

Baking Competencies on Students' Motivation and Performance

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Abstract—This study aimed to investigate the effectiveness of baking competencies in enhancing students' motivation and performance. It specifically sought to determine the level of baking competencies in terms of technical skills, recipe knowledge, equipment proficiency, food safety and hygiene practices, and creativity and innovation; the level of students' motivation in terms of intrinsic motivation, extrinsic motivation, and career aspiration; the level of students' performance in practical and written tests; and the significant relationship and effect of baking competencies on students' motivation and performance. The study utilized a predictive correlational research design to determine the relationship and effect of baking competencies on the motivation and performance of forty-three (43) Senior High School Baking Students of Lowland Integrated National High School, Academic Year 2025-2026, who were chosen through purposive random sampling. Data were collected using a questionnaire rating scale to assess baking competencies and motivation, a fifty (50) item written test, and a one hundred (100) point performance test to evaluate students' performance. Weighted mean and standard deviation were used to determine the levels of baking competencies, motivation, and performance, while regression analysis was employed to test the significant effects. The findings show that the level of baking competencies perceived by students in terms of technical skills, recipe knowledge, equipment proficiency, food safety and hygiene practices, and creativity and innovation is very high. Students' motivation in terms of intrinsic motivation, extrinsic motivation, and career aspiration is rated as very high. Additionally, students performed exceptionally well in practical tests, with an "Outstanding" rating, and performed very well in written tests. It shows that there is a significant effect of baking competencies on students' motivation and performance. The baking competencies have a significant relationship on students' motivation and a significant effect on students' performance. Therefore, both hypotheses are rejected. This concludes that students' baking skills is driven by their motivation, which in turn enhances their overall performance. It is recommended that Technical Vocational and Livelihood teachers may strengthen the development of baking competencies to enhance students' motivation and performance. School heads and subject coordinators may promote competency-based activities that integrate both practical and theoretical learning.

Keywords— Baking Competencies, Technical Skills, Creativity and Innovation, Motivation, Students' Performance, Practical Test, Written Test

I. INTRODUCTION

Through Technical-Vocational-Livelihood (TVL) education, baking has become a popular art and practical skill that promotes technical know-how and personal growth. The learning experience covers a wide range of abilities included in baking, technical skill, recipe knowledge, ingredient handling, equipment proficiency, food safety and hygiene

practices and creativity and innovation. These skills support students in developing and critical thinking while they apply abstract ideas to reality.

Baking skills connect directly to students' academic performance and motivation. Competency-based training allows learners to participate in hands-on activities, making the learning process more enjoyable and meaningful. This stimulates intrinsic motivation. When students master practical baking skills, they feel a sense of achievement and confidence. This drives them to engage actively in learning. Dimaunahan and Panoy (2022) found a connection between academic motivation, self-efficacy, and performance in Technology and Livelihood Education (TLE) subjects.

One of the important factors that boosts student learning and success is motivation. Students who are motivated intrinsically and extrinsically are more likely to strive for excellence, overcome challenges, and engage fully in class. Students who learn to bake can see the results of their efforts in real life, which could be inspiring. A notable lack of motivation and engagement among students during classroom activities, with teachers expressing concern over students' tendency to become distracted rather than participate actively. Educators need to adopt strategies that effectively capture learners' interest and encourage active involvement through positive reinforcement (Rone et al. 2023).

Performance shows how effectively students apply their learned skills and knowledge in real-world projects. In the baking competencies, performance is assessed based on practical tests and written tests. Students' success in this area demonstrates their learning process, readiness for real-world employment opportunities, and potential for advancement in the food service industry or related fields as they demonstrate the competencies. Both students' interest and exposure to baking significantly affect their performance in bread and pastry production, with exposure having the greatest impact. Consistent hands-on practice and varied instructional methods, including the use of technology, are essential for improving students' baking skills and overall performance (Balendres & Diel, 2025).

This study seeks to explore the effect between baking competencies, student motivation, and performance to better support learners in overcoming obstacles and successfully achieving their certification goals.

1.1 Statement of the Problem

Problem/s which were addressed by the research

The goal of this study was to determine the relationship between Baking Competencies to the motivation and performance of learners of Lowland Integrated National High School.

