

Original Article

Competency Assessment of TVL of Senior High School Students: Aligning Skills with Industry Requirements

Erwin M. Diapana^{id}, Amelie E. Trinidad^{id}, Queenie Lyn G. Almeresz^{id}, Felomino P. Alba^{id},
Augie E. Fuentes^{id}

Author Information:

Davao del Sur State College, Digos City,
Philippines

Corresponding Author:

erwindiapana66@gmail.com

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Abstract. Competency development and industry alignment are important in preparing Technical-Vocational-Livelihood (TVL) Cookery students for higher education and employment. However, there is a need to examine whether students' competencies match actual workplace expectations. This study assessed the basic, common, and core competencies of TVL Cookery Senior High School students and examined their alignment with industry needs. A mixed-methods design was used. Quantitative data were gathered through student self-assessments and industry supervisors' evaluations based on TESDA standards, while qualitative data were collected from industry managers and supervisors through key informant interviews. Descriptive statistics, independent samples t-tests, and thematic analysis were used to analyze the data. Results showed that students rated themselves highly on basic, common, and core competencies, while industry supervisors rated them very highly across the same areas. Significant differences were found between students' self-assessments and industry evaluations across all competency domains, indicating that industry supervisors viewed students' workplace competencies more favorably than students did. Qualitative findings showed that workplace readiness requires both technical and soft skills, particularly food preparation, sanitation, time management, communication, teamwork, adaptability, and a willingness to continue learning. Industry partners also emphasized the value of competitions, TESDA certifications, and hands-on training in strengthening student competence. The findings suggest that TESDA-aligned instruction and structured industry exposure help prepare TVL Cookery students for workplace demands. The study recommends stronger reflective activities, ongoing skills training, and closer collaboration between schools and industry to support students' confidence, competence, and professional growth.

Keywords: Competencies; Cookery; Industry alignment; Professional development; Workforce readiness.

The Technical-Vocational-Livelihood (TVL) strand in the Philippine Senior High School curriculum was designed to prepare students for employment, entrepreneurship, and higher education. In the Cookery specialization, students are expected to develop competencies in food preparation, kitchen safety, sanitation, and basic culinary practice. These competencies are important in the hospitality and food service industries, where workers are expected to perform tasks accurately and quickly, with attention to cleanliness, teamwork, and professionalism. However, completing school-based cookery training does not always guarantee that students are ready for the demands of the culinary workplace. This necessitates examining whether the competencies developed by TVL Cookery students are truly aligned with industry expectations.

Hospitality and culinary services continue to play an important role in creating jobs and supporting economic activity across many countries. As a major component of the tourism industry, food-related services contribute substantially to global economic development (WTTC, 2020). Consequently, vocational institutions are increasingly challenged to equip learners with competencies that can be effectively demonstrated in professional environments. Competency-based education supports this goal by focusing not only on what students know but also on what they can actually do in practice (Açıkgöz & Babadoğan, 2021). In nations such as Australia and Canada, vocational education systems have been structured to respond to workforce demands and facilitate graduates' entry into employment opportunities (Smith et al., 2018). Likewise, the European Qualifications Framework provides standards for comparing skills across industries, including hospitality and culinary arts, to help prepare learners for local and international employment opportunities (Atkins, 2017). Collectively, these international initiatives underscore the importance of aligning educational preparation with industry expectations to improve the workforce.

In the Philippines, the TVL strand was included in the K to 12 system to give students practical skills that may support immediate employment. The Cookery specialization is especially relevant because of the country's growing tourism and food service industries. The food service industry has continued to contribute to the economy and create employment opportunities (Philippine Statistics Authority, 2020). However, industry growth also increases the need for graduates who can meet workplace expectations. Studies have shown that there remains a mismatch between the competencies of TVL Cookery students and the industry's actual demands (Alinea et al., 2024). Although students may learn basic cooking skills in school, they may have limited exposure to real workplace situations, which can affect their ability to perform under actual kitchen conditions (Edralin & Pastrana, 2023). This suggests that student readiness should be measured not only by school-based assessments but also by evaluating industry partners.

