



## TEACHER COMMUNICATION BEHAVIOR AND CLASSROOM ENVIRONMENT AS PEDAGOGICAL FACTORS TO THE CULINARY COMPETENCE OF SENIOR HIGH SCHOOL STUDENTS

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### **Abstract:**

This study determined which domain, the teacher communication behavior, and the classroom environment, best influences the culinary competence of senior high school students for the year 2020 to 2021 in five (5) selected public secondary schools in the Province of Davao Occidental, Region XI, Philippines using a non-experimental quantitative descriptive-correlational research design. In analysing the data, weighted mean, standard deviation, Pearson  $r$ , and Spearman Rho coefficient were utilized. Findings show the levels of teacher communication behavior (TCB), classroom environment (CE) and culinary competence (CC) are “High”, and a significant relationship between TCB and CC, between CE and CC existed. None of the indicators would best influence culinary competence. It suggested that a conducive learning and working environment may have a significant relationship with the acquisition, development, and improvement of culinary competence but teachers will not have to make up for poor-quality materials with wrong or out-of-date information or methods that do not work.

**Keywords:** technology and livelihood education, teacher communication behavior, classroom environment, culinary competence, Philippines

### **1. Introduction**

When teacher communication, classroom setting, and student-teacher engagement methods are utilized, culinary competence—the learned mastery of kitchen knowledge and skills—becomes more difficult (Stuve & Cassady, 2015). Murray *et al.*, (2015) suggested that a lack of culinary skills, financial insecurity, restricted availability to healthier food alternatives, and lifestyle constraints all hindered the market's growing

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sophisticated need for new clients. This is when educational qualifications are crucial to enhancing culinary skills and landing high-quality jobs. Despite a shortage of workers, top hotels need highly trained culinary experts. These shortages might threaten small food companies (Kurniawan *et al.*, 2016).

Corollary, communication between students and teachers create a pleasant classroom atmosphere. It has greatly influenced students' behaviors and drive to learn, and good classroom learning experiences depend on teachers' leadership in developing positive teacher-student relationships (Matos *et al.*, 2014). When students thought their teacher posed challenging questions, gave more nonverbal support, and was more flexible, their cognitive success scores improved. Morin (2019) lists watching academically or behaviorally difficult students as one of the top three hurdles to teachers feeling confident in their teaching abilities.

Additionally, teachers and students talk rapidly in class, but teachers frequently do not even understand or describe what occurs, such as how many questions they ask and what sort of feedback they offer. Fraser and Lee (2017) observed that students wanted to study more when they liked their classroom. To answer tough questions, students must recognize, evaluate, identify, and incorporate solutions for overcoming hurdles, describing, and assessing, all of which depend on teachers' expected and specified behaviors. Praise may empower students to improve in class. Some teachers do not even applaud their students when they answer questions, only nodding in agreement (Cox, 2019), which might lower students' confidence and make them unable to join in dialogues (Pagliai, 2021). This may lower confidence and comprehension.

Furthermore, when students are overwhelmed and upset in a resource-limited situation, their mental health suffers, and teachers get irritated because they cannot teach effectively (Milkie & Warner, 2016). However, acquiring culinary talents takes time, knowledge, execution philosophical competence, and a practical approach, making it more challenging than any other experience. Teacher communication and classroom environment were examined to determine senior high school students' culinary skills.

## 2. Research Objectives

The research examines how teacher communication behavior and classroom environment influence senior high school students' culinary skills in 2020–2021.

The following objectives were created in particular:

1. To assess the level of teacher communication behavior in terms of:
  - 1.1 challenging;
  - 1.2 encouragement and praise;
  - 1.3 non-verbal support;
  - 1.4 understanding and friendliness; and
  - 1.5 controlling.
2. To determine the classroom environment in terms of:

- 2.1 student cohesiveness;
  - 2.2 teacher support;
  - 2.3 investigation;
  - 2.4 involvement;
  - 2.5 task orientation;
  - 2.6 cooperation; and
  - 2.7 equity.
3. To determine the culinary competence of the Senior High School students in terms of:
- 3.1 learning attitude;
  - 3.2 study habits;
  - 3.3 learning method;
  - 3.4 resources application; and
  - 3.5 learning self-review.
4. To determine if a significant relationship existed among culinary competence, teacher communication behavior and classroom environment of the senior high school students.
5. To determine which domains of teacher communication behavior and classroom environment best influence the culinary competence of senior high school students.

## 2. Literature Review

In this section, studies from books, journals, articles, and other credible academic publications and research for each indication of the study are thematically presented. The use of these will provide a more extended meaning and information about the topic being investigated.

### 2.1 Teacher Communication Behavior

The quality of education relies on numerous factors, including student training, teacher effectiveness, school management, and teacher quality. Shekhawat (2020) claims that teachers make or break a learning environment. In Meletiou-Mavrotheris *et al.*, (2021), teacher quality is the single most critical factor in a good learning environment.

