

Moderating Effect of Support Systems on the Relationship Between Food Preparation Experience and Confidence Levels in Culinary Skills Among Students

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Abstract. This study aimed to determine the moderating effect of support systems on the relationship between food preparation experience and confidence levels in culinary skills among high school students in Tagum City. Utilizing a non-experimental quantitative approach with a descriptive-correlational technique, data were gathered from 302 students selected through simple random sampling. A researcher-made and pilot-tested questionnaire ensured the reliability and validity of the instrument. Results showed that students demonstrated an extensive level of food preparation experience, particularly in terms of independence and variety, although cooking frequency was only moderately extensive. Students also reported extensive confidence in culinary skills, most notably in participation, presentation, and feedback reception. Support systems, especially family encouragement, were extensively manifested, while institutional and peer support were moderately extensive. A significant relationship was found between food preparation experience and confidence levels, with frequency and independence being the most influential factors. Furthermore, support systems significantly moderated the relationship between preparation experience and culinary confidence, enhancing the positive effects of hands-on cooking. These findings affirm the importance of reinforcing support networks in promoting culinary competence among students.

KEY WORDS

1. Food preparation experience 2. confidence in culinary skills 3. support systems

Date Received: April 05, 2025 — Date Reviewed: May 15, 2025 — Date Published: June 18, 2025

1. Introduction

This study was investigated the low confidence levels in culinary skills among students, which may limit their interest and ability in cooking activities. It was highlighted that food preparation experience alone may not be enough to boost culinary confidence if support systems are lacking. The main claim is that such support systems will moderate the relationship between students' cooking experience and their self-assurance in the kitchen. Through exam-

ining how these environments will affect learning outcomes, the research will provide insights for educators and program developers. Hence, these findings will help establish strategies that will enhance students' confidence and motivation in culinary tasks. In the USA, report showed that there is a significant number of students exhibited low confidence in their culinary skills, attributing this to minimal practical exposure during their education (Liu et al., 2023).

According to Bauer et al. (2023), only thirty percent of high school students felt proficient in basic cooking techniques, reflecting a broader trend of educational programs prioritizing academic over practical life skills. This lack of confidence not only hinders personal independence but also affects nutritional choices, contributing to poorer health outcomes among young adults. The gap in culinary education suggests a need for enhanced curriculum frameworks that integrate more comprehensive, hands-on cooking experiences. Addressing this issue is critical for fostering self-sufficiency and healthier living in future generations. In the UK, analysis by Poelman et al. (2020) highlighted that over 40% of university students lacked confidence in their ability to prepare simple meals. Further research by Bulut and Ciftci (2024) identified that this uncertainty could lead to increased reliance on processed and pre-packaged foods. The studies called for educational institutions to incorporate more food preparation courses that are accessible to all students. These courses would not only improve culinary skills but also enhance students' understanding of nutrition. These improvements could lead to better eating habits and increased self-efficacy in meal preparation. In Arabian countries, Alharbi (2021) found that cultural expectations around cooking often deterred students, especially males, from developing culinary skills. Conversely, Khayyam et al. (2021) pointed out that culinary education is rarely emphasized in schools, leading to a general lack of culinary confidence across genders. They advocated for policy changes that would integrate culinary arts more thoroughly into the educational system to overcome societal stereotypes and encourage practical life skills. Such initiatives could help students feel more competent and enthusiastic about cooking, promoting a balanced lifestyle. Increased educational focus on culinary skills in these regions could bridge the gap between traditional roles and modern needs. In Asia, studies by

Leoparjo et al. (2023) in urban schools showed that students often felt intimidated by the complexity of traditional cooking methods, which affected their confidence. On the other hand, Lin et al. (2023) observed that rural students were more likely to engage in cooking at home but still showed low confidence in formal culinary settings. Both studies suggest the importance of contextual and culturally relevant culinary education that aligns with students' backgrounds. Programs tailored to local cuisines and cooking practices could significantly boost confidence and skills, making culinary education more effective and inclusive. Therefore, enhancing curriculum relevance could play a key role in improving student confidence in culinary arts across diverse Asian communities. In the Philippines, particularly in Luzon, research by Vergara et al. (2022) indicated that while many students participated in home cooking, their confidence in using professional culinary techniques remained low. Aquino et al. (2022) supported this, noting that culinary programs often lacked the resources to provide extensive hands-on experience. Añonuevo et.al (2018) explored the significance of integrating practical cooking experiences into the Philippine basic education curriculum, emphasizing its impact on students' life skills and self-sufficiency. They recommended that schools improve their facilities and offer more experiential learning opportunities to address this gap. Such enhancements would allow students to practice and master culinary skills in a supportive environment, thereby boosting their confidence. Strengthening the infrastructure for culinary education in Luzon could help elevate students' skills to meet both local and international culinary standards. In Mindanao, studies by Vergara et al. (2020) revealed that students' confidence in culinary skills was significantly lower in rural areas compared to urban centers. This discrepancy was attributed to less exposure to diverse culinary practices and limited access to qual-

ity culinary education. Salonga and Borbon (2021) supported this finding, noting that rural schools often struggle with underfunding, which affects the quality of culinary education provided. They recommend that targeted governmental and non-governmental programs be developed to address these disparities. In the researcher's setting, it was noted that students' confidence levels in culinary skills are notably influenced by community involvement in school programs. They found that schools with active community support, including guest chefs and local food businesses, reported higher student confidence and engagement. Reason for this could be that community engagement not only enhances practical learning opportunities but also boosts students' self-esteem and interest in culinary arts. Both research teams advocate for stronger community-school partnerships as a strategy to enrich culinary education and student confidence. Such collaborations can bridge the gap between theoretical knowledge and practical skills, enhancing the overall educational experience. The existing research on culinary education highlights a substantial gap concerning the impact of support systems on students' confidence in their cooking abilities. While numerous studies have explored how food preparation experience directly influences culinary skills, there is a lack of quantitative data specifically addressing how different types of support systems—such as peer mentoring, hands-on workshops, and faculty guidance—moderate this relationship. In Tagum City Division, where culinary programs are gaining popularity, the specific contributions of these support mechanisms remain underexplored. This oversight suggests an opportunity for a detailed examination of how support systems can enhance the effectiveness of culinary training. By focusing on this aspect, the study aims to provide a clearer understanding of the factors that most significantly contribute to building students' confidence in culinary arts. There is an urgent need

to conduct this study in Tagum City Division due to the growing interest in culinary careers among the youth and the increasing importance of food tourism in the region. As the local education system integrates more culinary-focused courses, understanding the role of support systems becomes crucial for maximizing student outcomes. Without concrete data on how support influences student confidence, educational programs may not reach their full potential in fostering skilled professionals. Moreover, with the culinary industry's expanding role in the local economy, equipping students with high confidence and competence becomes vital for future job readiness and economic development. Thus, conducting this quantitative study not only addresses a critical research gap but also supports the broader educational and economic goals of Tagum City.

