

# Perception on Culinary Education and Personal Food Choices of BS Hospitality Management Students: Basis for a Nutritional Literacy Program

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## Abstract

This research investigated the correlation between perceptions of culinary education and individual food preferences among Bachelor of Science in Hospitality Management (BSHM) students at Taguig City University. A total of 156 students in their third and fourth years participated in the study, which utilized a descriptive-correlational research design. A structured questionnaire assessed four dimensions of experiential learning—concrete experience, reflective observation, abstract conceptualization, and active experimentation—alongside prevalent personal food preferences.

The researchers used descriptive statistics and inferential tests like the independent samples t-test, one-way analysis of variance (ANOVA), and Pearson product-moment correlation. The reliability test showed that the test was very consistent inside (Cronbach's  $\alpha = 0.94$ ). The results indicated that respondents overwhelmingly concurred with all aspects of culinary education, with active experimentation yielding the highest mean ( $M = 3.71$ ). There were no statistically significant differences when respondents were categorized by age, sex, year level, and religion ( $p > 0.05$ ).

There were statistically significant weak to moderate positive correlations between all four dimensions of culinary education and individual food choices ( $r = 0.29-0.35$ ,  $p < 0.01$ ). These results suggest that increased participation in experiential learning correlates with more frequent and active food-related behaviors. However, the weak strength of these connections



shows that other things, like lifestyle, accessibility, and convenience, also affect what people choose to eat.

The results were used to create a Nutritional Literacy Program that would help students learn more about food and nutrition and make better choices about what they eat.

**Keywords:** *Culinary Education; Experiential Learning; Food Choices; Nutritional Literacy; Hospitality Students*



## INTRODUCTION

Students in hospitality and culinary programs need to know more about nutrition because it is important for both their health and their work. Students' knowledge, attitudes, and behaviors toward food affect not only what they eat now, but also what they will do in the future when it comes to preparing and serving food.

David A. Kolb suggests that experiential learning involves four stages: concrete experience, reflective observation, abstract conceptualization, and active experimentation. Studies have found that experiential methods in culinary education, like cooking, reflecting, and using what you've learned, are linked to better food skills, nutrition awareness, and self-efficacy.

Despite this, university students often eat a lot of processed foods, convenience meals, and sugary drinks, mostly because they don't have enough time or access to healthier options. Students who study cooking learn about healthier ways to eat, but we don't know much about how these lessons affect their own food choices, especially in local colleges and universities.

In the Philippines, there haven't been many studies that looked at culinary education and dietary behavior in the same way. This study fills this gap by looking at how BSHM students' views on culinary education affect their food choices. Out nutrition because it is important for both their health and their life in general. Students' knowledge, attitudes, and behaviors toward food affect not only what they eat now, but also what they will do in the future when it comes to preparing and serving food.

David A. Kolb suggests that experiential learning involves four stages: concrete experience, reflective observation, abstract conceptualization, and active experimentation. Studies have found that experiential methods in culinary education, like cooking, reflecting, and using what you've learned, are linked to better food skills, nutrition awareness, and self-efficacy. (Kolb & Kolb, 2022; Nutrients studies such as Chen et al., 2022; Shafto et al., 2023).

Despite this, university students often eat plenty of processed foods, convenience meals, and sugary drinks, mostly because they don't have enough time or access to healthier options. Students who study cooking learn about healthier ways to eat, but we don't know much about how these lessons affect their own food choices, especially in local colleges and universities. (World Health Organization, 2022; Monteiro et al., 2021).

In the Philippines, there haven't been many studies that looked at culinary education and dietary behavior in the same way. This study fills this gap by looking at how BSHM students' views on culinary education affect their food choices.

Specifically, the study sought to answer the following research sub-problems:

1. Profile of the respondents in terms of:
  - 1.1 Age
  - 1.2 Sex



- 1.3 Year level
- 1.4 Religion
2. Perception of the respondents on their culinary education in terms of:
  - 2.1 Concrete Experience
  - 2.2 Reflective Observation
  - 2.3 Abstract Conceptualization
  - 2.4 Active Experimentation
3. Common personal food choices of the respondents.
4. Significant difference in the perception of culinary education when grouped according to profile variables.
5. Significant difference in personal food choices when grouped according to profile variables.
6. Significant relationship between the perception of culinary education and common personal food choices.
7. Proposed Nutritional Literacy Program based on the findings.

## **2 MATERIALS AND METHODS**

### **2.1 Research Design**

This study utilized a descriptive-correlational research design to examine the relationship between students' perceptions of culinary education and their personal food choices.

### **2.2 Respondents**

The respondents consisted of 156 third- and fourth-year BSHM students enrolled during the second semester of Academic Year 2025–2026. These students were selected because they have sufficient exposure to both theoretical and practical culinary instruction, enabling them to provide informed responses.