The first domain in measuring teacher communication behavior is *challenging*. Learning quickly has become a cliché among teachers and students. Teachers need to ask hard questions that test not only how much students know but also how well they can use what they know in real life (Bambaeeroo & Shokrpour, 2017). The more the teacher uses extra activities as a type of challenge, the more motivated the students are to do the assignment right. This has become a reason for students to do better in school and in other areas of their lives. Additionally, one of the hardest things to accomplish is managing unconventional students. Students may hinder the teacher's ability to educate and maintain discipline, as well as the class's efficacy. There is usually a cause

for their behavior, or it may be their sole way of warning someone that something is wrong. Any act of communication may be considered a method of communication. As a result, it's vital to understand the root reasons for problematic behavior and the best ways to deal with it. Students with the most complicated needs may display baffling and demanding conduct, making it difficult for educational teams to devise a plan of help (Collier, 2018).

Another domain is encouragement and praise. The finest teachers show compassion. They love their students. Excellent teachers always prioritize student progress (Mariconda, 2018). Early on, they utilize students' names. They share students' aspirations, worries, and preferences. Students appreciate encouragement, accomplishment and feel respected (Dragomir *et al.*, 2021). Teachers' words and actions may motivate or laud students depending on their focus: the learner, the learning process, or the outcome. Students who do not learn will be reinforced. If students finish the work, teachers typically think praising excellent conduct would improve it. Praise loses its power when given just for difficult tasks or too liberally (Cochran-Smith, 2016). Students may see it as compulsion, implying that they have satisfied someone else's subjective expectations (Vlachopoulos & Makri, 2019). Encouragement should always concentrate on the student's deeds, not their efforts.

The next domain is *non-verbal support*. Communication—listening, speaking, reading, presenting, and writing—teaches. Teachers should encourage students to ask questions through facial expressions, body language, and gestures. The teacher's head nod shows that they trust their students to handle difficult issues and that reasoning is the only appropriate answer. Depending on how well they grasped the content, learners will be motivated to answer questions (Peimani & Kamalipour, 2021). More so, Bambaerou and Shokrpour (2017) found that the more teachers used verbal and nonverbal communication, the better their education and students' academic progress. Teachers' nonverbal communication abilities will also improve students' attitudes (Sutiyatno, 2018). This may have a good impact on a student's future.

Another domain is *understanding and friendliness*. Teachers must be able to explain ideas and listen to students. Teachers require clear thinking to transmit material, according to Korochentseva and Terekhin (2021). They must simplify complex topics to teach them. They must be able to adapt their communication style to each student, regardless of ability or chosen learning style. They can "understand" their students and customize their lessons. Effective communication requires the capacity to captivate and convey the boring.

The last domain in measuring teacher communication is *controlling*. Teacher educators help enhance education standards (Cochran-Smith, 2016). According to Maloney *et al.*, (2020), they directly affect students and teachers, which indirectly affects academic performance. There is unanimity that teacher educators need specific knowledge, skills, and attitudes. However, teacher educators may learn their professions or advance their careers in many ways (Al-Hinai, 2018). However, teacher-educator professional learning studies lack a complete picture (Karagiorgi &

Nicolaidou, 2016). The results show both students and teachers need a friendly environment to succeed. When teachers are empathetic, encouraging, and engaging and lead without being tough, students do better cognitively and emotionally. Hence, teachers' good or bad interactions impact students' life. They influence communication abilities by altering self-esteem and public opinion.

## 2.2 Classroom Environment

Students' lives are intertwined with the school. It is not only a place where a child can go; it is also where the child spends most of his or her time. It is important that a person's childhood and almost-teenage years be spent in an environment that encourages creativity (Agarwal, 2016). A classroom should also be seen as a small psychological experiment in which students of different ages are sampled and studied (Kokkinos *et al.*, 2017).

The first domain in measuring classroom environment is *student cohesiveness*. A person's conduct is affected by how people treat them. This showed that a relationship requires mutuality and originality. The teacher's role and the students' actions best determine the learning experience. Every teacher care about the classroom environment, which may be used to assess learning (Wu *et al.*, 2017). Student cohesion may aid or impede teaching goals depending on other classroom community dynamics (Kosasi & Sulastri, 2021). If they share counter-educational norms that impede student involvement or academic accomplishment, students' cohesion may act against schools' academic goals.

The second domain in measuring classroom environment is *teacher support*. Students and teachers value the learning environment. The desk arrangement and wall color affect students' study habits. According to Bidita (2022), Human and Nafi (2016), Lan and Moscardino (2019), teacher encouragement and emotional environment might alter the learning environment and how effectively students absorb instruction. Teachers should provide a safe, shared environment for emotional well-being (Willem, 2018). Humorous teachers make happier classrooms (Abdullah *et al.*, 2021; Aghaei *et al.*, 2022; Paranduk & Karisi, 2021). Classroom setup aids teaching and learning. Classroom design may reduce behavior issues and improve learning (Sula, 2018). A positive classroom atmosphere is essential for learning. In Datu and Restubog (2020), teachers learn how to keep students engaged and prevent, identify, and respond to cheating, plagiarism, and other academic integrity infractions. Organizing seats, students, decorations, and music in a classroom creates a certain ambiance (Zarrinfard *et al.*, 2021).