1.1. Theoretical/Conceptual Framework of the Study—This study is anchored on Social Cognitive Theory by Bandura (1986) which posits that learning occurs through observation, imitation, and modeling within a social environment. It emphasizes the importance of self-efficacy and the influence of social support in acquiring and mastering new skills. This theory is appropriate for the study as it highlights how support systems, such as family, peers, or educational programs, can facilitate the learning process and boost students' confidence in culinary skills. By receiving guidance and feedback, students' food preparation experiences are enhanced, leading to increased culinary confidence. Therefore, the theory's emphasis on self-efficacy aligns well with understanding how support systems mediate the relationship between food preparation experience and culinary confidence. In support, Self-Determination Theory by Deci and Ryan (1985) focuses on the role of intrinsic motivation in driving behavior, emphasizing autonomy, competence, and relatedness in learning and personal growth. It suggests that when individuals feel supported,

they are more likely to develop skills and gain confidence. This theory is applicable to the study as it explains how support systems can enhance students' intrinsic motivation to participate in food preparation activities, thereby boosting their confidence in culinary skills. The sense of competence gained from support serves as a mediator between food preparation experience and confidence levels. This makes Self-Determination Theory a suitable framework for understanding the influence of support systems on students' motivation and skill development in culinary contexts. Adding more, Social Support Theory developed by Cobb (1976) focuses on how the availability and quality of social support influence an individual's ability to cope with challenges and develop skills. It posits that emotional, informational, and practical support can significantly impact learning and confidence levels. This theory is well-suited for the study as it directly addresses the role of support systems in enhancing students' culinary skills and confidence. By explaining how different forms of support (e.g., guidance, encouragement, resources) can mediate the relationship between food preparation experience and confidence levels, Social Support Theory provides a strong foundation for understanding the contribution of supportive networks to skill acquisition and confidence in culinary settings. This theoretical framework highlights how peer, teacher, and family support can serve as a catalyst for skill development and boosted confidence in culinary education. Figure 1 presents the conceptual framework of the study which helped the researcher summarize and briefly state the concept of the study. The independent variable is the food preparation experience or the practical involvement and exposure of students in preparing, cooking, and handling various food ingredients, which enhances their understanding of food safety and quality. The measures of food preparation experience are frequency of cooking activities or the extent which describes how

regularly an individual engage in meal preparation, which greatly influences their cooking skills and food-related decision-making; variety of dishes prepared or the extent which involves how regularly they participate in meal preparation, which plays a crucial role in shaping their eating behaviors and culinary skills; and independence in cooking or the extent which reflects their ability to prepare meals with minimal assistance. The dependent variable of the study is confidence levels in culinary skills or the students' self-assurance and perceived ability to perform various cooking tasks efficiently and effectively. The measures of confidence levels in culinary skills are willingness to experiment or the degree to which they feel comfortable trying new recipes, ingredients, or cooking techniques; participation in cooking activities or the self-assurance students feel when engaging in cooking tasks and preparing meals; feedback reception or the students' ability to receive and respond to comments or critiques regarding their cooking efforts; and presentation of dishes or the degree of self-assurance students have in their ability to arrange and present food in an aesthetically pleasing and appealing manner. Lastly, the moderator is support systems for students or the various forms of assistance and resources provided to students within the classroom to enhance their learning experience and academic success. The measure of support system are willingness to experiment or the degree to which they feel comfortable trying new recipes, ingredients, or cooking techniques; participation in cooking activities or the self-assurance students feel when engaging in cooking tasks and preparing meals; feedback reception or the students' ability to receive and respond to comments or critiques regarding their cooking efforts; and presentation of dishes or the degree of self-assurance students have in their ability to arrange and present food in an aesthetically pleasing and appealing manner.

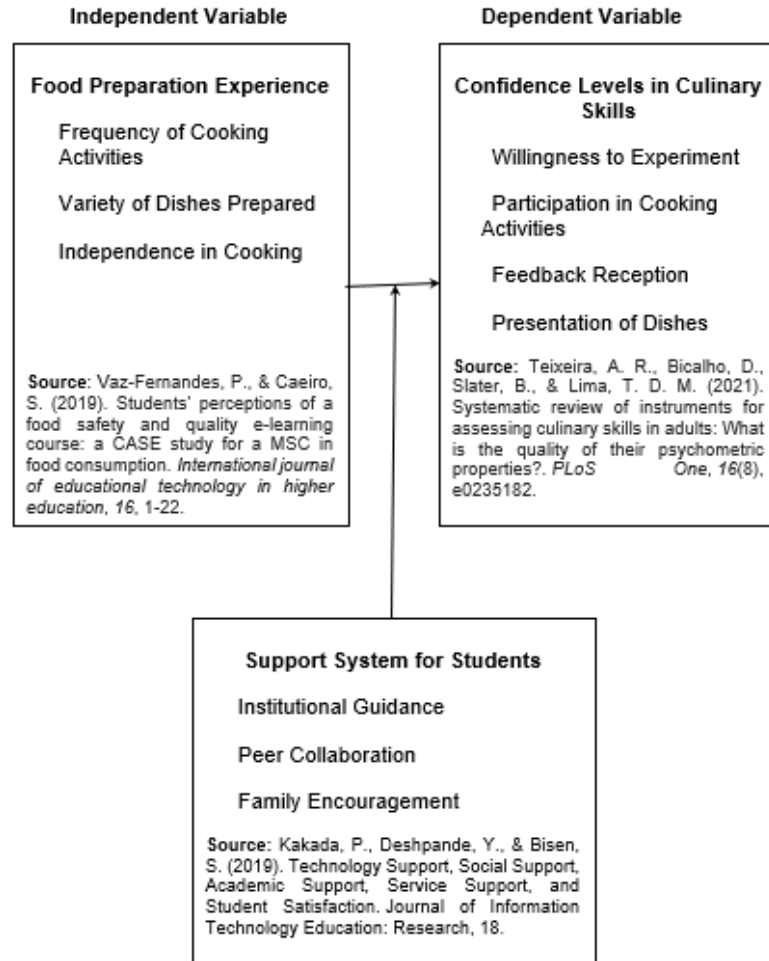


Fig. 1. Theoretical/Conceptual Framework

2. Methodology

This section contains the research design, research respondents, research ethics, research instrument, research procedure, data collection, and data analysis.