This concern is also important in the Davao Region, where tourism and food-related industries continue to expand. In 2024, the region welcomed over 4.15 million tourists, a 27 percent increase from the previous year, and generated around ₱34.79 billion in revenue, supporting the hospitality and culinary sectors (Philippine Information Agency, 2024). This growth can create more opportunities for TVL Cookery graduates, but it can also raise the expected skill level of future workers. Earlier efforts to strengthen human resource development in local tourism and culinary services also show that the region recognizes the need for better industry-based skills preparation (BusinessWorld Online, 2017). These developments highlight the need for schools to prepare students not only with basic cookery skills but also with the technical, adaptive, and workplace skills employers require.

Previous research has explored competency development, employability skills, and workforce preparedness among TVL students. However, many studies have focused either on students' perceptions of their own competencies or on employer expectations independently. Comparatively few investigations have examined both perspectives simultaneously while also identifying the competency requirements of the culinary and food service industry within a single study. Consequently, limited evidence exists regarding the degree to which competencies acquired through TESDA-based Cookery training correspond with actual workplace expectations. This limitation is important because assessments conducted solely within schools may not fully capture students' readiness for employment. Without the inclusion of industry perspectives, schools may face challenges in identifying competency areas that require improvement and determining whether graduates possess the qualifications most valued by employers. Therefore, integrating student self-assessments, industry partner evaluations, and industry competency requirements can provide a more comprehensive understanding of the preparedness of TVL Cookery students for employment and career advancement in the culinary field.

This study aimed to assess the competencies of TVL Cookery Senior High School students and determine the

extent to which these competencies align with industry requirements. Specifically, the study evaluated student competencies based on TESDA standards through self-assessment and industry partner evaluations, examined differences between the two assessment perspectives, identified competency requirements relevant to cookery and culinary occupations, and integrated quantitative and qualitative findings to develop a more comprehensive picture of student preparedness. The results may provide valuable insights for policymakers, educators, school administrators, and industry partners to strengthen curriculum-industry alignment, enhance training initiatives, and support the employability and workforce integration of TVL cookery graduates.

Methodology

Research Design

This study employed a convergent parallel mixed-methods design to provide a comprehensive assessment of TVL Cookery students' competencies and their alignment with industry requirements. This design was considered the most appropriate for answering the research questions because the study sought not only to assess students' competencies and determine differences between student self-assessments and industry partner evaluations but also to explore the specific competency needs of the culinary industry. The quantitative component assessed students' TESDA-based competencies through self-assessment and industry evaluation, while the qualitative component explored industry partners' views on essential workplace skills. Both data sets were collected simultaneously, analyzed separately, and integrated to provide a comprehensive understanding of students' competency alignment with industry expectations and identify potential competency gaps.

Research Participants

The participants of the study were TVL Cookery Senior High School students from selected public Senior High Schools in the Division of Davao del Sur and industry partners from culinary, food service, and hospitality establishments in the same province. The student participants were enrolled in the TVL Cookery strand during the 2025–2026 school year. The industry participants included supervisors, managers, and human resource personnel who had experience supervising, training, or employing TVL Cookery students or graduates. Purposive sampling was used because the study required participants who possessed relevant knowledge and experience regarding TVL Cookery competencies and industry expectations. Using this technique, the study involved $N=140$, consisting of $n=120$ student participants and $n=20$ industry partners based on the established inclusion criteria related to their direct connection to TVL Cookery training and industry practice. Out of the $n=20$ industry partners, $n=10$ participated in the interviews.

Research Instruments

The study used two survey instruments and one interview guide. The first instrument was the Self-Assessment of Cookery Competencies, adapted from TESDA-based Cookery standards to measure students' perceived competencies in basic, common, and core cookery skills. The second instrument was the Industry Evaluation of Student Competencies, which industry partners used to rate students' competencies across the same competency areas. Both instruments used a five-point Likert scale. To establish content validity, tools were checked by experts for clarity, relevance, and alignment with TESDA standards. A pilot test was conducted with respondents whose characteristics were similar to those of the target participants to assess item clarity and consistency. The reliability of the instruments was determined using Cronbach's alpha (Cronbach, 1951), which measured internal consistency and indicated acceptable reliability for the study. For the qualitative part, a semi-structured interview guide was used to gather industry partners' views on required cookery skills, competency gaps, and student readiness for work.

