulty in applying the following level of competences in Dressmaking NC II. Majority of the respondents have intermediate knowledge in “Providing performing drafting and cutting of patterns for casual apparel” (Wx=3.35, Intermediate), have intermediate knowledge and skills in “Lay-outing and marking of patterns on material” (Wx=3.37, Intermediate), have indecisive knowledge and skills in “Sewing casual Apparel” (Wx=3.35, Intermediate), and have an intermediate knowledge and skills in “Applying finishing touches” (Wx=3.31, Intermediate). This further elucidate that the students don't have yet the concrete knowledge and skills in some of the standard competencies under Dressmaking NCII. Enriching topics with TESDA standards in the curriculum is a must, to provide students' exposure to industry standards.

Difficulties of students in performing the desired skills are due to the following reasons:

P1: During dressmaking, we also have lack of facilities like dressmaking machines.

P2: The lack of machines and other type of machines that is suitable for different kinds of stitches.

P5: Busy academic schedule with sewing projects are difficult for us, especially having exam periods or when deadlines are looming.

P8: Exact measurements to be drafted, the outcome is not correct

P15: My difficulties encountered in dressmaking, when sewing a garment. I have a difficulty in handling the machine.

P17: The Challenges that I've encountered in Dressmaking is the Sewing machine how to operate the sewing machine. How to move our feet with the machine but I've learned already because of my Teacher. And also the pattern in making dress.

P18: Pattern drafting and measurement

P33: The challenges we face during dressmaking is when we can't perform handling the machines since we are lacked of electricity and space.

P20, P26, P29, P38, P47, P48, & P51 Lack of training, lack of tools, lack of equipment, still not enough materials to use, Limited resources and equipment, equipment problem, lack of equipment and tools, lack of sewing machine, lack of materials and equipment for Dressmaking skills.

The findings confirm that the difficulties face by the students in achieving the desired competencies in dressmaking can largely be attributed to a significant lack of school resources that support effective learning in this specialized field. Dressmaking, which requires not only theoretical knowledge but also practical skills, relies heavily on access to appropriate materials, tools, and facilities. When schools are inadequately equipped with essential resources—such as sewing machines, fabrics, patterns, and cutting tools—students find it challenging to practice their skills and apply what they have learned in a real-world context. Smith [1] identified that students often struggle with pattern-making and fabric manipulation, skills that are foundational to dressmaking. The intricacy of fitting garments and the need for creative design adjustments further complicate the learning process. The lack of adequate practice, especially in developing a sense of proportion and symmetry in garment

construction, contributes to difficulties in applying dressmaking competencies. This absence of hands-on experience limits their ability to experiment with different techniques, troubleshoot problems, and develop the creativity necessary for garment design and construction. Additionally, without sufficient resources, educators may struggle to provide comprehensive instruction that encompasses both foundational knowledge and advanced techniques. As a result, students may become disengaged and frustrated, leading to a lack of confidence in their abilities and a diminished interest in pursuing careers in fashion and dressmaking. To overcome these barriers, it is crucial for educational institutions to invest in the necessary resources and infrastructure that facilitate practical learning, thereby empowering students to fully develop their competencies in dressmaking and achieve success in their future endeavours.

Summary of Findings Conclusions and Recommendations Findings:

In Bread and Pastry Production: Most of the respondents believed that they have advanced knowledge and skills in preparing, producing, and presenting bakery products with a composite mean value of 3.60 (Advance) and in "Pastry Making" with a composite mean of 3.51 (Advance) which also means that most of them can apply knowledge and skills into practice. However, most of the respondents were having intermediate ($W_x=3.39$) knowledge and skills in applying knowledge and skills as required in "Cake Making" specifically for preparing gateaux, tortes, and cakes and an intermediate in preparing ($W_x=3.20$) and displaying petit fours ($W_x=3.25$) which means that most of them can apply knowledge and skills as required.

Inconsistency of performing some of the competencies in Bread and Pastry Production is due to a lack of resources which involves the following:

- 1) Lack of tools and equipment in the laboratory,
- 2) Limited resources for practising Bread and Pastry skills,
- 3) Lack of money to buy some ingredients for baking,
- 4) Mastering techniques like kneading and proofing, managing time effectively for baking schedules due to lack and functionalities of laboratory tools and equipment.