The third domain in measuring classroom environment is *investigation*. The classroom atmosphere has helped students learn interactively (Sula, 2018). A survey discovered that students seek a more supportive classroom (Okan, 2017). Thus, current research in this field has continually identified and explored areas to strengthen positive classroom practice, allowing researchers to stratify the significant association

and relationship between the classroom learning environment and students' overall academic performance (Andujar *et al.*, 2020).

The fourth domain in measuring classroom environment is *involvement*. The most significant explanation for referring to the classroom as a psychological laboratory is that teachers have enough opportunities to research, analyze, and derive direct impressions of various aspects of students' progress, such as physical, mental, psychological, and educational. The learning environment inspires both students and teachers (Liu, 2022). Both students and teachers benefit from a positive and balanced classroom environment (Stewart, 2016).

The fifth domain in measuring classroom environment is *task orientation*. Students learn better when they evaluate their classroom environment favorably (Alamarat, 2016), which increases the desire to study (Horwitz, 2017), but students in classes with insufficient supplies and teachers who feel unappreciated demonstrate higher mental health issues (American Sociological Association, 2015; Van Alten *et al.*, 2019).

The sixth domain in measuring classroom environment is *cooperation*. Classroom and cross-disciplinary cooperation are essential. Students may benefit much from classroom cooperation. In class, recess, and sports, students want to have fun with their peers. To develop morals and collaboration, teachers must monitor these activities (Kannangara *et al.*, 2018). To achieve objectives, one must coordinate and communicate with stakeholders. Cooperation values all student needs equally (Martin *et al.*, 2020). The teacher must explicitly define class goals, assign students to productive learning groups, provide appropriate resources, describe the cooperative goal structure, and monitor, and evaluate student achievement (Loderer *et al.*, 2020). Cooperative education may persuade adults to return to school and helps students achieve objectives that benefit themselves and others (Moles *et al.*, 2017). This is the idea that working together succeeds while working alone fails. Cooperative learning is teamwork in a realistic educational setting. It also emphasizes that students may achieve objectives faster and better when they work together (Shahnama *et al.*, 2021).

The seventh domain in measuring classroom environment is *equity*. Classrooms should represent the students equally and everyone should know each other's names. The teacher influences student growth and conduct (Shao *et al.*, 2019) and should set up the classroom with a good, learning-friendly approach (Ranka, 2016).

### 2.3 Culinary Competence

Modern schooling aims to educate brilliant and competent culinary artists with innovative thinking and creativity, knowledge and affection, and physical sensory technical abilities in converting raw food into a gratifying product (Askari, 2020). Restaurant managers and chefs must continually innovate to meet the market's more sophisticated needs and attract new consumers.

The first domain in measuring culinary competence is the *learning attitude*. Fine dining restaurant and hotel chefs must adjust to today's employment needs. Culinary

experts must have a broad variety of skills and experience; consequently, they must know numerous cooking techniques (Weigel *et al.*, 2017). This has been often referred to as learning attitudes among culinarians. They earned their name and image in high-end fine-dining restaurants by ensuring that their guests enjoyed superb meals with exceptional flavor, texture, and appearance (Chalmers, 2018). Culinary specialists are responsible for ensuring that food serving in hospitality-related activities is done correctly. One of the most difficult positions is in the hotel and tourist sector (Jomori *et al.*, 2018). This has resulted in culinary students attending useful cooking classes and sharing knowledge and expertise with others.

The second domain in measuring culinary competence is *study habits*. How culinary research is structured has been revealed in study habits. Many hospitality academics assume natural food science and safe operation are the same, and they seldom consider how history, aesthetics, technology, and facilities advancements might be applied creatively. Novel competence statements in educational systems and award eligibility standards may improve customers' culinary experiences and food service sector uniformity. Further, culinary certification students scored substantially higher on culinary fundamental skills and culinary attitude tests (Kowalkowska *et al.*, 2018). This showed that cooking conduct is more important than culinary expertise and creativity. A regression study demonstrated that a chef's positive attitude about cooking was a construct, while other constructions had no effect on job choice.

The third domain in measuring culinary competence is on *learning method* or the strategies employed whenever nervousness and drawbacks are felt. Nordqvist (2019) highlighted culinary competency as five easy stages to upping the game in the kitchen, which included an equipment audit since having the correct cookware and a quality pair of knives would provide better outcomes.

The fourth domain in measuring culinary competence is on *resources application*. Wang and Qualls (2017) said that cultural output is the world's most significant development strategy because hospitality innovation and technology may increase efficiency, revenue, and profits. Technology and the internet solve culinary questions and provide answers. This has advanced culinary education locally and globally. Business cultural consuming power has embraced city symbolic economies.

