

# Competencies in Food and Beverage Services on Students' Self-Efficacy and Engagement

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**Abstract**—This study aimed to determine the relationship between Food and Beverage Services competencies and students' self-efficacy and engagement among Senior High School learners enrolled in the Technical-Vocational-Livelihood track, particularly those specializing in Food and Beverage Services, in selected public secondary schools. Specifically, the study examined the extent of Food and Beverage Services competencies, students' self-efficacy and engagement. Furthermore, the study investigated whether significant relationships exist between Food and Beverage Services competencies and students' self-efficacy and engagement. A quantitative research approach was employed in the study, using a correlational research design. The respondents consisted of 140 Senior High School students enrolled in the Food and Beverage Services strand in selected public secondary schools in the Division of Laguna. The main data collection instrument was a questionnaire created by the researcher. The instrument underwent expert validation and pilot testing to ensure its validity and reliability. Data were analyzed using descriptive statistics such as weighted mean and standard deviation to determine the levels of competencies, self-efficacy, and engagement. The findings revealed that students demonstrated high levels of competencies in food and beverage services, particularly in food preparation, service preparation, and beverage knowledge. Students' self-efficacy and engagement were found to be high. The results of the analysis showed that Food and Beverage Services competencies are significantly related to students' self-efficacy and student engagement. The food and beverage services competencies are significantly related to students' self-efficacy and engagement resulting in rejection of both hypotheses. This concludes that learners possess confidence in performing tasks, fully understand their specialization and actively participate in practical learning activities and classroom tasks. It is recommended that schools strengthen competency-based instruction in Food and Beverage Services by providing more hands-on training, laboratory activities and experiential learning opportunities.

**Keywords**— Food and Beverage Services Competencies, Self-Efficacy, Student Engagement, Technical-Vocational Education, Senior High School.

## I. INTRODUCTION

As the Philippine education system continues to emphasize Technical-Vocational-Livelihood tracks under the K-12 curriculum, Food and Beverage Services education faces several challenges that may affect students' confidence and level of participation. These challenges can ultimately influence their performance and readiness for the hospitality industry.

Technical-Vocational-Livelihood (TVL) programs have become a strategic response to the demands of 21st-century skills and workforce readiness. Among these, the Food and

Beverage Services (FBS) strand plays a significant role in equipping learners with practical competencies, professional attitudes and industry-aligned essential skills for hospitality and service sectors.

Student self-efficacy is important in the acquisition and application of competencies, particularly within technical – vocational livelihood education. The development of competencies in Food and Beverage Services requires not only technical proficiency but also a strong sense of student's self-efficacy which influences students' capabilities to engage actively in skill-based learning activities – an insight supported by the findings of Zhang et. al (2021). Students' engagement was a strategy that aimed to provide positive learner experiences and active learning opportunities, such as taking part in collaborative group work, having students lead presentations and discussion actively sharing resources, developing course assignments with hands-on components, and incorporating case studies and reflections. However, Reckmeyer (2019) points out teachers who feel engaged with their work will have an easier time helping students feel engaged with school.

Furthermore, student engagement encompasses behavioral, emotional, and cognitive dimensions. It reflects how students participate in learning activities, how they feel about their educational experiences, and how deeply they process and understand academic content. When these dimensions are nurtured, students are more likely to demonstrate positive attitudes, sustained effort, and a deeper grasp of subject matter—ultimately contributing to improved academic outcomes and personal growth.

Therefore, it is essential to investigate the connection between Food and Beverage Services competencies and students' self-efficacy and engagement in order to ascertain if competency-based instruction enhances senior high school pupils' psychological empowerment and active learning participation in addition to their technical skill.

### 1.1 Statement of the Problem

#### *Problem/s which were addressed by the research*

The study aimed to determine the relationship between Food and Beverage Services competencies and students' self-efficacy and engagement among senior high school learners enrolled in the Technical-Vocational-Livelihood (TVL) track, particularly those specializing in Food and Beverage Services, in selected schools in the Division of Laguna.