Data Gathering Procedure

The researcher first secured permission from the Schools Division Superintendent of Davao del Sur and other concerned school officials. After approval was granted, endorsement letters were sent to the school heads of selected Senior High Schools and to the identified partner industries. The researcher then obtained the list of eligible TVL Cookery students and coordinated with industry partners who met the inclusion criteria. The researcher personally supervised the distribution and retrieval of the questionnaires to ensure completeness. For the qualitative part, semi-structured interviews were conducted with selected industry partners. With their consent, the interviews were recorded, transcribed, and prepared for analysis.

Data Analysis

Quantitative data were coded, tallied, and analyzed using statistical software. *M* and *SD* were used to describe

students' and industry partners' competency ratings. A *t*-test was used to determine whether there was a significant difference between students' self-assessments and industry evaluations. Qualitative data from the interviews were analyzed using thematic analysis. The transcripts were read repeatedly, meaningful responses were coded, similar codes were grouped, and major themes were developed. The quantitative and qualitative findings were then compared and integrated to explain the alignment between student competencies and industry needs.

Ethical Considerations

The researcher observed ethical standards throughout the study. Participation was voluntary, and all participants were informed of the purpose of the study, the procedures involved, the possible risks and benefits, confidentiality measures, and their right to withdraw at any time without penalty. Written informed consent was obtained before the survey and interview. For minor student participants, parental consent and student assent were secured. Confidentiality and privacy were also protected. Names, school identifiers, company names, and other personal details were not shown in the final report. Codes were used instead of real names. The collected data were stored securely and were accessed only by the researcher. Audio recordings, transcripts, and survey forms were used only for research purposes. After the required retention period, the data will be properly deleted or destroyed. These measures helped ensure that the participants' rights, safety, and dignity were protected.

Results and Discussion

Self-Assessed Competencies of TVL Cookery Students Based on TESDA Standards

Table 1 shows the self-assessed competency level of TVL Cookery students. The results show that the students rated themselves high across all domains, with an overall mean of 3.82. This indicates that the students generally perceived themselves as competent in performing TESDA-based skills required in the Cookery specialization. Among the three domains, common competencies had the highest mean, 3.93. This suggests that students felt most confident in general workplace-related skills such as communication, teamwork, safety practices, proper work habits, and professionalism. These competencies are important because they help students adjust to real food service and hospitality settings, where workers are expected not only to perform technical tasks but also to communicate effectively, follow workplace rules, and work well with others.

Table 1. *Self-Assessed Competencies of TVL Cookery Students Based on TESDA Standards*

Competencies	Assessment	
	<i>M</i>	Description
Basic	3.69	High
Common	3.93	High
Core	3.85	High
Overall	3.82	High

The high self-assessment ratings may suggest that the students have developed a positive view of their readiness for work. Job readiness refers to the knowledge, skills, work attitudes, and employability qualities that students need when entering the workforce. In TVL Cookery, this includes both technical skills, such as food preparation and equipment handling, and non-technical skills, such as responsibility, teamwork, and workplace discipline. Self-assessment allows students to reflect on their own strengths and areas for improvement. However, these results should be interpreted as perceived competence, not as direct proof of actual workplace performance. As Yusop et al. (2023) noted, technical-vocational students may assess their competencies differently from external evaluators because of their limited workplace experience and developing understanding of industry standards.

The finding that students rated themselves highly may also be linked to the practical nature of TVL Cookery instruction. TESDA-aligned training exposes students to competency-based learning, performance tasks, and work immersion activities that help them apply classroom learning to real work situations. Bentor et al. (2022) emphasized that TESDA-affiliated training and job immersion programs help senior high school students develop skills that are relevant to industry needs. For Cookery students, these skills include food safety, kitchen organization, proper use of tools and equipment, and basic cooking techniques. These experiences may have helped the students build confidence in their ability to perform tasks expected in food service workplaces.

