Instructional Competency, Adaptability, and Innovation: Exploring Contributing Factors to Competency Gaps Among Food and Beverage Services Educators

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Abstract

This study examined the instructional competencies of Technical-Vocational-Livelihood (TVL) teachers in the Food and Beverage Services (FBS) strand within the Catbalogan City Division to inform the development of a targeted extension program. Employing a descriptive-correlational research design, data were collected from 14 teachers, 204 students, and 4 school administrators across three public secondary schools using validated surveys, supervisor observation checklists, and student feedback instruments. Instructional competencies were assessed across five domains: adaptability, technological competence, subject mastery, instructional delivery, and operational guidance. Statistical analyses—including descriptive statistics, Kendall's Tau, and Cramer's V—were used to determine competency levels and examine relationships with contributing factors such as specialization, training attended, teaching experience, and resource availability. Findings revealed that while most teachers rated themselves as "developing" across all domains, students and supervisors provided notably higher evaluations. Significant correlations emerged between specialization and resource availability with adaptability and innovation, and between teaching experience and subject mastery. In contrast, technological competence showed no significant relationship with any contributing factor, indicating a persistent gap in effective technology integration. These findings highlight a disconnect between teacher self-perceptions and external evaluations, emphasizing the need for reflective teaching practices, targeted professional development, and institutional support. In response, a proposed extension program focuses on technological upskilling, industry immersion, and enhanced resource accessibility—aiming to close instructional gaps and align teaching practices with industry standards to improve student outcomes in technical-vocational education. upskilling, industry immersion, and enhanced resource accessibility—aiming to close instructional gaps and align teaching practices with industry standards to improve student outcomes in technical-vocational education. access to resources, aiming to bridge instructional gaps and enhance student outcomes in TVL education.

Keywords: *Instructional competency, TVL teachers, food and beverage services, competency gap, vocational education*

1. Introduction

The instructional effectiveness of Technical-Vocational-Livelihood (TVL) teachers had long been recognized as a pivotal factor in preparing senior high school students for industry-based employment. These teachers were responsible for equipping learners with theoretical knowledge and the practical competencies essential for success in specialized fields such as Food and Beverage Service Technology. As asserted by Darling-Hammond et al. (2020), high-quality instruction had a direct impact on student performance, particularly in technical-vocational education, where hands-on skills and real-world application were critical components of learning.

Following the implementation of the K–12 educational reform in the Philippines, the Technical-Vocational-Livelihood track has gained prominence as a viable path toward employment and entrepreneurship. In response, the Department of Education (DepEd) deployed over 25,000 TVL teachers across the country as of 2023. Region VIII, which included the province of Samar, accounted for more than 1,200 of these educators. In Samar Division alone, approximately 40 TVL teachers had been assigned to teach in the Food and Beverage Services (FBS), Bread and Pastry Production (BPP), and Cookery strands (DepEd Region VIII Report, 2023).

Despite the increasing number of TVL teachers, significant instructional disparities persisted—especially in rural and geographically isolated areas such as the Samar Division. These disparities were not primarily due to teacher shortages but rather the inconsistent levels of instructional competency among educators. Research and internal reports indicated that many teachers in the region struggled to integrate updated kitchen technologies, utilize digital instructional tools, and align their teaching

strategies with TESDA industry standards. These competency gaps presented serious obstacles to the effectiveness of TVL programs and the employability of graduates.

Hard data further illustrated the depth of the issue. While TVL teachers were expected to specialize in areas such as Cookery, FBS, SMAW, ICT, and Electrical Installation, they were also required to possess a National Certificate (NC) II or higher from TESDA. According to DepEd Order No. 41, s. 2016, these certifications ensured that TVL educators were equipped to teach competency-based learning outcomes. However, many teachers—especially those in rural areas—had found it challenging to maintain or update their certifications due to a lack of accessible professional development programs.Even though professional development has been found to be a significant factor in instructional progress, opportunities are still not uniformly distributed. Manalo and Abarro (2020) highlighted the importance of ongoing education for vocational education teachers' efficacy. Only over 35% of TVL teachers in rural areas like Samar have taken part in official upskilling or industrial immersion training in the previous two years, according to a 2021 study by SEAMEO INNOTECH. Among the reasons given were a lack of cooperation from regional authorities, logistical difficulties, and financial constraints.

Equally concerning was the limited availability of instructional resources. Padilla (2020) emphasized that access to appropriate equipment and learning tools was directly correlated with teaching quality, especially in strands that required experiential learning. In schools within the Samar Division, many teachers were forced to conduct practical lessons in outdated, poorly equipped laboratories. Without functional kitchen setups, modern cooking appliances, or standardized recipe manuals, educators frequently relied on improvised demonstrations or theoretical lectures to fill the gap—limiting students' exposure to realistic industry standards.

