The Mediating Effect of Schools' Availability of Resources on The Relationship Between Technology Integration in Teaching TLE and Academic Competence of Cookery Students

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Abstract— The purpose of this study was to determine the mediating effect of the school's availability of resources on the relationship between technology integration in teaching TLE and the academic competence of cookery students. Utilizing a quantitative, non-experimental design via correlational technique, data were obtained from 300 respondents who are grade 9 and 10 cookery students in Carmen district, Davao del Norte. The researcher utilized stratified random sampling techniques using face-to-face survey modes to collect the data. Mean, Pearson r, and mediating effect: path analysis were the statistical tools used by the researcher. Also, in the results of the study, it was found that there are very high levels of mean scores for technology integration in teaching TLE and the school's availability of resources, and a high level of mean score for the academic competence of cookery students. Also, results revealed that there is a significant relationship between technology integration in teaching TLE and the academic competence of cookery students, a significant relationship between technology integration in teaching TLE and schools' availability of resources, and a significant relationship between schools' availability of resources and the academic competence of cookery students. Further, it was revealed that there was partial mediation on the effect of schools' availability of resources on the relationship between technology integration in teaching TLE and the academic competence of cookery students.

Keywords— Academic competence, Cookery students, Mediating effect, Philippines, Schools' resources, Technology.

I. INTRODUCTION

One crucial element of the constellation of variables that determine students' success is their academic competence. It also has a huge impact on education, particularly by serving as a practical tool to evaluate students' learning progress. One of the problems encountered in teaching TLE subjects is the lack of interest among learners. Despite the fact that students are dealing with a variety of difficulties in life that may negatively impact their academic achievement, some educational programs do not take their needs into consideration. Olusegun et al. (2020) revealed that secondary school pupils in Osun State demonstrated poor, moderate, and high levels of academic competence in respective amounts of 9.41%, 60.21 percent, and 30.37%. Further, according to the study's findings, students' academic competence was significantly positively influenced by self-efficacy (F = 69.35; p 0.05). According to the study's findings, secondary school pupils in Osun State had a self-efficacy effect on their academic competence. In Davao del Norte, a researcher observed that students have demonstrated low interest in TLE subjects. Barrera, R. In 2022, this study found that instructional materials are the most important needs in developing the skills of all learners

in SHS-TVL schools who are responsible for the successful completion of all classroom activities.

This study's results may be considered a basis for assisting TLE teachers in integrating technology into teaching TLE to improve the academic competence of cookery students. In order to provide dynamic teaching strategies and approaches that could assist the educational undertaking of the academic competence of cookery students in the twenty-first century, this study will add information on the linkages between integrating technology in teaching TLE and the academic competence of students. This study will give information on the academic competence of cookery students, the schools' availability of resources, and the professional development of the teachers in general.

Moreover, there is existing literature that establishes the relationship between technology integration in teaching TLE and the academic competence of cookery students (Santoso & Lestari, 2019) and the availability of resources and the academic competence of cookery students (Shin et al., 2021). However, there are limited studies that explore the mediating effect of schools' availability of resources on the relationship between technology integration in teaching TLE and the

academic competence of cookery students. Hence, this becomes the driving force for the researcher to conduct a study that will determine the impact of technology integration in teaching TLE on the academic competence of cookery students and the mediating effect of schools' availability of resources on the relationship between technology integration in teaching TLE and the academic competence of cookery students.

Finally, there are many studies conducted about the academic competence of cookery students, but few about how technology is integrated into teaching TLE, academic competence, and the availability of resources. With this, the researcher is urged to conduct a study that aims to determine the interplay of the aforementioned variables among cookery students in Carmen District in the Division of Davao del Norte. Specifically, it aims to achieve the following objectives: first, to assess the level of technology integration in teaching TLE in terms of exploration of thinking about using technology; experimentation of beginning to use technology; adoption of using technology regularly; and integration of innovative use of technology. Second, to ascertain the level of academic competence of cookery students in terms of engagement, motivation, and study skills. Third, to determine the extent of the schools' availability of resources. Fourth, is there a significant relationship between technology integration in teaching TLE and schools' availability of resources? Fifth, is there a significant relationship between the schools' availability of resources and the academic competence of cookery students? Sixth, is there a significant relationship between technology integration in teaching TLE and the academic competence of cookery students? Lastly, does the school's availability of resources significantly mediate the effect of technology integration in teaching TLE and the academic competence of cookery students? The assumptions of this study are that there is no significant relationship between the technology integration in teaching TLE and schools' availability of resources; there is no significant relationship between the schools' availability of resources and the academic competence of cookery students; there is no significant relationship between the technology integration in teaching TLE and the academic competence of cookery students; and there is no mediating effect of the school's availability of resources on the relationship between the technology integration in teaching TLE and the academic competence of cookery students.

