

Teaching Competence, Laboratory Resource Availability, and Student Performance in Bartending Courses at South Cotabato State College

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DOI: <https://doi.org/10.47772/IJRISS.2026.100500692>

Received: 16 May 2026; Accepted: 21 May 2026; Published: 11 June 2026

ABSTRACT

This study examined the teaching competence of instructors, laboratory resource availability, and student performance in bartending courses. Specifically, it determined the profile of respondents in terms of age, sex, and year level; assessed the level of teaching competence in terms of instructional delivery, subject matter expertise, and classroom and laboratory management; evaluated laboratory resource availability; determined the level of student performance in terms of practical skill performance, theoretical knowledge, and service quality; identified significant differences in student performance when grouped according to profile variables; and determined the relationship between teaching competence, laboratory resource availability, and student performance.

A quantitative descriptive-correlational research design was utilized. The respondents of the study were 50 students enrolled in bartending courses. A researcher-made questionnaire served as the primary data gathering instrument. Statistical tools employed included frequency and percentage, mean and standard deviation, Mann–Whitney U test, Kruskal–Wallis H test, and Spearman’s rho correlation coefficient.

Findings revealed that teaching competence was rated very high, particularly in subject matter expertise and instructional delivery. Laboratory resource availability was rated high, with functionality and maintenance obtaining the highest evaluation. Student performance was also rated very high, especially in practical skills and service quality. No significant differences were found in student performance when grouped according to age, sex, and year level. Furthermore, strong positive and significant relationships were found between teaching competence and student performance, and between laboratory resource availability and student performance.

The study concluded that effective teaching competence and adequate laboratory resources significantly contribute to improved student performance in bartending education. It is recommended that institutions strengthen faculty development programs, enhance laboratory facilities, and implement supplemental instructional strategies to sustain high-quality vocational education.

Keywords: teaching competence, laboratory resources, bartending education, student performance, vocational education

INTRODUCTION

Background of the Study

Technical-vocational education plays a crucial role in preparing learners for industry-based employment by developing practical competencies, technical expertise, and professional attitudes. In hospitality-related programs such as bartending, the effectiveness of instruction and the availability of laboratory resources significantly influence students’ skill acquisition and performance. Bartending education requires a combination of theoretical knowledge, practical training, and experiential learning to ensure that students acquire competencies aligned with industry standards.

Teaching competence is considered one of the most important factors affecting student learning outcomes. Competent instructors demonstrate strong subject matter expertise, effective instructional delivery, and efficient classroom and laboratory management. In vocational education, instructors are expected not only to possess technical knowledge but also to facilitate experiential learning and hands-on practice. Studies have emphasized that teaching competence directly contributes to improved student achievement and practical skill mastery (Giousmpasoglou & Pantelidis, 2021).

Similarly, laboratory resource availability is essential in competency-based education. Adequate tools, equipment, ingredients, and functional facilities provide students with opportunities to practice and refine their technical skills. Insufficient resources may limit practical exposure and negatively affect training quality and student performance. Research indicates that well-maintained and industry-standard laboratory environments significantly enhance learning effectiveness and skill development (Nikolic et al., 2022).

Despite the recognized importance of teaching competence and laboratory resources, some institutions continue to face challenges related to instructional delivery strategies, supply adequacy, and access to practical learning materials. These concerns highlight the need to assess how teaching competence and laboratory resource availability influence student performance in bartending courses.

This study was conducted to determine the level of teaching competence of instructors, laboratory resource availability, and student performance in bartending courses. The findings of the study may provide valuable insights for administrators, instructors, and policymakers in strengthening vocational and hospitality education programs.

THEORETICAL FRAMEWORK

This study is anchored on Experiential Learning Theory by David Kolb and Competency-Based Education Theory.

Experiential Learning Theory emphasizes that learning occurs through concrete experiences, reflective observation, conceptualization, and active experimentation. In bartending education, students learn more effectively through hands-on activities, simulations, and repeated practice in laboratory environments.

Competency-Based Education Theory posits that learners achieve mastery through the demonstration of specific competencies and performance standards. In vocational education, effective instruction and adequate laboratory resources are necessary to support skill acquisition and competency development.

These theories support the assumption that teaching competence and laboratory resource availability positively influence student performance in bartending courses.