The shortage of instructional tools was compounded by high student-to-teacher ratios. Reports indicated that some TVL classes included 40 to 50 students per session, especially in practical subjects like FBS. These overcrowded environments made individualized instruction and effective supervision during hands-on activities nearly impossible. Furthermore, the absence of standardized learning modules had left many teachers to develop their own teaching materials or download content from unverified online sources, leading to inconsistent delivery and assessment practices.

Torres and Santos (2021) emphasized that the availability of significant institutional support and years of experience are two factors that influence teacher effectiveness in TVL programs, which further supports this claim. When limited by insufficient infrastructure and resources, their findings showed that even highly experienced teachers have a difficult time providing efficient, industry-aligned instruction. As a result, improving instructional competency necessitates a comprehensive strategy that both invests in teacher development and guarantees the continuous supply of modern resources, operational infrastructure, and attentive administrative support.

Moreover, a broader concern existed regarding the skills mismatch between TVL graduates and labor market demands. According to the Philippine Chamber of Commerce and Industry (PCCI), industry partners had noted that many TVL graduates lacked sufficient exposure to modern tools and techniques, placing the burden of post-training on employers. This gap had been largely attributed to teachers' inability to access current industry practices and resources. Given these conditions, the present study was conceptualized to assess the instructional competencies of TVL teachers in the Food and Beverage Service Technology strand in Samar Division. Using a descriptive-correlational design, the study aimed to examine how teaching experience, participation in professional development, and the availability of teaching resources influenced instructional competence. By gathering data from a rural setting, the study sought to generate localized insights that could be used to inform the creation of an evidence-based extension program targeted at TVL educators.

The need for such a study was underscored by the limited volume of research focusing on TVL teachers themselves. Much of the existing literature emphasized student outcomes, curriculum standards, and industry partnerships, but there remained a notable gap in examining the actual competencies, needs, and challenges of the instructors who were tasked with delivering technical-vocational education. This study intended to fill that void and offer concrete recommendations addressing the ground realities.

In conclusion, this research was conducted in response to the growing need to strengthen the quality of technical-vocational instruction in the Philippines, particularly in under-resourced and isolated divisions such as Samar. By investigating the factors that influenced the instructional competencies of TVL teachers, this study aimed to contribute to the national effort of improving vocational education. The research outcomes were expected to provide a foundation for designing sustainable, scalable, and data-informed extension programs that would empower teachers, uplift student outcomes, and bridge the gaps between education and employment in the Philippine context.

2. Review of Related Literature

Instructional competency, as defined in various studies, encompassed mastery of content, pedagogical skills, technological proficiency, adaptability, effective instructional delivery, and operational guidance. These components were crucial in delivering quality vocational education, especially in rural and underserved areas such as the Samar Division.

The foundation of instructional competency was widely recognized as the mastery of subject matter. Teachers needed to be experts in their fields to be effective facilitators of learning. González et al. (2020) emphasized that vocational teachers must not only understand their subjects deeply but also relate them to real-world industry practices. Kauffman and Coon (2020) added that teachers who demonstrated high content mastery were better equipped to make instruction relevant and engaging for students preparing for technical careers. Locally, Dela Cruz (2018) found that in Region VIII, TVL teachers who held National Certificates (NC) from TESDA showed a higher level of confidence and competence in handling practical lessons in Food and Beverage Service classes. Similarly, Santos (2019) discovered that teachers who had undergone immersion with industry partners in Eastern Visayas were better able to connect course content with current professional practices, thereby improving instructional quality and student engagement.

Instructional delivery was another critical aspect of teaching competency. It referred to how teachers planned, organized, and implemented instruction to achieve desired learning outcomes. Wang et al. (2018) observed that teachers who were able to use various instructional strategies were more successful in facilitating student understanding. In the context of Samar, Ramirez and Tuazon (2019) studied the effectiveness of TVL teachers who applied differentiated instruction and blended learning approaches. Their findings suggested that those trained in student-centered teaching and flexible delivery modes achieved greater student participation and retention, particularly during the shift to modular learning. Teachers who were adaptable in instructional delivery were found to be more resilient in managing challenges in under-resourced rural schools.

A key competency that emerged from the literature was technological proficiency. As modern vocational education increasingly integrated technology, teachers were expected to use digital tools for instruction, assessment, and communication. Chuang et al. (2020) noted that technological competence had become a baseline requirement for effective teaching. However, disparities in access and training often created challenges. In Northern Samar, Rivera (2020) identified that a significant number of TVL teachers struggled to integrate educational technologies due to poor internet connectivity and limited ICT training. On the other hand, those who participated in DepEd's digital training initiatives demonstrated improved confidence in using online platforms, simulation tools, and digital portfolios. This highlighted the need for sustained technological support and training, especially in remote schools.