This research study is anchored on the theory of Gunuc (2017) "Engagement and Technology Integration Theory". This theory's main argument is that student success and efficient learning are correlated with academic achievement, and technology use teachers must develop personal and professional competencies such as effective communication, effective presentation, field competence, pedagogical knowledge, knowledge of technology use and competence, and effective classroom management in technology-supported classrooms in order to integrate technology effectively. Effective technology integration increases and facilitates learning (Gunuç et al., 2018).

In addition, to support the theory of Gunuc (2017) and Bandura's (1977) "Social Cognitive Theory", people learn by paying attention to, copying, and repeating the behaviors of others. This theory places a strong emphasis on the value of social context in the learning process, which can be improved by using technology.

Moreover, another supporting preposition of Ryan et al.'s (2000) self-determination theory proposes that students are motivated when they feel competent, independent, and part of a group. This is further supported by Gunuc's Engagement and Technology Integration Theory, which asserts that the use of technology can increase student involvement, which in turn enhances academic achievement and motivation.

Conceptual Framework
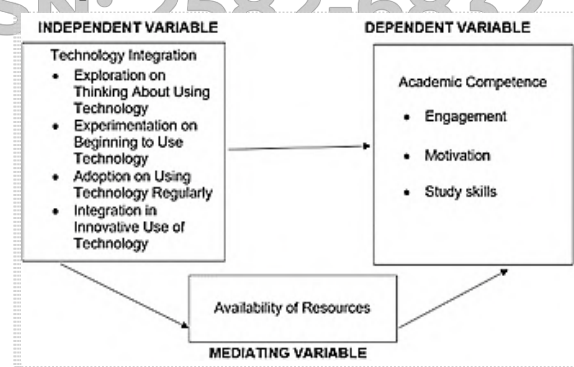
II. METHODOLOGY

Research Respondent

The study respondents: (1) should be junior high school students; (2) from schools in the DepEd Division of Davao del Norte, particularly Carmen District; (3) volunteer to participate in the study; (4) choose cookery as their field of specialization in TLE/TVE; and (5) provide valid informed consent and assent forms. The respondents of the study were grade nine to grade ten

students who were officially enrolled for the school year 2022-2023.

The research study's targeted population was obtained from the secondary schools of Davao del Norte Carmen district, which have approximately 1,650 cookery students. The population of this study, cookery students in Davao del Norte Carmen district, were selected using a web-based software called Raosoft. This software was used in determining the accurate size of the population sample, which was three hundred respondents; the total population estimated 1,650, which covers the grade nine and grade 10 cookery students in Carmen district secondary schools; a 95 percent confidence level with a 5 percent marginal error. The only requirement for respondents to be included was that they were enrolled in grades nine and ten for this current school year. The three hundred respondents from secondary schools in Carmen district were chosen using stratified random sampling techniques. This sampling was used to ensure that the sample was representative of the population and to reduce sampling error. By dividing the population into strata, the variability within each stratum is minimized, and the sample is more likely to be representative of the population as a whole. Creswell (2015) described this method as a means of determining the sampling size, wherein a population was divided into smaller groupings called strata.

Materials and Instruments

The researcher made use of the descriptive correlation survey method with the use of a survey questionnaire adapted from Jones (2011), Kuterbach (2013), and Esongo (2017) to determine the technology integration in teaching TLE, the academic competence of cookery students, and the availability of resources, respectively. Some research questions were retained, and some were revised and contextualized after thorough research and reading of books, theses, and files that were relevant to the study.

The three-part questionnaire was submitted for approval and validation by the panel of experts. The said questionnaires had undergone pilot testing among forty (40) students who were not included in the study. The results of Cronbach's alpha for independent, dependent, and mediating variables were 0.893, 0.921, and 0.764, respectively. The results of the pilot test showed that the items of the study, revisions, and modifications were made. Polishing and refining of the said questionnaires were likewise done.

The first, second, and third survey questionnaires were given to the students. As highlighted in the different literatures on technology integration in teaching TLE, integrating technology into teaching would improve students' literacy in using technology in terms of exploration in thinking about using technology, experimentation in beginning to use technology, adoption of using technology regularly, and integration in innovative use of technology. The academic competence of cookery students dealt with engagement, motivation, and study skills. The mediating variable is the availability of resources.

The five-point Likert scale was used to determine the level of technology integration in teaching TLE (Jones 2011). Moreover, each indicator has its own scale.

The range of means from 4.20 to 5.00 exhibits a strongly agreeable descriptive level, indicating that the statement is always true and is manifested or observed. The range of means from 3.40 to 4.19 has an agreeable descriptive level, indicating that the statement is often true and is manifested or observed. The range of means from 2.60 to 3.39 shows a moderately agreeable descriptive level, suggesting that the statement is sometimes true and is manifested or observed. The range of means from 1.80 to 2.59 indicates a disagreeable descriptive level, which implies that the statement is rarely true and is manifested or observed. Lastly, the range of means from 1.00 to 1.79 shows a strongly disagreeing descriptive level, indicating that the statement is almost never true and is manifested or observed.