General Objective

To determine the teaching competence of instructors, laboratory resource availability, and student performance in bartending courses.

Specific Objectives

1. To determine the profile of respondents in terms of:
 - age;
 - sex; and
 - year level.
2. To assess the level of teaching competence of instructors in terms of:

- instructional delivery;
 - subject matter expertise; and
 - classroom and laboratory management.
3. To determine the level of laboratory resource availability in terms of:
- bar tools and equipment;
 - supplies and ingredients; and
 - functionality and maintenance.
4. To determine the level of student performance in terms of:
- practical skill performance;
 - theoretical knowledge; and
 - service quality.
5. To determine the significant differences in student performance when grouped according to:
- age;
 - sex; and
 - year level.
6. To determine the relationship between:
- teaching competence and student performance; and
 - laboratory resource availability and student performance.

REVIEW OF RELATED LITERATURE AND STUDIES

Related Literature

Teaching competence is widely recognized as a significant determinant of student achievement in vocational and hospitality education. Competent instructors facilitate effective learning experiences through mastery of subject matter, clear instructional delivery, and efficient management of practical learning environments. According to Giousmpasoglou and Pantelidis (2021), hospitality education requires instructors who possess both pedagogical competence and industry-based expertise to ensure effective experiential learning.

Experiential and competency-based learning environments also depend heavily on laboratory resource availability. Nikolic et al. (2022) emphasized that adequate tools, equipment, and learning facilities significantly improve learners' practical performance and competency acquisition in technical-vocational education. Likewise, Portillo et al. (2023) explained that equitable access to instructional resources contributes to improved student engagement, confidence, and learning outcomes.

Literature further highlights that practical performance often exceeds theoretical performance in hospitality-related programs because vocational learning emphasizes repeated practice, simulation, and applied training (Siliņa-Jasjukeviča et al., 2024). However, strengthening theoretical foundations remains essential in ensuring balanced competency development.

Related Studies

Several studies have explored the relationship between teaching competence, learning resources, and student performance. Giousmpasoglou and Pantelidis (2021) found that instructor competence significantly predicts hospitality students' practical performance and service quality. Their findings revealed that effective instructional delivery and strong industry exposure enhance competency development.

Nikolic et al. (2022) also reported that well-equipped laboratory environments positively affect student learning outcomes in technical-vocational education. The study emphasized that adequate resources provide opportunities for repeated practice and experiential learning.

Similarly, Portillo et al. (2023) revealed that students in hospitality programs perform better when institutions provide sufficient instructional materials and equitable access to facilities. Siliņa-Jasjukeviča et al. (2024) further found that continuous exposure to practical learning environments enhances both technical performance and service-oriented competencies among hospitality students.

Research Gap

Although several studies have examined teaching competence and vocational education outcomes, limited studies have specifically explored the combined influence of teaching competence and laboratory resource availability on student performance in bartending courses. Existing studies often focus on hospitality education broadly, with less attention given to bartending programs and practical laboratory-based instruction.

Moreover, limited localized studies have examined whether student performance differs according to demographic variables such as age, sex, and year level. The scarcity of descriptive-correlational studies in bartending education creates a gap in understanding how instructional competence and resource adequacy contribute to vocational performance outcomes.

Hence, this study was conducted to address this gap by determining the level of teaching competence, laboratory resource availability, and student performance in bartending courses.

RESEARCH METHODOLOGY

Research Design

This study utilized a quantitative descriptive-correlational research design. The descriptive method was used to assess teaching competence, laboratory resource availability, and student performance, while the correlational method was employed to determine the relationships among variables.

Respondents of the Study

The respondents of the study were 50 students enrolled in bartending courses. Complete enumeration was employed to ensure comprehensive representation of respondents.

Research Instrument

The study utilized a researcher-made questionnaire composed of the following parts:

- Part I – Profile of Respondents
- Part II – Teaching Competence Indicators
- Part III – Laboratory Resource Availability Indicators
- Part IV – Student Performance Indicators

The questionnaire utilized a five-point Likert scale.

Validity and Reliability of the Instrument

The instrument underwent expert validation and pilot testing to establish content validity and reliability. Reliability results yielded acceptable coefficients for all indicators.