Specifically, the study aimed to answer the questions:

1. What is the level of competencies in food and beverage services in terms of:
  - 1.1 food and beverage pairing;
  - 1.2 food preparation;
  - 1.3 food service preparation;
  - 1.4 menu selection;
  - 1.5 menu preparation; and
  - 1.6 beverage knowledge?
2. What is the level of students' self-efficacy in terms of:
  - 2.1 motivation and interest;
  - 2.2 classroom environment;
  - 2.3 learning strategies; and
  - 2.4 academic resources?
3. What is the level of student engagement in terms of:
  - 3.1 behavioral engagement;
  - 3.2 cognitive engagement; and
  - 3.3 emotional engagement?
4. Is there a significant relationship between the competencies in food and beverage services and students' self-efficacy?
5. Is there a significant relationship between the competencies in food and beverage services and student engagement?

II. METHODOLOGY

The study employed a quantitative research approach using correlational research design. The respondents consisted of 140 Senior High School students enrolled in the Food and Beverage Services strand in selected public secondary schools in the Division of Laguna. The researcher-made survey served as the main tool for collecting data. To guarantee the instrument's validity and dependability, it was pilot-tested and validated by experts. Data were analyzed using descriptive statistics such as weighted mean and standard deviation to determine the levels of competencies, self-efficacy, and engagement.

III. RESULTS AND DISCUSSION

This part discusses the results that were yielded from the treatment of the data that was gathered in this study. The following tabular presentations and discussions further analyze the relationship of food and beverage services competencies to the level of students' self-efficacy and engagement.

*Level of Competencies in Food and Beverage Services*

In this study, the level of competencies in food and beverage services was described in terms of food and beverage pairing, food preparation, food service preparation, menu selection, menu preparation, beverage knowledge and was determined by the mean and standard deviation.

*Level of Food and Beverage Services Competencies in terms of Food and Beverage Pairing*

Table 1 presents the level of competencies in food and beverage services in terms of food and beverage pairing.

As presented, students agree that they can adjust pairings based on customer preferences and they are able to identify suitable beverage pairings for different cuisines. Just the same, students can recommend pairings for special dietary needs,

can demonstrate knowledge of cultural pairing traditions as well as matching wine types with appropriate dishes.

The level of competencies in food and beverage services in terms of food and beverage pairing gained the overall weighted mean of 3.88 with a standard deviation of 0.84, verbally interpreted as Highly Competent. This means that the students show high competence in choosing beverages that matches various dishes.

**Table 1.** Level of Competencies in Food and Beverage Services in terms of Food and Beverage Pairing

Statements	Mean	SD	Remarks
As a student I...			
...can identify suitable beverage pairings for various cuisines.	3.97	0.50	Agree
...can match wine types with appropriate dishes.	3.70	0.53	Agree
...can demonstrate knowledge of cultural pairing traditions.	3.86	0.60	Agree
...can recommend pairings for special dietary needs.	3.89	0.63	Agree
...can adjust pairings based on customer preferences.	3.99	0.67	Agree
Weighted Mean	3.88		
SD	0.84		
Verbal Interpretation	Highly Competent		

The results indicate that the high competency level implies that present instructional approaches in food and beverage pairing are effective in developing students' applied service skills. Students who possess a strong knowledge of food and beverage pairing can apply these skills in real-world situations.

Table 2 shows the level of competencies in food and beverage services in terms of food preparation.

As shown, the respondents strongly agree that they can adapt recipes based on available ingredients and can follow standard recipes accurately. Similarly, students strongly agree that they can select appropriate cooking methods for ingredients and prepare food with attention to presentation. Meanwhile, preparing food in accordance with dietary restrictions obtained a slightly lower mean but was still interpreted as agree.

**Table 2.** Level of Competencies in Food and Beverage Services in terms of Food Preparation

Statements	Mean	SD	Remarks
As a student I...			
...can follow standard recipes accurately.	4.42	0.50	Strongly Agree
...can select appropriate cooking methods for ingredients.	4.37	0.53	Strongly Agree
...can prepare food with attention to presentation.	4.33	0.60	Strongly Agree
...can adapt recipes based on available ingredients.	4.43	0.63	Strongly Agree
...can prepare food in accordance with dietary restrictions.	4.09	0.67	Agree
Weighted Mean	4.32		
SD	0.62		
Verbal Interpretation	Very Highly Competent		

The level of competencies in food and beverage services in terms of food preparation gained an overall weighted mean of

4.32 with a standard deviation of 0.62, verbally interpreted as Very Highly Competent. This means that the students demonstrate very high competence in preparing food according to industry standards and practical requirements.