The questionnaire for the academic competence of cookery students was adopted from Kuterbach (2013). The indicators include engagement, motivation, and study skills. The five-point Likert scale was used to determine the academic competence of cookery students in Carmen district, Division of Davao del Norte.

The range of means from 4.20 to 5.00 exhibits a strongly agreeable descriptive level, indicating that the statement is always true and is manifested or observed. The range of means from 3.40 to 4.19 has an agreeable descriptive level, indicating that the statement is often true and is manifested or observed. The range of means from 2.60 to 3.39 shows a moderately agreeable descriptive level, suggesting that the statement is sometimes true and is manifested or observed. The range of means from 1.80 to 2.59 indicates a disagreeable descriptive level, which implies that the statement is rarely true and is manifested

or observed. Lastly, the range of means from 1.00 to 1.79 shows a strongly disagreeing descriptive level, indicating that the statement is almost never true and is manifested or observed.

The questionnaire for the availability of resources was adopted from Esongo (2017). The five-point Likert scale was used to determine the availability of resources in secondary schools in Carmen district, Division of Davao del Norte.

The range of means from 4.20 to 5.00 exhibits a strongly agreeable descriptive level, indicating that the statement is always true and is manifested or observed. The range of means from 3.40 to 4.19 has an agreeable descriptive level, indicating that the statement is often true and is manifested or observed. The range of means from 2.60 to 3.39 shows a moderately agreeable descriptive level, suggesting that the statement is sometimes true and is manifested or observed. The range of means from 1.80 to 2.59 indicates a disagreeable descriptive level, which implies that the statement is rarely true and is manifested or observed. Lastly, the range of means from 1.00 to 1.79 shows a strongly disagreeing descriptive level, indicating that the statement is almost never true and is manifested or observed.

The survey questionnaires had undergone a validation process to ensure their validity. The first draft of the research instrument was checked by the research adviser for comments, suggestions, and recommendations to improve its presentation, with the corrections to be included and integrated. The final copies were submitted to a panel of experts for refinement. Every correction, criticism, and recommendation made throughout the drafting process by professional validators was incorporated into the final revision. To determine the status of the questionnaires, the validators' evaluations were tallied and combined.

Design and Procedure

The study used the quantitative descriptive approach using the correlation technique, which is concerned with establishing relationships between two or more variables in the same population or between the same variables in two populations. According to Creswell (2020), correlational survey research is a model that defines and evaluates the relationship between two or more variables, the strength of the relationship already present, and the state and development of the variables that influence one another. In this research, the researcher investigates the significant influence of technology integration in teaching TLE and the academic competence of cookery students as moderated by the availability of resources by utilizing quantitative, non-experimental, descriptive-correlational research as the design of this study. This research design was used in this study since it will allow the researcher to examine the relationship between technology integration in teaching TLE and the academic competence of cookery students as moderated by the availability of resources. The data will be used to look for relationships and, therefore, can be used to make predictions (Creswell, 2014).

The survey questionnaire for this investigation utilized the conceptually adapted research questionnaire. Before the data collection was conducted, the researcher submitted the conceptualized, adapted research questionnaire to the expert validators, which was subject to review and corrections for finalization. After the review and validation by the expert validators, the survey questionnaire underwent expert validation by the external validator. Afterwards, the researcher submitted all the documentary requirements to UMERC to secure their approval and certificate to proceed with data gathering. The researcher secured the certificate to proceed with the data collection with the UMERC protocol number UMERC-2023-238.

Data collection

In gathering applicable information for this study, the researcher received an endorsement letter from the Dean of Graduate Schools. The researcher wrote to the Schools Division Superintendent of Davao del Norte and requested permission to conduct the study. The researcher attached a letter of consent for the parents of the respondents with the endorsement letter from the Dean of Graduate Schools. The superintendent's endorsed letter was attached to the letter for the principals of the secondary schools in Carmen district, Division of Davao del Norte, requesting permission for the researcher to conduct the study.

Following the approval of the request form, the researcher personally administered the survey questionnaires to the grade 9 and 10 cookery students in the secondary schools of Carmen district, Division of Davao del Norte, for two days in the month of June 2023. All questionnaires were distributed to cookery students. The questionnaires were collected and tallied for statistical purposes.

Next, responses were consolidated and summarized using MS Excel, and an electronic copy of the data was sent to the statistician for treatment. To determine the technology integration in teaching TLE and the academic competence of cookery students as moderated by the availability of resources, a descriptive analysis, mean, and standard deviation were utilized.

Data analysis

To identify the significant relationship between technology integration in teaching TLE and the academic competence of cookery students, a Pearson Product Moment Correlation was used. Multiple regression analysis was also helpful in determining the significant influence of technology integration in teaching TLE and the academic competence of cookery students. In addition, regression analysis was used to examine the effect of one variable (the mediator) on the relationship between two other variables (the independent and dependent variables).

