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RESEARCH ARTICLE

# EVALUATION OF THE TECHNICAL-VOCATIONAL-LIVELIHOOD HOME ECONOMICS CURRICULUM AT RIZAL NATIONAL HIGH SCHOOL

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## ABSTRACT

This quantitative descriptive study evaluated the instructional effectiveness, institutional capacity, practical readiness, and industry relevance of the Technical-Vocational-Livelihood Home Economics (TVL-HE) curriculum specializing in Bread and Pastry Production NC II at Rizal National High School during School Year 2025–2026. Specifically, the investigation analyzed student enrollment patterns, TESDA National Certificate II (NC II) participation, laboratory facility and equipment adequacy, competency performance, industry-based work immersion evaluations, and operational gaps affecting program implementation. Utilizing comprehensive document analysis and secondary data evaluation, the study examined official institutional records, including laboratory inventory reports, assessment results, budget allocations, and Work Immersion Performance Appraisal Reports.

The study covered a complete enumeration of 32 Grade 12 learners enrolled in the specialization. Assessment metrics revealed exceptional competency, with all 32 learners participating in and successfully passing the national assessment, achieving a 100% participation and certification rate. Work immersion appraisals further demonstrated strong

alignment with workplace standards, yielding an overall composite mean of 4.61 on a five-point scale. Learners demonstrated superior performance in initiative and responsibility, whereas teamwork and work attitude were identified as minor areas for targeted enhancement. Conversely, facility evaluation uncovered significant resource constraints, particularly critical shortages in refrigeration units, heavy-duty deck ovens, and functional commercial ranges, which directly limit individualized hands-on learning.

The findings confirm that while the TVL-HE program exhibits robust pedagogical quality, high student achievement, and strong industry relevance, persistent infrastructure deficiencies constrain maximum operational capacity. To resolve these operational challenges, a comprehensive TVL-HE Curriculum Enhancement and Facility Action Plan was developed. This strategic plan prioritizes modernizing specialized laboratory equipment, expanding practical simulation hours, optimizing pre-immersion orientation, broadening local industry partnerships, and institutionalizing continuous quality assurance protocols to sustain high program outcomes.

**Keywords:** *Technical-Vocational-Livelihood (TVL), Work Immersion Performance, Facility Adequacy*

## INTRODUCTION

Around the world, practical education is stepping up as a key solution to youth unemployment and changing job markets. Major global organizations like UNESCO and the International Labour Organization have long pushed for Technical and Vocational Education and Training (TVET) to help bridge the gap between classroom learning and actual workplace demands. Over the years, Home Economics has evolved far beyond basic domestic chores into a respected vocational discipline covering culinary arts, hospitality, tourism, caregiving, and fashion. Today, schools globally face a common challenge: making sure these practical programs do not just exist on paper, but actually teach skills that students find useful and

directly relevant to real jobs or starting a business.

How well vocational training works usually comes down to how students experience it firsthand. When learners feel that what they are doing in class directly connects to their personal goals and future careers, they tend to stay more engaged, pick up skills faster, and perform better overall. However, a widespread issue in many countries is that curriculum design often lags behind industry standards. Technology moves fast, and economic needs shift constantly. Without regularly updated training tools, modern equipment, and practical learning modules, students can easily end up learning outdated methods that fall short in competitive job markets.

In the Philippines, the government responded to these global educational trends by introducing the Senior High School (SHS) program under the K to 12 Law (Republic Act No. 10533). As part of this reform, the Technical-Vocational-Livelihood (TVL) Track was created, with Home Economics (HE) as one of its core strands. The TVL-HE curriculum aims to equip students with TESDA National Certificates in areas like Cookery, Bread and Pastry Production, Housekeeping, Food and Beverage Services, and Caregiving. The ultimate goal is simple: give high school graduates clear options, whether they want to get a job right after graduation, start a small business, or go on to college.

While the design looks strong on paper, public high schools across the country face real challenges bringing it to life. Many campuses deal with a lack of specialized tools, outdated equipment, cramped laboratory spaces, and limited practice materials. These day-to-day resource limitations create a frustrating gap between what the curriculum promises and what students actually experience. Because of this, student perspectives on the TVL-HE strand vary widely, some see it as a helpful launchpad for quick employment or business, while others feel the skill training lacks depth and leaves them unprepared for college or formal industry work.

Looking at how students perceive the effectiveness and relevance of their curriculum is one of the best ways to see if the TVL-HE program is actually delivering. "Perceived

effectiveness" comes down to whether students feel they are truly mastering practical skills and theoretical concepts in class. "Perceived relevance," on the other hand, is about whether they see those skills as useful for their personal lives, their local community, and their future job plans. Since a student's belief in what they are learning directly drives their motivation, understanding their viewpoint gives educators the feedback needed to fix what isn't working.