### **2.3 Research Instrument**

A structured questionnaire was used, consisting of:

1. Demographic Profile (age, sex, year level, religion)
2. Perception of Culinary Education, based on experiential learning dimensions:
  - 2.1 Concrete Experience
  - 2.2 Reflective Observation
  - 2.3 Abstract Conceptualization
  - 2.4 Active Experimentation
3. Personal Food Choices, covering:
  - 3.1 Meals and staples
  - 3.2 Protein sources



- 3.3 Fruits and vegetables
- 3.4 Processed and fast foods
- 3.5 Beverages

Three academic experts in hospitality and nutrition validated the instrument's face and content. Before collecting data, a pilot test with 25 people was done. The overall Cronbach's alpha of 0.94 from the reliability testing shows that the test is very consistent within itself.

### 2.3 Statistical Analysis

Descriptive statistics like frequency, percentage, and weighted mean were used to sum up the data. Independent samples t-test, one-way ANOVA, and Pearson product-moment correlation were all examples of inferential statistics.

Although Likert-scale data are ordinal, composite scores were treated as interval data so that parametric tests could be used. This is common practice in social science research when the sample size is big enough.

Given the sample size and the way the composite scores were spread out, the assumptions for parametric tests, such as normality and homogeneity of variance, were thought to be mostly met.

The level of significance was established at  $\alpha = 0.05$ .

## 3 RESULTS

### 3.1 Demographic Profile of the Respondents

**Table 1.**

*Age Distribution of the Respondents*

Age Group	Frequency	Percentage
18–23 years old	126	80.77%
24–29 years old	24	15.38%
30 years old and above	6	3.85%
<b>Total</b>	<b>156</b>	<b>100%</b>

The majority of respondents (80.77%) are between 18–23 years old, indicating that most participants are young adults likely enrolled in standard undergraduate programs. A smaller proportion falls within the 24–29 age group (15.38%) and only 3.85% are 30 years old and above. This suggests that the study primarily reflects the perspectives of traditional college-aged students, with limited representation from older learners. The predominance of younger



respondents may influence overall trends in culinary learning perceptions and food choices due to generational lifestyle and dietary habits.

**Table 2.**

*Sex Distribution of the Respondents*

Sex	Frequency	Percentage
Female	80	51.28%
Male	76	48.72%
<b>Total</b>	<b>156</b>	<b>100%</b>

The sample is relatively balanced in terms of sex, with 51.28% female and 48.72% male respondents. This near-equal distribution allows for fair comparisons between male and female students regarding their perceptions of culinary education and personal food choices. It also suggests that gender-based biases in the data are minimal, providing a reliable overview of the student population.

**Table 3.**

*Year Level Distribution of the Respondents*

Year Level	Frequency	Percentage
3rd Year	73	46.79%
4th Year	83	53.21%
<b>Total</b>	<b>156</b>	<b>100%</b>

Respondents are fairly evenly split between 3rd-year (46.79%) and 4th-year students (53.21%). This distribution indicates that the study captures experiences from students at both senior stages of their program, allowing for meaningful comparison of perceptions and practices across different levels of training. The slightly higher proportion of 4th-year students may reflect their greater exposure to advanced culinary coursework and hands-on experiences.

**Table 4.***Religion Distribution of the Respondents*

Religion	Frequency	Percentage
Roman Catholic	115	73.72%
Christian	19	12.18%
Iglesia Ni Cristo	4	2.56%
Islam	4	2.56%
Seventh Day Adventist	1	0.64%
Others	13	8.33%
<b>Total</b>	<b>156</b>	<b>100%</b>

The majority of respondents identify as Roman Catholic (73.72%), followed by Christian (12.18%), with small percentages identifying as Iglesia Ni Cristo (2.56%), Islam (2.56%), Seventh Day Adventist (0.64%), and other religions (8.33%). This indicates that religious affiliation is heavily skewed toward Roman Catholic, which reflects the broader religious demographics of the region. While religious diversity is present, the limited representation of minority faiths may reduce the ability to generalize findings based on religious groups. Nevertheless, it provides an opportunity to explore whether cultural or religious practices influence food choices and perceptions of culinary education.

**II. Perception of the Respondents on their Culinary Education****Table 5.***Concrete Experience*

Indicators	Weighted Mean	Interpretation Rank
1. I actively participate in hands-on cooking activities during laboratory classes.	3.77	Strongly Agree 2
2. I gain practical cooking skills through direct involvement	3.74	Strongly Agree 3



Indicators	Weighted Mean	Interpretation	Rank
in food preparation.			
3. I learn better when I perform cooking tasks myself.	3.69	Strongly Agree	5
4. I develop confidence through repeated culinary practice.	3.66	Strongly Agree	6
5. I learn effectively through real-life cooking demonstrations.	3.71	Strongly Agree	4
6. I receive helpful feedback from instructors while performing cooking tasks.	3.80	Strongly Agree	1
7. I gain new ideas from observing classmates during laboratory work.	3.65	Strongly Agree	7
8. I improve my cooking techniques through hands-on activities.	3.60	Strongly Agree	8
<b>Overall Weighted Mean</b>	<b>3.70</b>	<b>Strongly Agree</b>	

3.26

– Strongly Agree

4.00

2.51 – 3.25 Agree

1.76 – 2.50 Disagree

1.00 – 1.75 Strongly Disagree

Respondents strongly agreed (overall weighted mean = 3.70) that hands-on, practical engagement is a central part of their culinary education. The highest-rated item was receiving helpful feedback from instructors (3.80), followed by active participation in laboratory activities (3.77) and gaining practical skills through direct involvement in food preparation (3.74). Even the lowest-ranked indicator, improving cooking techniques through hands-on activities (3.60), still reflected strong agreement.