Data Gathering Procedure

1. Securing permission from institutional authorities
2. Administration of questionnaires to respondents
3. Retrieval and consolidation of responses
4. Observance of ethical considerations and confidentiality

Statistical Tools

1. Frequency and Percentage
2. Mean and Standard Deviation
3. Mann–Whitney U Test
4. Kruskal–Wallis H Test
5. Spearman’s rho Correlation Coefficient

RESULTS AND DISCUSSION

Table 1. Profile of the Respondents in Terms of Age, Sex, and Year Level

Profile Variable	Category	f	%
Age	18–20 years old	20	40.0
	21–23 years old	18	36.0
	24 years old and above	12	24.0
Sex	Male	22	44.0
	Female	28	56.0
Year Level	1st Year	15	30.0
	2nd Year	18	36.0
	3rd Year	17	34.0
Total		50	100.0

Table 1 presents the profile of the respondents in terms of age, sex, and year level. In terms of age, the largest proportion of respondents belongs to the 18–20 years old category with 20 respondents or 40.0%, followed by respondents aged 21–23 years old with 18 respondents or 36.0%, while 12 respondents or 24.0% are aged 24 years old and above. This distribution indicates that most respondents are in the early stage of tertiary education, where practical competencies and foundational vocational skills are actively developed. Learners within this age range are generally engaged in competency acquisition and experiential learning processes necessary in hospitality-related programs.

With respect to sex, female respondents comprise the majority with 28 respondents or 56.0%, while male respondents account for 22 or 44.0%. The relatively balanced distribution suggests inclusive participation across genders in bartending education programs. Studies in hospitality and technical-vocational education emphasize that gender-inclusive learning environments contribute to equitable participation, collaborative learning, and balanced competency development among students (Portillo et al., 2023).

In terms of year level, second-year students constitute the largest group with 18 respondents or 36.0%, followed by third-year students with 17 respondents or 34.0%, and first-year students with 15 respondents or 30.0%. This indicates that respondents possess varying levels of exposure to laboratory-based instruction and practical

bartending activities. Students in higher year levels are more likely to have experienced repeated hands-on training and industry-simulated learning activities, which contribute to improved technical competence and learning confidence. According to Giousmpasoglou and Pantelidis (2021), prolonged exposure to experiential and hospitality-based training environments strengthens learners' appreciation of vocational instruction and enhances competency acquisition.

Overall, the findings suggest that the respondents represent diverse demographic categories with sufficient exposure to bartending education, allowing for comprehensive evaluation of teaching competence, laboratory resource availability, and student performance.

Table 2. Level of Teaching Competence of Instructors Handling Bartending Courses as a Whole

Indicators	Mean	SD	Description
Instructional Delivery	4.35	0.52	Very High
Subject Matter Expertise	4.42	0.48	Very High
Classroom and Laboratory Management	4.28	0.55	Very High
Grand Mean	4.35	0.52	Very High

Legend

Scale	Description
4.21–5.00	Very High
3.41–4.20	High
2.61–3.40	Moderate
1.81–2.60	Low
1.00–1.80	Very Low

Table 2 presents the level of teaching competence of instructors handling bartending courses as a whole. The results reveal a grand mean of 4.35 (SD = 0.52), interpreted as “Very High,” indicating that instructors are perceived as highly competent across instructional domains.

Among the indicators, subject matter expertise obtained the highest mean of 4.42 (SD = 0.48), followed by instructional delivery with a mean of 4.35 (SD = 0.52), and classroom and laboratory management with a mean of 4.28 (SD = 0.55), all interpreted as “Very High.” These findings suggest that instructors possess strong technical knowledge and industry-related competencies necessary in hospitality and vocational education. Effective instructional delivery also indicates the ability of instructors to facilitate experiential and practical learning environments.

The findings support the argument that hospitality education requires a balanced model integrating academic rigor, vocational relevance, and experiential learning to improve student competency and industry preparedness (Giousmpasoglou & Pantelidis, 2021). Likewise, instructional quality and pedagogical competence significantly contribute to learners' practical performance and employability in hospitality programs (Siliņa-Jasjukeviča et al., 2024).

The relatively low standard deviations indicate consistency in student responses, suggesting generally aligned perceptions regarding instructor competence. Overall, the findings imply that instructors handling bartending courses effectively facilitate both theoretical and practical learning experiences essential for competency development in hospitality education.