2.1. Research Design—In this research, a quantitative methodology using a descriptive-correlational design was utilized to investigate the role of support systems for students as a moderating factor between food preparation experience and confidence levels in culinary skills among students. According to Ahmad et al. (2019), quantitative research design involved the systematic empirical investigation of observable phenomena via statistical, mathematical, or computational techniques. The primary objective was to develop and employ mathematical models, theories, and hypotheses pertaining to phenomena. A quantitative research design was suitable for the study as it allowed for precise measurement of the relationships between food preparation experience, confidence levels in culinary skills, and the influence of various support systems. By quantifying these variables, the researcher objectively assessed the strength and direction of these relationships. Additionally, this design supported the use of statistical tests to validate the hypotheses regarding the moderating effects of support systems, providing a robust framework for drawing empirical conclusions. Also, descriptive research

methods were used to describe characteristics of a population or phenomenon being studied. They did not make connections between events or determine cause and effect (Sarstedt et al., 2019). Descriptive methods were appropriate for the initial part of the study, where detailing the current state of students' culinary skills and their confidence levels was crucial. These methods helped identify common patterns or trends in food preparation experiences across different student demographics. Utilizing descriptive statistics provided a solid foundation for deeper analysis using more complex statistical techniques, such as moderation analysis. The correlational research was used to identify and assess the relationships between two or more variables without determining a causal link. This approach measured the strength and direction of a relationship between variables (Flynn, 2022). The correlational approach was appropriate as it allowed for the examination of the relationship between students' food preparation experience and their confidence in culinary skills. It helped in understanding how these variables changed together without implying that one caused the other. For the study, this approach provided preliminary insights that guided further analysis on how these relationships might be influenced by external variables like support systems. Moreover, moderation analysis using the Baron and Kenny method involved adding interaction terms to regression models to test if the effect of an independent variable on an outcome variable changed at different levels of a moderator. This method helped in understanding how, and to what extent, different conditions affected the relationship between variables (Pieters et al., 2022). This method was highly appropriate for investigating whether support systems moderated the relationship between food preparation experience and culinary confidence among students. By employing hierarchical regression, the researcher first established the main effects of food preparation and support systems on con-

fidence and then added the interaction term to see if the impact of food preparation experience on confidence varied by the level of support received. This detailed analysis allowed for a nuanced understanding of how support systems could enhance or dilute the benefits of practical food preparation experiences, offering valuable insights for educational strategies in culinary training.

2.2. Ethical Consideration—The researcher promptly followed all necessary protocols outlined in the standard guidelines for conducting the study, focusing particularly on the assessment criteria for managing the population and data. Survey questionnaires and supporting references were submitted for further evaluation. Once approval from the Ethics Committee was obtained, the researcher proceeded to the next phase of the study.

Social Value

This study had high social value because it focused on improving students' confidence in culinary skills through effective support systems in Tagum City Division. It aimed to determine how food preparation experience connected to students' self-assurance when guided by institutional, peer, or family support. By exploring these factors, the research provided schools and parents with valuable insights on fostering stronger culinary competencies among high school students. Such insights encouraged healthier eating habits, as students who were more confident in the kitchen tended to prepare wholesome meals. Consequently, the research contributed to the well-being of both the education sector and the broader community. The study also carried societal relevance because it highlighted practical approaches to bridging skill gaps in culinary education. Through the data gathered, the researcher showed how collaborative efforts among institutions, peers, and families could lift students' abilities and confidence in cooking. This knowledge was particularly useful in designing programs that nur-

tured independent life skills. Improved life skills, including cooking, often translated into better health choices and resource management. Hence, the findings had a direct impact on developing self-reliant and well-rounded individuals. Moreover, the study underscored the broader benefits of technology and pedagogy working together to support learners. By examining the moderating effect of support systems, the research recognized the dynamic interplay between student experiences and their environments. Such findings inspired community-based interventions that fostered active engagement in cooking-related activities. When students possessed sufficient skills in preparing food, they were more likely to share these talents within their households, benefiting family members. The research advanced a holistic perspective on how educational strategies in culinary arts could significantly shape daily life and community well-being.

Informed Consent and Assent

Before starting data collection, the researcher ensured that all high school students were clearly informed about the study's purpose and scope. They were told that the research would examine how food preparation experience and support systems might influence their confidence in culinary skills. Each respondent was provided with a simple but comprehensive explanation of why their involvement was vital. The researcher emphasized that this study aimed to help improve teaching methods and support structures in cooking classes. Such transparency built trust and enabled the students to make an informed decision about participating. The researcher also clarified the benefits that could come from taking part in the study. These benefits included the possibility that new strategies would be introduced in schools, potentially enhancing the food preparation experience for many students. By underscoring these potential improvements, the researcher motivated the respondents to contribute accurate and hon-

est responses. Also, all students were made aware of their right to withdraw from the study at any point, ensuring that their participation remained strictly voluntary. This freedom guaranteed respect for their autonomy and safeguarded their comfort throughout the process. Additionally, the researcher informed those under 18 years old that their parents' approval was necessary for them to be included in the study. Consent forms were distributed, detailing the study's objectives, procedures, and the role of the respondents. Parents or legal guardians were encouraged to ask questions and voice any concerns they might have. This measure ensured that the rights and welfare of minor respondents were protected at all times. Consequently, the entire informed consent process took into account both the students' and parents' perspectives. In conducting the research, the researcher took care to explain the confidentiality measures in place. All personal data collected were anonymized, and only grouped results were reported. Through this approach, students felt safe to share honest experiences without fear of negative repercussions. Moreover, the researcher stressed that final results would only be used for academic and development purposes. By maintaining these protocols, the study complied with ethical standards and upheld the principles of respect for every respondent.

Vulnerability of Research Respondents

Because high school students might have been vulnerable, the researcher used extra caution during the entire study. All data collection activities were designed to be non-intrusive and respectful of students' feelings. If a student felt uncomfortable at any point, the researcher encouraged them to speak up or withdraw from the study. This approach minimized any potential discomfort linked to discussing their confidence in culinary skills. Through this, the study recognized the unique challenges students faced and aimed to handle them responsibly. The researcher also prepared a mitigation process to

protect the well-being of these vulnerable respondents. A guidance counselor or teacher was present during the data collection if needed to address any emotional or psychological concerns. Students were assured that their participation or non-participation would not affect their academic standing. Additionally, those who needed more guidance or encouragement regarding cooking skills were directed to school or community resources for extra help. This safety net provided reassurance and upheld the study's ethical commitment to student welfare.

Privacy and Confidentiality

Adhering to the Data Privacy Act of 2012, the researcher prioritized the privacy and confidentiality of all respondents' information. Personal identifiers such as names, student numbers, or any details that could reveal the respondents' identities were excluded from the research data presented in reports or publications. Data collected were coded, and only aggregated results were used to ensure individual respondents could not be identified. To safeguard the data, all electronic files were stored on password-protected computers or encrypted storage devices accessible only to the researcher. Hard copies of any data collection instruments were kept in locked cabinets. Access to both soft and hard data was strictly limited to the researcher and, if necessary, authorized personnel who were directly involved in the study and had signed confidentiality agreements. After the completion and publication of the study, the researcher responsibly disposed of all data to maintain confidentiality. Soft copies were permanently deleted using secure data erasure methods that prevented data recovery. Hard copies were shredded or incinerated to ensure that no information could be reconstructed. The researcher documented the data disposal process in a log, demonstrating compliance with ethical standards and legal obligations under the Data Privacy Act of 2012. This meticulous approach ensured that the respondents' pri-

vacy was protected even after the study had concluded.