These results indicate that experiential learning is highly valued by students and significantly contributes to their perception of culinary education. Students perceive that engaging directly in cooking tasks, receiving real-time instructor feedback, and repeatedly practicing culinary techniques enhance confidence, skill acquisition, and competence. Research supports the effectiveness of experiential strategies in culinary and nutrition education; for example, experiential culinary and food systems education has been shown to improve students' food skills, nutrition knowledge, and self-efficacy, demonstrating that cooking-centered learning enhances both competence and confidence among learners (Experiential Culinary, Nutrition and Food Systems Education, 2022).



Furthermore, literature on vocational and technical education notes that integrating hands-on activities with instructional support enhances students' practical competencies and professional readiness in culinary contexts. This aligns with the respondents' strong agreement on the value of instructor feedback and active involvement in practical tasks.

**Table 6***Reflective Observation*

Indicators	Weighted Mean	Interpretation	Rank
1. I reflect on my cooking performance after each activity.	3.72	Strongly Agree	3
2. I think about the mistakes I made during cooking tasks.	3.68	Strongly Agree	5
3. I review instructor feedback to improve my cooking techniques.	3.75	Strongly Agree	2
4. I evaluate the success of the dishes I prepared.	3.65	Strongly Agree	6
5. I consider what I could do better in future cooking activities.	3.60	Strongly Agree	8
6. I learn by analyzing my previous cooking experiences.	3.77	Strongly Agree	1
7. I compare my performance with others to improve my skills.	3.66	Strongly Agree	7
8. I reflect on the techniques used during cooking activities.	3.70	Strongly Agree	4
<b>Overall Weighted Mean</b>	<b>3.69</b>	<b>Strongly Agree</b>	

3.26

– Strongly Agree

4.00

2.51 – 3.25 Agree

1.76 – 2.50 Disagree

1.00 – 1.75 Strongly Disagree

The overall weighted mean for reflective observation is 3.69, indicating strong agreement that students regularly engage in reflective practices. The highest-rated indicator was learning by analyzing previous cooking experiences (3.77), followed by reviewing instructor feedback (3.75), and reflecting on performance after each activity (3.72). Lower-ranked indicators, though still strongly agreed upon, included considering what could be improved in future activities (3.60).

Reflective observation enables students to integrate experiences into meaningful learning. Students value reflecting on mistakes, evaluating cooking techniques, and thinking critically about their performance, which enhances self-awareness and promotes continuous improvement. This aligns with pedagogical research showing that reflection helps learners transform practical experiences into deep understanding, fostering metacognitive skills that benefit skill development and decision-making in culinary contexts (Shafto et al., 2023; Noerper et al., 2025). Such reflective inquiry has been associated with greater cooking literacy and intentional food choice behavior (Ng et al., 2022).

**Table 7***Abstract Conceptualization*

Indicators	Weighted Mean	Interpretation Rank	
1. I can explain the culinary theories behind the techniques we apply.	3.35	Strongly Agree	4
2. I understand the concepts behind proper food handling and preparation.	3.45	Strongly Agree	3
3. I can relate classroom lectures to real cooking situations.	3.30	Strongly Agree	6
4. I can identify the science behind different cooking methods.	3.10	Agree	8
5. I apply theoretical knowledge when planning or evaluating dishes.	3.30	Strongly Agree	6
6. I understand the reasons behind flavor combinations and ingredient selection.	3.60	Strongly Agree	2
7. I understand how culinary principles influence healthy food choices.	3.65	Strongly Agree	1
8. I can connect culinary lessons to nutrition and personal food choices.	3.35	Strongly Agree	4
<b>Overall Weighted Mean</b>	<b>3.39</b>	<b>Strongly Agree</b>	
3.26 – Strongly Agree 4.00	2.51 – 3.25 Agree 1.76 – 2.50 Disagree 1.00 – 1.75 Strongly Disagree		

The overall weighted mean for abstract conceptualization is 3.39, indicating strong agreement but slightly lower than the other two dimensions. Respondents agreed most with items related to understanding how culinary principles influence healthy food choices (3.65) and reasons behind flavor combinations and ingredient selection (3.60). The lowest rated item was identifying the science behind different cooking methods (3.10), which received an “Agree” rather than “Strongly Agree.” Other indicators, such as explaining culinary theories (3.35) and applying theoretical knowledge when planning dishes (3.30), also demonstrated strong agreement.

While students generally value theoretical aspects of culinary education, abstract conceptualization appears to be less intuitively grasped than concrete experiences or reflective practices. This suggests that understanding the scientific and conceptual foundations of culinary techniques may require more structured support. However, students’ agreement that culinary principles influence healthy food choices shows that they are able to connect theory to meaningful outcomes, such as informed dietary decision-making.