At the local level, schools experience these national challenges in very specific ways. Rizal National High School operates in a community where students come from diverse socio-economic backgrounds, each with different goals and levels of support at home. For many of these young people, the TVL-HE strand is a vital pathway toward learning a practical trade to support their families, land a local job, or start a small enterprise. Yet, despite the program's presence in the school, there is very little clear data on how well the current offerings actually match what these students need and expect.

Local conditions naturally shape how learning happens every day. Factors such as the actual state of the school's Home Economics laboratory, the availability of cooking or service equipment per student, the teaching approaches used by instructors, and the actual job demands within the surrounding community all influence the quality of training. Without direct feedback from the students themselves, teachers and school leaders at Rizal National High School are left guessing about whether their TVL-HE instruction is truly preparing graduates for what comes next, or if critical resource and training gaps are holding them back.

This study will evaluate the overall effectiveness and industry relevance of the TVL Home Economics curriculum at Rizal National High School through a document-based analysis of institutional records. By grounding vocational education in verified data—connecting national standards and local workplace demands directly to official school metrics—this research aims to highlight structural strengths and pinpoint critical resource gaps. Ultimately, the goal is to leverage empirical evidence from inventory logs, passing rates, and industry appraisals to build a practical Action Plan that refines teaching practices,

upgrades learning facilities, and ensures students are fully equipped for the workforce.

**Theoretical Framework**

This study is anchored on Albert Bandura's Social Learning Theory, later expanded into Social Cognitive Theory, alongside John Dewey's Theory of Experiential Education. Together, these frameworks provide a solid foundation for evaluating how Senior High School students assess the effectiveness and relevance of their Technical-Vocational-Livelihood (TVL) Home Economics curriculum.

Bandura posits that learning occurs within a social context through observational modeling, retention, physical reproduction, and motivation. In TVL Home Economics, instructional quality relies heavily on demonstration teaching by qualified instructors. Students observe proper food preparation, baking techniques, and service setups before executing these skills on their own. Bandura's concept of self-efficacy, a learner's belief in their ability to perform specific tasks explains how ratings of skill acquisition reflect student confidence in executing tasks independently. As cited by Lucas et al. (2021) and OECD Vocational Education Frameworks (2023), Bandura's constructs remain central to vocational pedagogy, showing that structured observational learning directly predicts practical skill performance.

Dewey's theory asserts that genuine education happens through direct experience, or learning by doing. For experiential learning to work, physical environments must supply functional tools and realistic conditions. Within the TVL-HE curriculum, Dewey's model grounds the evaluation of laboratory facility and equipment adequacy. Mastering competencies in Cookery, Bread and Pastry Production, Food and Beverage Services, and Housekeeping requires working kitchen stations and sufficient supplies. When resources are lacking or overshared, hands-on learning suffers, lowering evaluated curriculum effectiveness. As cited by Billett (2021) and the UNESCO-UNEVOC Technical Framework (2022), Dewey's model forms the foundation of modern competency-based training, where direct equipment

access determines task mastery.

These theoretical perspectives link directly to the study's main variables. Instructional quality and skill acquisition draw from Bandura's observational learning and self-efficacy models, where teacher demonstrations build student performance confidence. Facility adequacy and operational challenges stem from Dewey's experiential learning requirements, as material constraints shape how students experience training. Lastly, evaluations of curriculum relevance regarding industry alignment, college preparation, and entrepreneurship readiness reflect students' perceived readiness to apply their vocational training to workforce demands, further studies, or business ventures.

**Conceptual Framework**

The conceptual framework of this study uses a Context-Input-Process-Output (CIPO) Model to illustrate the relationship between institutional records, the document analysis procedure, evaluated program indicators, and the resulting intervention plan.

The Input of the study consists of official institutional documents and records from Rizal National High School and its partner establishments. These include:

Program Profile Records such as student enrollment and Technical Education and Skills Development Authority National Certificate II assessment participation records.

School Audit Logs including laboratory inventory reports covering tool adequacy, equipment functionality, and student-to-equipment ratios.

Assessment and Evaluation Records such as student National Certificate II assessment results and Work Immersion Performance Appraisal Reports completed by industry supervisors.

Operational Logs including budget allocation records, laboratory utilization reports, and industry supervisor feedback documenting operational concerns and implementation challenges.