This research is sought to answer the following questions:

1. What is the level of Baking Competencies as perceived by the students in terms of:
 - 1.1 Technical Skills;
 - 1.2 Recipe Knowledge;
 - 1.3 Equipment proficiency;
 - 1.4 Food Safety and Hygiene Practices; and
 - 1.5 Creativity and Innovation?
2. What is the level of Students' Motivation in terms of:
 - 2.1 Intrinsic motivation;
 - 2.2 Extrinsic motivation; and
 - 2.3 Career aspiration?
3. What is the level of Students' Performance in in terms of:
 - 3.1 Practical tests; and
 - 3.2 Written Test?
4. Is there a significant relationship between baking competencies and students' motivation?
5. Is there a significant effect between baking competencies and students' performance?

II. METHODOLOGY

The study utilized a predictive correlational research design to determine the relationship and effect of baking competencies on the motivation and performance of forty-three (43) Senior High School Baking Students of Lowland Integrated National High School, Academic Year 2025-2026, who were chosen through purposive random sampling. Data were collected using a questionnaire rating scale to assess baking competencies and motivation, a fifty (50) item written test, and a one hundred (100) point performance test to evaluate students' performance. Weighted mean and standard deviation were used to determine the levels of baking competencies, motivation, and performance, while regression analysis was employed to test the significant effects.

III. RESULTS AND DISCUSSION

This part deals with the presentation, analysis and interpretation of the gathered data based on research questions in relation to the statement of the problem and the hypotheses mentioned in the first chapter. It enumerates different results yielded from the treatment of the data gathered in this study.

Level of Baking Competencies as Perceived by the Students

In this study, the baking competencies as perceived by the students in terms of technical skills, recipe knowledge, equipment proficiency, food safety and hygiene practices, and creativity and innovation and was determined through mean and standard deviation.

The following tables tackled the level of teachers' competence in the various aspects of baking.

Table 1 shows the level of baking competencies as perceived by the students in terms of technical skills.

Students feel confident in performing essential baking techniques such as mixing, kneading, and baking because of the technical skills demonstrated by the teacher which enable them to complete baking tasks efficiently and on time. Students are also guided in handling multiple baking steps at a time. They are allowed to perform baking tasks with minimal supervision. If baking problems like having inconsistent dough and baking time error, the teachers assist them resolving it. Regular practice with these technical skills reduces errors, improves timing, and helps students scale recipes confidently.

Table 1. Level of Baking Competencies as Perceived by the Students in terms of Technical Skills

Statements	Mean	SD	Remarks
The teacher's technical skills are demonstrated by...			
...making me confident in performing essential baking techniques such as mixing, kneading, and baking.	4.70	0.46	Strongly Agree
...helping me troubleshoot common baking problems such as dough consistency and baking time.	4.26	0.44	Strongly Agree
...enabling me to complete baking tasks efficiently within assigned time frames.	4.58	0.49	Strongly Agree
...allowing me to perform baking tasks with minimal supervision.	4.37	0.48	Strongly Agree
...guiding me to handle multiple baking steps at the same time.	4.47	0.62	Strongly Agree
Weighted Mean	4.47		
SD	0.53		
Verbal Interpretation			Very High

The level of baking competencies as perceived by the students in terms of technical skills gained the overall weighted mean of 4.47 with a standard deviation of 0.53, verbally interpreted as Very High. This indicates strong agreement among students that the teachers have high technical expertise which enables them to acquire the knowledge and skills in baking.

In summary, the results indicate that the teacher's recipe knowledge effectively develops students' understanding of baking concepts. Likewise, clear instructions, guided practice, and hands-on activities support students in reading and following recipes, adapting ingredients, understanding terminology, correcting mistakes, and recognizing the importance of accurate measurements.

Table 2. Level of Baking Competencies as Perceived by the Students in terms of Recipe Knowledge

Statements	Mean	SD	Remarks
The teacher's knowledge in recipe is shown through...			
...the ability to read and follow baking recipes accurately.	4.60	0.49	Strongly Agree
...helping to adapt recipes based on available ingredients or preferences.	4.56	0.50	Strongly Agree
...familiarity with baking terminology used in recipes.	4.44	0.50	Strongly Agree
...teaching how to identify and correct mistakes in a recipe during baking.	4.58	0.49	Strongly Agree
...understanding how ingredient measurements affect the final baking product.	4.47	0.47	Strongly Agree
Weighted Mean	4.53		
SD	0.50		
Verbal Interpretation			Very High

Table 2 shows the level of baking competencies as perceived by the students in terms of recipe knowledge.