Table 3. Level of Teaching Competence When Grouped According to Age, Sex, and Year Level

Variable	Category	Mean	SD	Description
Age	18–20	4.30	0.50	Very High
	21–23	4.36	0.48	Very High

	24+	4.40	0.55	Very High
Sex	Male	4.33	0.51	Very High
	Female	4.37	0.49	Very High
Year Level	1st Year	4.25	0.54	Very High
	2nd Year	4.38	0.47	Very High
	3rd Year	4.41	0.50	Very High

Table 3 presents the level of teaching competence when grouped according to age, sex, and year level. All respondent groups rated teaching competence as “Very High,” with mean scores ranging from 4.25 to 4.41.

In terms of age, respondents aged 24 years old and above reported the highest mean of 4.40 (SD = 0.55), followed by respondents aged 21–23 years old with 4.36 (SD = 0.48), and those aged 18–20 years old with 4.30 (SD = 0.50). By sex, female respondents gave a slightly higher mean of 4.37 (SD = 0.49) than male respondents with 4.33 (SD = 0.51). In terms of year level, third-year students obtained the highest mean of 4.41 (SD = 0.50), followed by second-year students with 4.38 (SD = 0.47), while first-year students obtained the lowest mean of 4.25 (SD = 0.54), although all ratings remained within the “Very High” category.

These findings indicate that students consistently perceive instructors as highly competent regardless of demographic characteristics. The slightly higher ratings among upper-year students may suggest that prolonged exposure to laboratory-based instruction enhances appreciation of instructional quality and teaching effectiveness.

This finding aligns with studies emphasizing that experiential and industry-connected hospitality education improves student engagement and learning perceptions over time (Giousmpasoglou & Pantelidis, 2021). Furthermore, competency-based hospitality education highlights that sustained exposure to practical instruction enhances learners’ evaluation of teaching competence and training quality (Siliņa-Jasjukeviča et al., 2024).

The standard deviations indicate moderate consistency in responses, suggesting relatively aligned perceptions among students across demographic groups. Overall, the findings imply that instructors maintain strong teaching competence across various student categories, contributing positively to the quality of bartending education.

Table 4. Level of Laboratory Resource Availability as a Whole

Indicators	Mean	SD	Description
Bar Tools and Equipment	4.10	0.60	High
Supplies and Ingredients	4.05	0.58	High
Functionality and Maintenance	4.20	0.55	Very High
Grand Mean	4.12	0.58	High

Table 4 presents the level of laboratory resource availability as a whole. The results reveal a grand mean of 4.12 (SD = 0.58), interpreted as “High,” indicating that laboratory resources are generally adequate and supportive of practical bartending instruction.

Among the indicators, functionality and maintenance obtained the highest mean of 4.20 (SD = 0.55), interpreted as “Very High,” followed by bar tools and equipment with a mean of 4.10 (SD = 0.60), and supplies and ingredients with a mean of 4.05 (SD = 0.58), both interpreted as “High.” These findings indicate that laboratory facilities are operational and capable of supporting competency-based learning and practical skill acquisition.

The very high rating for functionality and maintenance suggests that existing laboratory facilities are well-maintained and effectively utilized in practical instruction. Research has shown that properly maintained training laboratories significantly improve learning efficiency and technical skill development in vocational education (Nikolic et al., 2022). Likewise, adequate laboratory resources provide students with opportunities for repeated practice, experiential learning, and real-world simulation activities essential in hospitality-related programs (Portillo et al., 2023).

However, the slightly lower ratings for supplies and ingredients suggest that there may still be occasional limitations in the adequacy or accessibility of materials needed for practical bartending exercises. Studies on competency-based technical education emphasize that inconsistent resource availability may affect the quality of practical training and reduce opportunities for continuous hands-on learning (Siliņa-Jasjukeviča et al., 2024).

Overall, the findings imply that laboratory resource availability effectively supports bartending education, although continued enhancement of tools, supplies, and instructional materials may further strengthen practical learning experiences and competency development.

Table 5. Level of Laboratory Resource Availability When Grouped According to Age, Sex, and Year Level

Variable	Category	Mean	SD	Description
Age	18–20	4.08	0.59	High
	21–23	4.12	0.57	High
	24+	4.16	0.60	High
Sex	Male	4.09	0.58	High
	Female	4.14	0.57	High
Year Level	1st Year	4.00	0.61	High
	2nd Year	4.13	0.56	High
	3rd Year	4.22	0.55	Very High

Table 5 presents the level of laboratory resource availability when grouped according to age, sex, and year level. The results indicate that all respondent groups generally rated laboratory resource availability as “High,” with mean scores ranging from 4.00 to 4.22.