The Process stage involves systematic Document Analysis and Secondary Data Evaluation of the collected records. This includes data extraction and organization from institutional documents, quantitative analysis of assessment performance, inventory status, and participation records, and qualitative content analysis of work immersion appraisal reports and industry feedback to identify competency gaps, resource deficiencies, and operational constraints affecting program implementation.

The Output of the study is a Data-Driven TVL-HE Action Plan designed to strengthen the implementation of the Technical-Vocational-Livelihood Home Economics- Bread and Pastry Production. The proposed output is designed to cultivate students' technical competencies, employability skills, and alignment with commercial industry standards.

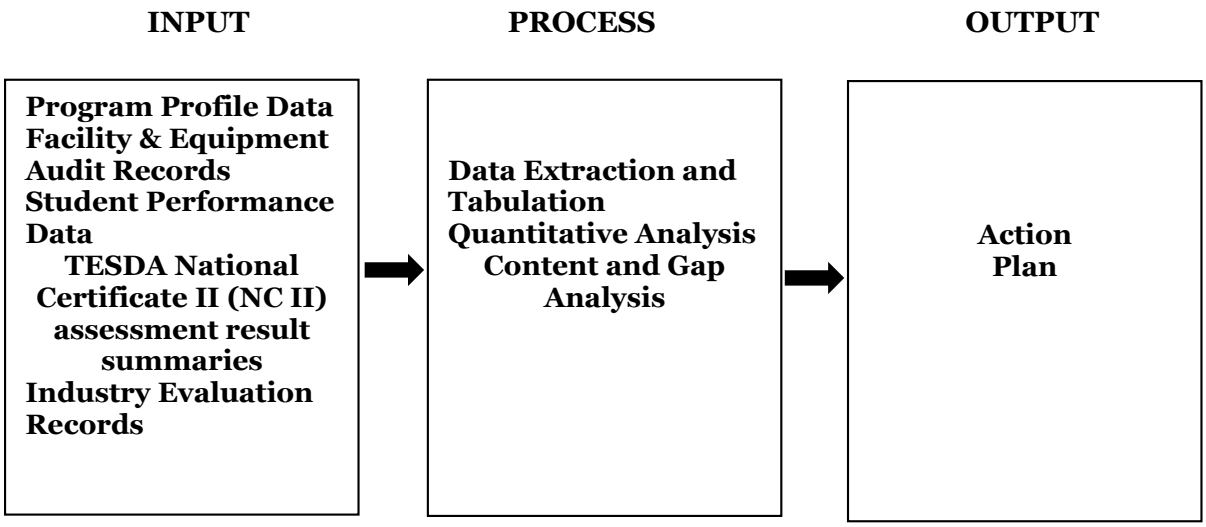



**Figure 1. Research Paradigm**

**Scope and Delimitation/Limitation of the Study**

This study will focus on evaluating the effectiveness, industry relevance, and operational capacity of the TVL Home Economics curriculum at Rizal National High School for Academic Year 2025–2026 using institutional records. The scope covers four key areas: program enrollment profiles across specializations; laboratory equipment inventories; student TESDA NC II passing rates; and industry alignment based on Work Immersion appraisal reports. These empirical findings will directly inform a proposed Curriculum

Enhancement and Facility Action Plan.

The scope is strictly limited to official school documents and external evaluation records from Grade 12 TVL-HE students who completed their coursework and Work Immersion. Primary data collection such as student surveys or interviews and records from academic tracks are excluded to keep the focus entirely on the Home Economics framework.

**Significance of the Study**

The findings of this study will provide meaningful insights into the implementation, quality, and real-world value of the Technical-Vocational-Livelihood (TVL) Home Economics curriculum. This research will offer practical value to the following stakeholders:

**Senior High School Students**. TVL-HE learners benefit directly from an honest look at the resources supporting their track. By reviewing inventory records and immersion performance data, this study pinpoints real resource shortages and skill gaps, driving an Action Plan to upgrade lab equipment, improve practical training, and boost career readiness.

**TVL-Home Economics Teachers**. Educators receive clear, evidence-based feedback on how well their instruction matches workplace demands. Using industry supervisor appraisals and competency reports instead of student opinions helps teachers identify technical skill gaps, adjust lab activities, and meet current industry standards.

**School Administrators and Department Heads**. School leadership gains a solid, data-backed foundation for budgeting and planning. Documented equipment-to-student ratios and facility audit logs allow administrators to justify funding requests, prioritize lab upgrades, and design targeted training for TVL faculty.

**Local Community and Industry Partners**. Local businesses and hospitality partners gain access to well-prepared graduates with job-ready skills. Aligning classroom outcomes with industry appraisal metrics closes the gap between school training and local workforce needs, building stronger industry partnerships.