The results also support the importance of industry-linked technical-vocational education. According to Asis (2020), competency-based senior high school programs that integrate TESDA standards, practical training, and

industry partnerships can strengthen students' employability and job readiness. In this study, the high ratings across the competency areas may suggest that students perceive their training as helpful in preparing them for the demands of the cookery field. However, since the data were based only on student self-assessment, the findings should be supported by other forms of assessment, such as teacher evaluations, industry supervisor ratings, skills demonstrations, or actual workplace performance assessments.

Industry Partners' Evaluation of TVL Cookery Students' Competencies Based on TESDA Standards

Table 2 shows that the industry partners rated the TVL Cookery students as very high, with an overall mean of 4.44. This indicates that, from the industry partners' perspective, the students demonstrated a strong level of competence in TESDA-based skills required for the Cookery specialization. The high ratings suggest that the students were able to apply key workplace skills and technical abilities in settings closer to real food service and hospitality environments.

Table 2. *Industry Partners' Evaluation of TVL Cookery Students' Competencies Based on TESDA Standards*

Competencies	Assessment	
	M	Description
Basic	4.34	Very High
Common	4.42	Very High
Core	4.55	Very High
Overall	4.44	Very High

Among the competency areas, common competencies had the highest mean, 4.44. This suggests that industry partners observed strong performance in workplace-related skills, including communication, teamwork, safety practices, professionalism, and proper work behavior. These competencies are important because cookery graduates are expected not only to perform food preparation tasks but also to follow workplace procedures, coordinate with others, adhere to safety standards, and demonstrate professional conduct. In food service settings, these general workplace behaviors support effective performance and help students adjust to actual industry expectations.

The high rating in core competencies also suggests that students were able to demonstrate important technical skills required in Cookery. These may include food preparation, proper use of kitchen tools and equipment, sanitation practices, workplace organization, and compliance with food safety procedures. Since core competencies are directly related to specialized job tasks, the favorable assessment from industry partners may indicate that students have developed the essential skills needed for entry-level work in the food service industry. However, this result should be interpreted carefully. A high rating from industry partners suggests strong observed performance, but it should not be treated as full proof of long-term job readiness unless supported by other evidence, such as actual employment performance, certification results, or follow-up evaluation.

The findings are consistent with the role of technical-vocational education in preparing students for work. Edralin and Pastrana (2023) explained that TVET development in the Philippines, under TESDA and the Philippine Qualifications Framework, has helped strengthen skills training, graduate employability, and policy direction. This underscores the importance of assessing both common and core competencies, as these areas reflect the workplace and technical skills expected of TVL graduates. Similarly, Villamor et al. (2023) emphasized the need to align TVET curricula with national and global development goals, including the United Nations Sustainable Development Goal 4 and the Philippine Development Plan 2022–2028, to ensure that graduates acquire skills that are relevant to industry needs.

The results also support the value of competency-based education. Carney et al. (2023) noted that competency-based courses focus on clear learning objectives and career-relevant skills. In the context of TVL Cookery, this means that students should be assessed not only through classroom activities but also through performance-based tasks that reflect actual workplace demands. Industry partner assessment is therefore important because it provides an external evaluation of students' skills based on workplace expectations. Unlike self-assessment, which reflects students' perceptions of their competence, industry partner assessment provides a more objective view of how students perform against industry standards.

Difference Between Student Self-Assessment and Industry Partner Evaluations of TVL Cookery Competencies

Table 3 reveals a significant difference between student self-assessment and industry partner evaluations across all competency domains. For basic competencies, the computed t -value of -9.71, with a p -value $< .001$, indicates a significant difference between the two ratings. This led to the rejection of the null hypothesis. Significant differences were also found in common competencies ($t = -8.70, p < .001$) and in core competencies ($t = -10.84, p < .001$). These results show that student and industry partner ratings differed across the three competency areas.

