

Factors of Students' Performance in Bread and Pastry Production

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Abstract: This study focused on the students' performance in Bread and Pastry Production and how it is affected by the written works and hands-on activities. The study was conducted in Cluster II, comprising the city of San Pablo, located in the Third Congressional District in the province of Laguna. Ninety students in public high schools served as respondents. The student's performance in Bread and Pastry Production was gauged regarding students' and teachers' factors. Fifteen students by section were used. Four written tests and hands-on activities were prepared to comprise the lessons under TLE-BPP 8 third quarter; every other week, written tests and hands-on activities were used after the lesson. The result of the study showed that the teacher factors such as knowledge and pedagogy, skills, and teaching strategies are not significantly correlated with students' performance in written works and hands-on activities. This result means that these teacher factors did not greatly influence the student's performance in class. It is recommended that TLE teachers advocate for Learners' development in Bread and Pastry Production and other areas of Technology and Livelihood Education by conducting seminars at least once a year to give teachers the necessary knowledge.

Keywords: *Students' Performance; Teacher Factor; Students' Factor; Written Test; Hands-On Activities.*

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I. INTRODUCTION

Teaching the new generation of students is a big challenge for the teachers. We, teachers, should understand students, needs, and necessities so that they can gain the possible learning.

Technology and Livelihood Education is one subject that trains young citizens to be productive and develop different skills in homemaking, practical and industrial arts, and livelihood. TLE is most effectively thought through using the entrepreneurial, contextualized, integrative, experiential, authentic, and constructivist teaching-learning approaches.

Bread and Pastry Production is one of the Technology and Livelihood Education learning areas that deal with concepts and experiences that allow learners to acquire and reinforce knowledge, skills, attitudes, and values.

RA 10533, titled the "Enhanced Basic Education Act of 2013," set the ground for implementing the K to 12 Basic Education Program by upgrading the Philippine Basic Education System's curriculum and expanding the years for Basic Education.

One of these changes in the curriculum is the implementation of the Senior High School Program composed of 4 tracks: Academic, Tech-Voc, Sports, and Arts and Design.

The Technology and Livelihood Education (TLE) for Junior High School and Technical-Livelihood-Vocational Education (TVL) for senior high school is one track in the implementation of the K to 12 Basic Education Program (BEP). It comprises four components: Agri-Fishery Arts, Home Economics, Industrial Arts, and Information and Communication Technology. Learners in Grades 7 and 8 may take an exploratory course on the subject, tackling common competencies they would need to have a career in TLE/TVL. Their learning and competencies are further enhanced in Grades 9 and 10 up to Senior High. Moreover, 40 hours per quarter of exploratory subjects are taken during Grades 7 to 8. (D0. Nos.67 s.2012)

Exploratory courses are skilled-based subjects that aim to provide students with necessary abilities that can be learned through training, hands-on activities, and face-to-face interaction with teachers.

Bread and Pastry Production is one of the areas in Technology and Home Economics (TLE) that provide knowledge and skills in baking. This area includes using tools and bakery equipment, performing mensuration and calculation, maintaining tools and equipment, and practicing occupational health and safety procedures. The aim is to prepare Grade 8 students in their Grades 9 and 10 specializations. And it will help them if students have their laboratory experience in Grade 8.

Students have different roles and goals, and education is one of the best tools to achieve these goals. It plays a vital role in a learner's behavioral and intellectual development.

Students' performance is one of the major concerns of Technology and livelihood Education. Some learners can grasp concepts, excel, and perform according to expected standards.

In laboratory experiences, students may learn to use the tools and follow the instructions for better output. Many claims have been made about the value of laboratory work in schools, yet research shows that it often achieves little meaningful student learning. One reason, among many, for this failure is that students often do not know the purposes of these tasks.

However, some students have difficulties in the learning process. In the classroom, teachers are witnessing this every day. Many factors affect students' performance; number one is facility, family status, attitudes, and students' interests. And to help these students, we need to know about these factors and use this knowledge to develop their Bread and Pastry Production performance.

To achieve it, there should be enough activities to lead the learners to mastery. The exercises should be short, simple, and fun so the learners do not get bored. The teacher should give a variety of activities to cater to diverse learning styles. They should also ensure that the activities are aligned with the Most Essential Learning Competencies.