**Future Researchers**. This research offers a practical blueprint for using document-based evaluation in technical-vocational education. Future researchers can use the baseline data and methods to study other TVL tracks, schools, or educational divisions.

**Definition of Terms**

For clarity and consistency, the following key terms are operationally defined based on how they are used in this study:

**Industry Relevance** – The degree to which classroom training matches real-world workplace demands, evaluated using external supervisors' ratings on Work Immersion performance appraisal sheets.

**Institutional Capacity** – The physical resource readiness of the school to support technical training, evaluated through laboratory inventory reports assessing tool adequacy, equipment functional status, and student-to-equipment ratios.

**NC II Assessment Participation Rate** – The percentage of eligible Grade 12 TVL-HE students who officially registered for and underwent the TESDA National Certificate II competency assessment.

**Operational Gaps** – Systemic bottlenecks, equipment shortages, budget limitations, or training discrepancies identified by analyzing inventory logs, financial records, and industry supervisor feedback.

**Practical Readiness** – The level of technical skill and workplace preparedness demonstrated by students, as measured objectively by their pass/fail rates in the TESDA NC II Assessment.

**School Laboratory Inventory Reports** – Official school audit documents detailing the availability, condition, usability, and quantity of tools, appliances, and facilities in the Home Economics laboratories.

**TVL-HE Program Profile** – Refers to the baseline operational characteristics of the Technical-Vocational-Livelihood Home Economics track at Rizal National High School, measured specifically through student enrollment numbers across specializations and NC II participation rates.

**Work Immersion Performance Appraisal Reports** – Standardized evaluation documents completed by industry supervisors that measure students' technical skills, work ethic, and operational adherence during workplace placement.

## LITERATURE REVIEW

The review of related literature and studies explores previous research on the current state of knowledge in the field, along with pertinent theories, research techniques, and project-related gaps. The collected materials show how the study will add new insights and how it is related to previous research.

### Instructional Quality and Teacher Expertise

Foreign literature highlights that technical and vocational training relies heavily on the pedagogical competence and practical expertise of instructors. Lucas et al. (2021) emphasized that real-world vocational effectiveness requires instructors to master dual domains: domain-specific technical skills and industry-aligned teaching strategies. Their study demonstrated that student mastery in vocational tracks increases significantly when teachers blend direct skill demonstration with collaborative problem-solving, rather than relying solely on lecture-based instruction.

In the Philippine basic education context, Gatdula (2021) evaluated the implementation of the Senior High School TVL track and found that teacher instructional quality serves as a primary predictor of student skill retention. The research revealed that while TVL teachers demonstrate strong compliance with DepEd curriculum guides, student

performance scores peak when instructors hold national certifications and possess direct industry background. Complementing these findings, De Ocampo et al. (2022) conducted a quantitative assessment of TVL Home Economics programs in public high schools, reporting high mean scores in teacher instructional delivery. Their data indicated that frequent practical demonstrations and structured performance task rubrics significantly enhance learners' self-rated operational confidence.

**Laboratory Facilities and Equipment Adequacy**

Technical skill acquisition is directly bound to the physical learning environment. A study by UNESCO-UNEVOC (2022) across vocational training centers in Southeast Asia established that spatial capacity, tool accessibility, and equipment functional status account for over forty percent of the variance in technical competency scores among vocational students. The report concluded that theoretical instruction cannot compensate for deficits in physical machinery or consumable learning supplies.

Locally, resource limitations remain a dominant quantitative variable in public school TVL evaluation. Bandala (2022) investigated facility readiness in Senior High School TVL strands and recorded lower mean satisfaction scores regarding laboratory equipment ratios compared to instructional delivery. Students reported that shared equipment and insufficient raw materials reduced their actual hands-on execution time during practical exams. Similarly, a regional assessment by Moral and Villanueva (2023) across public high schools in CALABARZON showed a direct positive correlation between the functional status of Home Economics laboratory equipment (such as commercial ovens, kitchen stations, and service tools) and students' self-evaluated mastery of core competencies in Cookery and Food and Beverage Services.

**Industry Alignment and Employment Readiness**

A global perspective on technical-vocational education stresses the necessity of dynamic alignment between school curricula and labor market demands. Billett (2021)

examined vocational curriculum development across European and Asian vocational frameworks, concluding that curriculum relevance declines rapidly when training modules fail to mirror contemporary workplace technologies and service standards. The study underscored that authentic work integration during secondary education directly influences immediate graduate employability.