Another dimension of instructional competency was adaptability. Teachers needed to adjust to shifting educational contexts, learner needs, and external pressures. Adaptability was closely linked to a teacher's reflective practice and openness to change. Pianta et al. (2019) emphasized that adaptability allowed teachers to personalize learning experiences and apply new teaching strategies based on ongoing assessment. In the Philippines, Lucban (2019) studied the adaptability of TVL teachers in flood-prone and disaster-affected schools in Eastern Visayas. The study revealed that teachers who had undergone disaster preparedness training and flexible curriculum design workshops were more likely to maintain instruction despite interruptions, thus demonstrating a high level of professional resilience.

Institutional and administrative support played a significant role in shaping instructional competencies. Leithwood and Jantzi (2019) stressed that school leadership directly influenced teacher motivation, access to resources, and participation in professional development. In the local context, Espiritu (2019) found that TVL teachers in Samar who received consistent guidance and supervision from school administrators were more proactive in improving their teaching practices. Schools that implemented coaching sessions, lesson observations, and structured feedback mechanisms were able to create professional learning environments that promoted teacher growth. Moreover, well-managed schools often provided opportunities for collaboration and knowledge-sharing, which contributed to the continuous improvement of instructional practices.

Professional development was repeatedly emphasized as a key factor in enhancing instructional competencies. Avalos (2019) highlighted the importance of continuous learning and targeted training to meet the specific needs of vocational teachers. Timperley et al. (2020) reinforced that effective professional development must be ongoing, collaborative, and closely aligned with instructional goals. In the Philippines, the Department of Education implemented Learning Action Cells (LACs) as school-based communities of practice. According to Marcelo and Yazon (2020), LACs significantly improved TVL teachers' instructional competence by fostering collaboration and shared problem-solving. Vescio et al. (2020) supported this view, stating that peer mentoring, coaching, and collaborative lesson planning enhanced teacher performance and student achievement.

Collaboration with industry emerged as a powerful means to improve instructional competency. Miller et al. (2019) emphasized that linkages between educational institutions and industries enriched the relevance of instruction and aligned teaching with labor market demands. In Eastern Visayas, Barroga and Nario (2018) documented that TVL schools that partnered with restaurants, hotels, and service establishments provided students with on-the-job training, while teachers benefited from exposure to updated practices and standards. Hargreaves and Fullan (2019) suggested that such industry immersion experiences

enhanced teachers' confidence and ability to contextualize learning. Evers et al. (2019) also found that educators who participated in short-term industry placements reported greater enthusiasm in delivering practice-based lessons.

In addition to institutional and technical factors, socio-cultural and personal dimensions also influenced instructional competencies. Zhang and Mu (2020) pointed out that culturally responsive teaching required an understanding of students' backgrounds and values. Teachers who acknowledged their students' cultural contexts were more likely to foster inclusive and participatory classrooms. In Samar, De Jesus (2020) found that teachers who used local food traditions and community practices as teaching examples in Food and Beverage Service Technology classes promoted better student connection and appreciation of the course. Furthermore, teacher efficacy—defined by Bandura (2018) as the belief in one's ability to influence student learning—was a strong predictor of instructional success. Tschannen-Moran and Woolfolk Hoy (2020) reported that teachers with high efficacy levels tended to implement more innovative strategies, sustain high expectations, and persevere in the face of obstacles. Bautista (2019) affirmed this in a local study in Calbayog, where confident TVL teachers were more inclined to experiment with active learning methods and problem-based tasks.

Formative assessment practices were another vital component of instructional competence. According to Black and Wiliam (2018), formative assessment involved the continuous collection of student learning data to inform instruction and provide timely feedback. Wiliam (2019) further emphasized that teachers who effectively used assessment results to adjust their strategies were better positioned to support student growth. Lucero (2021), in a study conducted in Samar, observed that Food and Beverage Service teachers who frequently used rubrics, performance tasks, and student reflections improved learning outcomes and reduced dropout rates. These teachers also reported increased confidence in diagnosing learning gaps and personalizing instruction.

Despite the recognized importance of instructional competency, various challenges remained, especially in rural and low-resource settings. Ortiz et al. (2019) pointed out that limited access to quality professional development, outdated equipment, and lack of support networks hindered the growth of teachers in isolated regions. Gonzaga (2021) confirmed these challenges in Samar Division, where teachers expressed the need for more regular training, mobile resource units, and access to updated instructional materials. Teachers also cited insufficient funding for laboratory equipment and a lack of coordination with local industries as major obstacles in delivering quality vocational education.

Policy-level support was crucial to addressing these instructional gaps. Spilimbergo et al. (2020) argued that national education policies must prioritize the professionalization of TVL teachers through structured training programs and resource provision. In the Philippines, programs such as the National Training for TVL Teachers were introduced to bridge competency gaps. However, Lopez (2021) found that implementation varied across regions, with remote areas receiving less consistent support. To address these inequities, it was recommended that extension programs be developed based on localized needs assessments and ongoing monitoring of teacher performance and development.