The findings indicate that students demonstrate a very high level of competence in food preparation, as reflected in their ability to follow standard recipes, select appropriate cooking methods, and present food effectively. They also show adaptability by modifying recipes based on available ingredients, which highlights practical skill application. Although preparing food according to dietary restrictions obtained a slightly lower rating, it still reflects a satisfactory level of competence. Overall, students demonstrate skills aligned with industry standards in food preparation.

**Table 3.** Level of Competencies in Food and Beverage Services in terms of Food Service Preparation

Statements As a student I...	Mean	SD	Remarks
...can arrange table settings according to service standards	4.04	0.84	Agree
...can prepare service trays efficiently.	3.98	0.76	Agree
...can organize service stations for smooth operations.	3.85	0.81	Agree
...can ensure proper storage of service items.	3.99	0.86	Agree
...can prepare for different types of service.	3.87	0.92	Agree
Weighted Mean	3.95		
SD	0.84		
Verbal Interpretation	Highly Competent		

Table 3 shows the level of competencies in food and beverage services in terms of food service preparation.

As shown, the respondents agree that they can arrange table settings according to service standards and ensure proper storage of service items. Likewise, they agree that they can prepare service trays efficiently, organize service stations for smooth operations, and prepare for different types of service.

The level of competencies in food and beverage services in terms of food service preparation gained an overall weighted mean of 3.95 with a standard deviation of 0.84, verbally interpreted as Highly Competent. This means that the students demonstrate strong competence in performing preparatory service tasks required in real hospitality settings.

In summary, the results indicate that students demonstrate a high level of competence in food service preparation, particularly in arranging table settings and organizing service areas. They are also capable of efficiently preparing service trays and ensuring smooth operational flow during service. Their ability to handle various types of service reflects practical readiness and familiarity with standard procedures. Overall, the results show that students possess strong preparatory skills required in real hospitality settings.

Table 4 shows the level of competencies in food and beverage services in terms of menu selection.

As presented in the table, the respondents agree that they can consider nutritional balance in menu choices and balance variety and consistency in menu offerings. Likewise, they agree that they can select items that align with the restaurant's concept, consider cost-effectiveness in menu planning, and include options for dietary restrictions.

**Table 4.** Level of Competencies in Food and Beverage Services in terms of Menu Selection

Statements As a student I...	Mean	SD	Remarks
...can consider nutritional balance in menu choices	3.99	0.83	Agree
...can consider cost-effectiveness in menu planning.	3.81	0.84	Agree
...can include options for dietary restrictions.	3.77	0.89	Agree
...can balance variety and consistency in menu offerings.	3.89	0.78	Agree
...can select items that align with the restaurant's concept.	3.83	0.87	Agree
Weighted Mean	3.86		
SD	0.85		
Verbal Interpretation	Highly Competent		

The level of competencies in food and beverage services in terms of menu selection gained an overall weighted mean of 3.86 with a standard deviation of 0.85, verbally interpreted as Highly Competent. This means that the students demonstrate strong competence in making informed and strategic menu decisions that consider both customer needs and operational factors.

In summary, the findings indicate that students demonstrate a high level of competence in menu selection, particularly in considering nutritional balance and aligning menu items with the restaurant's concept. They are also capable of balancing variety, consistency, and cost-effectiveness in planning menu offerings. Their ability to include options for dietary restrictions reflects awareness of diverse customer needs. Overall, the results show that students can make informed and strategic menu decisions in food service operations. This further indicates their readiness to apply menu planning skills in real-world hospitality settings.

Table 5 shows the level of competencies in food and beverage services in terms of menu preparation.