The fifth domain in measuring culinary competence is on *learning self-review* wherein one can detect self-culinary learning abilities and encourage some improvements when hindrances are further categorized. Tittl (2018) used factor analysis to assess hospitality students' culinary talents. Basic knowledge, invention, talents, management, and attitude toward cooking were assessed for competency. The most essential aspect of competency was the attitude toward cooking, followed by fundamental culinary knowledge. Culinary innovation had the lowest competency score (Pagliai *et al.*, 2021). In the study on quality domains in culinary professions in Malaysia, competence profiling through self-assessment in Malaysian hotels was used to measure employee quality and identify top performers (Burrus *et al.*, 2018). This advised that students should seek to remedy any learning aspect weaknesses.

### 3. Methodology

The study used a non-experimental quantitative descriptive correlation research design participated by the Senior High School students conducted in the five (5) selected public secondary schools in the Province of Davao Occidental, Region XI, Philippines. A universal, census or complete enumeration was used for the population and sample.

The research instruments utilized in this study were standardized questionnaires and contextualized by the researcher to fit the study's research objectives. Cronbach-Alpha scores and validators' mean rating of 4.57 with a description of "Very Good" was used to determine the reliability of the standardized-modified questionnaires. These questions were obtained via the internet and correctly cited. After the questionnaires were changed, they were validated.

To assess the level of teacher communication behavior in terms of challenging, encouragement and praise, non-verbal support, understanding and friendliness, and controlling, it was patterned from the questionnaire of Mato *et al.*, (2014). Each indicator was provided with eight questions.

To determine the level of the classroom environment in terms of student cohesiveness, teacher support, investigation, involvement, task orientation, cooperation, and equity, it was patterned from the questionnaire of Aldridge and Fraser (2000 as cited in Velayutham, 2012). This comprised of seven scales with eight items in each scale, bringing the total to 56 items.

To determine the culinary competence of Senior High School students in terms of learning attitude, study habit, learning method, resources application, and learning self-review, it utilized the standardized questionnaire in the study of Ko (2010) with different domains provided: ten (10) questions for learning attitude, nine (9) questions for study habits, eight (8) questions for learning method, five (5) for resource application, and five (5) for learning self-review.

Furthermore, in evaluating the level of teacher communication behavior, the level of the classroom environment and the level of culinary competence of the senior high school students, a rating scale, verbal description, and descriptive meaning or interpretation were provided using a five-point Likert scale and Mean score as a statistical tool based on an alpha significance standard of 0.05. Pearson Product Moment Correlation Analysis (Pearson  $r$ ) was utilized to determine the relationship among culinary competence, teacher communication behavior and classroom environment and Spearman Rho Coefficient to determine which domains of teacher communication behavior and classroom environment best influence the culinary competence of the senior high school students.



## 4. Results and Discussion

### 4.1 Level of Teacher Communication Behavior (TCB)

Table 1 revealed that on the level of teacher communication behavior, it was frequently manifested with an overall mean score of 3.98 with a verbal description of high. All the domains on the extent of teacher communication behavior have high verbal descriptions; however, among the domains, the highest mean score is 4.09 on understanding and friendly. This was followed by challenging ( $\bar{x} = 3.97$ ,  $SD = 0.537$ ) and controlling ( $\bar{x} = 3.97$ ,  $SD = 0.478$ ) and non-verbal support obtained a mean of 3.95 ( $SD = 0.500$ ). Encouraging and praise obtained the lowest mean score of 3.94 ( $SD = 0.508$ ). This suggested that senior high school students believed their teacher asked questions that required them to provide steps or ways to solve problems, make them think hard about things they learned in class, require them to carefully analyze information and use judgment to answer, apply and integrate what they learned, and give explanations in their own words. Matos *et al.*, (2014) agree that teachers must ask challenging questions to measure students' knowledge, practical application, and benefit.

**Table 1:** Summary Table on the Level of Teacher Communication Behavior

Domains	Mean	Descriptive Level
Challenging	3.97	High
Encouragement and praise	3.94	High
Non-verbal support	3.95	High
Understanding and friendly	4.09	High
Controlling	3.97	High
<b>Overall</b>	<b>3.98</b>	<b>High</b>

Educators and researchers have also shown that teachers' nonverbal gestures during classes and classroom activities might elicit greater student reactions than their vocal conduct (Peimani & Kamalipour, 2021; Roviello, 2014). In Paranduk and Karisi (2021), teachers might model or have students imitate the desired behavior. Since students cannot manage their own behavior, high-control teachers believe student conduct must be managed (Cochran-Smith, 2016). Teachers, reinforce good behavior and prevent bad behavior.

According to Ryan's (1963) Teacher Behavior model, teachers are information-processing thoughts and systems. According to this notion, the teacher-system mediates between external elements like teacher inputs and the observable teaching response in each situation. The teacher-operation system processes teacher information. This contradicts Watson and Skinner's (1938) claim that behavior is predictable and controllable. The teacher directs student conduct in the technique. Internalizing conduct standards helps students make good decisions.