In the Philippines, the alignment of the K to 12 TVL track with industry requirements has been closely monitored. Santos and Cruz (2021) quantitatively analyzed the employment outcomes and skill readiness of SHS TVL graduates, finding that students who trained under updated competency modules demonstrated higher workplace entry ratings during initial employment. Their findings highlighted that local industry partners value practical soft skills and standardized operational discipline gained during school-based laboratory sessions. Furthermore, Awi and Garcia (2022) evaluated the career readiness of Senior High School TVL-HE graduates, reporting that while students rate their foundational technical skills as highly relevant to entry-level jobs, continuous alignment updates between DepEd training standards and local hospitality and food service business demands are vital to maintaining graduate competitiveness.

**Preparation for Higher Education and Entrepreneurship**

Vocational education in modern secondary school systems is increasingly evaluated as a dual-purpose pathway that prepares students both for work and tertiary academic progression. OECD (2023) research on vocational education tracks demonstrated that students who receive structured, competency-based technical training in secondary school display higher self-efficacy and performance in university-level technical and applied science degree programs compared to peers without practical training backgrounds.

Within the local context, Mordeno (2022) evaluated the career path alignment of Senior High School TVL graduates pursuing higher education, reporting that students who transition from TVL-HE to hospitality, tourism, and nutrition degree programs demonstrate

high academic adjustment levels because their foundational technical skills were established in Senior High School. In addition, a study by Ramos and Garcia (2021) on micro-entrepreneurship readiness among TVL-HE graduates found high mean ratings regarding the curriculum's inclusion of costing, service management, and product development. Their quantitative findings confirmed that the Home Economics curriculum successfully equips a significant portion of graduates with the perceived confidence and practical capability to launch small-scale, home-based food and service business enterprises.

**Perceived Effectiveness of the TVL Home Economics Curriculum**

Local Studies: In an empirical investigation evaluating technical education standards in secondary schools, DepEd-NEAP (2022) conducted a quantitative assessment of teacher instructional execution across TVL specializations. Utilizing a descriptive survey design, the study demonstrated that teachers' pedagogical competence and mastery of hands-on techniques significantly influenced students' self-assessed skill levels. Statistical correlation revealed that students taught by instructors with formal TESDA training assessors' credentials reported higher self-efficacy during practical evaluations.

In a similar regional study, Manalo and Soriano (2023) measured the impact of teaching methodologies on student technical proficiency in Home Economics courses. Surveying Senior High School learners with a structured Likert-scale instrument, the empirical findings indicated that regular teacher-led demonstrations and clear task rubrics served as strong positive predictors of student performance task mastery, underscoring the critical role of structured instructional delivery in technical strands.

Cedefop (2022) conducted a cross-national quantitative survey evaluating vocational teaching practices across secondary technical institutes. Path analysis confirmed that instructor industry experience combined with active learning approaches directly contributed to higher student operational proficiency and practical problem-solving capability in vocational workshops.

### Laboratory Facilities and Equipment Adequacy

Delos Santos and Mercado (2022) executed a quantitative evaluation of TVL Home Economics laboratory environments across public high schools. Using frequency distribution and statistical mean analysis, the study revealed that facility adequacy ratings lagged behind instructional quality scores. A majority of student respondents reported that shared kitchen stations and limited specialized utensils reduced their individual practice time during practical assessments.

Furthermore, Aquino and Dizon (2024) investigated the correlation between laboratory equipment ratios and student practical performance marks. Multiple regression analysis established that the availability and operational status of Home Economics equipment served as a statistically significant predictor of student skill execution, demonstrating that schools providing adequate student-to-tool ratios achieved higher performance scores in practical exams.

A study from an international perspective, World Bank (2023) published an empirical survey assessing vocational school infrastructure and learning outcomes across developing economies. Analysis of variance (ANOVA) testing revealed that students trained in institutions with fully functional, modern training equipment achieved significantly higher technical competency ratings than those attending institutions with inadequate or outdated workshop facilities.

## Perceived Relevance of the TVL Home Economics Curriculum

### Industry Alignment and Employment Readiness

Technical Education and Skills Development Authority [TESDA] (2022) conducted a quantitative evaluation on the industry alignment of Senior High School TVL specializations. Empirical survey data gathered from industry supervisors and TVL graduates demonstrated a strong alignment between core curriculum competencies and entry-level industry demands,

particularly in customer relations and basic food safety protocols.

Additionally, Bautista and Ocampo (2023) surveyed graduating Home Economics students to evaluate their perceived career readiness across hospitality and culinary specializations. Statistical mean computations and ranking distributions showed high student ratings regarding foundational technical procedures, but lower ratings concerning exposure to large-scale commercial kitchen operations, indicating specific areas where local industry demands exceed school training capacity.