In conclusion, the literature revealed that the instructional competency of TVL teachers in the Food and Beverage Service Technology strand was shaped by a combination of technical skills, pedagogical knowledge, adaptability, technological competence, and institutional support. Local and international studies consistently emphasized the importance of targeted professional development, industry collaboration, resource availability, and responsive leadership in supporting teachers' instructional growth. Furthermore, the unique challenges faced by teachers in rural areas, such as those in Samar, underscored the need for well-designed extension programs that addressed local realities and empowered educators to deliver high-quality vocational education. By understanding and addressing these competency gaps, educational institutions and policymakers could ensure that TVL teachers were better prepared to equip learners with the knowledge, skills, and confidence needed to succeed in the workforce.

3. Methodology

3.1 Research Design

This study utilized a descriptive-correlational research design to assess the instructional competencies of TVL teachers in the Food and Beverage Service (FBS) strand in Samar Division. The descriptive component of the study aimed to provide a detailed analysis of teachers' competency levels across four domains: adaptability, technological competence, mastery of subject matter, and operational and guidance skills. These domains were considered essential for evaluating how teachers performed their instructional roles and ensured the delivery of quality vocational education within the FBST strand.

To gather data for the descriptive component, the study employed surveys, classroom observations, and interviews. These tools helped capture a comprehensive view of the instructional practices, challenges, and teaching expertise of the respondents.

The correlational component of the study sought to examine the relationships between teachers' instructional competency levels and several influencing factors. These included educational background, number of training programs attended, teaching experience, practical or industry-based experience, resource availability, and levels of administrative and institutional support. In addition, demographic characteristics such as age, gender, and employment status were considered to determine their potential impact on instructional competency.

A representative sample of TVL teachers handling FBS subjects in the Samar Division was selected to enhance the reliability and generalizability of the findings. Quantitative data were gathered through structured surveys and classroom observation checklists, which assessed various aspects of instructional performance. Qualitative data were also collected through

interviews to obtain deeper insights into the personal and contextual factors affecting instructional delivery.

The statistical treatment of data included the use of descriptive statistics, such as means and standard deviations, to summarize competency levels across the targeted domains. Pearson's correlation coefficient was employed to determine the strength and direction of relationships between instructional competency and the identified influencing variables. These statistical methods ensured the credibility of findings and allowed for a comprehensive interpretation of the data.

The findings from this study were intended to offer valuable insights into the instructional strengths and gaps among TVL teachers in Samar Division. The results served as the basis for formulating evidence-based recommendations and proposed the development of an extension program tailored to address the identified competency gaps. Ultimately, this initiative aimed to support the professional growth of TVL teachers and contribute to improved student learning outcomes within the Food and Beverage Service Technology strand.

3.2 Participants

The sampling procedure employed in this study followed a systematic approach to ensure a representative selection of participants from the population of Technical-Vocational-Livelihood (TVL) stakeholders specializing in the Food and Beverage Services strand within the Samar Division. The population included TVL teachers, school administrators, and students across multiple public secondary schools offering the FBS/BPP/Cookery program.

A comprehensive list of eligible schools and their corresponding numbers of teachers, administrators, and students was obtained from Samar Division. In total, 40 teachers, 10 administrators, and 682 students were identified from 13 participating schools. These schools included Tominamos National High School, Villareal National High School, Wright National High School, and several others across the division.

To determine the pilot study sample size, recognized methodological guidelines for pilot studies were followed. For student participants, a guideline-based approach recommended a sample size ranging from 10% of the total population to a more conservative estimate using Slovin's formula. Applying the 10% rule to the student population of 248 yielded a sample of approximately 68 students. Using Slovin's formula with a 10% margin of error produced a more robust estimate of 87 students. Thus, the target student sample ranged from 68 to 87 respondents.

For TVL teachers, given a total population of 14, pilot sampling guidelines suggested a range of 10% to 20%, translating to a sample size between 4 to 8 teachers. A balanced and practical sample size of six teachers was selected to represent various schools.

Similarly, for administrators, 10 individuals were identified. Using the same 10–30% pilot sampling recommendation, a sample of 3 to 4 administrators was deemed appropriate.

In actual implementation, the response rates were as follows: all 40 identified teachers from Tominamos Integrated School, Villareal National High School, Wright National High School, Tarangnan National High School, Sto. Nino National High School, San Jorge National High School, Old San Agustin National High School, Pagsanghan National High School, Pinaplata National High School, Ramon T. Diaz National High School, Hinangutdan National High School, Calbiga National High School, Quintin Quijano Sr. Agricultural School, and Basey National High School participated (100% response rate). All 4 administrators from the same schools also responded. Of the 200 students from these schools and 52 through google form, 204 responded, resulting in an 82.3% student response rate.