The following are the statistical tools used to treat the data gathered: mean. This statistical technique, commonly referred to as the mean, is a way of summarizing a group of data. It was found by adding up all the values in a dataset and then dividing by the total number of values. This was used to determine the level of technology integration, the academic competence of cookery students, and the extent of schools' availability of resources. This statistical tool's output provided answers to problems 1, 2, and 3 using Pearson's correlation coefficient (r). This was used to determine the significant relationship between technology integration in teaching TLE and schools' availability of resources, the significant relationship between availability of resources and the academic competence of cookery students, and the significant relationship between technology integration in teaching TLE and the academic competence of cookery students in the Division of Davao del Norte, particularly Carmen district. This statistical tool's output provided answers to problems 4, 5, and 6. Path analysis is a method employed in structural equation modeling (SEM) to investigate the connections, both indirect and direct, between variables within a model. This approach enables researchers to evaluate the relationships among variables while simultaneously taking into account both the impacts and the indirect effects mediated by one or more mediating variables. This was utilized to see if the availability of resources has a mediating influence on the relationship between technology integration in teaching TLE and the academic competence of cookery students. This statistical tool's output provided an answer to problem number 7.

Furthermore, the researcher had taken the utmost care to compile the vital data and information that were necessary to accomplish the investigation's goal, namely by using the following ethical considerations:

To participate in the study, junior high school students from schools in the DepEd Division of Davao del Norte, specializing in cookery, must volunteer and provide informed consent and assent forms. The study is limited to grade 9 to 10 students in the school year 2022-2023, and the respondents will provide their agreement in a voluntary, unforced, and informed manner that is easy to understand and uncomplicated.

Privacy and Confidentiality: The researcher will take the utmost care in handling and managing private and confidential data collected from participants. Respondents will be informed that their responses will be used exclusively for the study and will be kept confidential. To protect against obscurity, identifying information will be replaced with codes. Hard copies of the data will be securely stored with code identifiers only. The paper will avoid mentioning any details that could identify specific respondents. After fulfilling research objectives or when data becomes unnecessary, the researcher must dispose of it properly. This entails securely deleting or destroying the data to prevent unauthorized access or accidental disclosure. Thus, the researcher will adhere to the Data Privacy Act, which protects personal information, governs its handling by organizations, and ensures privacy rights. They cover data collection, processing, storage, and sharing, aiming to prevent unauthorized access, promote transparency, and establish accountability. These laws involve obtaining consent, enabling control over personal data, implementing security measures, and allowing individuals to exercise their rights. Compliance is essential to maintain trust and avoid legal consequences.

Informed Consent Process: The researcher will ensure that the questionnaire is clear and easy to understand. The importance of the research will be clearly communicated to the respondents. To maintain respondent secrecy, consent forms will be provided for reference. Informed consent, a voluntary agreement to participate, will be obtained from parents or guardians for their children's involvement in the research study in

coordination with the guidance counselor, the adviser, and the subject teacher. The purpose of the study, use of responses, and voluntary nature of participation will be thoroughly explained to respondents. Additionally, minors are given an assent form to seek their permission to participate.

Recruitment: The researcher will ensure that the selected respondents provide sufficient information for the achievement of the primary objective of the investigation. During the selection of respondents, the researcher will use specific criteria, including the enrollment of junior high school cookery students during the data collection period. Respondents must be enrolled as Grade 9 and 10 cookery students for the school year 2023-2024 in the schools of the Carmen District Division of Davao del Norte, regardless of their socio-demographic profile like age, gender, ethnicity, living status, etc.

Risks: This study will not involve any dangerous or unsafe activities for the respondents' physical, mental, emotional, cultural, and, most specifically, spiritual aspects. Thus, the respondents will undergo proper briefing and debriefing regarding their participation in the research study, ensuring that it does not affect their academic performance in school. In addition, RA 9262, also known as the Anti-Violence Against Women and Their Children Act of 2004, will be given emphasis during the briefing of the respondents to ensure safety, welfare, and empowerment. The law also promotes public awareness, respect, non-violence, and the provision of support services to victims.

Benefits: The researcher will utilize the most optimal strategies to clarify the various advantages associated with taking part in the research study to the respondents. Respondents who express their interest in participating will have the opportunity to identify personal and external factors that can enhance their academic abilities and performance in school. As a gesture of appreciation for their valuable input towards accomplishing the research goals, the researcher will provide a token of gratitude to the respondents.

Plagiarism: The researcher will utilize the most effective approach to mitigate any potential misinterpretation of others' work. Additionally, plagiarism detection tools like Grammarly and Turnitin will be used to actively address and prevent any instances of plagiarism. This will ensure that the research will maintain a high level of integrity and originality by implementing measures to identify and avoid any unauthorized use of existing work.

Fabrication: The researcher will avoid fabrication where there is intentional manipulation or misrepresentation of data; there will be no fabrication of dates or results; and the conclusion reached will be accurate and not misleading.

Falsification: The researcher will present the results sincerely, without any intention to distort or misrepresent them to align with the stated conceptual or theoretical framework.

