Int. j. adv. multidisc. res. stud. 2026; 6(2):381-385

Received: 22-01-2026
Accepted: 02-03-2026

International Journal of Advanced Multidisciplinary Research and Studies

ISSN: 2583-049X

Experiential Learning Strategies in Philippine Cookery Education: A Qualitative Study on Engagement and Skill Mastery

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DOI: https://doi.org/10.62225/2583049X.2026.6.2.5971
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Abstract

This study examined the effects of experiential learning strategies on student engagement and skill mastery in cookery education. Guided by Kolb's Experiential Learning Theory, a qualitative observational design was implemented at the University of Northern Philippines Laboratory Schools. Data were collected through classroom observations, field notes, reflection journals, and focus group discussions with 18 purposively selected students. Thematic analysis revealed that experiential learning fostered active participation, collaboration, and intrinsic motivation. Iterative cycles of practice and reflection enhanced technical proficiency in culinary skills, adherence to safety protocols, and presentation standards. Students described the approach as empowering and meaningful, bridging theoretical instruction with industry-aligned practice. Findings underscore the value of competency-based, learner-centered pedagogy in Technology and Livelihood Education (TLE), offering implications for curriculum innovation in vocational education.

Keywords: Experiential Learning, Cookery Education, Student Engagement, Skill Master, Vocational Pedagogy

Introduction

The rapid transformation of the 21st-century educational landscape has compelled educators to adopt teaching methods that foster active, interactive, and meaningful learning experiences. This shift is particularly critical in technical-vocational education, where students must balance theoretical knowledge with practical proficiency to achieve workplace readiness (Commission on Higher Education [CHED], 2020). In the Philippines, cookery is a vital component of the Technology and Livelihood Education (TLE) curriculum, emphasizing national standards in safety, culinary skills, and entrepreneurial competencies (Department of Education [DepEd], 2016) [8]. However, despite curricular reforms, traditional lecture-oriented methods continue to dominate classrooms, often resulting in low student motivation, limited engagement, and insufficient skill retention (Corpuz & Salandanan, 2015) [5].

Globally, vocational education has undergone significant reforms to align with industry demands. Countries such as Germany, Australia, and Singapore have embraced competency-based training models that prioritize experiential learning, workplace immersion, and reflective practice (Gessler, 2020; Biggs & Tang, 2011) [10, 3]. These models highlight the importance of bridging the gap between theoretical instruction and authentic practice, ensuring that learners acquire not only technical skills but also critical thinking, collaboration, and adaptability. In contrast, many developing countries, including the Philippines, continue to struggle with resource constraints, outdated pedagogical approaches, and limited industry linkages (Pascual, 2020; Salazar, 2021) [14, 16].

Experiential learning serves as a pedagogical bridge between theory and practice. Kolb's (1984) [12] Experiential Learning Theory posits that learning is a recursive four-stage process: Concrete Experience, Reflective Observation, Abstract Conceptualization, and Active Experimentation. This cyclical model emphasizes that knowledge is created through the transformation of experience, making it particularly relevant in high-sensory, skill-based disciplines such as culinary arts. Beard and Wilson (2018) [2] further argue that culinary education requires a "sensory pedagogy," where touch, taste, and smell are central to the learning process. Such approaches move beyond rote memorization, fostering deeper engagement and mastery.

International research supports the efficacy of experiential learning in vocational contexts. Hwang and Lee (2022) [11] demonstrated that problem-based experiential learning in culinary programs increased retention of food safety protocols by

25% compared to traditional lecture-based groups. Similarly, studies in hospitality education highlight that students exposed to experiential modules exhibit higher levels of confidence, creativity, and industry readiness (Bay, 2019; Ryan & Deci, 2000) [1, 15]. These findings underscore the global relevance of experiential learning as a transformative pedagogical approach.