**Table 5.** Level of Competencies in Food and Beverage Services in terms of Menu Preparation

Statements As a student I...	Mean	SD	Remarks
...can include accurate pricing and portion sizes.	3.84	0.82	Agree
...can update menus based on inventory changes.	3.82	0.82	Agree
...can incorporate branding elements into the menu.	3.69	0.89	Agree
...can align menu design with target audience preferences.	3.91	0.83	Agree
...can organize menu sections logically.	3.86	0.91	Agree
Weighted Mean	3.82		
SD	0.86		
Verbal Interpretation	Highly Competent		

As shown, the respondents agree that they can align menu design with target audience preferences and organize menu sections logically. Similarly, they agree that they can include accurate pricing and portion sizes, update menus based on inventory changes, and incorporate branding elements into the menu. The level of competencies in food and beverage services in terms of menu preparation obtained an overall weighted mean of 3.82 with a standard deviation of 0.86, verbally interpreted as Highly Competent. This indicates that students demonstrate strong competence in designing and

preparing menus according to operational standards and customer preferences.

In summary, the findings indicate that students demonstrate a high level of competence in menu preparation, particularly in aligning menu design with customer preferences and organizing content logically. They are also capable of incorporating accurate pricing, portion sizes, and branding elements into menu development. Their ability to update menus based on inventory changes reflects awareness of operational requirements. Overall, the results show that students can effectively design menus that meet both customer expectations and business standards.

**Table 6.** Level of Competencies in Food and Beverage Services in terms of Beverage Knowledge

Statements	Mean	SD	Remarks
As a student I...			
...can identify types of alcoholic and non-alcoholic beverages.	4.03	0.89	Agree
...can identify glassware appropriate for each beverage.	3.98	0.87	Agree
...can recommend beverages based on customer preferences.	4.00	0.79	Agree
...can understand beverage storage requirements.	3.89	0.82	Agree
...can prepare basic cocktails.	3.78	0.92	Agree
Weighted Mean	3.94		
SD	0.86		
Verbal Interpretation			Highly Competent

Table 6 shows the level of competencies in food and beverage services in terms of beverage knowledge.

Students agree that they can identify types of alcoholic and non-alcoholic beverages and recommend beverages based on customer preferences. They also agree that they can identify appropriate glassware, understand beverage storage requirements, and prepare basic cocktails.

The overall weighted mean of 3.94 with a standard deviation of 0.86 was verbally interpreted as Highly Competent. This indicates that students have developed solid foundational knowledge in beverage service.

In summary, the results indicate that students demonstrate a high level of competence in beverage knowledge, particularly in identifying different types of beverages and recommending appropriate options based on customer preferences. They are also capable of selecting proper glassware, understanding storage requirements, and preparing basic cocktails. These skills reflect a solid understanding of fundamental beverage service practices. Overall, the results show that students possess essential knowledge required for effective beverage service.

*Level of Students' Self-efficacy*

In this study, the level of students' self-efficacy was described in terms of motivation and interest, classroom environment, learning strategies, academic resources and was determined by the mean and standard deviation.

Table 7 shows the level of students' self-efficacy in terms of Motivation and Interest.

Students agree that they enjoy participating in food service simulations and show enthusiasm for learning service skills. They also agree that they are driven to succeed and value

mastering competencies. They likewise demonstrate curiosity toward food and beverage trends, indicating active interest in continuous learning.

**Table 7.** Level of Students Self-efficacy in terms of Motivation and Interest

Statements	Mean	SD	Remarks
As a student I...			
...show enthusiasm for learning food and beverage service skills.	4.03	0.76	Agree
...are driven to succeed in practical assessments.	3.94	0.78	Agree
...express curiosity about food and beverage trends.	3.92	0.85	Agree
...enjoy participating in food service simulations.	4.05	0.90	Agree
...value the importance of mastering food service competencies.	4.01	0.84	Agree
Weighted Mean	3.99		
SD	0.83		
Verbal Interpretation			Highly Efficient

The overall weighted mean of 3.99 with a standard deviation of 0.83 was verbally interpreted as Highly Efficient. This suggests that students possess strong motivational self-belief in learning food and beverage competencies.

In summary, the findings indicate that students demonstrate a high level of self-efficacy in terms of motivation and interest, as shown by their enthusiasm for learning and active participation in simulations. They are driven to succeed and recognize the importance of mastering food and beverage competencies. Their curiosity toward industry trends further reflects a strong interest in continuous learning.