Table 3. *Difference Between Student Self-Assessment and Industry Partner Evaluations of TVL Cookery Competencies*

Competencies	t -value	p -value	Decision	Interpretation
Basic	-9.71	$< .001$	Reject H_0	Significant
Common	-8.70	$< .001$	Reject H_0	Significant
Core	-10.84	$< .001$	Reject H_0	Significant

The negative t -values indicate that industry partners rated the students higher than the students rated themselves, assuming that the comparison was coded with student self-assessment as the first group and industry partner evaluation as the second group. This means that, across basic, common, and core competencies, students tended to give themselves lower ratings than industry partners did. This finding suggests that TVL Cookery students may underestimate their own competencies, even when industry partners observe stronger performance in actual or workplace-related settings.

This difference may be explained by students' limited confidence in their ability to judge their own skills. Although students may already possess the required competencies, they may still be unsure about whether their performance meets industry standards. Romanova (2022) noted that students' self-perceptions of ability may differ from employer judgments, especially in vocational and occupational education. In the present study, this may mean that students were more cautious when rating themselves, whereas industry partners could evaluate their performance based on observable work behavior, technical skills, and workplace readiness.

The higher ratings from industry partners also highlight the value of external assessment in technical and vocational education. Industry partners can observe how students perform in practical settings, including following instructions, handling kitchen tasks, adhering to safety standards, working with others, and demonstrating professionalism. Chummani et al. (2025) emphasized that industry-based assessment is important for evaluating job preparation because employers and industry partners may recognize skills that students themselves may not fully recognize. In this study, the industry partner evaluations provided a broader view of students' competencies than self-perception alone.

The findings are also consistent with those of Yan et al. (2022), who explained that students transitioning from school to professional practice may experience gaps between self-assessment and external evaluation. These gaps may reflect students' developing confidence, reflective judgment, and professional self-awareness. For TVL Cookery students, lower self-ratings may not necessarily indicate weak competence. Instead, they may suggest that students are still learning how to accurately judge their own performance using industry standards.

Competency Needs of the Culinary Industry

This section presents the qualitative findings on the competency needs of the culinary industry as identified by ten selected managers and supervisors from different industry partners. The participants shared their observations on the skills, knowledge, and work attitudes expected from entry-level workers in the food service industry. Three major competency needs emerged as shown in Table 4.

Table 4. *Competency Needs of the Industry Relevant to Cookery and Culinary Professions*

Main Theme	Sub-Themes
Holistic Competency Development in Culinary Professions	Culinary Operation and Food Safety Competencies
	Core Employability and Interpersonal Competencies
	Continuous Learning and Sustainable Work Competencies

Culinary Operations and Food Safety Competencies

This sub-theme focuses on culinary operations and food safety competencies. Industry partners emphasized that entry-level workers in the culinary field must possess basic cooking skills, proper food preparation practices, food safety awareness, sanitation discipline, knife-handling skills, and time management. These competencies are important because kitchen work requires accuracy, speed, cleanliness, and consistency, especially during peak service hours. Participants noted that students need a strong foundation in basic cooking and food preparation. One participant explained:

P3: "The most important skills are basic cooking and food preparation, along with knowing how to follow procedures."

This response shows that industry partners expect TVL Cookery students to know not only how to cook but also how to follow standard kitchen procedures. In professional kitchens, cooking is not based only on creativity or personal style. It requires following recipes, preparing ingredients properly, using tools and equipment correctly, and observing workplace standards. These skills are essential because they directly affect food quality, service efficiency, and customer satisfaction.

Food safety and sanitation also emerged as major competency needs. Industry partners emphasized that students must understand proper hygiene, food handling, prevention of cross-contamination, safe storage of ingredients, and cleanliness in the work area. These findings are consistent with those of Aslam et al. (2020) and Jevšnik and Raspor (2021), who emphasized that food safety knowledge and sanitation practices are essential for protecting public health and maintaining trust in food service operations. In cookery training, food safety should not be treated as a separate topic only discussed in theory. It must be practiced consistently during food preparation, cooking, storage, and service.

The findings also suggest that technical skills and food safety practices should be developed together. A student may know how to prepare a dish, but this competence is incomplete if the student cannot maintain cleanliness, handle ingredients safely, or follow sanitation rules. Similarly, a clean and safe kitchen must also be supported by proper technical execution. Hussein et al. (2025) noted that culinary competence involves both practical kitchen skills and adherence to professional standards. This means that TVL Cookery students must be trained to perform tasks correctly while maintaining food safety and workplace discipline.