DepEd Order No. 8 2015 Series indicated that assessment is one of the key aspects of learning material that should be matched with its content that can be used to measure the level of competence of the learner. Teachers should provide appropriate assessments to holistically measure learners' current and developing abilities.

II. RELATED WORK

- **Teacher Factor.** The dedication to the success of their students sets apart passionate teachers. Teaching success requires commitment, which is a crucial component. Committed teachers struggle with maintaining their students' learning because they care about their student's growth. They foster curiosity and enthusiasm for studying in the children. Motivating kids can be aided by demonstrating a dedication to their education. Committed teachers know their obligations to their students and work hard to fulfill them. One of the

characteristics that sets committed teachers apart from others is their level of dedication to their line of work. Teachers passionate about their work and dedicated to learning are vital to students' growth (Mrt, 2013).

The significance of the classroom environment as a possible indicator of student results is one of the most significant findings from decades of research on educational efficacy. Therefore, we aim to synthesize the strongest supporting data from studies on teacher development and successful teaching in this review (Muijs, 2014).

- **Knowledge and Pedagogy.** If teachers are to teach effectively, they must have subject-specific information, such as topic and pedagogical content knowledge, and the ability to apply that knowledge in challenging classroom environments (Jeschke, 2021).

The study focusing on Africa's Skill Tragedy (Bientenbeck, 2018) examines sixth-grade students and their instructors using unique worldwide assessment data. Researchers in Sub-Saharan Africa discovered the significance of teacher-topic knowledge for student achievement.

As a conceptual framework for the knowledge foundation teachers require to successfully teach using technology, technological pedagogical content knowledge (TPACK) has been introduced. The framework is based on the idea that careful alignment of content, pedagogy, and technological potential in a particular educational context is beneficial and that teachers who want to incorporate technology into their teaching practice must be proficient in all three domains (Voogt, 2013).

- **Teaching Skills.** The study (Hanushek, 2019) found substantial differences in teacher cognitive skills across countries strongly related to student performance.
- **Teaching strategies.** Teaching methods play a crucial role in how well students learn. If the appropriate instructional resources are not provided, effective teaching practices alone will not ensure that students learn. The term "instructional materials" refers to the tools and resources, both human and non-human, that can be utilized to facilitate, support, enhance, and advance teaching and learning activities. They are any instructional materials that are used. They cover many tools that can be applied to effective training. They are human and non-human materials that a teacher utilizes to impart knowledge to the students in their class. According to Remillard and Heck (2014), it is also described as materials that organize and support instruction, such as textbooks.

One of the advantages of using presentations in the classroom is that oral presentations are student-centered. It is one of the few times in the language classroom when students are asked to give an oral presentation that they have direct control over the content and the classroom flow. This is because the presenting students can select the topic they want to speak about, choose the language it can provide

items they want to talk about that topic, and decide how to explain it to their classmates. With little or no teacher intervention, a properly scaffolded presentation can provide students with several opportunities to improve their English in an environment where the students themselves serve as both teachers and learners (Wilson, 2014)

Based on (Kurt, 2020), exercises and activities allow pupils to test their newly acquired skills. Additionally confirmed, assessments determine whether students have met their learning objectives. According to their evaluations, the teacher must ensure the pupils have a solid knowledge of the topic. For the teacher to accurately assess the student's knowledge, the success criteria and teaching methods must be linked with those evaluations. For the same line of thought, program targets focus on the abilities and behaviors of program techniques that seek to change (Schindler et al., 2019).

Every educator should think about methods to improve lessons so that occasionally students can learn more successfully, according to (Maranan, 2011), which is cited (Aguila, 2021). She believes educational materials can encourage high risk and joy in teaching and learning. The learner's desires should not precede the learning objectives in the educational materials. Teachers are always improving the teaching-learning process by introducing new creative elements.

The current situation makes it difficult to do face-to-face or even blended learning, but the educational system needs to reevaluate and regulate technology use so that, in an emergency, students and teachers can communicate via distance learning. Therefore, educational systems worldwide are forced to understand, experience, and embrace the vast and rapid changes in embracing emergency remote education regardless of whether emergency remote teaching produces positive or negative consequences (Guiamalon, 2021).