A foreign study by ILO (2022) analyzed curriculum-industry alignment across technical education frameworks using quantitative survey data from vocational learners. Correlation analysis established that authentic work-integrated training modules were strongly linked to enhanced student workplace confidence and job-entry readiness upon graduation.

The high supervisor ratings and TESDA NC II passing rate affirm that school-based training effectively delivers the operational proficiencies and safety standards required by employers. This directly mirrors findings by TESDA (2022), Santos and Cruz (2021), and Bautista and Ocampo (2023), which highlight that Senior High School TVL graduates consistently meet commercial expectations in technical execution and customer relations.

Beyond immediate workplace entry, the competencies developed in the TVL-HE strand provide a versatile foundation. As noted by OECD (2023) and Ramos and Garcia (2021), competency-based vocational education equips students with both the practical confidence for small-scale business ventures (micro-entrepreneurship) and the foundational readiness needed to successfully transition into tertiary academic degree programs.

**Preparation for Higher Education and Entrepreneurship**

Tolentino and Javier (2022) collected quantitative data from TVL Home Economics graduates pursuing tertiary degrees in hospitality and food technology. Standardized

comparative testing indicated that students who completed the TVL-HE strand achieved significantly higher initial grades in college-level practical laboratory courses compared to peers from non-technical academic tracks.

Regarding business creation, Castillo and Mendoza (2023) examined the micro-entrepreneurship readiness of Senior High School TVL-HE students. Frequency distributions showed that a large majority of respondents intended to launch small-scale food or service operations. Statistical evaluations revealed high readiness ratings in basic product costing, food safety, and customer service, confirming that the curriculum effectively builds foundational skills for small business ventures.

In an international study on vocational pathway outcomes, UNESCO (2023) analyzed longitudinal survey data tracking secondary technical track graduates. Statistical modeling confirmed that competency-based vocational education significantly increased student self-efficacy for both tertiary academic programs and self-employment pursuits compared to general secondary curricula.

## RESEARCH QUESTIONS

This study aims to assess the effectiveness and relevance of the Technical-Vocational-Livelihood Home Economics (TVL-HE) curriculum at Rizal National High School through an analysis of existing institutional records and evaluation reports.

Specifically, it seeks to answer the following questions:

1. What is the profile of the TVL-HE program at Rizal National High School in terms of:

   1.1. Student enrollment; and

   1.2. National Certificate II (NC II) assessment participation rate?

2. What is the level of institutional capacity and practical readiness of the program as indicated by:

   2.1. School Laboratory Inventory Reports; and

   2.2. Student performance results in the TESDA NC II Assessment?

3. How relevant is the TVL-HE curriculum to industry standards based on:

   3.1. Industry Supervisors' Work Immersion Performance Appraisal Reports; and

   3.2. Competency rating breakdowns in workplace evaluation rubrics?

4. What program constraints and operational gaps are revealed through the analysis of:

   4.1 inventory logs;

   4.2 budget allocation records; and

   4.3 Work Immersion feedback reports?

5. Based on the findings of the study, what Action Plan can be proposed to improve the implementation and industry alignment of the TVL-HE track?

## METHODOLOGY

This presents the methodology employed in the study. It describes the research design, research locale, respondents, research instrument, data collection procedures, and statistical treatment of data.

### Research Design

This study used a quantitative, descriptive design grounded in Document Analysis and Secondary Data Evaluation to evaluate the effectiveness, capacity, and industry relevance of

the TVL Home Economics curriculum at Rizal National High School. A descriptive design allows for a systematic examination of existing school records such as inventory logs, assessment summaries, and supervisor evaluations to establish an objective baseline of program conditions without disrupting ongoing instruction (Creswell & Creswell, 2023).

Instead of using student surveys, data were gathered directly from official records, including TESDA NC II assessment results, laboratory inventory logs, and Work Immersion performance appraisal reports. Analyzing these institutional records provides a concrete, empirical way to evaluate practical skill outcomes, equipment availability, and workplace readiness across all specializations (Cookery, Bread and Pastry Production, Food and Beverage Services, Housekeeping) (Subedi, 2021). These data-backed findings will serve as the foundation for the proposed Action Plan.

**Population and Sampling**

The target population for this study consisted of the complete school records and evaluation reports of Grade 12 TVL Home Economics- Bread and pastry students at Rizal National High School for Academic Year 2025–2026. These records encompassed Bread and Pastry specialization offered by the school. Because Grade 12 records covered students who have completed their required coursework, laboratory performance tasks, and Work Immersion placements, they provided a complete picture of student performance, resource availability, and technical skill acquisition.