Risk, Benefits, and Safety

The study posed minimal risk because it primarily involved answering questionnaires and possibly brief discussions related to culinary experiences. Students were not subjected to any invasive procedures or sensitive questions that could trigger serious stress. Any potential discomfort might have arisen from reflecting on one's confidence levels, but the researcher minimized this by maintaining a supportive environment. The research design also guaranteed the right to withdraw, reducing any pressure on the respondents. Therefore, the overall risk level was low and carefully managed. The primary benefit of the study was the potential for improved teaching methods in culinary education. If the findings showed strong support systems significantly boosted student confidence, schools could adapt new strategies to foster better cooking experiences. Students themselves stood to gain from better resource allocation, more engaging class activities, and supportive counseling. This supportive environment could eventually lead to greater self-efficacy and possibly future interest in culinary careers. The anticipated improvements in teaching and learning processes served both individual students and the broader educational community. Safety considerations were paramount throughout the entire study. Data were stored securely with limited access to maintain confidentiality. The researcher used anonymized identifiers to ensure that no personal information of the respondents was disclosed. A clear incident protocol was established in case any student felt distressed or if unforeseen issues arose. Through these measures, the research process remained transparent and safe for all respondents.

Justice

Justice was upheld by giving every willing high school student an equal chance to join the study. The researcher did not discriminate based

on academic performance, socioeconomic status, or personal background. All respondents received the same questionnaire and were treated fairly throughout the data collection and analysis. This approach ensured that the results genuinely reflected the diverse experiences of the student population in Tagum City Division. Consequently, the outcomes were more credible and beneficial to a wide range of stakeholders in the educational system.

Transparency

The study on the moderating effect of support systems in culinary skills education was conducted with a high level of transparency. The researcher ensured that all objectives, methods, and intended uses of the research were clearly communicated to all stakeholders, including students, parents, and school administrators. Detailed information about the research process was made available to participants before data collection began, allowing them to make informed decisions about their involvement. Regular updates were provided throughout the study to keep all parties informed of progress and any changes. This openness fostered trust and cooperation between the researcher and the school community. Upon completion of the study, the results were shared with multiple audiences to maximize impact. The primary dissemination occurred through a detailed report presented to the participating schools' administration and at a school district meeting, ensuring that those directly involved in the education of the students understood the findings and their implications. Additionally, findings were summarized in a newsletter distributed to all participating students and their families, providing them with a clear understanding of the study outcomes and potential implications for future culinary programs. Further dissemination included submission of the study's findings to relevant educational conferences and journals, aiming to reach a broader audience within the academic and educational

community. This facilitated a wider discussion on the importance of support systems in education and their impact on student confidence and skills development. The researcher also hosted workshops for local educators to explore practical applications of the research findings, encouraging the adoption of effective support strategies in other schools within the division. By bridging the gap between research and practice, these initiatives allowed teachers to apply evidence-based support techniques that improve students' confidence and learning. Conflict of Interest

To maintain the integrity of the study, the researcher took proactive steps to identify and manage any potential conflicts of interest. It was disclosed that the researcher had no financial or personal relationships with the schools involved that could inappropriately influence the study's outcomes. Measures such as transparent reporting of methods and findings, peer review of the study design, and oversight by an academic advisor were implemented to prevent any bias. The researcher's commitment to impartiality ensured that the results were driven solely by data and objective analysis. These steps were essential for upholding the trust and credibility of the research findings.

Qualification of the Researcher

The researcher conducting this study was well-equipped with the necessary academic background and practical skills to undertake this complex analysis. Having completed extensive coursework in Methods of Research and Advanced Statistics during graduate studies, the researcher had a robust understanding of both theoretical and applied aspects of educational research. This education provided the researcher with the expertise required to design the study, develop appropriate instruments, and perform sophisticated data analyses, including regression analysis. In addition to academic qualifications, the researcher had hands-on experience in educational settings, having previously

collaborated on several school-based research projects. This practical experience was invaluable for navigating the logistical and interpersonal aspects of conducting research in school environments. The combination of rigorous academic training and real-world experience ensured the researcher was capable of addressing the complexities of this study while adhering to the highest ethical and professional standards.

Adequacy of Facilities

To conduct the study efficiently, the researcher utilized adequate facilities that were conducive to data collection and ensured the comfort and safety of the respondents. This involved arranging suitable spaces within the schools in the Central District of Tagum City, such as classrooms or meeting rooms, where questionnaires were administered privately and without interruptions. The facilities were equipped with the necessary materials and resources, including seating, writing instruments, and a quiet environment, to facilitate focused responses. Ensuring the adequacy of facilities demonstrated the researcher's commitment to providing a professional setting that respected the respondents' time and participation.

Community Involvement

Community involvement was a cornerstone of this study, with strategies in place to engage students, parents, and school staff from the outset. The researcher organized initial meetings to introduce the study to the community, inviting input and addressing any concerns stakeholders had. This inclusive approach not only enriched the research process through diverse perspectives but also strengthened the community's investment in the study's outcomes. Engaging the community in this way ensured that the support systems explored were relevant and realistically implemented within the schools. Throughout the study, the researcher continued to involve the community by facilitating focus groups and feedback sessions to gather ongoing input and reflect on preliminary findings. This continu-

ous engagement helped ensure that the research remained aligned with community needs and that the interventions developed were both effective and sustainable. By actively involving the community in both planning and evaluation phases, the study fostered a sense of ownership and responsibility among all participants, enhancing the potential for positive change within the school system.

2.3. Research Respondents—For this study, a total of 302 high school students from the Tagum City Division were selected as respondents. To determine this sample size from an overall population of approximately 1,230 students across these schools, the researcher applied Slovin's formula with a 5% margin of error. The application of the simple random sampling technique guaranteed fairness and eliminated bias in the selection process. By giving each student an equal chance of inclusion, this approach aligned with the study's objective to explore the moderating role of support systems on the relationship between food preparation experience and confidence levels in culinary skills among students (Iqbal et al., 2023). Such a sampling strategy was crucial for maintaining the integrity of the study's results and enabled the findings to be generalized to the broader student population in Tagum City. The collected data, the researcher obtained a comprehensive list of students from the administration of each school within the district. Students were then randomly selected in proportion to the overall student population, ensuring that the sample accurately reflected the division's demographic and academic diversity. Additionally, the researcher secured consent from both the school administrations and the respondents, adhering to ethical standards that protected the students' privacy and ensured voluntary participation. In this study, the researcher established specific inclusion criteria to ensure the relevance and reliability of the data collected. The participants were high school students currently enrolled in Tagum

City, encompassing grades 7 to 12 to capture a comprehensive range of adolescent development stages. They had varying degrees of food preparation experience, from minimal to extensive, to represent a diverse spectrum of culinary backgrounds. Additionally, the students were part of the regular academic curriculum, excluding those in specialized culinary programs, to focus on the general student populations. Consent from both the students and their guardians was required, ensuring that ethical standards were fully met.

2.4. *Research Instrument*—The study made use of adopted survey questionnaires

Range of Mean, Description, and Interpretation for Food Preparation Experience of Students

Range of Mean	Description	Interpretation
4.20 – 5.00	Very Extensive	The food preparation experience of the students is always desirable.
3.40 – 4.19	Extensive	The food preparation experience of the students is frequently desirable.
2.60 – 3.39	Moderately Extensive	The food preparation experience of the students is occasionally desirable.
1.80 – 2.59	Less Extensive	The food preparation experience of the students is seldom desirable.
1.00 – 1.79	Not Extensive	The food preparation experience of the students is never desirable.