Despite mandates from DepEd (2012) [7] and the Technical Education and Skills Development Authority (TESDA, 2021) for competency-based training, local research on experiential learning in cookery education remains limited. Resource constraints in provincial schools often force educators to revert to passive instruction, relying heavily on textbooks and demonstrations rather than hands-on practice (Pascual, 2020) [14]. This gap is particularly concerning given that engagement is a primary predictor of academic success (Fredricks *et al*., 2004) [9]. Without active participation, students may fail to internalize essential culinary skills, compromising their employability in the hospitality industry.

Moreover, the Philippine TLE curriculum emphasizes entrepreneurial competencies alongside technical skills. Students are expected not only to master cooking techniques but also to develop business acumen, creativity, and problem-solving abilities (DepEd, 2016) [8]. Experiential learning offers a pathway to achieve these outcomes by immersing students in authentic tasks that mirror industry practices. However, the lack of systematic implementation and empirical evaluation has hindered its widespread adoption.

While experiential learning has been widely recognized as an effective pedagogical approach in vocational education, its integration into cookery education in the Philippines remains underexplored. Existing studies have primarily focused on general TLE subjects or theoretical discussions of pedagogy, leaving a gap in empirical evidence on how experiential strategies influence student engagement and skill mastery in culinary contexts. This study seeks to address this gap by examining the outcomes of an experiential framework implemented at the University of Northern Philippines Laboratory Schools.

This research contributes to both theory and practice. Theoretically, it extends Kolb's experiential learning model to cookery education, highlighting how the sensory and reflective dimensions interact in skill acquisition. Practically, it provides evidence-based insights for educators, policymakers, and curriculum developers seeking to enhance TLE instruction. By demonstrating the impact of experiential strategies on engagement and mastery, the study advocates for a shift toward competency-based, learner-centered pedagogy that aligns with global standards and industry demands.

Methodology

Research Design and Locale

This study employed a qualitative observational research design, chosen for its capacity to capture rich, descriptive data on behavioral patterns, classroom dynamics, and student perceptions in a naturalistic setting. Unlike quantitative approaches that rely on numerical measurement, qualitative observation allows for a nuanced understanding of how experiential learning strategies unfold in real time and how students respond to them (Creswell & Poth, 2018) [6].

The research was conducted at the University of Northern Philippines (UNP) Laboratory Schools in Vigan City, Ilocos Sur. This locale was selected because it integrates theoretical instruction in Technology and Livelihood Education (TLE) with performance-based laboratory sessions, offering an ideal environment to examine experiential learning in cookery education. The laboratory kitchen is equipped with standard culinary tools and safety facilities, simulating industry conditions while remaining accessible to secondary-level learners.

Participants and Sampling

The participants consisted of 18 students enrolled in the Cookery elective under the TLE curriculum. Ages ranged from 15 to 17 years, with a balanced representation of male and female students. Many came from diverse socio-economic backgrounds, reflecting the typical composition of provincial laboratory schools.

Purposeful Sampling was employed to ensure that participants were those most actively engaged in experiential modules. This sampling strategy was appropriate because the study sought to capture detailed insights from students directly involved in hands-on cookery activities rather than from a broader population with limited exposure. The sample size, though modest, was sufficient for qualitative inquiry, allowing for in-depth observation and thematic saturation (Miles, Huberman, & Saldaña, 2014) [13].

Data Gathering Procedures

Data-gathering procedures employed a triangulated approach to enhance the validity and reliability of the findings by drawing on multiple sources. Systematic classroom observations were conducted during cookery sessions to document student behaviors related to initiative, collaboration, and adherence to Kolb's experiential learning cycle, using observation checklists that captured indicators such as independent task performance, group collaboration, accuracy in technical procedures (e.g., knife handling and plating), and engagement in reflective discussions. In addition, detailed field notes were maintained to record contextual factors, classroom atmosphere, and spontaneous student interactions, while checklists monitored specific competencies including safety compliance, hygiene practices, and technical execution; together, these provided a narrative complement to structured observation data and ensured that subtle classroom dynamics were not overlooked. Students also maintained reflection journals throughout the experiential modules, guided by prompts that encouraged them to articulate their thoughts, challenges, and realizations after each session, thereby offering insights into their metacognitive processes and how they internalized experiences, identified errors, and conceptualized improvements. Furthermore, two focus group discussions (FGDs) were conducted with subsets of students, each comprising 8–10 participants, using semi-structured questions to explore perceptions of experiential learning, challenges encountered, and perceived benefits; these discussions yielded collective insights into shared and divergent experiences and were audio-recorded and transcribed for analysis.