To ensure comprehensive coverage and eliminate selection bias, the researcher applied total enumeration approach across all relevant school documents for the target cohort. Rather than sampling selective records, the study will evaluate the complete dataset, including all official laboratory inventory logs, TESDA NC II assessment result summaries, and Work Immersion performance appraisal reports. Utilizing total enumeration of school files ensured full data representation and provided an objective, comprehensive basis for evaluating the program.

**Respondents of the Study**

This study was conducted at Rizal National High School, Occidental Mindoro a public secondary school located in the municipality of Rizal, Occidental Mindoro operating under the DepEd Division of Occidental Mindoro. As a key senior high school provider in the area, the campus maintains official administrative files and dedicated workshop facilities for its core TVL Home Economics specializations, including Cookery, Bread and Pastry Production, Food and Beverage Services, and Housekeeping.

Selecting Rizal National High School provides a clear, practical look at how vocational education is documented and maintained in a provincial public school setting. Conducting the research within this specific locale ensures that the analyzed school records, laboratory inventory reports, and Work Immersion appraisal files accurately reflect the real operational conditions, facility availability, and resource allocation across the Division of Occidental Mindoro.

**Research Instrument**

Instead of using a survey questionnaire, this study utilized a structured Document Checklist designed to systematically extract and record secondary data from official school files. The research instrument was structured around four main data components: program enrollment and NC II participation logs, school laboratory inventory audit reports, TESDA NC II assessment result summaries, and Work Immersion performance appraisal rubrics.

To ensure content validity and contextual accuracy, the data abstraction instrument underwent expert review by the Senior High School TVL Coordinator and Master Teachers of Rizal National High School. This validation process confirmed that the metrics, indicators, and record-mapping parameters align directly with DepEd standards and TESDA competency requirements for TVL Home Economics.

**Data Gathering Procedure**

The data gathering process followed a structured administrative and technical procedure focused entirely within Rizal National High School to ensure research integrity, ethical compliance, and accurate data retrieval across all TVL-HE specializations. Because the study relied on official school records and document analysis, administrative authorization was requested solely from the Office of the School Principal through a formal transmittal letter detailing the scope and research purpose of the study.

Upon securing written approval from the principal, the researcher coordinated directly with the TVL Department Head, School Registrar, Work Immersion Coordinator, and TVL laboratory custodians and requested official access to necessary documents. These include enrollment logs, TESDA NC II assessment result summaries, laboratory inventory audit reports, and Work Immersion performance appraisal sheets for Bread and Pastry Production.

Data collection was conducted using the validated Data Checklist. The researcher systematically examined, extracted, and recorded the relevant quantitative metrics directly from official school documents. To uphold strict ethical standards and institutional privacy under the Data Privacy Act of 2012 (R.A. 10173), all personal identifiers such as individual student names and supervisor signatures were anonymized and replaced with coded tracking identifiers. Once extraction is complete, all recorded metrics were double-checked for completeness, organized by specialization, and transferred into a secure database for statistical processing and evaluation.

**Statistical Treatment**

To analyze and interpret the quantitative data extracted from the official school records of Rizal National High School, the researcher employed specific descriptive statistical tools. The data gathered for Bread and Pastry Production were categorized, tabulated, and processed using the following statistical measures:

**Frequency Count and Percentage**

Frequency counts and percentage calculations will be used to analyze the TVL-HE program profile and baseline student participation data corresponding to Statement of the Problem (SOP) 1. Specifically, this tool will compute:

The distribution of Grade 12 students enrolled per specialization.

The National Certificate II (NC II) assessment participation rate among eligible learners.

The proportion of functional versus non-functional tools and equipment in the laboratory inventory.

The overall passing and failure rates in the TESDA NC II Assessment.

Ratio Computation

Ratio calculations will be utilized under SOP 2 to evaluate institutional capacity and practical laboratory readiness. Specifically, student-to-equipment ratios will be computed by comparing the total number of functional tools and equipment retrieved from the School Laboratory Inventory Reports against the total number of enrolled Grade 12 TVL-HE students per specialization. This will establish whether the available inventory meets standard DepEd technical training ratios.

**Weighted Mean**

Weighted mean will be used to summarize and evaluate numerical scores from the Work Immersion Performance Appraisal Reports and competency rating rubrics under SOP 3. This measure will quantify industry supervisors' performance ratings across technical execution, work ethic, and workplace adherence.