## 4.2 Level of Classroom Environment (CE)

Table 2 on the level of classroom environment, obtained an overall mean score of 3.83 with a high verbal description. All the domains have high verbal descriptions; however, task orientation ( $\bar{x}=4.00$ ) obtained the highest mean score, followed by cooperation ( $\bar{x} = 3.95, SD = 0.548$ ), equity ( $\bar{x} = 3.92, SD = 0.554$ ;  $\bar{x} = 3.92, SD = 0.554$ ), student cohesiveness ( $\bar{x} = 3.92, SD = 0.525$ ), investigation ( $\bar{x} = 3.82, SD = 0.540$ ), and involvement ( $\bar{x} = 3.81, SD = 0.556$ ). Furthermore, teacher support ( $\bar{x}=3.78$ ) obtained the lowest mean score.

**Table 2:** Summary Table on the perceived level of Classroom Environment

Domains	Mean	Descriptive Level
Student cohesiveness	3.92	High
Teacher support	3.78	High
Investigation	3.82	High
Involvement	3.81	High
Task orientation	4.00	High
Cooperation	3.95	High
Equity	3.92	High
<b>Overall</b>	<b>3.88</b>	<b>High</b>

Results revealed that most Senior high school students in the five identified public secondary schools observed that before modular (print) classes or before Covid-19 pandemic times, they make friendships among students, identify other students in their class, work well with other students, and help other class members. This had been in parallel with the findings of Agarwal (2016) that student cohesiveness was important for women and minority students, who reported less support and more attrition. Female students value academic peer support groups more, especially in science classes (Kosasi & Sulastri, 2021) and academic and social integration improved student performance. In Kokkinos *et al.*, (2017), a person's behavior is influenced by how others treat them.

Further, the physical environment of the classroom can assist minimize behavioral problems while also promoting and enhancing learning (Sula, 2018). A healthy and supportive classroom atmosphere is necessary for effective teaching and learning (Abdullah *et al.*, 2021; Maddox, 2018; Morgan & Lahne, 2017; Wang & Qualls, 2017). It explains how a teacher should maintain student concentration, as well as how to avoid, identify, and respond to academic integrity breaches such as cheating, plagiarism, and other academic integrity infractions.

## 4.3 Level of Culinary Competence (CC)

Table 3 shows the level of culinary competence as frequently manifested with an overall mean score of 3.67 with a verbal description of high. All the domains have high descriptive levels; however, learning attitude obtained the highest mean score ( $\bar{x}=3.82$ ), followed by study habits ( $\bar{x} = 3.64, SD = 0.554$ ), and resource application ( $\bar{x} = 3.64, SD = 0.598$ ), and learning self-review ( $\bar{x} = 3.62, SD = 0.626$ ). Furthermore, the learning method ( $\bar{x}=3.61$ ) obtained the lowest mean score. This suggested that modern culinary school

strives to generate culinary artists with the talents of performers, capable of transforming raw food into a lovely product via the use of their creativity, intuition, intellect, emotions, and physical sensory technical skills.

**Table 3:** Summary table on the level of culinary competence

Domains	Mean	Descriptive Level
Learning attitude	3.82	High
Study habits	3.64	High
Learning method	3.61	High
Resource application	3.64	High
Learning self-review	3.62	High
<b>Overall</b>	<b>3.67</b>	<b>High</b>

More so, most Senior High school students believed that taking culinary lessons was beneficial for them and expressed interest in sharing and teaching their culinary talents to others. For them, studying in a cooking class was more intriguing than simply achieving a passing grade. They were required to use culinary knowledge in their daily lives, to understand its fundamental principles, to make and review notes upon completion of lessons, and to be excited about cuisine. This has been corroborated by Hu (2017)'s assertion that employers look for a certain set of credentials in job seekers that correlate to the competencies necessary to accomplish a particular job. Also, employers desire those characteristics in addition to job-specific technology abilities (Askari, 2020). In Weigel *et al.*, (2017), vocational institutions must ensure that graduates have the essential skills for employment.

Consequently, the study's findings correspond with Harter's (1978) competence motivation theory, or a theory of accomplishment motivation based on a person's sentiments of personal competence. This incentivizes the individual to assume additional duties. Culinary skill fostered the notion that an individual might see himself or herself as exceptional regardless of his or her ability to perform the tasks assigned to him or her. This is reinforced by Roberto Merton's (1968) self-fulfilling prophecy theory that induces itself to become true, either directly or indirectly, because of positive reinforcement between expectation and action.