In terms of age, respondents aged 24 years old and above reported the highest mean of 4.16 (SD = 0.60), followed by those aged 21–23 with 4.12 (SD = 0.57), and respondents aged 18–20 with 4.08 (SD = 0.59). This suggests that older students may perceive laboratory resources more favorably due to greater familiarity with equipment utilization and laboratory operations.

With respect to sex, female respondents reported a slightly higher mean of 4.14 (SD = 0.57) than male respondents with 4.09 (SD = 0.58), both interpreted as “High.” The minimal variation indicates relatively balanced perceptions regarding laboratory adequacy across gender groups. Studies in vocational and hospitality education suggest that equitable access to laboratory facilities contributes to balanced learning experiences and skill development among learners (Portillo et al., 2023).

In terms of year level, third-year students obtained the highest mean of 4.22 (SD = 0.55), interpreted as “Very High,” followed by second-year students with 4.13 (SD = 0.56), and first-year students with 4.00 (SD = 0.61), both interpreted as “High.” This trend suggests that prolonged exposure to practical laboratory environments improves students’ appreciation and utilization of available resources. According to Nikolic et al. (2022), students with greater laboratory exposure develop stronger perceptions of resource effectiveness and functionality.

Overall, the findings imply that laboratory resource availability is consistently perceived as adequate across demographic groups, although increased exposure and accessibility for lower-year students may further improve learning experiences and practical competency development.

Table 6. Level of Student Performance as a Whole

Indicators	Mean	SD	Description
Practical Skill Performance	4.30	0.53	Very High
Theoretical Knowledge	4.18	0.56	High
Service Quality	4.25	0.50	Very High
Grand Mean	4.24	0.53	Very High

Table 6 presents the level of student performance as a whole. The results reveal a grand mean of 4.24 (SD = 0.53), interpreted as “Very High,” indicating strong overall performance among students enrolled in bartending courses.

Among the indicators, practical skill performance obtained the highest mean of 4.30 (SD = 0.53), followed by service quality with 4.25 (SD = 0.50), both interpreted as “Very High.” Theoretical knowledge obtained a mean of 4.18 (SD = 0.56), interpreted as “High.” These findings indicate that students demonstrate stronger competencies in applied and performance-based tasks than in theoretical components.

The results align with studies emphasizing that experiential and hands-on learning environments significantly improve practical skill acquisition and service-oriented competencies in hospitality education (Giousmpasoglou & Pantelidis, 2021). Practical laboratory exposure, repeated simulation activities, and competency-based instruction enhance students’ ability to perform bartending procedures effectively and deliver quality customer service.

However, the slightly lower rating for theoretical knowledge suggests opportunities for improving conceptual understanding and integration of theory into practical activities. Research on hospitality education highlights the importance of balancing theoretical instruction and experiential learning to ensure holistic competency development (Siliņa-Jasjukeviča et al., 2024).

Overall, the findings imply that students possess strong practical and service-related competencies, while further strengthening theoretical instruction may contribute to more comprehensive learning outcomes in bartending education.

Table 7. Level of Student Performance When Grouped According to Age, Sex, and Year Level

Variable	Category	Mean	SD	Description
Age	18–20	4.18	0.54	High
	21–23	4.25	0.52	Very High
	24+	4.30	0.50	Very High
Sex	Male	4.20	0.55	Very High
	Female	4.27	0.50	Very High
Year Level	1st Year	4.10	0.57	High
	2nd Year	4.25	0.52	Very High
	3rd Year	4.35	0.48	Very High

Table 7 presents the level of student performance when grouped according to age, sex, and year level. Most groups rated student performance as “Very High,” with means ranging from 4.10 to 4.35.

Respondents aged 24 years old and above obtained the highest mean of 4.30 (SD = 0.50), followed by respondents aged 21–23 with 4.25 (SD = 0.52), while respondents aged 18–20 obtained a mean of 4.18 (SD = 0.54). These findings suggest that performance tends to improve with age and experience.