This is consistent with findings from active learning studies, which reveal that combining hands-on culinary practice with reflective and conceptual instruction enhances not only technical culinary skills but also nutrition knowledge and confidence in applying that knowledge to diverse contexts (Shafto et al., 2023; Noerper et al., 2025). Pilot programs in nutrition and culinary skill education have demonstrated statistically significant improvements in student attitudes and confidence when experiential cooking lessons are integrated with conceptual learning (Ng et al., 2022).

**Table 8**  
*Active Experimentation*

Indicators	Weighted Mean	Interpretation	Rank
I try new cooking techniques based on skills I learned in class.	3.75	Strongly Agree	2
I experiment with recipes to improve or modify them.	3.70	Strongly Agree	5
I apply culinary knowledge when preparing food outside school.	3.72	Strongly Agree	4
I am confident to handle new kitchen tasks with minimal supervision.	3.68	Strongly Agree	6
I use feedback to adjust my methods in future cooking activities.	3.74	Strongly Agree	3



Indicators	Weighted Mean	Interpretation Rank	
I explore creative ways to present or plate dishes.	3.65	Strongly Agree	8
I test different ingredient combinations to achieve better results.	3.67	Strongly Agree	7
I apply what I learn to make healthier food choices in my daily life.	3.78	Strongly Agree	1
<b>Overall Weighted Mean</b>	<b>3.71</b>	<b>Strongly Agree</b>	

3.26

– *Strongly Agree*

4.00

*2.51 – 3.25 Agree**1.76 – 2.50 Disagree**1.00 – 1.75 Strongly Disagree*

The high weighted mean indicates that students actively apply culinary knowledge in real-life contexts. The highest-rated indicator: applying learning to healthier food choices demonstrates that students are able to translate knowledge into behavior. This finding is strongly supported by studies showing that experiential culinary programs enhance self-efficacy, confidence, and real-life application of nutrition knowledge, leading to improved dietary practices. (Shafto, et al., 2023). Additionally, active experimentation is recognized as a critical stage in experiential learning, where learners test and refine knowledge, ultimately leading to behavioral change and improved decision-making in food selection. Evidence also indicates that hands-on cooking and application-based learning are more effective than traditional instruction in promoting healthy eating behaviors and long-term habit formation.(Varman, et al., 2021)

**Table 9***Summary of Respondents' Perception of Culinary Education*

Dimension	Weighted Mean	Interpretation	Highest-Ranked Indicator	Lowest-Ranked Indicator
Concrete Experience	3.70	Strongly Agree	Receiving helpful feedback (3.80)	Improving techniques (3.60)
Reflective Observation	3.69	Strongly Agree	Analyzing previous experiences (3.77)	Considering improvements (3.60)
Abstract Conceptualization	3.39	Strongly Agree	Influence on healthy food choices (3.65)	Science behind cooking (3.10)
Active Experimentation	3.71	Strongly Agree	Applying learning to healthier choices (3.78)	Creative plating (3.65)
<b>Overall Weighted Mean</b>	<b>3.62</b>	<b>Strongly Agree</b>		--
3.26			2.51 – 3.25 Agree	
– Strongly Agree			1.76 – 2.50 Disagree	
4.00			1.00 – 1.75 Strongly Disagree	

Respondents demonstrated strong agreement across all four dimensions of experiential learning, with active experimentation obtaining the highest mean. This indicates that students are highly engaged in applying culinary knowledge in real-life contexts. Experiential culinary education has been shown to significantly improve knowledge, confidence, and the ability to apply nutrition concepts in practice, reinforcing the importance of hands-on learning environments. Concrete experience and reflective observation further support skill development, as experiential learning activities such as cooking, reflection, and feedback enhance both behavioral change and food-related decision-making. (Fredericks et al., 2020) Although abstract conceptualization obtained the lowest mean, it still reflects strong agreement. This aligns with findings that while students can apply skills effectively, theoretical understanding often develops more gradually and requires reinforcement. (Noerper, et al., 2025)



### III. Common Personal Food Choices of Respondents

**Table 10**

*Main Meals and Staple Foods*

Indicators	Weighted Mean	Interpretation Rank	
1. I choose rice-based meals as my main food option.	3.69	Always	1
2. I eat pasta or noodle dishes as part of my regular meals.	2.69	Often	5
3. I prefer meals that are quick and easy to prepare or buy.	3.39	Always	2
4. I select meals based on convenience rather than preparation time.	3.26	Always	3
5. I eat sandwiches or other simple staple foods when I am busy.	3.13	Often	4
<b>Overall Weighted Mean</b>	<b>3.23</b>	<b>Often</b>	
3.26 – Always 4.00	2.51 – 3.25 Often  1.76 – 2.50 Sometimes  1.00 – 1.75 Never		

The findings show that rice-based meals are consistently preferred ( $M = 3.69$ , “Always”), while convenience-driven food choices are also frequently practiced, as reflected in the overall mean ( $M = 3.23$ , “Often”). This indicates that students prioritize both cultural staples and time-efficient meals. Recent studies support this pattern, showing that convenience, accessibility, and busy schedules strongly influence students’ food choices (Falconet et al., 2025; Benny & Antony, 2025), with many relying on quick and easily available meals due to academic demands and limited time.