**Table 8.** Level of Students Self-efficacy in terms of Classroom Environment

Statements	Mean	SD	Remarks
As a student I...			
...feel comfortable asking questions during class.	3.90	0.96	Agree
...collaborates well with peers during group tasks.	3.96	0.84	Agree
...feel safe expressing ideas and opinions.	3.92	0.82	Agree
...perceive the classroom as a supportive learning space.	3.99	0.84	Agree
...contribute positively to classroom discussions.	4.06	0.83	Agree
Weighted Mean	3.96		
SD	0.86		
Verbal Interpretation			Highly Efficient

Table 8 shows the level of students' self-efficacy in terms of Classroom Environment.

Students agree that they contribute positively to discussions and perceive the classroom as supportive. They also feel comfortable asking questions and collaborating with peers. They further demonstrate openness in sharing ideas, which reflects active participation in the learning process.

The overall weighted mean of 3.96 with a standard deviation of 0.86 was verbally interpreted as Highly Efficient. This indicates that students feel confident and supported within their classroom environment.

In summary, students perceive their learning environment as conducive to confidence and participation. They feel comfortable expressing their ideas and engaging with peers during learning activities. A supportive classroom atmosphere encourages collaboration and active involvement. Overall, the

environment contributes to the development of students' confidence and willingness to participate.

**Table 9.** Level of Students Self-efficacy in terms of Learning Strategies

Statements	Mean	SD	Remarks
As a student I...			
...use note-taking to retain important concepts.	4.07	0.86	Agree
...apply practical techniques learned in class.	3.97	0.82	Agree
...practice skills outside of scheduled class time.	3.89	0.80	Agree
...adapt learning strategies based on task requirements.	4.01	0.77	Agree
...reflect on mistakes to improve future performance.	4.06	0.84	Agree
Weighted Mean	4.00		
SD	0.82		
Verbal Interpretation	Highly Efficient		

Table 9 shows the level of students' self-efficacy in terms of Learning Strategies.

As shown, the respondents agree that they use note-taking to retain important concepts and reflect on mistakes to improve future performance. They also demonstrate the ability to adapt learning strategies based on task requirements and effectively apply practical techniques learned in class. In addition, they consistently practice skills beyond scheduled class time, indicating initiative and commitment to improvement. These behaviors reflect strong self-regulated learning and active engagement in skill development.

The level of students' self-efficacy in terms of learning strategies obtained an overall weighted mean of 4.00 with a standard deviation of 0.82, verbally interpreted as Highly Efficient. This means that the students demonstrate strong confidence in their ability to regulate and manage their own demonstrate learning processes effectively. This also indicates that students are capable of applying appropriate strategies to improve their academic and practical performance.

In summary, the findings indicate that students utilize strategic learning behaviors such as reflection, adaptation, and practice, which enhance their mastery of food and beverage service competencies. These strategies enable students to become more independent and proactive in their learning. They also contribute to improved performance and continuous skill development.

Table 10 shows the level of students' self-efficacy in terms of academic resources.

**Table 10.** Level of Students Self-efficacy in terms of Academic Resources

Statements	Mean	SD	Remarks
As a student I...			
...can utilize textbooks and manuals to support learning.	4.01	0.72	Agree
...can access online resources for additional knowledge.	4.17	0.76	Agree
...use library materials to enhance understanding.	3.72	0.81	Agree
...engage with peer study groups for support.	3.93	0.82	Agree
...take advantage of available learning platforms.	4.07	0.78	Agree
Weighted Mean	3.98		
SD	0.79		
Verbal Interpretation	Highly Efficient		

As reflected in the table, the respondents agree that they can access online resources for additional knowledge and take advantage of available learning platforms. They also agree that they can utilize textbooks and manuals to support learning, engage with peer study groups, and use library materials to enhance understanding.

The level of students' self-efficacy in terms of academic resources gained an overall weighted mean of 3.98 with a standard deviation of 0.79, verbally interpreted as Highly Efficient. This indicates that students possess strong confidence in their ability to use available instructional and academic support systems to enhance their learning.