With respect to sex, female respondents obtained a slightly higher mean of 4.27 (SD = 0.50) than male respondents with 4.20 (SD = 0.55), although both groups remained within the “Very High” category. The findings indicate relatively balanced performance outcomes across gender groups.

In terms of year level, third-year students obtained the highest mean of 4.35 (SD = 0.48), followed by second-year students with 4.25 (SD = 0.52), while first-year students obtained the lowest mean of 4.10 (SD = 0.57). This trend suggests that prolonged exposure to laboratory activities and competency-based training enhances student performance over time.

The findings support the argument that repeated practice, experiential learning, and sustained laboratory exposure significantly contribute to competency development and technical performance in hospitality education

(Giousmpasoglou & Pantelidis, 2021). Similarly, competency-based instruction strengthens learners' practical and service-oriented abilities as students progress through vocational programs (Siliņa-Jasjukeviča et al., 2024).

Table 8. Difference in Student Performance When Grouped According to Age

Variable	Test Statistic	p-value	Remarks	Interpretation
Age	2.15 (H)	0.117	Not Significant	No significant difference

Table 8 presents the difference in student performance when grouped according to age using the Kruskal–Wallis H test. The obtained p-value of 0.117 is greater than the 0.05 level of significance, indicating that there is no statistically significant difference in student performance across age groups.

Although descriptive results showed slight variations in mean scores, the differences were insufficient to establish statistical significance. This implies that age does not significantly influence student performance in bartending courses. The findings suggest that instructional quality, laboratory exposure, and competency-based activities may contribute more strongly to student performance than demographic characteristics.

This result supports studies in vocational and hospitality education which emphasize that competency development is more closely associated with experiential learning opportunities and instructional effectiveness rather than age-related factors (Giousmpasoglou & Pantelidis, 2021).

Table 9. Difference in Student Performance When Grouped According to Sex

Variable	Test Statistic	p-value	Remarks	Interpretation
Sex	1.32 (U)	0.186	Not Significant	No significant difference

Table 9 presents the difference in student performance when grouped according to sex using the Mann–Whitney U test. The obtained p-value of 0.186 is greater than the 0.05 level of significance, indicating no statistically significant difference between male and female respondents in terms of student performance.

The findings imply that students perform at relatively comparable levels regardless of sex. This suggests that the bartending program provides equitable instructional opportunities, laboratory access, and competency development activities across gender groups.

Studies in hospitality and vocational education indicate that when learning environments are inclusive and resources are equally accessible, gender differences in performance become minimal or statistically insignificant (Portillo et al., 2023). The findings therefore reflect a balanced and inclusive instructional environment supportive of equal skill acquisition opportunities among students.

Table 10. Difference in Student Performance When Grouped According to Year Level

Variable	Test Statistic	p-value	Remarks	Interpretation
Year Level	5.84 (H)	0.054	Not Significant	No significant difference

Table 10 presents the difference in student performance when grouped according to year level using the Kruskal–Wallis H test. The obtained p-value of 0.054 is slightly higher than the 0.05 level of significance, indicating no statistically significant difference in student performance according to year level.

Although descriptive findings suggested that higher-year students tend to obtain higher performance ratings, the inferential results indicate that these variations are not statistically significant. This suggests that students across year levels generally achieve comparable competency outcomes.

The findings imply that the bartending program maintains relatively consistent instructional quality and competency standards across year levels. According to Siliņa-Jasjukeviča et al. (2024), well-structured competency-based hospitality programs tend to produce uniform learning outcomes because instructional

objectives and practical training standards are consistently implemented across student cohorts.

Table 11. Relationship Between Teaching Competence and Student Performance

Variables	ρ	p-value	Remarks	Interpretation
Teaching Competence & Student Performance	0.78	0.000	Significant	Strong Positive

Table 11 presents the relationship between teaching competence and student performance using Spearman's rho. The results reveal a correlation coefficient of $\rho = 0.78$ with a p-value of 0.000, indicating a statistically significant relationship at the 0.01 level.

The findings indicate a strong positive relationship, suggesting that higher levels of teaching competence are associated with higher levels of student performance. Instructors who demonstrate strong instructional delivery, subject matter expertise, and effective classroom management significantly contribute to improved learning outcomes among students.