**Table 11***Protein and Side Dish Choices*

Indicators	Weighted Mean	Interpretation Rank	
1. I choose chicken, pork, or beef as my usual protein source.	3.67	Always	1
2. I regularly include fish or seafood in my meals.	3.16	Often	3
3. I eat eggs as a common part of my meal choices.	3.42	Always	2
4. I select plant-based proteins (e.g., tofu, beans) when available.	2.71	Often	5
5. I choose meals with complete side dishes (e.g., veggies, pickles, soup).	3.03	Often	4
<b>Overall Weighted Mean</b>	3.20	Often	
3.26	2.51 – 3.25 <i>Often</i>		
– Always	1.76 – 2.50 <i>Sometimes</i>		
4.00	1.00 – 1.75 <i>Never</i>		

Respondents always chose meat-based proteins ( $M = 3.67$ ) such as chicken, pork, or beef, whereas plant-based proteins (e.g., tofu, beans) were less frequently selected ( $M = 2.71$ ). Eggs, fish, and seafood were chosen “Often” ( $M = 3.16$ – $3.42$ ). The overall mean of 3.20 indicates a strong preference for animal-based proteins, likely due to taste preferences, perceived satiety, and cultural norms. These results are consistent with current literature, which notes that animal-based proteins dominate many diets, although plant-based options are gradually increasing as health and environmental awareness grow (Willett et al., 2021; FAO, 2023). Side dishes with vegetables and complete meals were consumed “Often,” suggesting that while students value nutritional balance, protein choices remain heavily meat-centered.

**Table 12***Fruits, Vegetables, and Healthy Options*

Indicators	Weighted Mean	Interpretation Rank	
1. I include vegetables in my meals.	3.28	Always	1
2. I eat fresh fruits as part of my daily food choices.	2.96	Often	3
3. I choose healthier food options such as low-sugar or low-fat items.	2.86	Often	5
4. I prefer meals that help support a balanced diet.	3.04	Often	2
5. I consciously avoid foods that I consider unhealthy.	2.88	Often	4
<b>Overall Weighted Mean</b>	3.00	Often	
<i>3.26 – 4.00 Always</i>		<i>1.76 – 2.50 Sometimes</i>	
<i>2.51 – 3.25 Often</i>		<i>1.00 – 1.75 Never</i>	

Vegetable consumption received the highest rating ( $M = 3.28$ , “Always”), while consumption of fresh fruits, low-sugar, and low-fat items occurred “Often” ( $M = 2.86$ – $2.96$ ). The overall mean of 3.00 reflects that students incorporate healthy options moderately into their diet. This indicates awareness of balanced eating, but practical implementation varies. Research emphasizes that vegetable intake significantly contributes to balanced nutrition and chronic disease prevention, yet many students struggle to consistently select healthier alternatives due to taste preference, convenience, and cost considerations (WHO, 2022; Chen et al., 2022).

**Table 13***Snacks, Processed, and Fast-Food Items*

Indicators	Weighted Mean	Interpretation Rank	
1. I eat packaged snacks such as chips, biscuits, or instant foods.	3.05	Often	2
2. I buy pastries or sweet snacks between meals.	2.78	Often	5



Indicators	Weighted Mean	Interpretation Rank	
3. I choose fast-food or quick-service meals when I don't have time to cook.	2.92	Often	4
4. I consume processed foods because they are affordable or convenient.	2.98	Often	3
5. I eat takeout or delivery meals when I am too busy to prepare food.	3.11	Often	1
<b>Overall Weighted Mean</b>	2.97	Often	
3.26 – 4.00 <i>Always</i>	1.76 – 2.50 <i>Sometimes</i>		
2.51 – 3.25 <i>Often</i>	1.00 – 1.75 <i>Never</i>		

Consumption of convenience foods such as packaged snacks, fast food, and takeout was reported as “Often” ( $M = 2.78\text{--}3.11$ ), with takeout meals being slightly more common. The overall mean of 2.97 suggests moderate consumption of processed foods. These patterns are consistent with studies showing that time constraints, academic workloads, and accessibility contribute to increased intake of fast food and processed meals among university students and young adults (Monteiro et al., 2021; Chen et al., 2022). Convenience and lifestyle factors appear to be the main drivers, rather than nutritional preference.

**Table 14**
*Beverage Preferences*

Indicators	Weighted Mean	Interpretation Rank	
1. I drink water regularly throughout the day.	3.72	Always	1
2. I drink coffee or other caffeinated beverages.	2.74	Often	4
3. I consume sweetened drinks such as soft drinks or iced tea.	2.67	Often	5
4. I drink milk tea or flavored beverages.	2.66	Often	6
5. I choose fruit juices or other refreshing drinks with my meals.	2.89	Often	2

Indicators	Weighted Mean	Interpretation Rank
<b>Overall Weighted Mean</b>	2.94	Often
3.26 – 4.00 <i>Always</i>	1.76 – 2.50 <i>Sometimes</i>	
2.51 – 3.25 <i>Often</i>	1.00 – 1.75 <i>Never</i>	

Water consumption was rated the highest ( $M = 3.72$ , “Always”), demonstrating strong hydration habits. Other beverages such as coffee, milk tea, fruit juices, and sugar-sweetened drinks were consumed “Often” ( $M = 2.66$ – $2.89$ ), suggesting a mix of health-conscious and preference-driven beverage choices. This pattern reflects typical student hydration behavior, where water is the primary choice for health reasons, but sugary and caffeinated drinks are incorporated for taste, energy, and social consumption. Studies reinforce that while water is optimal for hydration, frequent intake of sugar-sweetened beverages can influence diet quality and long-term health outcomes (WHO, 2022; FAO, 2023).