The second part of the instrument focused on the confidence levels in culinary skills of students. This questionnaire was designed to evaluate the domains namely: willingness to experiment, participation in cooking activities, feedback reception, and presentation of dishes.

The third part focused on the support system for students. This questionnaire was designed to evaluate the domains namely: institutional guidance, peer collaboration, and family encouragement. The new scale obtained a Cronach

to suit the investigation. The questionnaire was composed of three parts. The first part focused on the food preparation experience of students. This section of the questionnaire was distributed among three indicators: frequency of cooking activities, variety of dishes prepared, and level of independence in cooking. The new scale obtained a Cronach alpha value of 0.717, described as acceptable and interpreted as reliable. The questionnaire utilized a 5-point Likert scale, and the determination was based on the following ranges of means:

The new scale obtained a Cronach alpha value of 0.827, described as good and interpreted as reliable. The questionnaire utilized a 5-point Likert scale and was evaluated based on predefined mean ranges:

alpha value of 0.809, described as good and interpreted as reliable. The questionnaire made use of a 5-point Likert scale and was determined based on the following ranges of means:

Range of Mean, Description, and Interpretation for Students' Confidence in Culinary Skills

Range of Mean	Description	Interpretation
4.20 – 5.00	Very Extensive	The confidence levels in culinary skills of students is always demonstrated.
3.40 – 4.19	Extensive	The confidence levels in culinary skills of students is oftentimes demonstrated.
2.60 – 3.39	Moderately Extensive	The confidence levels in culinary skills of students is sometimes demonstrated.
1.80 – 2.59	Less Extensive	The confidence levels in culinary skills of students is seldom demonstrated.
1.00 – 1.79	Not Extensive	The confidence levels in culinary skills of students is never demonstrated.

Range of Mean, Description, and Interpretation for Support System for Students

Range of Mean	Description	Interpretation
4.20 – 5.00	Very Extensive	Support system for students is always manifested.
3.40 – 4.19	Extensive	Support system for students is oftentimes manifested.
2.60 – 3.39	Moderately Extensive	Support system for students is occasionally manifested.
1.80 – 2.59	Less Extensive	Support system for students is rarely manifested.
1.00 – 1.79	Not Extensive	Support system for students is never manifested.

2.5. Data Gathering Procedure—Permission to Conduct the Study

The data gathering process began with a clear focus on securing the necessary permissions to conduct the study. First, the researcher obtained an endorsement from the Dean of the Graduate School at The Rizal Memorial Colleges, Inc., Davao City, which established the academic legitimacy of the project. Subsequently, the researcher sought ethical clear-

ance from the Graduate School RMC-Research Ethics Committee (GSRMC-REC), ensuring that the study met all ethical guidelines. This ethical approval was crucial, as it confirmed that the research respected the rights and confidentiality of respondents. By completing these steps, the researcher laid a strong and ethical foundation for the study. After obtaining the endorsement and ethical clearance, the researcher proceeded to seek permission from the school

heads of the selected public secondary schools in Tagum City. The formal request was accompanied by copies of the endorsement from the Dean and the ethical clearance certificate from the GSRMC-REC to demonstrate full compliance with academic and ethical standards. Including these documents helped build trust with school administrators and showed that the study was both credible and ethically sound. As a result, the administrators were more willing to grant access for data collection within their schools. This careful approach ensured that the researcher had the necessary authorization to proceed with the survey, while also maintaining transparency and respect for institutional guidelines.

Distribution and Retrieval of the Questionnaire

The initial phase of data collection involved selecting appropriate respondents, specifically high school students within the Tagum City Division, to ensure a representative sample for the study on the moderating effects of support systems on culinary confidence. To refine the survey instrument and ensure its reliability and validity, a pilot test was conducted with a small group of no more than 30 students. This preliminary testing served to identify any ambiguities or biases in the questions and to adjust the survey accordingly, enhancing the accuracy and effectiveness of the data-gathering process. Feedback from the pilot participants was meticulously analyzed to make necessary modifications, thereby setting a solid foundation for the broader study. This careful approach ensured that the survey accurately captured the nuances of students' food preparation experiences, their confidence levels in culinary skills, and the influence of support systems. Following the successful pilot test, the main survey was distributed to the selected high school students. To accommodate the varying schedules and commitments of the students, they were informed that ample time would be provided to complete the

questionnaires, ensuring that they could participate without feeling rushed. This consideration helped to maximize response rates and the quality of the data collected, as students could answer thoughtfully and at their convenience. The questionnaires were designed to gather detailed information on each student's food preparation experience, their self-reported confidence in culinary skills, and the types of support systems they accessed—whether institutional, peer, or familial. The distribution process was carefully monitored to ensure that all students had equal access to the survey and understood the questions fully, thereby promoting fairness and clarity in the research study. To further enhance the accessibility of the survey and accommodate different preferences and technological accessibilities, students were offered the option to complete the questionnaires either online or face-to-face. This dual-mode approach allowed students who preferred digital interaction or those with limited access to in-person sessions during school hours to participate fully in the study. The online platform was secured and user-friendly, ensuring data privacy and ease of use, while the face-to-face method provided a personal touch, which was especially helpful for clarifying any doubts about the survey items. Each mode was designed to be equivalent in content and layout, ensuring that data consistency was maintained across different formats. This flexibility not only increased the inclusivity and reach of the study but also catered to the diverse needs and situations of high school students in Tagum City Division, enhancing the comprehensiveness and reliability of the collected data.

Collation and Statistical Treatment of Data

Once the survey questionnaires were completed and collected from the high school students in Tagum City Division, the initial step in the data handling process was to systematically count and sort the gathered information. This task involved categorizing the data into

specific domains—food preparation experience, confidence levels in culinary skills, and support systems—that were central to the study’s aims. Each set of data was meticulously entered into a Microsoft Excel spreadsheet, ensuring accuracy and organization for ease of analysis. This methodical entry process was crucial for preparing the dataset for subsequent analytical procedures, laying the groundwork for comprehensive statistical evaluation. The structured approach ensured that all data points were accounted for and appropriately classified, setting the stage for effective analysis. Following the organization of the data, the next step involved performing descriptive statistical analysis to quantify and summarize the extents of food preparation experience, confidence levels in culinary skills, and the presence of support systems among the students. The use of statistical means provided a clear, quantitative depiction of these variables, highlighting general trends and patterns within the dataset. This analysis helped in understanding the average conditions and variances of each domain, offering a baseline understanding of the student experiences. By elucidating the central tendencies and dispersions, this descriptive analysis furnished vital insights into the overall landscape of culinary skills and support mechanisms among the students, facilitating a deeper understanding of the data before moving to more complex analyses. To delve deeper into the relationships and influences among the variables, inferential statistics were employed. Pearson Product Moment Correlation was utilized to assess the strength

and direction of the relationship between students’ food preparation experience and their confidence levels in culinary skills. Furthermore, to explore the potential moderating effects of support systems on these relationships, the Baron and Kenny (1986) method of moderation analysis through hierarchical regression analysis was applied. This advanced statistical technique allowed for a precise examination of how different types of support systems might alter the impact of food preparation experience on students’ confidence levels. By employing these inferential methods, the study aimed to uncover underlying patterns and causative insights that could inform more targeted educational strategies. The final phase of the data analysis involved the interpretation and discussion of the results obtained from the descriptive and inferential analyses. This comprehensive evaluation highlighted significant findings, drawing connections between students’ practical experiences, their self-assurance in culinary activities, and the roles played by various support systems. The interpretations were carefully considered to ensure that they accurately reflected the data and adhered to statistical principles. Based on these insights, the study concluded with the formulation of specific recommendations aimed at enhancing educational practices and policies in Tagum City Division. These recommendations were tailored to address the identified needs and opportunities for bolstering student confidence and competence in culinary skills, potentially leading to more effective and supportive culinary education programs.