This finding supports previous studies emphasizing that teaching quality is one of the strongest predictors of student achievement in vocational and hospitality education (Giousmpasoglou & Pantelidis, 2021). Effective instructors facilitate experiential learning, provide appropriate guidance during practical activities, and enhance students' confidence and competency development.

The strong correlation further implies that continuous faculty development, pedagogical enhancement, and industry exposure among instructors may substantially improve student performance and program quality.

Table 12. Relationship Between Laboratory Resource Availability and Student Performance

Variables	ρ	p-value	Remarks	Interpretation
Laboratory Resources & Student Performance	0.72	0.000	Significant	Strong Positive

Table 12 presents the relationship between laboratory resource availability and student performance. The results reveal a correlation coefficient of $\rho = 0.72$ with a p-value of 0.000, indicating a statistically significant relationship at the 0.01 level.

The findings indicate a strong positive relationship, suggesting that adequate laboratory resources significantly contribute to higher student performance. Availability of tools, equipment, ingredients, and functional facilities enhances students' opportunities for repeated practice, simulation activities, and competency development.

Research in vocational and hospitality education emphasizes that well-equipped laboratory environments improve practical learning effectiveness and technical skill mastery (Nikolic et al., 2022). Similarly, adequate access to learning resources supports stronger engagement, confidence, and experiential learning among students (Portillo et al., 2023).

Although the relationship is slightly lower than that of teaching competence, the findings still highlight the essential role of laboratory resources in supporting quality vocational education and student competency acquisition.

Table 13. Proposed Intervention Plan Based on the Results of the Study

Area	Issue Identified	Proposed Intervention	Expected Outcome
Teaching Competence	Need for enhanced delivery strategies	Conduct faculty training on bartending pedagogy	Improved instructional quality
Laboratory Resources	Moderate supply adequacy	Upgrade bar tools and replenish supplies	Enhanced learning environment
Student Performance	Lower theoretical knowledge scores	Provide supplemental review sessions	Improved academic performance

Table 13 presents the proposed intervention plan based on the results of the study. The intervention focuses on improving teaching competence, strengthening laboratory resources, and enhancing student performance in bartending courses.

In terms of teaching competence, the identified issue involves the need for enhanced instructional delivery strategies despite the overall very high ratings. The proposed intervention is the conduct of faculty training on bartending pedagogy and experiential learning approaches. Research emphasizes that continuous professional development significantly improves instructional effectiveness and student learning outcomes in hospitality education (Giousmpasoglou & Pantelidis, 2021).

For laboratory resources, the identified concern involves moderate adequacy of supplies and ingredients. The proposed intervention is to upgrade bar tools and replenish instructional supplies to ensure continuous access to industry-standard materials. Studies highlight that adequate laboratory facilities and updated equipment are essential for competency-based learning and practical skill mastery (Nikolic et al., 2022).

In terms of student performance, lower theoretical knowledge scores were identified relative to practical competencies. The proposed intervention involves supplemental review sessions and reinforcement activities to strengthen conceptual understanding. According to Siliņa-Jasjukeviča et al. (2024), integrating theoretical reinforcement with practical learning enhances knowledge retention and improves competency development in hospitality-related programs.

Overall, the intervention plan integrates instructional improvement, laboratory enhancement, and academic support to strengthen the overall quality and effectiveness of bartending education.

CONCLUSIONS

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

1. Instructors demonstrate very high teaching competence in bartending courses.
2. Teaching competence significantly contributes to student performance.
3. Laboratory resources are generally adequate and functional.
4. Student performance is very high, particularly in practical skills.
5. Student performance does not significantly differ according to age, sex, and year level.
6. Teaching competence and laboratory resource availability significantly influence student performance.
7. Effective teaching and adequate resources are essential for competency development in bartending education.

RECOMMENDATIONS

In light of the findings and conclusions of the study, the following recommendations are offered:

1. Provide continuous professional development for bartending instructors.
2. Strengthen innovative and experiential teaching strategies.
3. Upgrade laboratory resources and replenish supplies regularly.
4. Ensure regular maintenance of laboratory facilities and equipment.
5. Enhance theoretical instruction through supplemental review activities.

6. Promote balanced integration of theory and practice.
7. Strengthen partnerships with hospitality industry stakeholders.
8. Conduct future studies on additional factors affecting student performance.

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