To enable basic education students to continue their education and teachers to deliver instruction in a secure working and learning environment, the Department of Education set out to design the Basic Education - Learning Continuity Plan (BE-LCP) (DO no.007, s.2020).

The Self-Learning Module and other alternative learning delivery modalities are in place to address the needs, circumstances, and resources of every learner, and they cover all the necessary ground to guarantee that basic education is accessible despite the current crisis brought on by Covid-19. (Deped Sec. Briones 2021).

- **Student Factor.** While learning facilities are significant factors in students' learning and academic achievement (Singh, Malik, 2016). The availability and the quality of the learning facility affect and improve students' achievement (Limon, 2016; Suleman & Hussain, 2014).
- **Attitudes.** According to Bernstein, Penner, Clarke-Stewart, and Roy (2006), one's attitude toward education can be favorable or negative depending on how one feels

about school and all the activities there. These activities can be cognitive, emotional, or behavioral. According to Fazio and Roskes (1994), attitudes are crucial to educational psychology because they significantly impact how people think about and process information. It is clear that when these concepts are used, attitudes can only be inferred from overt behavior, including verbal and nonverbal cues, rather than witnessed. Most kids arrive at school eager and ready to learn. It has remained a major issue how schools may best support and reinforce their tendency and guarantee that students graduate with the drive and aptitude to learn throughout their lives. Students may not be well-prepared to acquire the new knowledge and abilities required for successful adaptation to changing circumstances and the necessary scenario without the development of the proper attitudes to succeed in their academic endeavors the (International Journal of Humanities Social Sciences and Education (IJHSSE) Volume 1, Issue 11, November 2014, PP 2).

Students' attitudes toward school can be interpreted as a tendency toward education, collaboration, and participation in a social institution. This is one of the reasons why the Pearson Foundation and the Quaglia Institute for Student Aspiration (Brown, 2014) identified eight prerequisites for students to achieve academic, social, and personal success. They emphasized that the first and most important prerequisite is students' attitude toward school, also known as their sense of belonging.

It strongly emphasizes feeling of purpose, active learning, and self-worth. Students' attitude toward school is crucial to their competence, social involvement, and well-being. Positive attitudes toward education boost intrinsic motivation by promoting self-assurance and community involvement. Only with a positive attitude toward school can a student establish a strong feeling of community and participation in their studies. A student must feel a sense of belonging to be a respected school community member while retaining individuality. It is a connection and support for each individual's self-actualization and progress in a relationship between two or more people. For some students, their attitude toward school may be a good indicator of their future success in school. As such, this view merits consideration together with academic achievement, a crucial schooling result. Students' attitudes toward school and the level of achievement they hope to achieve may impact how well they perform academically. This study is necessary to critically examine the link and the degree to which kids' attitudes toward school can predict their academic progress. It is required for this reason (Kpolovie, 2014).

- **Interest.** As noted by (Kpolovie 2014), interest in learning may be a very strong affective psychological trait and a very strong knowledge emotion as well as an overwhelming magnetic positive feeling, a sense of being captured, enthralled, invigorated, and energized to cognitively process information much faster and more accurately as well as the most effective application of

psychomotor traits like self-regulation skills, self-discipline, working harder, and smarter. He suggested that psychologists do studies to determine the precise impact of learning interest on students' academic achievement at all levels of the educational system.

Based on the continuation of (the International Journal of Humanities Social Sciences and Education (IJHSSE) Volume 1, Issue 11, November 2014, PP 3) students need to be interested in studying if they want to put in the time. This study examines the connection between student interest in learning and academic achievement and the degree to which these two variables are related. (MeenuDev, 2016) provided evidence that students' interest levels in a subject impact their academic achievement.