Conflict of Interest (COI): The researcher will utilize an unbiased approach exclusively for this study and promptly dismiss any personal motives for personal benefit. Any potential conflicts of interest that may arise will be openly disclosed by the researcher, who will handle them in a fair manner to ensure impartiality.

Deceit: The researcher will avoid deception and address potential risks. Informed consent will be obtained from respondents, and the study aims to uphold integrity, credibility, and ethics.

Permission from Organization/Location: The researcher will secure the approval of the Schools Division Superintendent of Davao del Norte Division and the Principal, Department Heads, and Curriculum Heads of the Secondary Schools in Carmen District for the conduct of the said study for their stakeholders. This will ensure that the research will be conducted with proper authorization and support from the relevant educational authorities and school officials.

The researcher conducting the study holds a bachelor's degree in secondary education with a major in technology and livelihood education. The researcher's paper will go through multiple revisions based on feedback from the adviser. The study will also comply with the ethical standards set by the University of Mindanao's Ethics and Review Committee. After gaining approval, the study will undergo a pilot test, and the collected data will be analyzed in accordance with the research questionnaire.

III. RESULTS AND DISCUSSION

Presented in Table 1 is the level of technology integration in teaching TLE. The responses of the

respondents to each indicator were presented, evaluated, and carefully deliberated below. The results revealed that the overall mean was 4.33, which was interpreted as very high. This meant that technology integration in teaching TLE was always true and was manifested or observed. The data are closely packed around the mean, according to the very low overall standard deviation of 0.560. This shows that the degree of technological integration across the four indicators is highly consistent. The generated overall mean score was obtained based on the means scores of 4.41, or very high, for exploration in thinking about using technology, 4.42, or very high, for experimentation in beginning to use technology, 4.34, or very high, for adoption in using technology regularly, and 4.16, or high, for integration in innovative use of technology. The rest of the indicators obtained mean ratings ranging from 4.16 to

4.33. Make learning experiences for students that are interactive and engaging by using educational technology tools. For instance, TLE teachers can employ virtual reality headsets to give students first-hand experience with a particular ability or online simulations to teach students about complicated subjects.

The result conforms to the ideas of ScholarWorks (2019). Technology, pedagogy, content, and context are recognized as interconnected aspects of teachers' knowledge essential to successfully integrating content-based curricula with educational technologies. This is why it is advised to use the technology, pedagogy, and content knowledge (TPACK) framework to think about efficient technological integration.

Table 1: Level of Technology Integration in Teaching TLE

Indicators	SD	Mean	Descriptive Level
Exploration on Thinking About Using Technology	0.551	4.41	Very High
Experimentation on Beginning to Use Technology	0.541	4.42	Very High
Adoption on Using Technology Regularly	0.597	4.34	Very High
Integration on Innovative Use of Technology	0.860	4.16	High
Overall	0.560	4.33	Very High

Illustrated in Table 2 is a summary of the level of academic competence of cookery students. The results revealed an overall mean rating of 4.18 labeled as high, indicating that the academic competence of cookery students is often true and is manifested or observed with a standard deviation of 0.565. The general mean was from the mean scores of 4.12, or high, for engagement, 4.22, or very high, for motivation, and 4.19, or high, for study skills.

This shows that cookery students in the secondary schools in Carmen District, Davao del Norte Division, have high levels of academic competence. They are

engaged in their studies, motivated to learn, and have good study skills. These findings are encouraging and suggest that cookery students are well-prepared to succeed in their studies. The dependent variable of the study.

The study result conforms to the ideas of Agustina (2021). A person's strong need, interest, or desire to accomplish a particular objective, image, or goal while engaged is referred to as motivation. When motivation is there, a person will make every effort to realize his goals and eventually succeed in the future.

Table 2: Level of Academic Competence Evaluation Scale-Cookery Students

Indicators	SD	Mean	Descriptive Level
Engagement	0.615	4.12	High
Motivation	0.606	4.22	Very High
Study Skills	0.639	4.19	High
Overall	0.565	4.18	High

Presented in Table 3 is the level of schools' availability of resources. The results revealed an overall mean rating of 4.50, an overall standard deviation of 0.436, and a

very high descriptive level, indicating that there are many resources accessible in schools for a competency-based approach.

Respondents believed that the school has the financial means to assist their education and that the teachers are well-trained and enthusiastic.

Additionally, the respondents believed they had sufficient time to learn new skills and that their classrooms were well-equipped. Thus, Venatius et al.

(2023) concluded that effectively implementing an empirical approach based on evidence and experiences like active learning in school will boost students' acquisition of practical skills and make them actively involved in the learning process. Learning skills that are shielded in hands-on activities rely upon instructional procedures and skill practice opportunities.