2.6. Data Analysis—The following statistical tools were utilized by the researcher in processing the gathered data:

Weighted Mean In this study, the mean refers to the average score obtained from students’ responses on measures of food preparation experience, confidence levels in culinary

skills, and support systems. It provides a central value that represents the typical level of these variables among the surveyed students.

Pearson Product-Moment Correlation

This statistical measure assesses the strength and direction of the linear relationship between two continuous variables in the study, such as

food preparation experience and confidence levels in culinary skills. A significant Pearson correlation coefficient would indicate that as one variable increases or decreases, the other variable tends to increase or decrease in a predictable manner.

Hierarchical Regression Analysis

This is a statistical method used to examine whether support systems moderate the relationship between food preparation experience and confidence levels in culinary skills among students. By entering variables into the regres-

sion model in steps, it allows the researcher to determine if the inclusion of support systems significantly changes the predictive power of the model, indicating a moderating effect. This method makes it clearer how outside assistance affects students' confidence in ways that go beyond their personal experiences. Additionally, by determining whether support systems strengthen or weaken the bond, researchers can gain a better understanding of how these systems aid in skill development.

3. Results and Discussion

This chapter presents the results generated from the data gathered. It is sequenced based on the objectives of the study as presented in the first chapter. Thus, it presents the extents of food preparation experience, confidence levels in culinary skills of students, and support systems; the significant relationship among these variables; and the moderating effect of support systems on the relationship between food preparation experience and confidence levels in culinary skills among students in Tagum City.

3.1. Food Preparation Experience of Students—The food preparation experience of students in Tagum City obtained an overall mean of 3.46, interpreted as extensive. This suggests that students frequently engage in food preparation activities, demonstrating strong culinary skills across various domains. An extensive level of food preparation experience indicates that students have developed consistent cooking habits and a considerable degree of culinary confidence. According to Romero and Francis (2020), students who actively practice food preparation skills are more likely to maintain healthier eating patterns and demonstrate higher self-efficacy in managing their meals. Therefore, the overall extensive food preparation experience observed among the students supports positive long-term culinary competen-

cies. Meanwhile, the mean scores of the indicators ranged from moderately extensive to extensive. The highest-rated indicator is the level of independence in cooking with a mean score of 3.68 categorized as extensive, indicating that students frequently manage cooking tasks without assistance. Meanwhile, the indicator frequency of cooking activities recorded the lowest mean score of 3.31, interpreted as moderately extensive, suggesting that although students show capability, the regularity of cooking could still be enhanced. This finding is consistent with Lema et al., (2020), who noted that while students may possess strong technical cooking skills, regular practice is essential to maintaining and improving culinary proficiency. Thus, encouraging more frequent engagement in cooking activities would further strengthen students' food preparation experiences.

Table 1. Summary on Food Preparation Experience of Students in Tagum City

Indicators	Mean	Descriptive Equivalent
Frequency of Cooking Activities	3.31	Moderately Extensive
Variety of Dishes Prepared	3.40	Extensive
Level of Independence in Cooking	3.68	Extensive
Overall	3.46	Extensive

Legend: Very Extensive = Always Desirable; Extensive = Frequently Desirable; Moderately Extensive = Occasionally Desirable; Less Extensive = Seldom Desirable; Not Extensive = Never Desirable.

3.2. Confidence Levels in Culinary Skills Among Students—Confidence levels in culinary skills among students in Tagum City attained an overall mean of 3.56, described as Extensive. This result indicates that students frequently demonstrate confidence across various dimensions of culinary practice. As supported by Magallanes et al. (2021), confidence in practical skills such as cooking is strengthened through frequent exposure and supportive learning environments, contributing to greater student engagement and competency. The extensive rating across all domains highlights that students generally possess strong belief in their culinary abilities, enhancing their readiness for more advanced culinary tasks. This high level of confidence fosters active participation, experimen-

tation, and continual skill improvement within culinary education. The mean scores ranged from 3.53 to 3.59 across the four indicators. participation in cooking activities has the highest mean of 3.59 describe as extensive, showing that students often involve themselves actively in culinary activities, which greatly boosts practical learning. Meanwhile, willingness to experiment has the lowest mean of 3.53 or extensive, indicating that although students are confident, they may still exhibit slight hesitation in trying unfamiliar techniques or ingredients. As emphasized by Harrell (2021), fostering a spirit of experimentation is vital in culinary education, as it leads to innovation and adaptability. Therefore, encouraging students to take more creative risks can further strengthen their culinary confidence and broaden their culinary repertoire.

Table 2. Summary on Confidence Levels in Culinary Skills Among Students in Tagum City

Indicators	Mean	Descriptive Equivalent
Willingness to Experiment	3.53	Extensive
Participation in Cooking Activities	3.59	Extensive
Feedback Reception	3.55	Extensive
Presentation of Dishes	3.56	Extensive
Overall	3.56	Extensive

Legend: Very Extensive = Always Demonstrated; Extensive = Oftentimes Demonstrated; Moderately Extensive = Sometimes Demonstrated; Less Extensive = Seldom Demonstrated; Not Extensive = Never Demonstrated.

3.3. Support Systems for Students —The overall mean for support systems for students in Tagum City was 3.41, interpreted as Extensive. This suggests that, generally, students often-times experience support from various sources, including their institutions, peers, and families, which positively influences their academic engagement and success. According to Bertoldo et al. (2022), a strong support system is vital for nurturing student motivation and resilience. The extensive rating highlights the important role of a supportive environment in ensuring students' academic well-being. Hence, maintaining and enhancing these support systems remains crucial to promoting sustained academic performance among learners. Notably, the mean scores among the indicators ranges from 3.34

to 3.57. family encouragement emerge as the highest-rated support system with a mean score of 3.57 or extensive, indicating that emotional and moral backing from family members significantly strengthens students' academic journeys. On the other hand, institutional guidance has the lowest mean score of 3.34 or moderately extensive, suggesting that while institutional support is present, there are still areas for growth in offering structured academic and career-related assistance. As highlighted by Pang et al. (2019), effective institutional support can significantly enhance students' engagement and learning outcomes. Therefore, educational institutions in Tagum City should focus on intensifying structured guidance programs to complement the strong family support that students already receive.