- **Learning style.** Students with different learning styles approach the subject differently (Balakrishnan, 2016). According to learning style theories, every person thinks and learns best in a particular way. These preferences for processing specific information or doing so in distinct ways are not distinctions in ability. Since student accomplishment would result from the interaction between education and the student's style, if learning styles theories are right, they could have significant ramifications for instruction. There is reason to believe that learning styles theories are widely accepted, although little scientific evidence supports them. They proposed that educators should devote more time and effort to theories that could improve instruction (Willingham, 2015).
- **Students' Performance.** One of the main issues with technology and livelihood education is student performance. Certain students excel academically and can do tasks to the required standards while also being able to absorb concepts. Some kids struggle with the learning process, however. Teachers see this every day in the classroom (Cabansag, 2014). Internal and social factors are the primary impacts on students' academic progress, according to Maric and Sakac's (2014) categorization. They found that among the factors influencing pupils' academic success on the inside are aspiration, internal satisfaction, and motivation. Social factors also included money rewards and social prestige.
- **Written Test.** Instructive resources, as noted by (Nwike, 2013), are teachers and students and maximize learn to maximize learning across various. Schools must implement assessment and grading procedures that can most effectively foster student growth and adapt to various circumstances (Mateo, 2020). For students who study differently, written tasks could include critiques of books or articles, essays, diaries, papers for reactions or reflection, reports, data recording and analysis, lab reports, and creating work designs and charts. This paper from Sage Journal entitled "Subject-Specific Literacy and School Learning: A Focus on Writing" (Marsh, 2017) intends to advance educators' knowledge of literacy's conceptualist nature, particularly regarding academic learning. The operational, cultural, and critical dimensions of literacy are posited as three interconnected elements of literacy.

- **Hands-on Activities.** Experiential learning opportunities are crucial in information security in education. That is why students must have hands-on experiences in learning (Konak, 2014). (Petrich, 2013) and his team has come up with more than a hundred methods for using practical tasks to teach and assess students' knowledge. (Hampden, 2013) said that collaboration with classmates, continuous collaboration with students overseas, and active and hands-on activities extended beyond the scope of one lesson. The usefulness of a learners' intervention booklet in enhancing students' handicraft abilities was examined (Chozas, 2022). Using the Learner's Intervention Booklet, her study evaluated the handicraft abilities of challenging Grade 7 students at San Pablo City Integrated High School. As noted (James, 2018), one-on-one student sessions and after-school tutorial programs that concentrated on important subject areas and were impacted by an administrator's leadership style greatly aided student achievement. There are various ways to improve students' abilities through hands-on activities.

III. METHODOLOGY

This presents the research design used in the study, respondents, research procedures, research instrument, and the statistical treatment of data employed in the study. The instrument used in the study was a researcher's self-made questionnaire based on the LRMSD standardized evaluation for Print Resources. The questionnaire was composed of two parts. The first part will deal with the respondents' profile, and the second part will be the evaluation assessment tool which includes the criteria for evaluating the study in Determining Factors of Students' Performance in Bread and Pastry Production.

A. Part I. Respondents' Perception of Teacher Factor

Table 1-3 revealed the respondents' perception of teacher factors regarding knowledge and pedagogy, skills, and teaching strategies.

Table 1: Perception of Teacher Factors as to Knowledge and Pedagogy

Indicators	Mean	Std. Deviation	Verbal Interpretation
1.Support classroom environment to deliver educational lectures more conveniently	4.60	0.63	Always
2. Attend seminars and training for professional growth	4.63	0.68	Always
3. Develop and administer my assessment	4.68	0.54	Always
4. Focus on classroom management skills	4.61	0.65	Always
5. Establish professional relationships with colleagues, supervisors, and students' parents.	4.56	0.67	Always
Over-all	4.62	0.63	Always
Legend: 4.50 – 5.00 always/highly practiced 3.50 – 4.49 often/moderately practiced 2.50 – 3.49 sometimes/practiced 1.50 – 2.49 rarely/less practiced 1.00 – 1.49 never/not practiced			

The perceived extent of teacher factors as to knowledge and pedagogy is displayed in Table 1.

Indicator 3 has the highest mean score of 4.68 and a standard deviation 0.54. This means that the students perceived that the teacher always practiced developing and administering the assessments used for them in the classroom.

Indicator 5 has the lowest mean score of 4.56, with a standard deviation 0.67. The respondents show that they noticed that their teacher established and maintained professional relationships with colleagues, supervisors, and student's parents.