The result shows that students are able to read and follow baking recipes accurately because of the clear guidance and demonstrations provided by the teacher, which help them understand each step of the process. Students are also encouraged to adapt recipes based on available ingredients or personal preferences, allowing them to develop flexibility in baking. They become familiar with baking terminology as these are consistently explained and applied during activities. When mistakes occur during baking, the teacher guides them in identifying and correcting errors, such as wrong procedures or measurements. Lastly, students understand how ingredient measurements affect the final baking product, as they are taught the importance of accuracy through hands-on experience.

The level of baking competencies as perceived by the students in terms of recipe knowledge gained the overall weighted mean of 4.53 with a standard deviation of 0.50, verbally interpreted as Very High. This indicates strong agreement among students that the teachers have high recipe knowledge which enables them to acquire the knowledge and skills in baking.

In summary, the results indicate that the teacher’s recipe knowledge effectively develops students’ understanding of baking concepts. Likewise, clear instructions, guided practice, and hands-on activities support students in reading and following recipes, adapting ingredients, understanding terminology, correcting mistakes, and recognizing the importance of accurate measurements. These practices also help students feel more confident and good at solving problems. This means they can fix issues with recipes on their own and adjust methods as needed.

Table 3. Level of Baking Competencies as Perceived by the Students in terms of Equipment Proficiency

Statements	Mean	SD	Remarks
The teacher’s equipment proficiency is evident in...			
...developing skill in using baking equipment such as ovens, mixers, and measuring tools.	4.79	0.41	Strongly Agree
...teaching how to maintain and clean baking equipment properly.	4.58	0.49	Strongly Agree
...understanding the functions of different baking tools and when to use them.	4.56	0.50	Strongly Agree
...guiding to safely operate baking equipment according to standard procedures.	4.37	0.48	Strongly Agree
...helping to choose the correct equipment for specific baking tasks.	4.53	0.50	Strongly Agree
Weighted Mean	4.57		
SD	0.50		
Verbal Interpretation			Very High

Table 3 shows the level of baking competencies as perceived by the students in terms of equipment proficiency.

Students are able to develop skills in using baking equipment such as ovens, mixers, and measuring tools because of the teachers’ clear guidance and demonstrations. They are taught how to properly maintain and clean equipment, as well as understand the functions of different tools and when to use them. The teacher also guides them in safely operating

equipment following standard procedures. Additionally, students are helped in choosing the correct equipment for specific baking tasks, which improves their efficiency and performance.

The level of baking competencies as perceived by the students in terms of recipe knowledge gained the overall weighted mean of 4.57 with a standard deviation of 0.50, verbally interpreted as Very High. This indicates strong agreement among students that the teachers have high equipment proficiency which enables them to acquire the knowledge and skills in baking.

In summary the result indicates that the teacher’s guidance in equipment proficiency effectively enhances student’s skills using baking tools and equipment. Likewise, proper instruction, demonstrations, and hands-on activities help students understand equipment functions, ensure safe operation, maintain cleanliness, and select the appropriate tools for specific baking tasks.

Table 4. Level of Baking Competencies as Perceived by the Students in terms of Food Safety and Hygiene Practices

Statements	Mean	SD	Remarks
The teacher’s application of Food Safety and Hygiene Practices is applied through...			
...consistent observance of proper food safety guidelines during baking.	4.60	0.49	Strongly Agree
...modeling proper food safety and hygiene practices during baking activities	4.67	0.47	Strongly Agree
...knowledge of preventing cross-contamination in the kitchen.	4.60	0.49	Strongly Agree
...teaching proper waste disposal and sanitation procedures.	4.51	0.50	Strongly Agree
...awareness of health risks caused by improper food handling.	4.44	0.50	Strongly Agree
Weighted Mean	4.57		
SD	0.50		
Verbal Interpretation			Very High

Table 4 shows the level of baking competencies as perceived by the students in terms of food safety and hygiene practices.