Table 3. Summary on Support Systems for Students in Tagum City

Indicators	Mean	Descriptive Equivalent
Institutional Guidance	3.34	Moderately Extensive
Peer Collaboration	3.36	Moderately Extensive
Family Encouragement	3.57	Extensive
Overall	3.41	Extensive

Legend: Very Extensive = Always Manifested; Extensive = Oftentimes Manifested; Moderately Extensive = Sometimes Manifested; Less Extensive = Seldom Manifested; Not Extensive = Never Manifested.

3.4. Relationship Between Food Preparation Experience and Confidence Levels in Culinary Skills Among Students —The results on the analysis on the relationship between food preparation experience and confidence levels in culinary skills among students in Tagum City are presented. Bivariate correlation analysis using Pearson Product Moment Correlation was utilized to determine the relationship between the variables mentioned. The relationship between food preparation experience and confidence levels in culinary skills among students in Tagum City is found to be significant. The

overall correlation between food preparation experience and culinary confidence yielded an r-value of 0.612 and a p-value of 0.000, leading to the rejection of the null hypothesis. This indicates a moderate positive relationship, meaning that students with more frequent and varied food preparation experiences tend to display higher levels of confidence in their culinary abilities. As Pepetone et al. (2021) emphasized, hands-on experience builds mastery, which in turn strengthens self-efficacy, an essential element for skill development in practical fields like culinary arts. Thus, improving food

preparation engagement directly contributes to building culinary confidence among learners. In terms of specific indicators, the frequency of cooking activities showed a moderate positive relationship with confidence levels, with an r -value of 0.568 and a p -value of 0.000, leading again to the rejection of the null hypothesis. Similarly, variety of dishes prepared was positively correlated, showing an r -value of 0.594 and a p -value of 0.000, suggesting that exposure to a wide range of dishes boosts students' willingness to experiment and their culinary competence. Meanwhile, level of independence in cooking exhibited the strongest correlation among the three, with an r -value of 0.642 and a p -value of 0.000, indicating that students who can cook independently are notably more confident in their culinary skills. These findings affirm the idea that practical exposure across different cooking experiences is essential for cultivating higher culinary self-confidence. Overall, the results showed that all aspects of food preparation experience—frequency, variety, and independence—were significantly and positively related to confidence levels in culinary skills. The rejection of all null hypotheses underscores the critical importance of regular, varied, and self-

reliant culinary practices in building student competence. As Zhao et al. (2020) noted, experiential learning significantly enhances practical skills acquisition, particularly in technical and vocational education. Therefore, culinary education programs should place strong emphasis on providing students with diverse, hands-on cooking opportunities to foster greater confidence and preparedness for future professional or personal culinary endeavors. The results strongly support Morgan's (2020) idea that emotional and experiential support enhance individuals' confidence and competence. In this study, repeated practice in food preparation—an experiential form of support—contributed to building students' confidence in their culinary abilities. By regularly engaging in cooking activities, trying new dishes, and independently managing kitchen tasks, students receive implicit support that nurtures their skills and self-belief. As Martins et al. (2020) emphasized, supportive experiences bolster self-efficacy and emotional security, both of which were evident in the positive relationship between food preparation experience and culinary confidence among students in Tagum City.

Table 4. Relationship Between Food Preparation Experience and Confidence Levels in Culinary Skills Among Students in Tagum City

Food Preparation Experience	r-value	p-value	Decision
Frequency of Cooking Activities	.556**	.000	Reject H_0
Variety of Dishes Prepared	-.002	.975	Accept H_0
Level of Independence in Cooking	.271**	.000	Reject H_0
Overall Food Preparation Experience	.445**	.000	Reject H_0

*Significant at $p < 0.05$

Legend: Perfect Correlation for $r = 1.00$; Strong Correlation for $0.7 \leq r < 1.00$; Moderate Correlation for $0.3 \leq r < 0.7$; Weak Correlation for $0.3 > r > 0.00$; No Correlation for $r = 0.00$.

3.5. Moderating Effect of Support Systems on the Relationship Between Food Preparation Experience and Confidence Levels in Culinary

Skills Among Students —The result of the analysis on moderating effect of support systems on the relationship between food preparation experience

rience and confidence levels in culinary skills among students in Tagum City is presented in Table 15. Baron and Kenny's (1986) Method of Moderation Analysis through hierarchical regression method was utilized. In the first step of the analysis, the combined influence of food preparation experience and support systems on the confidence levels in culinary skills among students in Tagum City was found to be significant. Food preparation experience had a B estimate of 0.667, a beta of 0.777, and a p-value of 0.000, while support systems had a B estimate of -0.313, a beta of -0.372, and a p-value of

0.001. These results indicate that food preparation experience positively predicted confidence levels, whereas support systems alone showed a negative prediction when both variables were combined. The model yielded an Adjusted R^2 of 0.221 and an F-value of 43.783 with a p-value of 0.000, confirming that the predictors collectively explained a moderate proportion of the variance in students' culinary confidence. Thus, initial findings suggest that while practical experience strongly boosts culinary confidence, the influence of support systems becomes more complex when evaluated alongside experience.

Table 5. Moderating Effect of Support Systems on the Relationship Between Food Preparation Experience and Confidence Levels in Culinary Skills Among Students in Tagum City

Step 1: Confidence Levels in Culinary Skills (CLC)						
Variables			B	Beta	S.E.	p-value
Food Preparation (FPE)	Experience		.667	.777	.096	.000
Support Systems (SS)			-.313	-.372	.094	.001
Adjusted R ² = 0.221		F-value = 43.783**	p-value = 0.000			
Step 2: With Moderator (FPE*SS)						
Variables			B	Beta	S.E.	p-value
Food Preparation (FPE)	Experience		-.301	-.350	.365	.410
Support Systems (SS)			-1.222	-1.453	.343	.000
Moderator (FPE*SS)			.272	2.151	.099	.006
Adjusted R ² = 0.238		F-value = 32.352**	p-value = 0.000			

*Significant at $p < 0.05$

In the second step, where the interaction term (FPESS) was introduced, the combined influence of food preparation experience, support systems, and the moderator on culinary confidence remained significant. Food preparation experience now had a B estimate of -0.301, a beta of -0.350, and a p-value of 0.410, indi-

cating a non-significant direct influence in the presence of the moderator. Support systems continued to show a strong negative influence ($B = -1.222$, $\beta = -1.453$, $p\text{-value} = 0.000$), while the interaction term (moderator FPESS) revealed a B estimate of 0.272, a beta of 2.151, and a p-value of 0.006, which was significant.