Stratification was applied to ensure that samples were proportionally drawn based on school, grade level, and stakeholder role (teacher, administrator, student). Simple random sampling was used within each stratum to promote fairness and representativeness.

All participants were invited to participate through formal communication coordinated with school authorities. Informed consent was obtained prior to data collection. Participants were briefed on the study objectives, confidentiality measures, voluntary participation, and their right to withdraw at any time. Ethical compliance was ensured through adherence to data privacy guidelines and review board protocols.

This structured sampling approach ensured adequate representation, minimized selection bias, and provided a strong foundation for analyzing instructional competencies and challenges within the Food and Beverage Service track in Samar Division.

3.3 Research Instrument

The study made use of three types of instruments: surveys, observation checklists, and interview guides. These instruments were carefully crafted to capture both quantitative and qualitative data regarding instructional competency. They were aligned with the study's specific objectives and covered essential areas such as adaptability, subject mastery, technological skills, instructional delivery, and operational competence. This multifaceted approach ensured a thorough evaluation of teaching effectiveness and allowed for the identification of relevant correlations with demographic and institutional variables. The first part collected demographic and professional background information, including the respondents' age, gender, civil status, educational attainment, years of teaching experience, and prior industry exposure. These details were instrumental in contextualizing the instructional environment and analyzing variations across respondent profiles. The second part focused on evaluating the instructional competency of teachers in five major domains: adaptability and innovation, mastery of subject matter, technological competence, instructional delivery, and operational guidance. For each domain, a series of indicators were presented and rated using a four-point Likert scale: 4 for Strongly Agree, 3 for Agree, 2 for Disagree, and 1 for Strongly Disagree. Average scores were computed for each domain, and competency levels were interpreted as follows: 3.50–4.00 signified Highly Competent; 2.50–3.49, Competent; 1.50–2.49, Developing Competency; and 1.00–1.49, Needs Improvement. These scores offered a quantifiable picture of the strengths and areas needing improvement among the teachers. The third part of the teacher

questionnaire addressed the factors contributing to competency gaps. It sought to uncover the frequency and relevance of training attended, the adequacy of teaching resources, and the level of institutional and administrative support received by the teachers. Respondents were also asked to identify specific instructional challenges and suggest resources or interventions they believed could enhance their effectiveness in the classroom.

On the other hand, the student and supervisor version of the questionnaire designed to gather student and supervisor perspectives on their teachers' instructional competency. It mirrored the domains and rating format used in the teacher instrument, ensuring consistency and enabling comparative analysis between teacher self-assessments and student perceptions.

All instruments underwent expert validation by professionals in Technical-Vocational Education, curriculum development, and the Food and Beverage Services field. Following expert review, the tools were subjected to pilot testing to confirm clarity, appropriateness, and reliability. These processes ensured the accuracy of the tools in capturing data relevant to the study objectives and contributed to the credibility of the findings. Participants were briefed on the study objectives, confidentiality measures, voluntary participation, and their right to withdraw at any time. Ethical compliance was ensured through adherence to data privacy guidelines and review board protocols.

This structured sampling approach ensured adequate representation, minimized selection bias, and provided a strong foundation for analyzing instructional competencies and challenges within the Food and Beverage Service track in Samar Division.

3.4 Data Collection Procedure

The data gathering procedure for this study was conducted in a systematic and ethical manner to ensure the collection of accurate, comprehensive, and reliable data. The process began with the acquisition of the official list of Technical-Vocational-Livelihood (TVL) teachers, school administrators, and students specializing in the Food and Beverage Service (FBS/BPP/Cookery) strand from the Samar Division Office of the Department of Education (DepEd). This list contained essential demographic and institutional information and served as the sampling frame for the study.

The actual data revealed that thirteen schools—Samar High School, Silanga National High School, and Guinsorongan National High School—participated in the pilot implementation. These schools collectively comprised 14 TVL teachers, 4 school administrators, and 248 students enrolled in Grades 11 and 12 under the FBS/BPP/Cookery strand. Among these, all 14 teachers (100%), all 4 administrators (100%), and 204 out of 248 students (82.3%) responded and participated in the study, resulting in high response rates across all participant groups.

To determine the required student sample size, Slovin's Formula was applied with a 0.05 margin of error, ensuring a 95% level of confidence. Based on the total student population of 248, the computed sample size was approximately 153 students. For the teacher population, since the total number (14) was fewer than 30, complete enumeration was employed to enhance the reliability of the data and to avoid sampling bias. All 14 teachers were thus included in the study. Likewise, all 4 administrators were selected due to the limited population size.

Following the identification of participants, the researcher coordinated with school administrators to facilitate access and communication. Teachers and administrators were approached directly, while students were engaged with the assistance of their respective homeroom advisers and subject teachers. All participants were thoroughly informed about the objectives of the study, their rights as respondents, and the voluntary nature of their participation. Written informed consent was obtained from teachers and administrators, while student participation was conducted under strict ethical supervision.