To interpret the calculated weighted means for student Work Immersion performance, the following standard scoring scale and descriptive interpretation will be used:

Simple Category Frequency Count (Document Remarks Analysis)

To identify program constraints and operational gaps under SOP 4, the researchers will use a basic category counting method. Remarks, notes, and feedback extracted from inventory logs, budget documents, and supervisor appraisal forms will simply be read, assigned to one of four preset categories (Equipment Shortage, Facility/Maintenance Issue, Budget Constraint, or Technical Skill Gap), and tallied by count. The category with the highest tally will represent the primary operational challenge.

**Ethical Considerations**

Because this study relies on document analysis of official school records, strict ethical protocols will be enforced to protect data privacy, institutional confidentiality, and research integrity in accordance with the Data Privacy Act of 2012 (R.A. 10173).

Administrative Clearance: Formal written approval will be secured from the Office of the School Principal before accessing any school files. Document examination will be coordinated directly with the TVL Department Head, Registrar, Work Immersion Coordinator, and workshop custodians.

Anonymization: To protect individual privacy, names and identification numbers on assessment reports, appraisal forms, and inventory logs will be removed and replaced with alphanumeric codes. No personally identifiable information will appear in the study.

Data Security: All extracted data will be stored in password-protected files accessible only to the research team. Once the research is formally completed and accepted, all physical notes and digital records will be permanently destroyed following standard disposal guidelines.

Objective Reporting: Data will be extracted and computed with absolute transparency.

Findings regarding facility conditions, passing rates, and resource gaps will be reported accurately without manipulation or bias.

## FINDINGS

Based on the quantitative abstraction and content analysis of official school class registers, laboratory inventory audit logs, Technical Education and Skills Development Authority (TESDA) assessment summaries, and Work Immersion performance appraisal reports, the salient findings are structured according to the specific Statement of the Problem (SOP):

1. During the second semester of Academic Year 2025–2026, Rizal National High School exclusively offered the Bread and Pastry Production National Certificate II specialization for Grade 12 learners, with female students comprising the majority of the enrollment. All enrolled Grade 12 learners participated in the National Certificate II assessment, demonstrating full engagement in the certification process.

2. The program possessed adequate provisions of minor tools and basic laboratory resources needed for instruction, but limitations were noted in major equipment such as commercial ranges and stoves, refrigeration facilities, and heavy-duty baking equipment. Despite these laboratory and equipment limitations, all learner-candidates successfully completed the competency assessment and earned national certification prior to graduation.

3. Industry supervisors evaluated the learners' overall work immersion performance positively, indicating that students demonstrated satisfactory to outstanding levels of competence in actual workplace settings. Learners showed strong performance in initiative, responsibility, and task completion, while minor areas for improvement were identified in teamwork, workplace adaptability, and work attitude.

4. Inventory records revealed unserviceable laboratory equipment and limited access to

critical facilities required for baking and food production activities. Financial records indicated limitations in available maintenance and operational funds, and supervisor feedback identified challenges related to collaborative work practices, commercial kitchen pacing, and professional resilience.

## CONCLUSIONS

Based on the findings of the study, the following conclusions were formulated:

1. The TVL-HE program at Rizal National High School demonstrates high instructional efficacy and student competency, as evidenced by a flawless 100.00% passing rate in the TESDA Bread and Pastry Production NC II assessment despite localized resource limitations.

2. While foundational instruction and student soft skills are exceptionally well-received by industry partners, institutional capacity is significantly constrained by unserviceable cooking equipment, limited refrigeration, and high student-to-equipment ratios in practical laboratories.

3. Financial constraints, as reflected by restricted MOOE allocations, hinder the immediate repair and acquisition of heavy capital equipment, necessitating targeted external stakeholder partnerships.

4. The TVL-HE curriculum successfully aligns with commercial workplace expectations, though pre-immersion orientations must be strengthened to address minor gaps in teamwork and professional adaptability.

**RECOMMENDATIONS**

In light of the conclusions drawn, the following recommendations are hereby proposed:

1. School administration and TVL department heads should prioritize the immediate allocation of maintenance funds for the repair of the 4 non-functional commercial ranges/stoves and the acquisition of supplementary refrigeration and baking ovens to lower student-to-equipment ratios.

2. The school leadership should actively leverage Maintenance and Other Operating Expenses (MOOE) savings, Special Education Fund (SEF) requests, and alumni or industry partnerships to secure capital outlays dedicated to TVL-HE laboratory modernization.

3. TVL-HE teachers should integrate enhanced pre-immersion modules focusing on commercial kitchen etiquette, inter-shift communication, and collaborative teamwork to bridge minor competency gaps identified by industry supervisors.

4. School administrators should establish a quarterly inventory auditing protocol and continuous stakeholder feedback loop to sustain high TESDA certification rates and ensure ongoing alignment with evolving industry standards.

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