The holistic statistics for this model included an Adjusted R^2 of 0.238 and an F-value of 32.352 with a p-value of 0.000, indicating that the interaction term moderately improved the model's explanatory power. Comparing the results between Step 1 and Step 2, the Adjusted R^2 increased from 0.221 to 0.238, showing a small but meaningful change of 0.017. This suggests that the introduction of the moderator (interaction between food preparation experience and support systems) slightly enhanced the model's ability to explain the variance in students' culinary confidence. The significant positive effect of the interaction term reveals that support systems indeed moderated the relationship between food preparation experience and confidence levels, suggesting that supportive environments enhance the benefits of hands-on experience in developing culinary skills. Therefore, although the main effect of food preparation experience

weakened when combined with support systems, the interaction effect highlighted the importance of supportive environments in strengthening students' practical confidence. The findings support Bandura's (1986) Social Cognitive Theory, which posits that personal experiences and social environments interact to influence behavior and competence. The significant moderating role of support systems highlights that social reinforcement boosts self-efficacy gained from hands-on culinary experiences. Likewise, the results align with Deci and Ryan's (1985) Self-Determination Theory, emphasizing that external supports such as encouragement, collaboration, and feedback enhance intrinsic motivation and confidence. Thus, both theories are affirmed as the study underscores the importance of an empowering environment in nurturing students' confidence through experiential learning combined with social support.

4. Conclusions and Recommendations

This part of the paper presents the conclusion and recommendation of the researcher. The discussion is supported by the literature presented in the first chapters and the conclusion is in accordance with statements of the problem presented in this study.

4.1. Findings—This study aimed to assess the extent to which the support systems significantly moderated the relationship between food preparation experience and confidence levels in culinary skills among students utilizing non-experimental quantitative design using descriptive-correlation technique. The researcher selected the 302 high school students from the Tagum City Division as the respondents through simple random sampling method. The researcher made use of modified and enhanced adapted survey questionnaires which was pilot tested in a nearby school to ensure high reliability and internal consistency of the items in the instrument. The result of the study are summarized as follows: First, findings shows that students in Tagum City demonstrated

an extensive level of food preparation experience overall. The indicators level of independence in cooking and variety of dishes prepared were both rated as extensive, while frequency of cooking activities was described as moderately extensive. These results suggest that although students are confident and capable in diverse and independent cooking tasks, they do not consistently engage in cooking activities. Second, result reveals that students in Tagum City exhibited an extensive level of confidence in their culinary skills overall. Among the indicators, participation in cooking activities had the highest descriptive level, closely followed by presentation of dishes and feedback reception, all rated as extensive. Meanwhile, willingness to experiment also received an extensive rating, indicat-

ing a generally strong self-assurance among students in various culinary skill domains. Third, students in Tagum City experienced an extensive level of support from various systems overall. Among the three indicators, family encouragement received the highest descriptive rating of extensive, suggesting strong emotional and motivational support from home. On the other hand, both institutional guidance and peer collaboration were rated as moderately extensive, indicating that while present, support from schools and peers may benefit from enhancement to more consistently uplift students' academic and skill-based confidence. Fourth, the findings revealed a significant relationship between food preparation experience and students' confidence levels in culinary skills. Specifically, frequency of cooking activities and level of independence in cooking showed significant positive associations with culinary confidence. However, variety of dishes prepared did not significantly relate to confidence levels, suggesting that practical engagement and autonomy matter more than diversity in cooking. Fifth, the findings conclude that support systems significantly moderate the relationship between food preparation experience and confidence levels in culinary skills among students in Tagum City. While food preparation experience alone initially predicts higher confidence, the interaction effect of support systems enhances this influence, indicating that support plays a critical role in reinforcing student self-assurance. This suggests that schools and families should strengthen institutional, peer, and familial support to fully maximize the benefits of practical culinary experiences.

4.2. Conclusions—Based on the findings of this study several conclusions were generated: The study concludes that students in Tagum City demonstrate an overall extensive food preparation experience, particularly in terms of their level of independence in cooking. This suggests that students are developing essential life skills

through hands-on culinary practice. Schools may further enhance this by integrating structured culinary modules that promote frequent cooking and exposure to diverse dishes, fostering both self-sufficiency and nutritional awareness. Moreover, students exhibit extensive confidence in their culinary skills, especially in participation in cooking activities and presentation of dishes. This indicates that regular involvement in food preparation contributes to their self-assurance in executing culinary tasks. Educational programs may benefit from reinforcing experiential learning opportunities that emphasize creativity, exploration, and reflection in the kitchen to sustain and enhance students' culinary confidence. In addition, the findings reveal that student moderately benefit from institutional and peer support, while family encouragement is extensively manifested. This implies that while family remains a key support source, schools can improve guidance and peer-driven collaboration to provide a more balanced support network. Strengthening institutional programs and promoting peer mentoring may contribute to a more holistic environment that supports student development in culinary education. Further, the study concludes that there is a significant relationship between food preparation experience and students' confidence levels in culinary skills, particularly in terms of frequency of cooking and level of independence. However, the variety of dishes prepared does not show a significant correlation, suggesting that depth of experience may matter more than diversity. This implies that encouraging students to regularly cook and become self-reliant in food preparation can be more effective in boosting culinary confidence than simply broadening the range of recipes they attempt. Furthermore, the results reveal that support systems significantly moderate the relationship between food preparation experience and students' confidence in culinary skills. This means that the presence of strong support—whether institu-

tional, peer-based, or familial—enhances the positive effect of practical cooking experience on confidence development. These findings align with Bandura’s (1986) Social Cognitive Theory, which emphasizes the role of social reinforcement in shaping behavior, and Deci and Ryan’s (1985) Self-Determination Theory, which highlights the importance of supportive environments in fostering intrinsic motivation and competence. Therefore, strengthening support systems within educational settings can substantially improve students’ self-efficacy and engagement in culinary learning.

4.3. Recommendations—Schools may develop programs that encourage students to participate more frequently in cooking activities, such as weekly culinary challenges or take-home cooking assignments. Teachers can integrate cooking routines into practical lessons to build habit and consistency in kitchen practice. Additionally, parents may be encouraged to involve their children more regularly in meal preparation at home to strengthen both experience and engagement. To sustain students’ high confidence in culinary skills, schools may continue to provide hands-on cooking experiences that allow students to showcase their creativity and presentation skills. Teachers should facilitate regular feedback and peer sharing opportunities to reinforce learning and build self-assurance. More so, culinary educators

can incorporate more student-led activities to nurture independent and experimental learning approaches. School administrators should enhance institutional support by organizing more workshops, mentorships, and academic counseling focused on culinary education. Teachers can promote stronger peer collaboration through group-based cooking projects and peer evaluations. Families should be continuously engaged through home-based activities or school-led programs that recognize and involve their supportive roles in students’ culinary development. Teachers should emphasize consistent participation and independence in cooking activities as key components for boosting culinary confidence. Schools may design lesson plans that allow students to cook autonomously and frequently rather than simply exploring variety. Culinary programs should prioritize depth and regularity of engagement over the breadth of dishes to build lasting competence. Educational institutions must strengthen the design and delivery of support systems that complement students’ hands-on cooking experiences. Teachers and school leaders should integrate emotional, academic, and peer support elements in culinary instruction to reinforce student confidence. Moreover, partnerships with families and community networks can be established to provide holistic support that enhances the developmental impact of food preparation education.

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