In Cooking: Majority of the respondents have Advance knowledge and skills in "Preparing and Cook Hot Meals" ($W_x=3.78$, Advance), "Preparing Cold Meals" ($W_x=3.89$, Advance), and "Preparing Sweets" ($W_x=3.91$, Advance). While the general mean is 3.86 (Advance) which means that most of the respondents in all the competencies as prescribed by TESDA as implemented by NORSU can apply knowledge and skills into practice.

In Housekeeping: The majority of the respondents have intermediate knowledge in Providing Valet/Butler Service ($W_x=3.12$, Intermediate), and in providing Laundry Services for guests ($W_x=3.33$, Intermediate) and most specifically in Dealing with or handling intoxicated guests ($W_x=3.31$, Intermediate). More so, the general composite mean is 3.39 (Intermediate).

In Dressmaking: Majority of the respondents have intermediate knowledge in "Providing performing drafting and cutting of patterns for casual apparel" ($W_x=3.35$, Intermediate), have intermediate knowledge and skills in "Lay-outing and marking of patterns on material" ($W_x=3.37$,

Intermediate), have indecisive knowledge and skills in "Sewing Casual Apparel" ($W_x=3.35$, Intermediate), and have an intermediate knowledge and skills in "Applying finishing touches" ($W_x=3.31$, Intermediate).

CONCLUSIONS

Based on the findings, the following conclusions are formulated.

Under the supervision and direction of the professors, the BTLED students on the Main Campus and the Guihulngan Campus must acquire the knowledge and abilities necessary to make cakes and petit fours. More practice and real-world experience-based learning will be facilitated to foster and enhance the level of independence. This can be achieved by consistent practice, spending more time honing consistency and accuracy to gain self-assurance and originality. The inconsistency in executing some competencies related to Bread & Pastry Production can be attributed to insufficient laboratory and financial resources.

Most responders in every competency set out by TESDA and executed by NORSU can put their knowledge and abilities to use in the culinary arts. Students enrolled in the BTLED-Home Economics program can put the knowledge and abilities they have learned at NORSU to use. They can also observe and enhance procedures beyond what is considered standard practice and provide creative services in response to changing needs. Students can perform industry-standard practices while putting their knowledge and talents to use. However, a shortage of resources will make return demonstrations and demonstrations during experiential learning difficult.

When it comes to housekeeping, students lack the established knowledge and abilities to handle inebriated guests, offer laundry services, and give valet or butler services. Furthermore, inadequate experiential learning, inadequate training, a lack of practical experiences to supplement instruction, and a lack of facilities that support real-world performance activities all contribute to students' incapacity to execute the necessary competencies.

In certain standard competencies under Dressmaking NCII, the students lack the necessary practical knowledge and skills. TESDA standards must be incorporated into curricular topics to give students exposure to industry norms.

Recommendations

Based on the conclusions, the following recommendations were formulated.

- (1) Subject teachers and professors under BTLED programs should increase extended learning opportunities for students on the following topics:

Bread and Pastry Production

- Prepare gateaux, tortes, and cakes.
- Prepare petits fours.
- Display petits fours

Cookery

- Prepare seafood dishes
- Prepare starch products

Housekeeping

- Provide Valet/Butler services.
- Deal with/Handle Intoxicated guests.
- Laundry linen and guests' clothes

- Deal with/Handle intoxicated guests.

Dressmaking

- Plan garment design
- Draft basic/block pattern
- Manipulate pattern
- Lay out and mark pattern on material
- Prepare cut parts
- Sew and assemble garment parts
- Alter the completed garment
- Apply finishing touches

(2)To increase experiential learning for students, the school should establish strong linkages to industry to provide opportunities for student's experiential learning.

(3)The instructors/professors in each area shall provide extended learning opportunities for students to apply knowledge and skills in actual performance task/s.

(4)The instructors/professors should see to it the alignment of NORSU curriculum and TESDA standard learning competencies to ensure developed or learned competencies are responsive to the needs in of the industry.

(5)The school administrators shall take initiatives and activities that would strengthen the school environment specifically in providing complete facilities and equipment for student's effectiveness in learning and in demonstrating the required skills.

(6)Instructors /Professors in the subject should continually seek for professional advancement and to earn TESDA-related qualifications.

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