In summary, the results indicate that students demonstrate a high level of self-efficacy in utilizing academic resources to support their learning. They can access various materials such as online platforms, textbooks, and library resources to enhance their understanding. Their engagement with peer study groups further reflects collaborative learning practices. Overall, the results show that students are confident in maximizing available resources to improve their academic performance.

*Level of Student Engagement*

In this study, the level of student engagement was described in terms of behavioral, cognitive and emotional engagement and was determined by the mean and standard deviation.

**Table 11.** Level of Student Engagement in terms of Behavioral Engagement

Statements	Mean	SD	Remarks
As a student I...			
...attend classes regularly.	4.25	0.90	Strongly Agree
...participate actively in hands-on activities.	4.05	0.86	Agree
...interact positively with classmates during activities.	3.99	0.92	Agree
...respect classroom rules and protocols.	4.11	0.93	Agree
...contribute to group work during hands-on activities.	4.00	0.83	Agree
Weighted Mean	4.08		
SD	0.91		
Verbal Interpretation	Highly Engaged		

Table 11 shows the level of student engagement in terms of behavioral engagement.

As shown, the respondents strongly agree that they attend classes regularly. They also actively participate in hands-on activities, follow classroom rules and protocols, and maintain positive interactions with classmates. In addition, they contribute effectively to group work, showing cooperation and responsibility during activities. These behaviors reflect strong participation, discipline, and consistent involvement in learning tasks.

The level of student engagement in terms of behavioral engagement gained an overall weighted mean of 4.08 with a standard deviation of 0.91, verbally interpreted as Highly Engaged. This means that the students demonstrate strong observable participation, persistence, and involvement in food and beverage service-learning activities.

In summary, the findings indicate that students demonstrate a high level of behavioral engagement, as

reflected in their regular attendance and active participation in hands-on activities. They also show positive interactions with peers and adherence to classroom rules and protocols. Their involvement in group work further highlights collaboration and responsibility in learning tasks. Overall, the results show that students are actively engaged and consistently participate in food and beverage service-learning activities. This further indicates their readiness to perform tasks effectively in practical learning environments.

**Table 12.** Level of Student Engagement in terms of Cognitive Engagement

Statements As a student I...	Mean	SD	Remarks
...reflect on feedback to improve performance.	4.16	0.81	Agree
...demonstrate curiosity about food and beverage trends.	4.03	0.76	Agree
...explore alternative methods in food preparation.	3.96	0.87	Agree
...integrate prior knowledge into new learning situations.	3.97	0.84	Agree
...ask thoughtful questions during lessons.	3.88	0.92	Agree
Weighted Mean	4.00		
SD	0.85		
Verbal Interpretation			Highly Engaged

Table 12 shows the level of student engagement in terms of cognitive engagement.

As reflected in the table, the respondents agree that they reflect on feedback to improve performance and demonstrate curiosity about food and beverage trends. They also agree that they explore alternative methods in food preparation, integrate prior knowledge into new learning situations, and ask thoughtful questions during lessons.

The level of student engagement in terms of cognitive engagement obtained an overall weighted mean of 4.00 with a standard deviation of 0.85, verbally interpreted as Highly Engaged. This indicates that students actively invest effort in understanding concepts, analyzing information, and applying knowledge strategically in practical tasks. It also reflects their ability to think critically, integrate prior learning, and make meaningful connections during learning activities.

In summary, the results indicate that students demonstrate a high level of cognitive engagement, as shown by their ability to reflect on feedback and apply it to improve performance. They actively explore alternative methods, integrate prior knowledge, and show curiosity in learning tasks. Their tendency to ask thoughtful questions reflects deeper understanding and critical thinking. Overall, the results show that students invest effort in processing and applying knowledge effectively in practical activities.

Table 13 shows the level of student engagement in terms of emotional engagement.

As presented, the respondents strongly agree that they express enjoyment in hands-on activities. They also demonstrate a sense of belonging in the classroom, take pride in their accomplishments, and maintain a positive attitude toward feedback. Additionally, they are able to manage frustration during challenging tasks, reflecting emotional resilience. These responses indicate that students are emotionally invested in their learning and maintain a positive

mindset toward improvement. This also suggests that students are able to sustain positive emotions even when faced with learning challenges.