#### **4.4 Significant Relationship between Teacher Communication Behavior and Culinary Competence**

Table 4 shows the correlation analysis showing the significance of the relationship between Teacher Communication Behavior (TCB) and Culinary Competence (CC) among Senior High School students. Based on the analysis, overall TCB positively and significantly correlated with overall CC ( $r=0.534$ ). Moreover, the domains of TCB also significantly correlated with culinary competence: challenging ( $r=0.426$ ), encouragement and praise ( $r=0.437$ ), non-verbal support ( $r=0.456$ ), understanding and friendly ( $r=0.406$ ), and controlling ( $r=0.391$ ). Hence, the null hypothesis of no significant relationship is rejected. There existed a significance relationship between TCB and CC. More so, challenging significantly correlated to the domains of culinary competence; learn

attitude ( $r=0.284$ ), study habits ( $r=0.384$ ), learning methods ( $r=0.375$ ), application ( $r=0.336$ ) and self-review ( $r=0.277$ ). Also, encouragement and praise significantly correlated to the domains of culinary competence; learn attitude ( $r=0.313$ ), study habits ( $r=0.404$ ), learning methods ( $r=0.345$ ), application ( $r=0.374$ ) and self-review ( $r=0.262$ ).

Furthermore, non-verbal support significantly correlated to the domains of culinary competence; learn attitude ( $r=0.234$ ), study habits ( $r=0.348$ ), learning methods ( $r=0.396$ ), application ( $r=0.432$ ) and self-review ( $r=0.351$ ). Consequently, understanding, and friendly significantly correlated to the domains of culinary competence; learn attitude ( $r=0.417$ ), study habits ( $r=0.355$ ), learning methods ( $r=0.317$ ), application ( $r=0.291$ ) and self-review ( $r=0.203$ ). For controlling, it significantly correlated to the domains of culinary competence; learn attitude ( $r=0.351$ ), study habits ( $r=0.302$ ), learning methods ( $r=0.28$ ), application ( $r=0.331$ ) and self-review ( $r=0.250$ ). Thus, the null hypothesis of no significant relationship is rejected.

**Table 4:** Correlation matrix of TCB and CC

Teacher Communication Behavior	Culinary Competence					
	Learn attitude	Study habits	Learning methods	Application	Self-review	Overall
Challenging	.284**	.384**	.375**	.336**	.278**	.426**
	.000	.000	.000	.000	.000	.000
Encouragement and praise	.313**	.404**	.345**	.374**	.262**	.437**
	.000	.000	.000	.000	.000	.000
Non-verbal support	.234**	.348**	.396**	.432**	.351**	.456**
	.000	.000	.000	.000	.000	.000
Understanding and friendly	.417**	.355**	.317**	.291**	.203**	.406**
	.000	.000	.000	.000	.001	.000
Controlling	.351**	.302**	.280**	.331**	.250**	.391**
	.000	.000	.000	.000	.000	.000
Overall	.404**	.453**	.433**	.444**	.339**	.534**
	.000	.000	.000	.000	.000	.000

\*\*  $p < 0.01$  \*  $p < 0.05$

It can be implied that the more TCB is evident, the more the Senior High School students developed and improved their acquisition of CC. The more they could understand, share, and teach their culinary competence to others. A significant component of a teacher's performance in the classroom, both in terms of the classroom atmosphere and teacher communication style, is how students see them. They have a clear vision of the objectives and diligently carry out everything that has been planned (Korochentseva & Terekhin, 2021). There is a substantial association between teacher ability and successful learning outcomes, as demonstrated by teacher competences (Cárdenas, 2021). Competencies, particularly in the culinary arts, may be identified collectively and should reflect the changing nature of employment (Vlachopoulos & Makri, 2019). In the job and training environment, there is a sense of togetherness. If an organization's missions are prioritized and employees' professional progress is

promoted, it is critical to building an accomplishment culture. Due to contact, competencies are enhanced (Paranduk & Karisi, 2021).

#### 4.5 Significant Relationship between Classroom Environment and Culinary Competence

Table 5 shows the correlation analysis on the significant relationship between Classroom Environment and Culinary Competence among senior high school students in the five selected public secondary schools in Davao Occidental. Based on the analysis, the overall Classroom Environment positively and significantly correlated with overall Culinary Competence ( $r=0.587$ ). In addition, the domains of Classroom Environment also significantly correlated with Culinary Competence: student cohesiveness ( $r=0.387$ ), teacher support ( $r=0.450$ ), investigation ( $r=0.493$ ), involvement ( $r=0.388$ ), task orientation ( $r=0.472$ ), cooperation ( $r=0.397$ ), and equity ( $r=0.484$ ). Hence, the null hypothesis of no significant relationship is rejected. There existed a significant relationship between CE and CC.

More so, Table 5 presents the significant relationship between the domains of Classroom Environment and the domains of culinary competence. Student cohesiveness significantly correlated to the domains of culinary competence; learn attitude ( $r=0.351$ ), study habits ( $r=0.355$ ), learning methods ( $r=0.340$ ), application ( $r=0.209$ ) and self-review ( $r=0.260$ ). Also, teacher support significantly correlated to the domains of culinary competence; learn attitude ( $r=0.252$ ), study habits ( $r=0.426$ ), learning methods ( $r=0.345$ ), application ( $r=0.407$ ) and self-review ( $r=0.315$ ). More so, investigation significantly correlated to the domains of culinary competence; learn attitude ( $r=0.352$ ), study habits ( $r=0.443$ ), learning methods ( $r=0.447$ ), application ( $r=0.342$ ) and self-review ( $r=0.337$ ).