Respondents were provided with questionnaires, either in printed or electronic form, depending on their preferences and the technological capacity of their respective schools. The instrument administered to teachers and administrators comprised three major sections: (1) demographic information; (2) a validated rating scale measuring instructional competencies across domains such as adaptability, mastery of subject matter, technological competence, instructional delivery, and operational guidance; and (3) items pertaining to training history, resource availability, and institutional support.

The student questionnaire similarly included sections on demographic details, evaluation of teacher competencies, and open-ended items on teaching strategies, learning challenges, and available resources. Data were collected over a coordinated period to ensure high response rates while minimizing disruption to regular classes.

Throughout the process, ethical standards were upheld. Approval from the appropriate institutional review board was secured, and confidentiality of responses was strictly maintained. Participants were assured of their anonymity and their right to withdraw at any point without repercussions.

After data collection, the responses were coded, organized, and tabulated for statistical analysis. Both descriptive and inferential techniques were applied to examine the instructional competencies of TVL teachers and identify key factors affecting their performance. This well-structured data gathering procedure provided a strong empirical foundation for drawing meaningful conclusions and formulating actionable recommendations for enhancing TVL instruction in the Samar Division.

3.5 Data Analysis

The statistical treatment of data in this study was structured to yield both descriptive and inferential insights into the instructional competencies of Technical-Vocational-Livelihood (TVL) teachers, as well as the various factors that influenced them. The analysis encompassed responses from 14 teachers, 4 administrators, and 204 students. A range of statistical tools was employed to analyze the data collected through structured questionnaires.

Coefficient. This was used to measure the strength and direction of the relationship between different variables. For example, it helped the researchers understand how strongly certain factors, like teacher experience or student satisfaction, were related to the instructional competencies of TVL teachers. A higher coefficient indicated a stronger relationship, while a lower

one suggested a weaker or no significant connection. This gave the researchers a clearer understanding of which factors were most closely tied to the teachers' performance.

Correlation. This was used to explore the relationship between different factors and the instructional competencies of TVL teachers. It helped the researchers understand whether there were any connections between how teachers, administrators, and students viewed the teachers' abilities. For example, they might have looked at whether higher ratings from students were linked to certain teaching practices or if administrators' opinions correlated with specific areas of teacher performance. This helped reveal any patterns or associations that could explain how different factors influenced teachers' instructional skills.

Frequency. This was used to count how many times certain responses or answers appeared in the data from teachers, administrators, and students. By looking at how often specific answers were given, the researchers could identify which opinions or observations were most common. This helped them understand the general views about the instructional competencies of TVL teachers and see which factors were mentioned most frequently across the different groups.

Mean. This measure was used was used to interpret the data collected from teachers, administrators, and students. By computing the average scores from the questionnaires, the researchers gained a clearer understanding of how the instructional competencies of TVL teachers were perceived. This approach helped highlight common trends in the responses and allowed for easier comparison of the different groups' views on the teachers' performance.

Percentage. This used to show how frequently certain responses or opinions appeared in the data from teachers, administrators, and students. By turning the raw numbers into percentages, the researchers were able to better identify patterns—for example, what percentage of students believed their teachers were effective or how many administrators pointed out specific strengths or areas for improvement. This made it easier to compare responses across the three groups and to highlight important trends in how the instructional competencies of TVL teachers were perceived.

Standard Deviation. This was used to show how much the responses differed from the average. It helped the researchers understand whether the views of teachers, administrators, and students were generally alike or varied widely. A low standard deviation indicated that most responses were close to each other, while a high standard deviation suggested a broader range of opinions. This helped reveal how consistent or varied the perceptions were regarding the instructional competencies of TVL teachers.

3.6 Ethical Considerations

This study adhered to strict ethical standards to ensure the protection, dignity, and rights of all participants. Before participating in the study, each respondent was provided with an informed consent form. This form explained the study's purpose, the nature of their involvement, and the voluntary nature of participation. It also clearly stated any potential risks and benefits associated with the research. Confidentiality was treated with the utmost importance. Participants were assured that their personal information would remain private, and their identities would not be disclosed in any of the findings or reports. All data collected were anonymized and presented only in aggregate form. Digital files containing responses were securely stored in password-protected folders, accessible only to the primary researcher. Participants were informed that their involvement in the study was voluntary, and that they could withdraw at any point without fear of penalty or repercussion. This respect for autonomy was central to maintaining ethical research standards. To further ensure the integrity of the research process, the study complied with the provisions of the Data Privacy Act of 2012 (Republic Act No. 10173), which mandates the secure and responsible collection, use, and storage of personal data. In addition, the study followed the research ethics guidelines set forth by Samar State University. These institutional protocols emphasize the importance of transparency, fairness, and accountability in conducting research involving human subjects. Through these measures, the study fostered an environment of trust and mutual respect, thereby promoting meaningful and ethically sound participation among all stakeholders involved.