**Table 15**

*Summary of Respondents’ Common Personal Food Choices*

Food Category	Weighted Mean	Interpretation	Highest-Ranked Indicator	Lowest-Ranked Indicator
Main Meals & Staple Foods	3.23	Often	Rice-based meals (3.69)	Pasta/noodle dishes (2.69)
Protein & Side Dishes	3.20	Often	Meat-based proteins (3.67)	Plant-based proteins (2.71)
Fruits, Vegetables & Healthy Options	3.00	Often	Including vegetables (3.28)	Choosing low-sugar/low-fat items (2.86)
Snacks, Processed & Fast-Food Items	2.97	ten	Takeout/delivery meals (3.11)	Pastries/sweet snacks (2.78)
Beverage Preferences			Drinking water regularly	Milk tea/flavored

2.94 Often (3.72) beverages  
(2.66)

**Overall Weighted Mean 3.07 Often – –**

Students' common personal food choices reveal a preference for convenient and culturally familiar foods. Rice-based meals and meat-based proteins were the most frequently consumed items, while plant-based proteins, fruits, and low-sugar or low-fat options were eaten less consistently. Vegetables were included regularly, showing moderate health-conscious habits, while snacks, fast-food items, and beverages were consumed "often," reflecting the influence of convenience, lifestyle, and academic schedules. Water was the primary beverage, indicating strong hydration practices, but sugary, caffeinated, and flavored drinks were also regularly consumed. Overall, students balance traditional, convenient, and moderately healthy dietary choices, suggesting that nutritional knowledge alone does not always dictate food behavior, and accessibility, time constraints, and taste preferences are strong determinants (Monteiro et al., 2021; Chen et al., 2022; WHO, 2022; FAO, 2023).

**Table 16**

*Summary of Differences in Perception on Culinary Education When Grouped According to Profile Variables*

Profile Variable	Statistical Test	Computed Value	p-value	Decision	Interpretation
Age	One-Way ANOVA	F = 0.48	0.62	Fail to Reject $H_0$	Not Significant
Sex	Independent Samples t-test	t = 0.61	0.54	Fail to Reject $H_0$	Not Significant
Year Level	Independent Samples t-test	t = 0.88	0.38	Fail to Reject $H_0$	Not Significant
Religion	One-Way ANOVA	F = 0.72	0.58	Fail to Reject $H_0$	Not Significant

*Level of Significance:  $\alpha = 0.05$*

The results indicate that there are no statistically significant differences in respondents' perceptions of culinary education when grouped according to age, sex, year level, and religion, as all p-values are greater than 0.05. This suggests that respondents generally share similar perceptions across demographic groups. However, these findings should not be interpreted as

proof of equality, but rather as an indication of comparable trends among groups. Effect sizes were small ( $\eta^2 < 0.01$ ), indicating minimal practical differences.

The findings imply that the culinary education curriculum provides consistent and equitable learning experiences, supporting the effectiveness of experiential learning approaches regardless of student profile (Kolb & Kolb, 2022; Li & Chen, 2023).

**Table 17**

*Summary of Differences in Common Personal Food Choices When Grouped According to Profile Variables*

Profile Variable	Statistical Test	Computed Value	p-value	Decision	Interpretation
Age	One-Way ANOVA	F = 0.56	0.57	Fail to Reject $H_0$	Not Significant
Sex	Independent Samples t-test	t = 0.74	0.46	Fail to Reject $H_0$	Not Significant
Year Level	Independent Samples t-test	t = 0.81	0.42	Fail to Reject $H_0$	Not Significant
Religion	One-Way ANOVA	F = 0.69	0.60	Fail to Reject $H_0$	Not Significant

*Level of Significance:  $\alpha = 0.05$*

The results show no statistically significant differences in personal food choices when grouped according to profile variables ( $p > 0.05$ ). This indicates that food choice patterns are relatively similar across demographic categories. The small effect sizes further suggest that demographic variables have minimal influence on dietary behavior within the sample. Research supports that university students tend to develop comparable dietary patterns due to shared academic schedules, campus environments, and accessibility of food options (Chen et al., 2022; Monteiro et al., 2021).