Students consistently observe proper food safety guidelines during baking the teacher models correct hygiene practices during activities. They develop knowledge in preventing cross-contamination and are taught proper waste disposal and sanitation procedures. Students are also made aware of health risks caused by improper food handling, which helps them practice safe and responsible baking.

The level of baking competencies as perceived by the students in terms of food safety and hygiene practices gained the overall weighted mean of 4.57 with a standard deviation of 0.50, verbally interpreted as Very High. This indicates strong agreement among students that the teachers have high food safety and hygiene practices which enables them to acquire the knowledge and skills in baking.

In summary, the results indicate that the teacher’s emphasis on food safety and hygiene effectively develops students’ awareness and practices in safe food handling. Likewise, demonstrations, guidance, and consistent reinforcement help students observe proper sanitation, prevent contamination, and understand health risks in baking. Regular

practice and assessment reinforce proper procedures, turning safety protocols into habitual behavior.

Table 5. Level of Baking Competencies as Perceived by the Students in terms of Creativity and Innovation

Statements	Mean	SD	Remarks
The creativity and innovation of the teacher is expressed through...			
...encouraging to experiment with new baking ideas and techniques.	4.65	0.48	Strongly Agree
...integrating cultural or modern trends into baking projects to stimulate creativity	4.35	0.48	Strongly Agree
...providing guidance in decorating and presenting baked goods creatively.	4.63	0.48	Strongly Agree
...guiding to design visually appealing baked products.	4.51	0.50	Strongly Agree
...encouraging the use of creative ideas when presenting baked goods.	4.56	0.50	Strongly Agree
Weighted Mean	4.54		
SD	0.50		
Verbal Interpretation	Very High		

Table 5 shows the level of baking competencies as perceived by the students in terms of creativity and innovation.

The result shows that the students are encouraged to experiment with new baking ideas and techniques because the teacher promotes creativity during activities. They are guided to integrate cultural and modern trends into their projects, making their outputs more relevant and innovative. The teacher also provides guidance in decorating and presenting baked goods creatively, helping students design visually appealing products. Students are further encouraged to apply their own creative ideas in presenting their outputs.

The level of baking competencies as perceived by the students in terms of creativity and innovation gained the overall weighted mean of 4.54 with a standard deviation of 0.50, verbally interpreted as Very High. This indicates strong agreement among students that the teachers have high creativity and innovation which enables them to acquire the knowledge and skills in baking.

In summary, the results indicate that the teacher's approach to fostering creativity effectively enhances students' ability to innovate and present baked products. Likewise, guidance, exposure to trends, and hands-on activities support the development of students' creativity in baking. These practices also help students build confidence in expressing their ideas and experimenting with new techniques in baking. Furthermore, encouraging creativity in the classroom promotes active participation and improves students' overall learning experience.

Level of Student's Motivation

In this study, the level of the Students' Motivation was described in terms of Intrinsic Motivation, Extrinsic Motivation and Career Aspiration and was determined by the mean and standard deviation.

Shown in table 6 is the level of students' motivation in terms of intrinsic motivation.

As shown, students find the baking process enjoyable and personally rewarding because the teacher creates a positive and engaging learning environment. Their confidence and

sense of accomplishment are boosted as they successfully complete baking activities. Students also show increased excitement in learning new skills and methods and are encouraged to practice even beyond class requirements, gaining satisfaction from their achievements. This sustained motivation nurtures a deeper appreciation for the craft, inspiring them to pursue baking as both a creative outlet and a potential career path.

Table 6. Level of Student Motivation in terms of Intrinsic Motivation

Statements	Mean	SD	Remarks
The baking competencies of the teacher make the students intrinsically motivated through...			
...making the baking process enjoyable and personally rewarding.	4.63	0.48	Strongly Agree
...boosting confidence and sense of accomplishment in baking.	4.60	0.49	Strongly Agree
...increasing excitement in learning new baking skills and methods.	4.56	0.50	Strongly Agree
...giving satisfaction when successfully completing baking activities.	4.65	0.48	Strongly Agree
...encouraging practice even without class requirements.	4.33	0.47	Strongly Agree
Weighted Mean	4.55		
SD	0.50		
Verbal Interpretation	Very High		

The level of students' intrinsic motivation obtained an overall weighted mean of 4.55 with a standard deviation of 0.50, verbally interpreted as Very High. This reflects a strong agreement among students that they are highly motivated from within, which enables them to actively engage in and acquire the essential knowledge and skills in baking.