Data Analysis

Data analysis was guided by the framework of Miles, Huberman, and Saldaña (2014) [13], which involves the iterative processes of data reduction, data display, and conclusion drawing/verification. Data from classroom observations, reflection journals, and focus group discussions were systematically coded into analytically meaningful categories, including initiative, collaboration, reflection, technical mastery, and motivation. During data display, codes and themes were organized into matrices and visual charts to facilitate cross-source comparison and pattern identification. Conclusions were drawn through thematic analysis and were continuously verified by comparing emergent themes with established theoretical constructs, particularly Kolb's experiential learning cycle and Self-Determination Theory. Credibility was strengthened through data triangulation across multiple sources. At the same time, dependability and confirmability were enhanced through peer debriefing with fellow educators who reviewed the coding procedures, category development, and thematic interpretations.

Ethical Considerations

Ethical considerations were strictly observed throughout the study to protect participants' rights and welfare. Written informed consent was obtained from both students and their guardians, given the participants' minor status, and confidentiality was ensured by anonymizing student identities in all records and publications using codes rather than names. Participation was entirely voluntary, and students were clearly informed of their right to withdraw from the study at any time without penalty. To uphold the principle of non-maleficence, all learning activities were carefully designed to ensure student safety, with strict adherence to established kitchen protocols to prevent accidents. Prior to data collection, ethical clearance was secured from the University of Northern Philippines (UNP) Research Ethics Committee. In addition, the trustworthiness of the study was established through several strategies, including triangulation of multiple data sources such as classroom observations, reflection journals, and focus group discussions; member checking, wherein preliminary findings were shared with participants to confirm the accuracy of interpretations; the maintenance of a detailed audit trail documenting procedures, coding decisions, and analytical steps; and peer debriefing with colleagues who reviewed the methodology and findings to minimize researcher bias and enhance credibility, dependability, and confirmability.

Results and Discussion

The implementation of experiential learning strategies in cookery education at the University of Northern Philippines Laboratory Schools yielded rich insights into student engagement, skill mastery, and reflective practice. Data from classroom observations, reflection journals, and focus group discussions revealed five major themes: (1) initiative and autonomy, (2) collaboration and peer learning, (3) reflective practice and metacognition, (4) technical mastery and skill progression, and (5) motivation and confidence. These themes collectively illustrate how experiential learning transformed the cookery classroom into a dynamic environment where students actively constructed knowledge through hands-on practice and reflective dialogue.

The findings also highlight the challenges encountered, including resource limitations, uneven participation, and cultural factors that shaped classroom dynamics. When situated against international literature, the results affirm the global relevance of experiential learning while underscoring the unique contextual realities of Philippine vocational education.

Initiative and Autonomy

Observation data showed that students increasingly demonstrated initiative in performing culinary tasks without constant prompting from the teacher. Early sessions revealed hesitancy, with students waiting for explicit instructions before beginning tasks. However, as experiential modules progressed, learners began to take ownership of their activities.

One student reflected in her journal: *"At first, I was afraid to make mistakes, but when I was allowed to try on my own, I realized I could learn faster. I felt proud when I finished the dish without asking for help."* This statement illustrates the shift from dependence to autonomy, a hallmark of experiential learning.

Kolb's (1984) [12] model emphasizes active experimentation as a critical stage in the transformation of knowledge. The students' willingness to initiate tasks reflects their movement into this stage, where learning is consolidated through independent practice. International studies echo this finding: Bay (2019) [1] reported that culinary students in Australia who were given autonomy over kitchen tasks developed stronger problem-solving skills and greater confidence than peers in teacher-directed settings.