Time management was also identified as an important competency in culinary work. In food service settings, workers are expected to prepare ingredients, complete assigned tasks, and serve food within a required time. Poor time management may delay kitchen operations and affect the quality of service. This finding supports Wadhwa and Piparsania (2025), who identified time management and multitasking as important skills in kitchen operations. For TVL Cookery students, this means that training should include not only cooking skills but also task sequencing, preparation planning, and working efficiently under pressure. One participant also emphasized the importance of broader workplace qualities:

P3: "Moreover, when considering specific skills, education, experience, and a strong willingness to learn are important. However, the most important skills are communication, creativity, and self-discipline."

Although this response includes soft skills, it still supports the idea that culinary competence extends beyond technical performance. Entry-level workers must also communicate clearly, show discipline, and remain willing to learn. These qualities help students adjust to the demands of professional kitchens, where teamwork, feedback, and consistency are necessary.

Core Employability and Interpersonal Competencies

This sub-theme focuses on core employability and interpersonal competencies. Industry partners emphasized that entry-level culinary workers need communication, teamwork, customer service, adaptability, problem-solving, and time management. These competencies are important because food service work requires constant coordination among kitchen staff, service crew, supervisors, and customers. In this setting, technical cooking skills alone are not enough. Students must also know how to communicate clearly, work with others, respond to customers, and adjust to the fast-paced nature of restaurant work. Participants consistently identified communication and teamwork as important workplace competencies. One participant explained:

P4: *“Furthermore, in a restaurant setting, many skills are applied, such as serving techniques, table set-up, communication, and teamwork. However, the most important are collaboration and effective communication because they strengthen unity in the workplace.”*

This statement shows that communication and collaboration help maintain unity and smooth workflow in the workplace. In restaurants and commercial kitchens, workers need to coordinate tasks, relay instructions, avoid mistakes, and support one another during service. Lee and Lim (2023) emphasized that communication and teamwork are important predictors of service effectiveness in hospitality settings. Similarly, Bahrain et al. (2023) found that weak interpersonal skills may lead to operational problems and lower customer satisfaction. Customer communication also emerged as an area that needs improvement. One industry partner observed:

P5: *“I saw that they were not very good at keeping clients happy. Most of them were quiet. They really need to learn how to talk to customers.”*

This finding suggests that some TVL Cookery students may still lack confidence in interacting with customers. While students may be able to perform kitchen-related tasks, they also need to develop customer service skills, especially when assigned to front-of-house duties, food service, or client-facing activities. This is important because customer satisfaction depends not only on food quality but also on how workers communicate, respond to requests, and create a positive service experience.

Teamwork was also seen as necessary during peak service hours. One participant shared:

P7: *“Moreover, in the kitchen, teamwork really helps during peak hours as everyone must coordinate to serve orders quickly and efficiently. Communication avoids mistakes.”*

This response shows that teamwork and communication are closely connected to operational efficiency. During busy hours, kitchen staff must move quickly, follow instructions, divide tasks, and coordinate with one another. Poor communication may result in delayed orders, incorrect preparation, and service errors. Thus, teamwork should be developed not only as a general value but also as a practical skill used in real kitchen situations.

Time management and coordination were also identified as important employability skills. One participant stated:

P10: *“In this field, every second matters; thus, time management is as crucial as cooking, cutting, and plating. Collaboration is needed.”*

This statement highlights the time-sensitive nature of culinary work. In food service operations, students must learn how to manage time, prioritize tasks, and work efficiently under pressure. Lee et al. (2022) noted that adaptability and time-sensitive problem-solving are important skills for hospitality graduates. Zhenjing et al. (2022) also found that flexible and well-coordinated workers perform better in high-pressure service environments.