4. Result

Results are discussed across five core competency domains and examined against various contributing factors using correlational analysis.

Instructional Competency Levels of TVL Teachers

The analysis covers five instructional domains: adaptability, technological competence, mastery of subject matter, instructional delivery, and operational guidance. Data were drawn from teacher self-assessments and corresponding student evaluations, with notable gaps offering insight into strengths and areas for development.

Adaptability

As shown in Table 1, teacher self-ratings in adaptability leaned toward "Proficient" (44.4%), with 11.1% identifying as "Developing." No teachers rated themselves as "Exemplary," suggesting an awareness of limitations in their instructional flexibility. In contrast, student evaluations were more favorable—61.0% rated their teachers as "Exemplary," and 31.3% as "Proficient."

Table 1
Instructional Competency in Adaptability

Level	Faculty (f/%)	Students (f/%)
Exemplary	12 / 44.4%	152 / 61.0%
Proficient	12 / 44.4%	78 / 31.3%
Developing	3 / 11.1%	11 / 4.4%
Needs Improvement	0 / 0.0%	8 / 3.2%

There are important ramifications for the perceptual difference. Teachers who overestimate their teaching efficiency in comparison to student evaluation do not necessarily change their methods when simply informed of the disparity, according to research by Röhl and Gärtner (2021). Rather, focused, behavior-specific feedback and ongoing coaching to support reflective growth are necessary for significant progress. Therefore, in order to close this gap, structured feedback mechanisms that not only record students' affective and experiential insights but also encourage reflective practice and mentorship support networks to improve professional growth and instructional quality must be put in place.

Technological Competence

Table 2 highlights contrasting perspectives. Nearly half of the teachers (44.4%) rated themselves as “Developing,” and only 25.9% selected “Exemplary.” Yet students overwhelmingly perceived their teachers as “Proficient” (83.5%), with only 8.8% viewing them as “Exemplary.”

Table 2
Instructional Competency in Technological Competence

Level	Faculty (f/%)	Students (f/%)
Exemplary	7 / 25.9%	22 / 8.8%
Proficient	8 / 29.6%	208 / 83.5%
Developing	12 / 44.4%	10 / 4.0%
Needs Improvement	0 / 0.0%	9 / 3.6%

By analyzing the discrepancy between teachers' self-assessments of their digital competency and their actual classroom practices, Ilomäki, Lakkala, and Kantosalo (2022) investigated this topic in more detail. Their research showed that while students tend to appreciate practical practicality and obvious confidence in using digital tools, many educators either undervalue or rate their technology integration inconsistently. These results demonstrate the value of organized, context-sensitive professional development that not only enhances teachers' proficiency in digital pedagogy but also closes the gap between their self-perception and the changing demands of students in the twenty-first century.

Mastery of Subject Matter

Both teachers and students reported high ratings in this domain, as presented in Table 3. Over half the teachers (55.6%) rated themselves as “Exemplary,” supported by 68.3% of student ratings. This strong alignment underscores mutual recognition of content expertise.

Table 3
Instructional Competency in Mastery of Subject Matter

Level	Faculty (f/%)	Students (f/%)
Exemplary	15 / 55.6%	170 / 68.3%
Proficient	6 / 22.2%	65 / 26.1%
Developing	6 / 22.2%	5 / 2.0%
Needs Improvement	0 / 0.0%	9 / 3.6%

These findings echo Shulman's (1986) assertion that subject mastery forms the backbone of pedagogical success. In technical-vocational settings, deep content knowledge directly affects instructional planning and hands-on application.

Operational Guidance

Operational guidance yielded the highest student approval, with 88.0% rating their teachers as "Exemplary." Teachers, however, were more moderate—51.9% rated themselves at this level, with only 14.8% choosing "Proficient."

Table 4
Instructional Competency in Operational Guidance

Level	Faculty (f/%)	Students (f/%)
Exemplary	14 / 51.9%	219 / 88.0%
Proficient	4 / 14.8%	18 / 7.2%
Developing	2 / 7.4%	2 / 0.8%
Needs Improvement	0 / 0.0%	10 / 4.0%

This viewpoint is supported by more recent study by Izwah and Politeknik (2024), which demonstrates that the use of explicit demonstration in conjunction with closely monitored student practice results in notable improvements in problem-solving skills, technical competency, and work preparedness. According to their findings, organized, practical methods improve skill learning while also cultivating the pragmatic mindset required in real-world job settings. Therefore, it is still crucial to incorporate guided supervision and direct demonstration into vocational training in order to successfully close the gap between classroom learning and industry standards.