**Table 13.** Level of Student Engagement in terms of Emotional Engagement

Statements As a student I...	Mean	SD	Remarks
...express enjoyment on hands-on activities.	4.05	0.90	Strongly Agree
...feel a sense of belonging in the classroom.	4.00	0.86	Agree
...can manage frustration during difficult tasks.	3.86	0.94	Agree
...feel proud of their accomplishments.	4.04	0.97	Agree
...maintain a positive attitude toward feedback.	4.06	0.93	Agree
Weighted Mean	4.00		
SD	0.92		
Verbal Interpretation			Highly Engaged

The level of student engagement in terms of emotional engagement gained an overall weighted mean of 4.00 with a standard deviation of 0.92, verbally interpreted as Highly Engaged. This indicates that students demonstrate strong emotional attachment, interest, and commitment to their food and beverage service-learning experiences. It also reflects their ability to maintain positive attitudes and emotional resilience during learning activities. Such emotional engagement supports sustained motivation and enhances their overall learning experience. This further indicates that emotional factors play a significant role in maintaining students' active participation.

In summary, the results indicate that students demonstrate a high level of emotional engagement, particularly in expressing enjoyment during hands-on activities. They also show a sense of belonging in the classroom and take pride in their accomplishments. Their positive attitude toward feedback and ability to manage frustration reflect emotional maturity in learning.

*Significant Relationship Between Competencies in Food and Beverage Service and Students' Self-Efficacy*

In this study, the significant relationship between competencies in food and beverage service and students' self-efficacy were analyzed by applying Pearson Correlation Coefficient using Minitab 14. This statistical method was used to determine the strength and direction of the relationship between the variables.

Table 14 presents the correlation between level of competencies in food and beverage services and students' self-efficacy. The results include Pearson correlation coefficients (r-values), p-values, and sample size (N=140) for each relationship.

A significant correlation between the extent of Food and Beverage Service various competencies and all attributes students' self-efficacy was manifested supported by the p-values which are all less than 0.05 level of significance. This indicates that students' acquired competencies in Food and beverage services are associated to their self-efficacy. Students who demonstrate higher levels of competence in food and beverage service also tend to exhibit stronger confidence

in their abilities. As students' practical service skills improve, their belief in their capability to perform tasks successfully likewise increases.

**Table 14.** Significant Relationship between Competencies in Food and Beverage Service and Students' Self-Efficacy

Competencies in Food and Beverage Service	Motivation and Interest	Classroom Environment	Learning Strategies	Academic Resources
Food and Beverage Pairing	Pearson Correlation .304*	.397*	.452*	.308*
	Sig. (2-tailed) .000	.000	.000	.000
	N 140	140	140	140
Food Preparation	Pearson Correlation .384*	.489*	.334*	.421*
	Sig. (2-tailed) .000	.000	.000	.000
	N 140	140	140	140
Food Service Preparation	Pearson Correlation .422*	.547*	.370*	.430*
	Sig. (2-tailed) .000	.000	.000	.000
	N 140	140	140	140
Menu Selection	Pearson Correlation .388*	.419*	.586*	.460*
	Sig. (2-tailed) .000	.000	.000	.000
	N 140	140	140	140
Menu Preparation	Pearson Correlation .426*	.355*	.365*	.450*
	Sig. (2-tailed) .000	.000	.000	.000
	N 140	140	140	140
Beverage Knowledge	Pearson Correlation .342*	.339*	.492*	.352*
	Sig. (2-tailed) .000	.000	.000	.000
	N 140	140	140	140

Note \* p < .05

The significant relationship attests that developing strong competencies in food and beverage services contribute meaningfully to students' self-belief and professional readiness. Since the computed p-values are less than 0.05, the null hypothesis stating that there is no significant relationship between Food and Beverage Services competencies and students' self-efficacy is rejected. Therefore, the alternative hypothesis is accepted.

*Significant Relationship Between Competencies in Food and Beverage Services and Student Engagement*

In this study, the significant relationship between the of competencies in food and beverage service and student engagement were analyzed by applying Pearson Correlation Coefficient using Minitab 14.