The overall mean is 4.62, with a standard deviation of 0.63, and is verbally interpreted as "always." The result implied that pedagogy and knowledge such as classroom environment and management, attending seminars and training, and self-made assessment were always practiced by their teachers as observed by the students. Furthermore,

establishing and maintaining professional relationships with colleagues, supervisors, and parents is a supplementary factor that might contribute to students' progress.

According to Adewale et al. (2014), to increase students' academic success, teachers at all levels must expose children to stimulation or intervention. Classroom Assessment is an integral part of K to 12 curriculum implementation. It allows the teachers to track and measure learners' progress and adjust instruction accordingly. Classroom assessment informs the learners, as well as their parents and guardians, of their progress.

The perceived extent of teacher factors as to skills is displayed in Table 2.

Indicator 3 has the highest mean score of 4.63 and a standard deviation of 0.67. These show that the students always experience how teachers teach students with special learning needs.

Table 2: Perception of Respondents on Teacher Factor as to Skills

Indicators	Mean	Std. Deviation	Verbal Interpretation
1. Use ICT for teaching the learning process	3.94	0.98	Often
2. Act not only as a subject teacher but also guidance officer	4.40	0.90	Often
3. Teach students with special learning needs	4.63	0.68	Always
4. Apply critical thinking to consider skills to consider the best interests of the students	4.37	0.80	Often
5. Develop student engagement skills	4.51	0.67	Always
Over-all	4.37	0.84	Often
Legend: 4.50 – 5.00 always/highly practiced 3.50 – 4.49 often/moderately practiced 2.50 – 3.49 sometimes/practiced 1.50 – 2.49 rarely/less practiced 1.00 – 1.49 never/not practiced			

Indicator 1 has the lowest mean score of 3.94, with a standard deviation 0.98. The respondents show that they often noticed how teachers use ICT for teaching the learning process in class discussions.

The overall mean is 4.37 with a standard deviation of 0.84, and it is verbally interpreted as "often." The result implied that skills such as acting not only the subject teacher, applying critical thinking skills, and developing student engagement skills are in the best interests of the students during the discussion.

The study (Hanushek, 2019) found substantial differences in teacher cognitive skills across countries strongly related to students' performance.

The perceived extent of teacher factors as to teaching strategies is displayed in Table 3.

Indicator 2 has the highest mean score of 4.76 and a standard deviation 0.43. This shows that the students always experience how the teacher uses materials during discussion. It deepens students understanding through these materials, and it promotes experiential learning.

Table 3: Perception of Respondents on Teacher Factor as to Teaching Strategies

Indicators	Mean	Std. Deviation	Verbal Interpretation
1. Use of actual materials during discussion	4.66	0.62	Always
2. Allow time for every student to succeed	4.76	0.43	Always
3. Promote independent thinking	4.56	0.67	Always
4. Get students to collaborate in productive ways	4.49	0.74	Often
5. Use questions to check students' understanding	4.64	0.68	Always
Over-all	4.62	0.64	Always
<i>Legend: 4.50 – 5.00 always/highly practiced</i>			
<i>3.50 – 4.49 often/moderately practiced</i>			
<i>2.50 – 3.49 sometimes/practiced</i>			
<i>1.50 – 2.49 rarely/less practiced</i>			
<i>1.00 – 1.49 never/not practiced</i>			

Indicator 4 has the lowest mean score of 4.49, with a standard deviation 0.74. The respondents show that they often noticed how teachers get students collaboration in productive ways. This finding implies that the teacher needs to review and enhance the collaborative tasks and activities given to students to maximize learning.

The overall mean is 4.62, with a standard deviation of 0.64, and is verbally interpreted as “always.” The result implied that teaching strategies such as promoting independent thinking and using questions to check students' understanding might help every student succeed. It helps

students learn through their own efforts and assess their knowledge through open-and-close-ended questions.

This epidemic hinders face-to-face and even mixed learning, but the education sector must reconsider and control technology use so that, in an emergency, distance learning can be conducted between students and teachers. Therefore, whether or not emergency remote teaching yields positive or negative results, educational systems worldwide are left with no choice but to comprehend, experience, and accept the great and rapid changes in adopting the concepts of emergency remote education (Guiamalon, 2021).