Table 3: Level of Schools' Availability of Resources

Items	SD	Mean	Descriptive Level
There are enough TLE teachers who are trained and expert to teach competency based approach at school	0.693	4.30	Very High
Our teachers have many chances to go to good workshops, training sessions, or work with mentors to get better at teaching	0.691	4.54	Very High
As a student, our teachers have enough experience and proper training before teaching us so that they can help us learn new skills better.	0.614	4.59	Very High
As a student, our teachers have enough motivation to teach us new skills because they get paid very much	0.776	4.45	Very High
Our school is financially capable to finance teacher's trainings	0.767	4.44	Very High
Our school has enough finances to support activities that help students learn new skills.	0.676	4.46	Very High
Our classroom is good for learning new things because there are enough space for the students	0.765	4.50	Very High
We have enough manuals and materials to help us students learn better.	0.701	4.52	Very High
Teachers have enough time in class to teach us (the students) everything we need for competency-based programs.	0.614	4.70	Very High
Overall	0.436	4.50	Very High

Presented in Table 4 is the correlation between technology integration in teaching TLE and schools' availability of resources.

As shown in the table, it revealed an overall r-value of 0.422 with a p-value of 0.000, which is less than the 0.05 significance level; thus, the null hypothesis is rejected.

The results entail that, on a combined level, technology integration in teaching TLE is significantly correlated with schools' availability of resources.

The test of the relationship between variables reveals a significant relationship between technology integration in teaching TLE and schools' availability of resources.

The indicators that contributed to the overall positive and significant relationship are exploration of thinking about using technology, experimentation with beginning to use technology, adoption of using technology

regularly, and integration of innovative use of technology.

This means that schools that are more committed to integrating technology into their TLE programs are also more likely to have the resources necessary to support this integration.

Furthermore, Schmitz (2023) says that the infrastructure of digital schools, teachers' positive attitudes toward technology, their technical proficiency, and their abilities to educate with technology have all significantly and favorably benefited from transformational leadership.

All of these variables significantly and favorably predicted higher degrees of technology integration, like providing teachers with the resources and support to develop and integrate technology effectively.

Table 4: Significance of the Relationship between the Technology Integration in TLE and Schools' Availability of Resources

Technology Integration in TLE	Schools' Availability of Resources Overall
Exploration on Thinking About Using Technology	.358* (0.000)
Experimentation on Beginning to Use Technology	.394* (0.000)
Adoption on Using Technology Regularly	.377* (0.000)
Integration on Innovative Use of Technology	.362* (0.000)
Overall	.422* (0.000)

*Significant at 0.05 significance level.

Presented in Table 5 is the correlation between schools' availability of resources and the academic competence of cookery students. As shown in the table, it revealed an overall r-value of 0.287 with a p-value of 0.000, which is less than the 0.05 significance level; thus, the null hypothesis is rejected. The results entail that, on a combined level, schools' availability of resources is significantly correlated with the academic competence of cookery students in secondary schools in the Carmen district division of Davao del Norte.

The test of the relationship between variables reveals a significant relationship between the schools' availability of resources and the academic competence of cookery students. The indicators that contributed to the overall positive and significant relationship are engagement,

motivation, and study skills. This implies that schools with more resources available are more likely to have students who are academically competent.

Furthermore, Castillo (2022) results showed a substantial correlation between learning competencies in cookery for Grade 9 students and hands-on activities for both individual and group activities.

The integration of theory and practice, collaborative work experiences, academic settings, schools' resources and educational interactions, and learning competencies in the cookery of Grade 9 students, on the other hand, had a substantial association with personal learning experiences.

Table 5: Significance of the Relationship between the Schools' Availability of Resources and Academic Competence Evaluation Scale-Cookery Students

Schools' Availability of Resources	Academic Competence Evaluation Scale-Cookery			
	Affective Commitment	Continuance Commitment	Normative Commitment	Overall
Schools' Availability of Resources	.223* (0.000)	.263* (0.000)	.297* (0.000)	.287* (0.000)

*Significant at 0.05 significance level. *

Presented in Table 6 is the correlation between technology integration in teaching TLE and the academic competence of cookery students. As shown in the table, it revealed an overall r-value of 0.261 with a p-value of 0.000, which is less than the 0.05 significance level; thus, the null hypothesis is rejected. The results entail that, on a combined level, technology integration in teaching TLE is significantly correlated with the academic competence of cookery students in secondary schools in the Carmen district division of Davao del

Norte. The test of the relationship between variables reveals a significant relationship between technology integration in teaching TLE and the academic competence of cookery students. The indicators that contributed to the overall positive and significant relationship are exploration of thinking about using technology, experimentation with beginning to use technology, adoption of using technology regularly, and integration of innovative use of technology. Indicating

that as technology integration in teaching TLE rises, so does the academic competence of cookery students.

Moreover, the findings of Lipayon (2022) indicate that students' retention of information and engagement in learning activities motivate them to feel at ease in the classroom and engage in educationally useful TLE

activities due to the effectiveness of technology integration. Multiple learning styles and accommodations also demonstrate an effort to match the students' approach to teaching and learning effectiveness and promote active learning environments in order to accommodate learning and multiple styles in the delivery of TLE subjects.