**Table 5:** Correlation matrix of CE and CC

Classroom Environment	Culinary Competence					
	Learn attitude	Study habits	Learning methods	Application	Self-review	Overall
Student cohesiveness	.351**	.355**	.340**	.209**	.260**	.387**
	.000	.000	.000	.001	.000	.000
Teacher support	.252**	.426**	.345**	.407**	.315**	.450**
	.000	.000	.000	.000	.000	.000
Investigation	.352**	.443**	.447**	.342**	.337**	.493**
	.000	.000	.000	.000	.000	.000
Involvement	.346**	.375**	.313**	.268**	.215**	.388**
	.000	.000	.000	.000	.000	.000
Task orientation	.380**	.392**	.410**	.358**	.295**	.472**
	.000	.000	.000	.000	.000	.000
Cooperation	.336**	.316**	.353**	.295**	.244**	.397**
	.000	.000	.000	.000	.000	.000
Equity	.323**	.354**	.381**	.447**	.361**	.484**
	.000	.000	.000	.000	.000	.000
Overall	.449**	.508**	.496**	.445**	.387**	.587**
	.000	.000	.000	.000	.000	.000

\*\*  $p<0.01$  \*  $p<0.05$

Similarly, involvement significantly correlated to the domains of culinary competence; learn attitude ( $r=0.346$ ), study habits ( $r=0.375$ ), learning methods ( $r=0.313$ ), application ( $r=0.268$ ) and self-review ( $r=0.215$ ). Likewise, task orientation significantly correlated to the domains of culinary competence; learn attitude ( $r=0.380$ ), study habits ( $r=0.392$ ), learning methods ( $r=0.410$ ), application ( $r=0.358$ ) and self-review ( $r=0.295$ ). Moreover, cooperation significantly correlated to the domains of culinary competence; learn attitude ( $r=0.336$ ), study habits ( $r=0.316$ ), learning methods ( $r=0.353$ ), application ( $r=0.295$ ) and self-review ( $r=0.244$ ). Furthermore, equity significantly correlated to the domains of culinary competence; learn attitude ( $r=0.323$ ), study habits ( $r=0.354$ ), learning methods ( $r=0.381$ ), application ( $r=0.447$ ) and self-review ( $r=0.361$ ). Thus, the null hypothesis of no significant relationship is rejected.

It can be implied that the more that CE was evident to be conducive, the more the Senior High School students developed and improved their acquisition of culinary competence. According to Halpen and Tucker (2015), each activity requires the identification of competences in the critical areas of skill, knowledge, attitude, and conduct. It is critical to have recorded behavioral proof of acquired competence. In Ko (2017), there was a favorable association between an effective learning environment or classroom, professional competence, and academic success, which comprised work satisfaction, course satisfaction, and practice scores.

#### **4.6 Combined Influence of TCB and CE on the CC of Students**

Multiple linear regression was used to show the combined variables that best influence the overall culinary competence of the Senior High School students in the five selected and identified public secondary schools in Davao Occidental.

In Model 1 with the investigation as one of the domains of Classroom Environment entered as a regressor, it was found not to significantly influence overall culinary competence ( $B=0.393$ ,  $t=9.148$ ). It has a combined variance explained of  $R^2=0.240$ , which means that 24.00% of the variation of the dependent variable is explained by the indicator mentioned. In Model 2 with the investigation ( $B=0.297$ ,  $t=6.661$ ), and teacher support ( $B=0.260$ ,  $t=5.383$ ), entered as regressors, it was found not to significantly influence overall culinary competence. It has a combined variance explained of  $R^2=0.313$ , which means that 31.30% of the variation of the dependent variable is explained by the two (2) regressors. In Model 3 with the investigation ( $B=0.256$ ,  $t=5.792$ ), teacher support ( $B=0.225$ ,  $t=4.736$ ), and controlling ( $B=0.202$ ,  $t=4.249$ ), entered as regressors, it was found not to significantly influence overall culinary competence. It has a combined variance explained of  $R^2=0.356$ , which means that 35.60% of the variation of the dependent variable is explained by the three (3) regressors.