Table 15 presents the correlation between the competencies in food and beverage service and student engagement. The results include Pearson correlation coefficients (r-values), p-values, and a sample size of N = 140 for each relationship.

A significant correlation between the competencies in food and beverage services and all dimensions of student

engagement was observed, as indicated by the p-values, which are all less than the 0.05 level of significance. This implies that students' competencies in food and beverage services are significantly related to their behavioral, cognitive, and emotional engagement. Students who demonstrate higher levels of competence in areas such as food preparation, service preparation, menu planning, beverage knowledge, and pairing are more likely to actively participate in activities, engage in deeper learning processes, and develop stronger emotional connections to their learning experiences. These results indicate that the development of practical competencies enhances students' overall engagement by promoting active involvement, critical thinking, and positive learning attitudes.

**Table 15.** Significant Relationship between the Extent of Food and Beverage Service Competencies and Students Engagement

Food and Beverage Service Competencies	behavioral engagement	cognitive engagement	emotional engagement
Food and Beverage Pairing	Pearson Correlation .371*	.356*	.245*
	Sig. (2-tailed) .000	.000	.012
	N 140	140	140
Food Preparation	Pearson Correlation .491*	.534*	.355*
	Sig. (2-tailed) .000	.000	.000
	N 140	140	140
Food Service Preparation	Pearson Correlation .361*	.396*	.252*
	Sig. (2-tailed) .000	.000	.009
	N 140	140	140
Menu Selection	Pearson Correlation .301*	.389*	.345*
	Sig. (2-tailed) .000	.000	.000
	N 140	140	140
Menu Preparation	Pearson Correlation .333*	.461*	.259*
	Sig. (2-tailed) .000	.000	.010
	N 140	140	140
Beverage Knowledge	Pearson Correlation .483*	.408*	.379*
	Sig. (2-tailed) .000	.000	.000
	N 140	140	140

Note \* p < .05

The significant relationship indicates that strengthening competencies in food and beverage services plays a vital role in enhancing students' overall engagement in technical-vocational learning environments. As students develop practical skills, they become more actively involved, think more deeply about tasks, and show greater emotional investment in learning activities. This highlights the importance of competency-based instruction in fostering meaningful participation and sustained engagement.

IV. CONCLUSION AND RECOMMENDATIONS

There is a significant relationship between competencies in Food and Beverage Services and students' self-efficacy; hence, the hypothesis is rejected. This indicates that as students develop higher levels of competencies, their confidence in performing academic and practical tasks correspondingly increases.

There is a significant relationship between competencies in Food and Beverage Services and student engagement; thus, the hypothesis is rejected. This implies that enhanced competencies contribute to increased behavioral, cognitive, and emotional engagement in learning activities, reflecting greater involvement and commitment among students.

Based on the findings and conclusions of the study, the following recommendations are proposed:

Curriculum planners and educational policymakers may continue to enhance competency-based learning approaches within Technical-Vocational-Livelihood programs to ensure alignment with industry standards.

School Head may strengthen Food and Beverage Services programs by providing adequate training facilities, instructional material, and industry-based learning opportunities that support competency development.

Teachers in the Food and Beverage Services strand may implement more experiential learning strategies such as simulated restaurant operations, hands-on demonstrations, and

collaborative service activities to further enhance students' confidence and engagement.

Students may actively participate in practical training and skill-development activities to improve their competencies and strengthen their confidence in performing hospitality-related tasks.

Future researchers may conduct similar studies in other Technical-Vocational-Livelihood strands or educational institutions to further validate the relationship between technical competencies, students' self-efficacy, and engagement.

#### REFERENCE

- [1]. Reckmeyer, M. (2019). Focus on student engagement for better academic outcomes. Gallup. <https://www.gallup.com/education/267521/focus-student-engagement-better-academic-outcomes.aspx>
- [2]. Zhang, X., Wang, J., & Zhang, Y. (2021). Student engagement and academic achievement: The role of self-efficacy in higher education learning. *Frontiers in Psychology*, 12, 1–10. <https://doi.org/10.3389/fpsyg.2021.633344>