Continuous Learning and Sustainable Work Competencies

This sub-theme focuses on continuous learning and sustainable work competencies. Industry partners emphasized that entry-level culinary workers should be willing to learn, improve their skills, adapt to new workplace demands, and maintain professional standards. These competencies are important because the culinary industry continues to evolve amid new cooking techniques, changing customer expectations, evolving food safety requirements, and workplace technologies. Participants noted that students should continue developing their technical foundation even after formal training. One participant stated:

P3: *“In handling kitchen pressure and rush hours, it is important to know the basics such as mise en place, master common knife skills, and have a brief understanding of mother sauces.”*

This statement shows that continuous learning begins with strengthening the fundamentals. In the culinary field, students are expected to master basic kitchen preparation, knife skills, and essential cooking knowledge before

they can perform more advanced tasks. These skills also help students work more efficiently during rush hours, when speed, accuracy, and organization are necessary.

Another participant emphasized the value of professional growth, creativity, and discipline:

P2: *“Key qualities include having the right educational background and relevant experience, a willingness to learn, strong communication skills, creativity in problem-solving, and self-discipline to stay focused and committed to goals.”*

This response highlights that industry partners value workers who are not only technically skilled but also open to learning and improvement. Willingness to learn is important for entry-level workers because they are still adjusting to actual workplace standards. Creativity in problem-solving also helps workers respond to unexpected kitchen situations, while self-discipline supports consistency, focus, and professional behavior.

The participants also emphasized the importance of training and maintaining kitchen cleanliness. One participant shared:

P4: *“NC II is a big help because it allows students to undergo training and focus on basic cooking skills and kitchen cleanliness.”*

This statement suggests that certification and training help students improve their basic culinary skills and sanitation practices. It also shows that professional development is not limited to learning new recipes or advanced techniques. It also includes maintaining cleanliness, adhering to standards, and developing habits that support safe, responsible kitchen work.

In relation to sustainability, the findings suggest that students should also be trained to work responsibly with available resources. Although the participants did not directly discuss sustainability in detail, their emphasis on cleanliness, proper procedures, discipline, and efficient kitchen work may be connected to sustainable culinary practice. Gössling et al. (2021) explained that sustainability practices in the culinary and hospitality industry include waste reduction, responsible resource use, and environmentally conscious food service operations. For TVL Cookery students, this means that training may include proper portioning, waste control, safe storage of ingredients, and efficient use of kitchen materials.

Corroboration of Quantitative and Qualitative Findings

Table 5 integrates the quantitative findings from student self-assessment and industry partner evaluation with the qualitative findings from managers and supervisors. The purpose of this integration is to determine how the measured competencies of TVL Cookery students align with the culinary industry's competency expectations.

Table 5. *Corroboration of Quantitative and Qualitative Findings Across All Competencies*

Competencies	Quantitative Results	Qualitative Themes	Integrated Insights
Basic Competencies	Students: $M = 3.69$ (High) Supervisors: $M = 4.34$ (Very High) Overall: 3.82 - 4.44	Technical skills correspond to basic competencies (foundational operational knowledge and fundamental culinary procedures)	Quantitative and qualitative findings converge in showing strong foundational competencies. The need to indicate for reflective feedback to strengthen confidence and self-recognition of skills.
Common Competencies	Students: $M = 3.93$ (High) Supervisors: $M = 4.42$ (Very High)	Soft skills align with common competencies (communication, teamwork, workplace values, and occupational safety)	Partial convergence is evident. While students possess foundational soft skills, qualitative data reveal gaps in applying them effectively in real workplace situations. Experiential learning and workplace simulations are recommended to strengthen these competencies.
Core Competencies	Students: $M = 3.85$ (High) Industry Partners: $M = 4.55$ (Very High)	Professional development reflects core competencies (higher-level competencies specific to cookery, such as menu planning, cost control, supervision, and continuous professional growth).	Strong convergence between data sources confirms that the technical competencies taught in school effectively translate to workplace performance, demonstrating the effectiveness of the TESDA-aligned curriculum and on-the-job training.