In summary, the results indicate that the teacher's approach effectively fosters motivation and a positive attitude toward baking. Likewise, engaging activities, support, and opportunities for independent practice help students enjoy baking, build confidence, and develop a sense of achievement.

Table 7. Level of Student Motivation in terms of Extrinsic Motivation

Statements	Mean	SD	Remarks
The baking competencies of the teacher make the students extrinsically motivated through...			
...recognition from teachers or peers for good baking performance.	4.72	0.45	Strongly Agree
...rewards such as grades or certificates related to baking.	4.44	0.50	Strongly Agree
...positive feedback that encourages better performance.	4.49	0.50	Strongly Agree
...constructive evaluation of baking activities that encourages students to improve performance.	4.53	0.50	Strongly Agree
...showcasing and displaying students' baking outputs.	4.42	0.49	Strongly Agree
Weighted Mean	4.52		
SD	0.50		
Verbal Interpretation	Very High		

Table 7 shows the level of students' motivation in terms of extrinsic motivation.

Students receive recognition from teachers and peers for good baking performance, which motivates them to do better. They are also given rewards such as grades or certificates that reflect their efforts. Positive feedback is consistently provided

to encourage improved performance, while constructive evaluation helps them identify areas for improvement. Additionally, students are given opportunities to showcase and display their baking outputs, which boosts their confidence and engagement.

The level of students' extrinsic motivation obtained an overall weighted mean of 4.52 with a standard deviation of 0.50, verbally interpreted as Very High. This reflects a strong agreement among students that external factors such as rewards, recognition, and teacher support motivate them to actively engage in and acquire the essential knowledge and skills in baking.

In summary, the results indicate that the teacher's use of recognition and feedback effectively enhances students' motivation and performance in baking. Likewise, rewards, constructive evaluation, and opportunities for showcasing outputs support continuous improvement and build students' confidence. These strategies encourage students to take pride in their work and strive for higher quality outputs in every activity. Moreover, consistent feedback helps students identify their strengths and areas for improvement, leading to better learning outcomes over time.

Table 8. Level of Student Motivation in terms of Career Aspiration

Statements	Mean	SD	Remarks
The teacher's baking competencies inspire students to consider baking as a future career because...			
...they effectively motivate students to excel in baking activities.	4.49	0.50	Strongly Agree
...they encourage students to improve their baking skills for future employment.	4.63	0.48	Strongly Agree
...they help students recognize baking as a viable career option.	4.53	0.50	Strongly Agree
...they emphasize the practical value of baking skills for future use.	4.53	0.50	Strongly Agree
...they motivate students to pursue further training or courses in baking.	4.60	0.49	Strongly Agree
Weighted Mean	4.56		
SD	0.50		
Verbal Interpretation	Very High		

Shown in table 8 is the level of students' motivation in terms of career aspiration.

As shown, teachers effectively motivate students to excel in baking activities by encouraging continuous improvement of their skills. They inspire students to enhance their baking abilities for future employment and help them recognize baking as a viable career option. Teachers also emphasize the practical value of baking skills in real-life situations and motivate students to pursue further training or courses in baking.

The level of students' career aspiration obtained an overall weighted mean of 4.56 with a standard deviation of 0.50, verbally interpreted as Very High. This reflects a strong agreement among students that their future career goals and aspirations motivate them to actively engage in and acquire the essential knowledge and skills in baking.

In summary, the results indicate that the teacher's guidance plays a significant role in shaping students' career awareness and motivation in baking. Likewise, encouragement, real-life

application, and career-oriented support help students see baking as a valuable skill and potential profession. This guidance not only builds confidence but also nurtures creativity, allowing students to explore baking beyond technical mastery. As a result, students develop both the competence and vision needed to pursue baking as a meaningful career path.

Level of Students' Performance

In this study, Learners' Performance was described in terms of written test and performance test and was determined by frequency, percentage, mean and standard deviation.