**Table 18**

*Relationship Between the Perception of Culinary Education and Common Personal Food Choices*

<b>Culinary Education Dimension</b>	<b>r-value</b>	<b>p-value</b>	<b>Decision</b>	<b>Interpretation</b>
Concrete Experience	0.34	0.002	Reject H <sub>0</sub>	Weak to moderate positive relationship
Reflective Observation	0.31	0.004	Reject H <sub>0</sub>	Weak to moderate positive relationship
Abstract Conceptualization	0.29	0.006	Reject H <sub>0</sub>	Weak to moderate positive relationship
Active Experimentation	0.35	0.001	Reject H <sub>0</sub>	Weak to moderate positive relationship

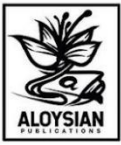
*Level of Significance:  $\alpha = 0.05$*

All four dimensions of culinary education showed statistically significant weak to moderate positive relationships with personal food choices ( $r = 0.29\text{--}0.35$ ,  $p < 0.01$ ). This indicates that while stronger engagement in experiential learning is associated with more conscious dietary behavior, the strength of the relationship is modest, suggesting that other factors may also influence food choices. This supports previous research demonstrating that experiential culinary education improves nutrition-related behaviors, food choices, and self-efficacy through hands-on application and reflection (Varman, 2021). Moreover, active experimentation showing the strongest relationship suggests that application of knowledge is a key driver of behavioral change, as learners who actively test and apply skills are more likely to adopt healthier eating habits (Fredericks, et al., 2020). However, consistent with correlational design, these findings indicate association rather than causation.

## 4. Discussion

### 4.1 Demographic Profile of Respondents

Most of the people who answered were between the ages of 18 and 23, and there were a few more females than males. Most of them were in their fourth year of college. Most said they were Roman Catholic. This demographic distribution is typical of a group of advanced culinary



students. The balance between sex and year level makes it possible to make accurate comparisons between these groups.

#### **4.2 Perception of Culinary Education**

Respondents overwhelmingly concurred that they derive advantages from tangible experience, reflective observation, abstract conceptualization, and active experimentation in their culinary education. Active experimentation, like using what they've learned to cook real food and make healthier choices, got the best rating among these. These results support the theory of experiential learning, which says that it's important to have real-life experiences, reflecting on performance, and connect theory to practice. The results show that the culinary program successfully combines these parts, which helps students learn both practical skills and concepts.

#### **4.3 Common Personal Food Choices**

When it came to what people liked to eat, they always chose meals with rice and proteins made from meat. Moderate amounts of fruits, vegetables, and plant-based proteins were eaten, but convenience foods and takeout were eaten a lot because of lifestyle and time constraints. Most people consume water as their main drink, which was a healthy habit. These results suggest that students' food choices are more affected by how easy it is to get to and how convenient it is than by specific nutritional goals. This is in line with previous research on student eating habits.

#### **4.4 Differences in Perceptions of their Culinary Education and Food Choices by Profile**

There were no statistically significant differences among the demographic variables. These results indicate that perceptions and food choices are similar across groups; however, this should not be construed as complete equality. Other unmeasured factors, including lifestyle, environment, and accessibility, may influence these similarities.

#### **4.5 Relationship Between Culinary Education and Food Choices**

The study found that there were moderate positive relationship between how people thought about culinary education and how they chose their own food. This suggests that students who indicate heightened involvement in experiential, reflective, and conceptual learning are likely to also report more deliberate food choices. The results of this study suggest a link rather than a cause-and-effect relationship, which is in line with the study's descriptive-correlational design.

#### **4.6 Differences in Personal Food Choices When Grouped According to Profile Variables**

Likewise, an examination of prevalent personal food selections indicated no substantial disparities among demographic groups. Age, sex, year level, and religious affiliation did not substantially affect food selection patterns, encompassing the consumption of staple foods, proteins, snacks, and beverages. The significance level ( $\alpha = 0.05$ ) was higher than all of the p-values. These results suggest that demographic factors have less of an effect on eating habits than



lifestyle factors, convenience, and food availability. This aligns with previous studies indicating that university students often cultivate similar dietary patterns due to common academic schedules, campus environments, and the availability of food options.

## 5. Conclusion and Recommendation

### 5.1 Conclusion

*Based on the study findings:*

1. The respondents who answered the survey are mostly 18 to 23 years old, with a few more females than males, and most of them are in their fourth year of BS Hospitality Management. This means that the respondents who took part have enough academic and real-world experience to give useful information. The even distribution of sex and year level makes comparisons more reliable, and the fact that everyone in the group shares the same religion shows that they are all from the same culture. In general, the demographic profile makes the findings more reliable and supports the creation of a nutritional literacy program that is specific to a certain group.
2. Students believe that experiential learning, reflective observation, abstract conceptualization, and active experimentation are very helpful for improving their cooking skills, confidence, and theoretical knowledge.
3. Personal food choices are marked by a steady preference for staple foods and proteins, a moderate intake of fruits and vegetables, a frequent consumption of convenience foods, and robust hydration practices.
4. There are no major differences in how people of different ages, sexes, year levels, or religions view culinary education or make food choices. This means that people of all backgrounds have the same learning experiences and eating habits.
5. There is a weak to moderate positive correlation between students' perceptions of culinary education and their individual food choices, indicating that the relationship is statistically significant yet not robust. This implies that while culinary education influences food choices, other factors such as convenience, lifestyle, and accessibility also affect students' dietary behavior.