For basic competencies, both groups viewed the students positively, although industry partners gave higher ratings than the students themselves. This difference suggests that students may have underestimated their own competencies despite being evaluated favorably by external assessors. This pattern is consistent with Romanova (2022), who noted that students' self-perceptions may differ from employer or industry-based evaluations, especially in vocational education. The qualitative findings support and deepen this result. Industry partners emphasized the importance of foundational workplace and kitchen competencies, including adherence to food safety protocols, proper hygiene, time management, and following standard kitchen procedures. These findings suggest that basic competency in TVL Cookery is not limited to knowing what to do; it also involves performing tasks correctly, safely, and consistently in actual or simulated workplace settings. The convergence between the quantitative and qualitative findings indicates that students have developed important foundational competencies for entry-level culinary work. However, the lower self-assessment mean also suggests the need to strengthen students' confidence through reflective activities, mentoring, and structured feedback.

For common competencies, students also evaluated themselves lower than the industry partners did. The result suggests that students may already demonstrate workplace-related competencies, but they may not fully recognize the quality of their own performance. The qualitative findings provide a more detailed explanation of this result. Managers and supervisors identified communication, teamwork, adaptability, problem-solving, customer engagement, and stress management as important competencies in the culinary workplace. These findings show that common competencies are especially important in dynamic food service settings where workers must coordinate with others, respond to customers, manage pressure, and adjust to changing workplace demands. However, the qualitative findings also revealed areas that numerical ratings, such as assertive communication, confidence in customer interaction, and performance during peak service hours, may not fully capture. This partial convergence suggests that students possess important interpersonal and workplace skills, but these skills still need further development through more authentic practice. Structured simulations, role-playing, workplace exposure, and service-based tasks may help students improve communication, conflict resolution, and stress management (Pianda et al., 2024; Pacaña & Pantaleon, 2025; Diquito, 2024).

In core competencies, students demonstrated strong technical and applied cookery skills aligned with TESDA standards. The higher rating from industry partners further indicates that students' actual performance may be stronger than their self-perception of their abilities. The qualitative findings support this interpretation. Industry partners highlighted students' ability to perform practical cooking tasks, apply TESDA-based procedures, manage kitchen workflows, observe food safety practices, and produce quality outputs in real-world or workplace settings. This convergence suggests that the technical skills taught in the TVL Cookery program are being transferred into practical performance. It also supports the value of TESDA-aligned instruction, hands-on training, and on-the-job training in preparing students for entry-level culinary positions (Selamat, 2025).

A separate but important finding from the qualitative data is the need for both professional development and continuous learning. This competency was not directly measured in the quantitative part of the study, but it emerged strongly from the interviews with industry partners. Managers and supervisors emphasized that students should continue learning, pursue TESDA certifications, participate in competitions, adapt to new culinary trends, and be open to innovation and sustainability practices. This finding expands the quantitative results by showing that industry readiness extends beyond current technical competence. It also includes adaptability, professional growth, and willingness to improve. These qualities are important because the culinary industry continues to change in response to new technologies, customer expectations, workplace standards, and sustainable practices (Lee et al., 2021; Choi & Kim, 2022).

Conclusion

The positive ratings suggest that TESDA-aligned training and industry exposure help prepare students for workplace demands. However, the differences between student self-assessment and industry partner evaluation show the need to strengthen students' confidence and professional self-awareness. These findings have important implications for educational practice and policy, particularly in strengthening curriculum-industry alignment, competency-based assessment, and workplace-based learning opportunities. TVL Cookery programs may integrate regular formative feedback, reflective journals, mentoring, skills demonstrations, and post-immersion debriefing to help students better recognize their strengths and areas for improvement. The curriculum may also include more authentic learning activities such as restaurant simulations, timed kitchen tasks, customer service

role-play, project-based cooking activities, and competency-based assessments. Finally, the findings suggest that TVL Cookery training should prepare students not only for immediate employment but also for long-term professional growth. Aside from technical cooking skills, students need communication, adaptability, confidence, a commitment to continuous learning, and awareness of emerging culinary practices. By combining technical instruction, workplace-based learning, reflective practice, and exposure to industry innovations, TVL Cookery programs can better prepare graduates for the changing demands of the culinary industry. Future research may further examine competency development and industry readiness across different contexts and larger populations to strengthen the evidence base for TVL education.

Contributions of Authors

Author 1: conceptualization, data gathering, data analysis

Author 2: data analysis, assisted in data interpretation

Author 3: proposal writing, data analysis

Author 4: proposal writing, literature reviewer

Author 5: data analysis

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