Table 9 presents the level of students' performance in terms of practical test. As perceived, majority of the students obtain grades in the highest range resulting to an outstanding practical learning outcomes as it gained the mean grade of 91.77 and a standard deviation of 2.84 affirming that most of students achieved high results. An outstanding level of performance implies that students were able to apply the knowledge they learn from the teacher in performing hands-on activities in baking.

Table 9. Level of Students' Performance in terms of Practical Test

Grades	Frequency	Percentage	Descriptive Value
90-100	34	79.07%	Outstanding
85-89	8	18.60%	Very Satisfactory
80-84	1	2.33%	Satisfactory
75-79	0	0	Fairly satisfactory
Below 75	0	0	Did Not Meet Expectations
Mean Grade	91.77		
SD	2.84		
Descriptive Value	Outstanding		

The students' performance was attributed to the application of the performance rubric in the practical test that measured the essential baking competencies such as preparation, sanitation, baking skills, cake quality, and creativity and presentation. Most of the students were able to prepare ingredients and tools correctly, observe cleanliness and food safety practices, apply appropriate baking procedures, produce quality baked products and present their outputs creatively. The results show that the students have good practical skills in baking and can do the baking tasks effectively based on the standards set in the rubric.

Table 10. Level of Students' Performance in terms of Written Test

Score	Frequency	Percentage	Descriptive Value
41 - 50	11	25.58%	Excellent
31 - 40	17	39.53%	Very Good
21 - 30	6	13.95%	Good
11 - 20	7	16.28%	Fair
0 - 10	2	4.65%	Poor
Mean Score	32.33		
SD	10.69		
Descriptive Value	Very Good		

Table 10 presents the level of students' performance in terms of written test. As perceived, majority of the students obtain score in the higher range resulting to a very good written learning outcomes as it gained the mean score of 32.33 and a standard deviation of 10.69 affirming that most of students achieved high results. A very good level of

performance implies that students were able to apply the knowledge they learn from the teacher in performing written test in baking.

Written assessments can differentially reward students depending on how they engaged with practical activities through hands-on work, teacher demonstrations, video, or reading. The findings showed that written test most effectively reflected learning when practical work was teacher-guided and encouraged active student participation. This indicates that the match between the type of instruction used and mode of assessment is necessary for effective evaluation. In this case, educators should ensure that the written task assigned to learners are comparable to the practical activities performed under teacher guidance.

Significant Relationship Between Baking Competencies and Students' Motivation

In this study, the significant relationship between the adequacy of the instructional materials and student engagement were analyzed applying Pearson Correlation Coefficient using Minitab 14.

Table 11 presents the correlation between baking competencies and students' motivation. The results include Pearson correlation coefficients (r-values), p-values, and sample size (N=43) for each relationship.

Table 11. Significant Relationship Between Baking Competencies and Students' Motivation

Baking Competencies		Active Involvement	Enthusiasm	Peer Relations
Technical Skills	Pearson Correlation	0.721*	0.780*	0.791*
	Sig. (2-tailed)	.000	.000	.000
	N	43	43	43
Recipe Knowledge	Pearson Correlation	0.729*	0.768*	0.791*
	Sig. (2-tailed)	.000	.000	.000
	N	43	43	43
Equipment proficiency	Pearson Correlation	0.791*	0.724*	0.722*
	Sig. (2-tailed)	.000	.000	.000
	N	43	43	43
Food Safety and Hygiene Practices	Pearson Correlation	0.848*	0.704*	0.730*
	Sig. (2-tailed)	.000	.000	.000
	N	43	43	43
Creativity and Innovation	Pearson Correlation	0.793*	0.665*	0.699*
	Sig. (2-tailed)	.000	.000	.000
	N	43	43	43

Note *p < .05

As perceived, there is a significant relationship between teachers' baking competencies in terms of technical skills, recipe knowledge, equipment proficiency, food safety and hygiene practices, and creativity and innovation and students' motivation in terms of intrinsic and extrinsic motivation, and career aspiration, supported by the obtained p-values less than 0.05 level of significance.

This further means that the teacher's technical expertise, knowledge of various baking recipes, proficiency in using and handling baking equipment, food safety and hygiene practices, creativeness and inventiveness highly motivate students develop and improve their baking expertise not only for academic purposes but also in preparation for their future careers.