**Table 6:** Multiple linear regression results showing the combined variables that best influence overall culinary competence

Regressors	B	S.E.	$\beta$	t	Sig.	$\Delta R^2$
<b>Model 1</b>						
(Constant)	2.407	.165		14.549	.000	0.240
Investigation	.393	.043	.493	9.148	.000	
<i>F=83.687, p&lt;0.01</i>						
<b>Model 2</b>						
(Constant)	1.791	.195		9.204	.000	0.313
Investigation	.297	.045	.372	6.661	.000	
Teacher support	.260	.048	.301	5.383	.000	
<i>F=60.817, p&lt;0.01</i>						
<b>Model 3</b>						
(Constant)	1.278	.224		5.709	.000	0.356
Investigation	.256	.044	.321	5.792	.000	
Teacher support	.225	.048	.260	4.736	.000	
Controlling	.202	.048	.224	4.249	.000	
<i>F=49.223, p&lt;0.01</i>						
<b>Model 4</b>						
(Constant)	1.160	.225		5.166	.000	0.373
Investigation	.198	.048	.248	4.111	.000	
Teacher support	.198	.048	.228	4.126	.000	
Controlling	.172	.048	.191	3.575	.000	
Task orientation	.141	.049	.177	2.873	.004	
<i>F=40.015, p&lt;0.01</i>						
<b>Model 5</b>						
(Constant)	1.066	.226		4.717	.000	0.384
Investigation	.169	.049	.212	3.442	.001	
Teacher support	.175	.048	.202	3.605	.000	
Controlling	.128	.051	.142	2.502	.013	
Task orientation	.134	.049	.167	2.744	.007	
Non-verbal support	.124	.053	.145	2.361	.019	
<i>F=33.695, p&lt;0.01</i>						

In Model 4 with the investigation (B=0.198, t=4.111), teacher support (B=0.198, t=4.126), controlling (B=0.172, t=3.575), and task orientation (B=0.141, t=2.873) entered as regressors, it was found not to significantly influence overall culinary competence. It has a combined variance explained of  $R^2=0.373$ , which means that 37.30% of the variation of the dependent variable is explained by the four (4) regressors. In Model 5 with the investigation (B=0.169, t=3.442), teacher support (B=0.175, t=3.605), controlling (B=0.128, t=2.502), task orientation (B=0.134, t=2.744), and non-verbal support (B=0.124, t=2.361) entered as regressors, it was found not to significantly influence overall culinary competence. It has a combined variance explained of  $R^2=0.384$ , which means that 38.40% of the variation of the dependent variable is explained by the five (5) regressors.

In Model 1 with the investigation as one of the domains of CE entered as a regressor, it was found not to significantly influence overall CC; in Model 2 with the

investigation, and teacher support, entered as regressors, it was found not to significantly influence overall CC; in Model 3 with the investigation, teacher support, and controlling, entered as regressors, it was found not to significantly influence overall CC; in Model 4 with the investigation, teacher support, controlling, and task orientation entered as regressors, it was found not to significantly influence overall CC; in Model 5 with the investigation, teacher support, controlling, task orientation, and non-verbal support entered as regressors, it was found not to significantly influence overall CC, it can be inferred that although overall TCB and CE significantly correlated with overall CC, they do not significantly influence culinary competence. None of the indicators would best influence culinary competence.

## 5. Conclusions

Based on the findings generated in the study, since the levels of TCB, CE and CC are high, there exists a significance relationship between TCB and C, and between CE and CC, it corroborated with the social-learning theory of Bandura as cited by Cherry (2022) that behavior of an observer changes after viewing the behavior of the model which means it focuses on learning that occurs within a social context. Therefore, it considers that people learn from one another, including such concepts as observational learning, imitation, and modeling.

Moreover, the study's results showed that NC did not affect or mediate the relationship between EC and QWL. After using SPSS AMOS to do a path analysis, it was found that there is a relationship between NC and the QWL. This means that step 3 of Baron and Kenny's (1986) guidelines for mediation (path b) was completed. The researcher can move on to step 4 to test how the combined effects of ethical climate and normative commitment affect the quality of life at work. However, it was revealed that normative commitment does not impact the relationship between ethical climate and the quality of life at work for elementary school teachers in the public sector.

### 5.1 Recommendations

High TCB, CE, and CC levels stimulate, engage, and increase skill acquisition, development, and improvement. Teachers may simplify curricula and help more students succeed. Both classroom climate and communication style depend on how students see their teachers. More so, non-verbal support has the lowest mean score for the degree of TCB, thus teachers may use it to boost students' emotions, academic growth, and motivation. By introducing gestures into education and encouraging students to do the same, educators and researchers found that students respond more to teachers' nonverbal gestures than to spoken ones.

Since teacher support has the lowest mean score for CE, education institutions like the Department of Education (DepEd), the Commission on Higher Education (CHED), Technical Education and Skills Development Authority (TESDA), and comparable colleges can provide additional awareness programs, forums, or campaign



agendas to increase culinary competency program enrolment. Because it may give better solutions, the school may be used to improve instructional facilities, equipment, and labs. Educational institutions must balance providing information and resources with instructors' and students' talents. Without the ability to predict future wants and requirements, it will be impossible to allocate enough cooking resources.

Teachers should provide more information using the study's results because the learning technique has the lowest mean score for CC. This may highlight their culinary expertise and skills, regardless of demand. Setting explicit instructional objectives while articulating the institution's goals is the first step since teacher communication behavior may influence what is taught and how. Future academics may also investigate students' and instructors' culinary proficiency experiences. Culinary expertise encouraged people to consider themselves as special regardless of their ability to complete tasks.

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