Table 6: Significance of the Relationship between the Technology Integration in Teaching TLE and Academic Competence Evaluation Scale-Cookery Students

Technology Integration in Teaching TLE	Academic Competence Evaluation Scale-Cookery Students			
	Engagement	Motivation	Study Skills	Overall
Exploration on Thinking About Using Technology	.283* (0.000)	.220* (0.000)	.224* (0.000)	.266* (0.000)
Experimentation on Beginning to Use Technology	.260* (0.000)	.195* (0.001)	.215* (0.000)	.245* (0.000)
Adoption on Using Technology Regularly	.271* (0.000)	.204* (0.000)	.230* (0.000)	.258* (0.000)
Integration on Innovative Use of Technology	.210* (0.000)	.111 (0.056)	.163* (0.005)	.177* (0.002)
Overall	.285* (0.000)	.197* (0.001)	.231* (0.000)	.261* (0.000)

*Significant at 0.05 significance level.

Presented in Table 7 is the mediating effect: path analysis. On the first path, the schools' availability of resources and technology integration in teaching TLE: The path coefficient from TITT to SAR is .329 (unstandardized) or .422 (standardized). The results indicate a positive and significant relationship between the schools' availability of resources and the extent of technological integration in teaching TLE. The value of C R. is 8.055 with a p-value of ***, which denotes that this association is highly significant.

The second path is the schools' availability of resources and the academic competence of cookery students. The path coefficient from SAR to ACCS is .279 (unstandardized) or .215 (standardized). The results indicate a positive and significant relationship between the schools' availability of resources and the academic competence of cookery students. The value of C R. is 3.564 with a p-value of ***, which denotes that this association is highly significant.

Lastly, the technology integration in teaching TLE and the academic competence of cookery students: the path coefficient from TITT to ACCS is .172 (unstandardized) or .170 (standardized). The results indicate a positive and

significant relationship between technology integration in teaching TLE and the academic competence of cookery students. The value of C R. 2.819 with a p-value of 0.005 denotes that this association is significant.

Therefore, it is advised by Kiwango (2021) that the government should assist technology integration by increasing schools' and other practitioners' capacity for efficient technology integration in schools. Moreover, Toshtemirovich (2023) says that with the aid of school resources, a student who is more independent is better able to grasp the purposes, objectives, and strategies behind his or her activity and shifts from being the subject of educational influence to being the subject of it. Hence, they are more likely to be motivated to learn when they have a sense of ownership over their own learning and become more responsible for their learning outcomes.

Furthermore, Pittas et al. (2019) found that the majority of students, according to the findings, use technology for projects and research. Both teachers and students love, feel comfortable, are motivated, and are engaged in the use of technology in the teaching and learning process, and evaluate it similarly in terms of how well it works.

Table 7: Mediating Effect: Path Analysis

PATH	ESTIMATES		SE	C.R.	P
	Unstandardized	Standardized			
ASR<--- TITT	.329	.422	.041	8.055	***
ACCS<--- ASR	.279	.215	.078	3.564	***
ACCS<---TIIT	.172	.170	.061	2.819	.005

Table 8 reveals that the total effect of X on Y is 0.2634, with a 95% confidence interval of 0.1523 to 0.3746. This means that X has a statistically significant effect on Y, even after controlling for M. The direct effect of X on Y is 0.1717, with a 95% confidence interval of 0.0514 to 0.2920. This means that X has a statistically significant effect on Y that is not mediated by M, and the indirect effect of X on Y through M is 0.0917, with a 95% confidence interval of 0.0351 to 0.1660. This means that

X has a statistically significant effect on Y that is mediated by M. The study result conforms to Akram et al.'s (2022) finding that teachers have good attitudes toward using technology in teaching and learning. They feel that using technology in the classroom helps them improve their instructional strategies, make the best use of the available resources in the classroom, make learning engaging and interactive, and maintain student motivation or help increase students' competence.

Table 8: Total, Direct, and Indirect Effects

Effect	b	95% CI	
		Lower	Upper
Total	.2634	.1523	.3746
Direct	.1717	.0514	.2920
Indirect (mediation)	.0917	.0351	.1660

- X =TECHNOLOGY INTEGRATION IN TEACHING TLE (TITT)
- Y = ACADEMIC COMPETENCE of COOKERY STUDENTS (ACCS)
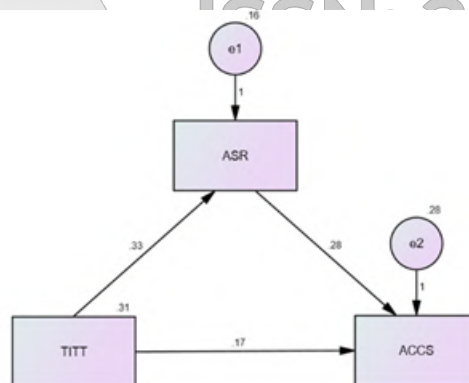- M= SCHOOLS' AVAILABLITY OF RESOURCES (SAR)