Regression Analysis on the Effect of Baking Competencies on Students' Performance

In this study, the significant effect of Baking Competencies on Students' Performance in terms of practical and written test were analyzed employing Regression Analysis using Minitab 14.

Table 12 exhibits the effect of Baking Competencies on Students' Performance in terms of Practical Test. The results include beta coefficients, f-value, t-values, and p-values for each analysis.

Table 12. Regression Analysis on the Effect of Baking Competencies on Students' Performance in terms of Practical Test

Baking Competencies	beta coefficients	t- value	p-value
Technical Skills	0.078	0.349	.729
Recipe Knowledge	0.174	0.723	.474
Equipment proficiency	0.199	0.681	.500
Food Safety and Hygiene Practices	0.174	0.649	.521
Creativity and Innovation	0.661	2.889	.006*

Note: * p < .05

The regression coefficients indicate that among the indicators of baking competencies, only creativity and innovation ($\beta = 0.661, t = 2.889, p = 0.006$) shows significant effect on student's practical performance, the obtained p-value is less than the 0.05 level of significance, confirming that teacher's creativity and innovation significantly contribute to the students' application of practical learning in baking.

The result indicates further that teachers' competence plays a very important role for the students to attain necessary competencies in baking particularly, creativity and innovation. Incorporating new teaching strategies, creative demonstrations, and experimentation to instruction translate more effectively into students' practical skill application.

Table 13. Regression Analysis on the Effect of Baking Competencies on Students' Performance in terms of Written Test

Baking Competencies	beta coefficients	t- value	p-value
Technical Skills	0.035	.881	0.035*
Recipe Knowledge	0.138	.585	0.138
Equipment proficiency	0.342	.271	0.342
Food Safety and Hygiene Practices	0.003	.990	0.003*
Creativity and Innovation	0.210	.385	0.210

Note: * p < .05

Table 13 exhibits the effect of Baking Competencies on Students' Performance in terms of Written Test. The results include beta coefficients, f-value, t-values, and p-values for each analysis.

The regression coefficients indicate that among the indicators of baking competencies, Technical Skills ($\beta = 0.881$, $t = .881$, $p = 0.035$) and Food Safety and Hygiene Practices ($\beta = 0.990$, $t = .990$, $p = 0.003$) show significant effects on students' written performance. The obtained p-values are less than the 0.05 level of significance, confirming that these variables significantly contribute to students' knowledge and understanding in baking. On the other hand, Recipe Knowledge does not show significant effects since their p-values are greater than 0.05. This implies that these competencies do not strongly influence students' written test performance.

The results further indicate that teachers' competence, particularly in demonstrating technical skills and emphasizing food safety and hygiene, plays very important role in enhancing students' cognitive understanding of baking concepts. Clear instruction, proper demonstrations, and reinforcement of safety practices help improve students' ability to perform well in written assessments.

IV. CONCLUSION AND RECOMMENDATIONS

The baking competencies has a significant relationship with students' motivation. Thus, the hypothesis is rejected. This concludes that baking competencies play an important role in improving students' interest. This proves that the development of baking competencies has the potential to enhance students' motivation.

Only creativity and innovation, among the baking competency indicators has significant effect with practical test performance, demonstrating their function in developing creativity and flexibility in practical activities. On the other hand, technical skills and food safety and hygiene practices has significant effect in written test performance, indicating the significance of accuracy, standardized competency, and professionalism in written assessments. Overall, these show that various competencies clearly influence performance based on the kind of evaluation, which leads to the rejection of hypothesis.

In light of the conclusions about the significant relationship and effects of baking competencies on students' motivation and performance, the following recommendations were made:

School heads and subject coordinators may encourage the integration of competency-based and skill-oriented activities that promote both practical and theoretical learning in baking.

Technical Vocational and Livelihood teachers may strengthen the development of baking competencies, particularly in creativity and innovation, technical skills, and food safety and hygiene practices, to further enhance students' motivation and performance.

Students may actively engage in developing their baking competencies, especially in areas that influence their motivation and performance, and apply these skills in both practical and written tasks.

Future researchers may conduct further studies focusing on other factors that may influence students' motivation and performance, as well as explore additional variables related to baking competencies for a more comprehensive analysis.

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