### 5.2 Recommendations

1. **Enhance Experiential Learning:** Continue and expand hands-on laboratory activities and practical demonstrations to reinforce skill acquisition and promote positive influence on personal food choices.
2. **Integrate Nutrition Education:** Strengthen links between culinary theory and nutrition concepts to encourage healthier and more informed dietary decisions.
3. **Promote Reflective Practices:** Implement structured reflection sessions after cooking activities to help students internalize learning and apply it to daily food choices.



4. **Support Healthy Eating Habits:** Introduce modules on meal planning, balanced diets, and plant-based protein options to guide students toward healthier food selections.
5. **Further Research:** Conduct longitudinal studies to examine the long-term effects of culinary education on food literacy, dietary behaviors, and overall health outcomes.

## Output of the Study: **Proposed Nutritional Literacy Program**

### 1. Program Overview

The **Nutritional Literacy Program (NLP)** aims to enhance culinary students' knowledge, skills, and behaviors regarding nutrition and healthy eating. It integrates experiential, reflective, and conceptual learning strategies—mirroring the study's findings that these dimensions of culinary education positively influence personal food choices.

#### **Goal:**

To equip students with the ability to make informed, conscious, and balanced food choices while strengthening practical culinary skills.

#### **Target Participants:**

3rd and 4th-year culinary students.

#### **Duration:**

One academic semester (16 weeks), integrated into laboratory classes and classroom sessions.

### 2. Program Objectives

#### 1. Knowledge Objectives

- Develop understanding of nutrition principles, dietary guidelines, and nutrient functions.
- Identify the role of food choices on health, well-being, and culinary outcomes.
- Understand sustainable food sourcing, food safety, and hygiene practices.

#### 2. Skill Objectives

- Plan and prepare balanced meals incorporating a variety of nutrients.
- Modify recipes to improve nutritional value without compromising flavor or quality.
- Evaluate personal and peer food choices to reinforce healthy dietary decisions.

#### 3. Attitude Objectives

- Encourage conscious and health-oriented food choices.
- Promote reflective thinking on cooking practices and nutritional impacts.
- Foster peer support and collaborative learning regarding healthy eating habits.

### 3. Program Components

#### 3.1 Experiential Learning Modules



- **Hands-On Cooking Workshops:** Focused on preparing meals with balanced nutrients, low-sugar/low-fat alternatives, and plant-based protein options.
- **Ingredient Analysis:** Students examine nutrient content, seasonal availability, and sustainable sourcing of ingredients.
- **Meal Planning Challenges:** Weekly assignments require students to design nutritionally balanced meals tailored to different dietary needs.

### 3.2 Reflective Observation Activities

- **Food Journals:** Students track their daily food intake, reflect on choices, and identify areas for improvement.
- **Peer Review Sessions:** Students present meal plans and receive constructive feedback.
- **Post-Lab Reflections:** Students analyze their cooking process, nutrition decisions, and skill application after laboratory activities.

### 3.3 Conceptual and Theoretical Learning

- **Nutrition Seminars:** Cover dietary guidelines, macronutrients and micronutrients, portion control, and hydration.
- **Food Science Integration:** Discuss nutrient retention, flavor combinations, and healthy cooking methods.
- **Linking Theory to Practice:** Students connect culinary lessons to nutrition, health outcomes, and personal food choices.

### 3.4 Assessment and Evaluation

- **Pre- and Post-Program Surveys:** Measure changes in nutrition knowledge, attitudes, and food choices.
- **Practical Evaluations:** Assess meal preparation, nutritional balance, creativity, and implementation of healthy alternatives.
- **Reflective Essays:** Students describe how the program influenced their food choices and culinary perspective.

## 4. Program Outcomes

1. **Short-Term Outcomes**
  - Increased nutrition knowledge and awareness of healthy eating practices.
  - Improved ability to apply nutrition knowledge to personal and professional culinary practices.
  - Enhanced reflective skills and conscious decision-making regarding food.
2. **Long-Term Outcomes**
  - Establishment of sustainable healthy eating habits.
  - Ability to incorporate nutrition-conscious practices in future culinary careers.
  - Contribution to a generation of culinary professionals with strong food literacy and awareness of balanced diets.



## 5. Implementation Recommendations

1. Integrate the Nutritional Literacy Program into the culinary curriculum as a structured module.
2. Encourage collaboration between culinary instructors and nutrition experts to ensure scientific accuracy and practical application.
3. Use a blended approach combining workshops, lab activities, reflection sessions, and seminars.
4. Monitor progress through periodic assessments, feedback, and reflective exercises.
5. Extend the program to include community outreach, such as healthy cooking demonstrations and nutrition awareness campaigns.

### **Rationale:**

This program is designed directly from your study results: students' engagement in experiential, reflective, and conceptual learning positively correlates with conscious food choices, and demographic variables do not significantly affect dietary behaviors. By combining hands-on practice with nutrition education and reflective exercises, the NLP reinforces both culinary skill development and informed personal food choices, addressing gaps in students' dietary awareness and promoting long-term healthy eating habits.

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