In the Philippine context, where traditional pedagogy often emphasizes obedience and deference to authority, the emergence of initiative is particularly significant. It suggests that experiential strategies can counteract passive learning tendencies and foster learners' agency.

Collaboration and Peer Learning

Collaboration emerged as a central theme in both observations and focus group discussions. Students frequently worked in pairs or small groups, sharing responsibilities such as ingredient preparation, cooking, and plating. This cooperative dynamic not only enhanced efficiency but also created opportunities for peer-to-peer learning.

During one FGD, a student remarked, *"When my partner showed me how to cut the vegetables properly, I realized I was holding the knife wrong. It was easier to learn from a classmate because we were both practicing together."* Such peer exchanges exemplify Vygotsky's concept of the Zone of Proximal Development, where learners advance through social interaction and scaffolding provided by peers.

International literature supports the value of collaboration in vocational education. Gessler (2020) [10] noted that German apprenticeship models thrive on cooperative learning, where students learn alongside peers and mentors in authentic workplace settings. Similarly, Singapore's competency-based training emphasizes teamwork as a critical employability skill (Hwang & Lee, 2022) [11].

In the UNP cookery classroom, collaboration also fostered a sense of community. Students reported feeling more motivated when working with peers, as group tasks reduced anxiety and encouraged mutual support. This aligns with

Self-Determination Theory (Ryan & Deci, 2000) [15], which identifies relatedness as a key driver of intrinsic motivation.

Reflective Practice and Metacognition

Reflection journals provided a window into students' metacognitive processes. Learners documented their challenges, realizations, and strategies for improvement after each session. These reflections revealed a growing capacity for self-assessment and critical thinking.

One journal entry stated: *"I burned the sauce because I didn't stir it enough. Next time, I will watch the heat and stir constantly. I learned that mistakes can teach me how to do better."* This demonstrates how students engaged in reflective observation and abstract conceptualization, key stages in Kolb's cycle.

FGDs reinforced this theme, with students expressing appreciation for the opportunity to reflect. One participant shared: *"Writing in the journal helped me see what I needed to improve. It was like talking to myself about my cooking."*

International research underscores the importance of reflection in skill-based disciplines. Beard and Wilson (2018) [2] argue that sensory pedagogy must be complemented by reflective practice to ensure deep learning. In hospitality education, reflective journals have been shown to enhance students' ability to connect practical experiences with theoretical concepts (Bay, 2019) [1].

In the Philippine cookery classroom, reflection was particularly valuable because it compensated for resource constraints. Even when students had limited access to ingredients or tools, reflective practice allowed them to internalize lessons and conceptualize improvements for future sessions.

Technical Mastery and Skill Progression

Observations and checklists documented clear progression in technical competencies. Early sessions revealed frequent errors in knife handling, hygiene practices, and plating. However, by the end of the modules, students demonstrated marked improvement in accuracy and efficiency.

For example, one student who initially struggled with knife skills was later observed slicing vegetables evenly and confidently. Another student who had difficulty maintaining hygiene was noted consistently washing hands and sanitizing tools.

Students themselves recognized these improvements. A journal entry read: *"I used to be slow in chopping, but now I can finish faster and cleaner. I feel like I am becoming a real cook."*

These findings align with international literature. Hwang and Lee (2022) [11] reported that experiential learning improved food safety compliance among culinary students in Korea. Similarly, studies in Singapore and Australia highlight that hands-on practice accelerates technical mastery compared to lecture-based instruction (Biggs & Tang, 2011) [3].

In the Philippine context, technical mastery is critical not only for employability but also for entrepreneurial competencies. Students who master cooking techniques are better positioned to develop small food enterprises, a key goal of the TLE curriculum (DepEd, 2016) [8].

Motivation and Confidence

Experiential learning significantly enhanced student motivation and confidence. Observations revealed increased enthusiasm during cooking sessions, with students actively participating and expressing excitement about their tasks.