Figure 2. The Mediating Effect of Schools' Availability of Resources on the Relationship between Technology Integration in Teaching TLE and Academic Competence of Cookery Students

IV. CONCLUSIONS AND RECOMMENDATIONS

The following conclusions are drawn based on the results of the study:

The technology integration in teaching TLE is very high, which indicates that technology integration in teaching TLE has always been true and is manifested or observed. Moreover, the results of the indicators exploration on thinking about using technology, experimentation on

beginning to use technology, and adoption on using technology regularly are also very high, which means teachers are integrating technology in teaching and integration on innovative use of technology is high, which indicates that this indicator is often true and is manifested or observed. More so, the academic competence of cookery students reveals a high descriptive level. This indicates that the academic competence of cookery students is often true and is manifested or observed. Furthermore, the result on the schools' availability of resources shows a very high descriptive level, which indicates that the schools' availability of resources was always true and was manifested or observed.

The research discovered a significant positive correlation between the two variables, indicating that the availability of resources in schools increases in accordance with the degree of technology integration in teaching TLE. Also, the findings of the correlation analysis indicate a significant relationship between the academic competence of cookery students and the resources made available by the schools. This means that the schools that have more available resources are more competent. Similarly, the results of the correlation show a significant relationship between the academic competence of cookery students and technology integration in teaching TLE. As a result, students who receive TLE instruction with the integration of technology are more likely to be academically capable. Further, the analysis findings imply that schools' availability of resources partially mediates the direct impact of technology integration in teaching TLE on the academic competence of cookery students. This suggests that schools' availability of resources plays a part in how technology integration in teaching TLE affects the academic competence of cookery students.

Therefore, the results of the study confirm the claims of Gunuc (2017) "Engagement and Technology Integration Theory". This theory's main argument is that student success and efficient learning are correlated with academic competence, technology use, and the availability of resources, where teachers must develop personal and professional competencies such as effective communication, effective presentation, field competence, pedagogical knowledge, knowledge of technology use and competence, and effective classroom management in technology-supported classrooms in order to integrate technology effectively.

Moreover, according to Bandura's (1977) "Social Cognitive Theory," people learn by paying attention to, copying, and repeating the behaviors of others. This theory places a strong emphasis on the value of social context in the learning process, which can be improved by using technology. Students are more likely to learn when they are able to collaborate with others and receive constructive criticism from the teacher.

Furthermore, another theory that confirms the study results is Ryan et al.'s (2000) self-determination theory, which proposes that students are motivated when they feel competent, independent, and part of a group. This is further supported by Gunuc's Engagement and Technology Integration Theory, which asserts that the use of technology can increase student involvement, which in turn enhances academic achievement and motivation.

Given the importance of the study, the following is recommended:

This study, which found a high level of technology integration, suggests strengthening and preparing teachers for the various stages of technology integration, particularly the integration of using it in innovative ways. In order to enhance their use of technology, teachers of TLE are strongly encouraged to participate in skill development programs, seminars, and technological upgrades. The high level of academic competence of cookery students can be used to guide the creation of interventions and programs that will support the academic competence of cookery students. It is also recommended to have interventions that emphasize boosting students' engagement in the classroom by incorporating engaging classroom activities like role playing, problem solving, and hands-on experience, and by integrating technology like interactive software, educational applications, game-based applications such as Quizizz and Kahoot, or utilizing educational technology. In addition, in order to maximize the technology integration in the classroom, which later enhances the academic competence of cookery students in terms of engagement, motivation, and study skills, students should also be given time to devote to actually using technology in the classroom by providing them with technologies such as computers, LCD projectors, or TVs per classroom. Further, the survey's findings indicate that there are a lot of resources accessible in schools for competency-based instruction. Students believe that the school has the financial means to assist

their education and that the teachers are well-trained and enthusiastic. Additionally, the students believe they have sufficient time to learn new skills and that their classrooms are well-equipped. Thus, policies and procedures to encourage the adoption of a competency-based approach in schools can be developed. For instance, the school should maintain its investments in teacher development and creativity where there should be enough TLE teachers who are experts to teach competency-based approaches at school, and it should make sure that it has the funding necessary to fulfill the academic demands of its students.

Since the results showed that there is a significant relationship between the technology integration in teaching TLE and schools' availability of resources, the schools' availability of resources and the academic competence of cookery students, and the technology integration in teaching TLE and the academic competence of cookery students, The overall findings demonstrate the potential mediating role of schools' availability of resources in describing the relationship between technology integration in teaching TLE and the academic competence of cookery students. Therefore, it is recommended that the students have a greater opportunity to apply technology integration to their schoolwork, which could result in improved academic competence. The more students are involved in using the resources in school, the greater their academic competence, like engagement, motivation, and study skills. However, if there are few resources in school available for students to use, this could limit the positive impacts of technology integration on the academic competence of cookery students. Further studies on other variables affecting the academic competence of cookery students may also be carried out.

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