Contributing Factors to Competency Gaps
Educational Background

As shown in Table 5, 63.0% of TVL teachers held a bachelor's degree while only 37.0% had a master's degree. Specialization skewed heavily toward TLE (81.5%).

Table 5
Educational Attainment and Specialization of TVL Teachers

Attainment	TLE	Home Economics	Total	%
Master's Degree	7	3	10	37.0%
Bachelor's Degree	15	2	17	63.0%

The limited presence of master's degree holders highlights the need for advanced academic preparation to improve content depth and instructional strategies.

Industry Experience

Table 6 reveals that 85.2% of respondents had no practical industry experience, with only 4 teachers reporting two to three years of work in the field.

Table 6
Industry Experience of TVL Teachers

Years	With Experience	No Experience	Total	%
3	1	0	1	3.7%
2	3	0	3	11.1%
None	0	23	23	85.2%

This gap weakens the relevance of instruction and hinders the transfer of real-world skills to learners. The findings align with TESDA guidelines emphasizing industry immersion for TVL instructors.

Training, Teaching Experience, Resources, and Support

Table 7 presents additional variables. A majority (59.3%) of teachers had attended only two trainings, and nearly half had just 1–3 years of teaching experience. Moreover, 44.4% lacked sufficient resources, and 85.2% reported minimal administrative support.

Table 7
Other Contributing Factors to Competency Gaps

Factor	Category	%
No. of Trainings	2 trainings	59.3%
Years in Teaching	1–3 years	48.1%
Resource Availability	No resources	44.4%
Administrative/Institutional Support	Low support	85.2%

additionally, Wart et al. (2023) contend that there is no one-size-fits-all method for professional development in vocational education. Their thorough analysis promotes a multifaceted framework that takes into account teacher development at different educational system levels. Teachers get the most from specialized, competency-based training that is catered to their particular technical areas at the micro level. Institutions ought to promote a collaborative culture at the meso level by means of shared reflective practices, cooperative lesson planning, and peer mentorship. Long-term success at the macro level is contingent upon adequate funding, consistent governmental support, and institutional flexibility to adjust to local demands. Neglecting any one of these aspects results in fragmented and inconsistent teacher development, making educators unprepared to meet changing industry standards and pedagogical demands.

Correlational Analysis: Instructional Competency vs. Contributing Factors

A series of statistical tests were conducted to explore associations between teacher competencies and potential contributing factors.

- Adaptability was significantly associated with specialization (Cramer's V = 0.576, $p = .031$), and nearly significant with resource availability ($p = .051$).
- Mastery of Subject Matter showed a near-significant relationship with years in teaching TLE ($p = .054$), implying experience may influence subject expertise.
- For technological competence, instructional delivery, and operational guidance, no factors yielded statistically significant correlations, although industry experience approached significance in some instances.

These results suggest that specialization and teaching experience are meaningful in shaping instructional capacity, while administrative support and industry immersion require further study for their indirect effects.

Findings reveal strengths in subject mastery and operational guidance, validated by both faculty and student ratings. However, limited training, lack of practical experience, and insufficient institutional support contribute to noticeable gaps, especially in technological competence and adaptability. To enhance TVL teaching quality—particularly in Food and Beverage Services—policy interventions must target specialization alignment, industry immersion, and access to resources.

Conclusion

Based on the findings of the study, several important conclusions were identified. Teachers frequently rated themselves lower in key areas such as adaptability and technological competence, whereas students generally viewed their performance as proficient or even exemplary. This contrast highlights the teachers' commitment to self-reflection and continuous improvement. However, their ability to deliver effective instruction is hindered by limited access to updated tools and equipment, which restricts opportunities for hands-on, real-world learning. Moreover, a substantial number of teachers lack industry experience, which poses challenges in connecting theoretical concepts with practical applications. Even brief exposure to industry environments was shown to significantly enhance their subject mastery and adaptability. Additionally, inadequate administrative support further compounds the issue by limiting resources and restricting access to meaningful professional development opportunities.

Recommendation

Based on the conclusions of this study, several recommendations are proposed to guide the development and implementation of an extension program aimed at addressing instructional competency gaps among TVL teachers in the Food and Beverage Services (FBS) strand. These include the integration of reflective teaching practices and adaptive strategies to help educators assess and refine their methods in response to diverse learner needs. Workshops focusing on updated teaching tools and current industry practices—particularly in collaboration with local businesses—can provide hands-on experiences that enrich classroom instruction. Immersion in real-world settings such as restaurants and hotels is also encouraged to bridge gaps in industry experience and enhance instructional relevance. Strengthening partnerships with school administrators is essential to ensure access to resources and sustained professional growth. A holistic teacher development approach that includes mentoring, emotional intelligence training, and collaborative teaching can further support both personal and professional advancement. Lastly, participation in university extension programs in partnership with local food enterprises can offer meaningful experiential learning and reinforce the practical application of classroom instruction.

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