One student shared in the FGD: *"I used to feel nervous in the kitchen, but now I look forward to cooking. I feel more confident because I know I can do it."*

This motivational shift can be explained through Self-Determination Theory. Experiential learning provided autonomy (freedom to experiment), competence (skill mastery), and relatedness (peer collaboration), all of which foster intrinsic motivation (Ryan & Deci, 2000) [15].

International comparisons reinforce this finding. Studies in hospitality education show that experiential modules increase student confidence and creativity, preparing them for industry demands (Bay, 2019) [1]. In Germany, competency-based training similarly boosts learner motivation by situating tasks in authentic contexts (Gessler, 2020) [10].

In the Philippine cookery classroom, enhanced motivation is particularly significant given resource constraints and traditional pedagogy. Experiential strategies provided a pathway to re-engage students who might otherwise be disengaged in lecture-based settings.

Challenges and Limitations

Despite positive outcomes, several challenges were observed. Resource constraints limited the availability of ingredients and tools, forcing students to improvise. While this sometimes-encouraged creativity, it also restricted the scope of practice.

Uneven participation was another issue. Some students were more engaged than others, reflecting differences in confidence and prior experience. Cultural factors also influenced dynamics, as respect for authority sometimes inhibited students from questioning instructions or experimenting freely.

These challenges mirror findings in other developing countries. Salazar (2021) [16] noted that limited resources and outdated pedagogy hinder vocational education in the Philippines. Pascual (2020) [14] similarly highlighted teachers' tendency to revert to passive instruction when faced with constraints.

Acknowledging these limitations is critical for contextualizing the findings. While experiential learning proved effective, its full potential can only be realized with adequate resources, teacher training, and cultural adaptation.

Implications for Practice

The findings of this study offer a roadmap for elevating Technology and Livelihood Education (TLE) from traditional instruction to industry-ready vocational training.

- **For Educators:** The transition from "lecturer" to "facilitator" is essential. Even in resource-limited settings, teachers should prioritize the Active Experimentation and Reflective Observation stages of Kolb's cycle to foster student autonomy and reduce the "fear of mistakes" identified in this study.
- **For School Administrators & Policymakers:** To move beyond passive textbook-based learning, there must be a sustained investment in laboratory facilities that simulate authentic kitchen environments. Addressing the "resource constraints" mentioned by participants is critical to preventing educators from reverting to less effective, lecture-oriented methods.

- **For Curriculum Developers:** There is a clear need to systematically embed reflective journaling and peer-led "Zone of Proximal Development" activities into the national TLE curriculum. This ensures that technical mastery is accompanied by the metacognitive skills required for entrepreneurial success and 21st-century workplace readiness.

These recommendations align with global trends in vocational education, where experiential learning is increasingly recognized as essential for workplace readiness (Biggs & Tang, 2011; Gessler, 2020) [3, 10].

Future Directions

Future research should explore longitudinal outcomes of experiential learning in cookery education, tracking students beyond secondary school to assess employability and entrepreneurial success. Larger sample sizes and diverse contexts would enhance generalizability.

Studies could also examine the integration of industry immersion, in which students apply their skills in real-world workplace settings. This would align Philippine cookery education with international models that emphasize authentic practice and industry linkages.

Finally, future research should investigate the impact of experiential learning on entrepreneurial competencies, such as menu planning, costing, and marketing. These skills are critical for students who aspire to establish food enterprises, a key objective of the TLE curriculum.

Conclusion

Integrating experiential learning strategies into cookery education enhances student engagement and mastery of technical skills. Embedding Kolb's learning cycle into classroom practice transforms cookery instruction into a dynamic, reflective, and industry-relevant experience. This study contributes to vocational pedagogy literature by demonstrating how experiential approaches foster resilience, autonomy, and collaborative competence. For policymakers and practitioners, the findings advocate sustained investment in performance-based, reflective instructional designs to align TLE curricula with global standards.

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