Table 4: Summary of Teacher Factor

	Overall Mean	Overall SD	Interpretation
1. Knowledge and Pedagogy	4.62	0.63	Always
2. Skills	4.37	0.84	Often
3. Teaching Strategies	4.62	0.64	Always
<i>Legend: 4.50 – 5.00 always/highly practiced</i>			
<i>3.50 – 4.49 often/moderately practiced</i>			
<i>2.50 – 3.49 sometimes/practiced</i>			
<i>1.50 – 2.49 rarely/less practiced</i>			
<i>1.00 – 1.49 never/not practiced</i>			

Table 4 presents a summary of the teacher factor. The knowledge, pedagogy, and teaching strategies had the highest overall mean of 4.62. This implies that the students always observed these teacher factors during the class discussion. Skills have the lowest overall mean of 4.37. It

can be considered that students are less interested in this teacher factor.

B. Part II. Respondents' Perception of Student Factors

Table 5-7 revealed the respondent's attitude, interest, and learning style perception of student factors.

Table 5: Perception of Student Factor as to Attitude

Indicators	Mean	Std. Deviation	Verbal Interpretation
1. I listen attentively to the lecture of my teacher	4.43	0.69	Often
2. I exert more effort when I do difficult assignments.	4.18	0.79	Often
3. I spend my vacant time doing assignments or studying my lessons	3.81	0.87	Often
4 I share positive experiences during the discussion.	3.98	1.15	Often
5. I develop new skills and try new activities.	4.41	0.78	Often
Over-all	4.16	0.90	Often
Legend: 4.50 – 5.00 always/highly practiced 1.50 – 2.49 rarely/less practiced			
3.50 – 4.49 often/moderately practiced 1.00 – 1.49 never/not practiced			
2.50 – 3.49 sometimes/practiced			

Indicator 1 has the highest mean score of 4.43 and a standard deviation 0.67. These show that the students often listen attentively to the teacher's lecture during class discussions.

Indicator 3 has the lowest mean score of 3.81, with a standard deviation 0.87. The respondents often spend time doing assignments or studying the lessons.

The overall mean is 4.16, with a standard deviation of 0.90, and is verbally interpreted as “often.” The result implied that student attitudes, such as exerting effort when

doing assignments and sharing positive experiences, must be strengthened to develop new skills and try new activities during discussion. Teachers should help the students by finding ways to motivate and get the attention and engagement to learn and to do their tasks efficiently.

Meenu Dev (2016) proved that students' interest levels in a subject impact their academic achievement. Similarly, Kpolovie, Joe, and Okoto (2014) argued that students' attitudes toward school and interest in learning impact their academic performance.

Table 6: Perception of Student Factor as to Interest

Indicators	Mean	Std. Deviation	Verbal Interpretation
1. I make myself prepare for our TLE subject	4.36	0.88	Often
2. I actively participate in the discussion, answering exercises and/or clarifying things I did not understand.	4.16	0.89	Often
3. I can work with the help of others	4.13	0.75	Often
4. I prefer to do hands-on activities rather than theory	4.17	0.82	Often
5. I often feel student social relationships.	4.16	0.98	Often
Over-all	4.19	0.87	Often
Legend: 4.50 – 5.00 always/highly practiced 1.50 – 2.49 rarely/less practiced			
3.50 – 4.49 often/moderately practiced 1.00 – 1.49 never/not practiced			
2.50 – 3.49 sometimes/practiced			

Indicator 1 has the highest mean score of 4.36, with a standard deviation 0.88. These show that the students often make themselves prepare for TLE subjects. This means the teacher should motivate students to attend the class to increase their engagement.

Indicator 3 has the lowest mean score of 4.13, with a standard deviation 0.75. The respondents show that they can often work with the help of others. It promotes teamwork and collaboration.

The overall mean of 4.19 with a standard deviation of 0.87 was verbally interpreted as “often.” The result implied that student interests, such as actively participating in the

discussion and often feeling student social relationships, will improve their confidence. Furthermore, most of the students prefer to do hands-on activities rather than theory towards their interests.

Similarly, Kpolovie, Joe, and Okoto (2014) argued that student's attitudes toward school and interest in learning impact their academic performance.

Table 7: Perception of Student Factor as to Learning Style

Indicators	Mean	Std. Deviation	Verbal Interpretation
1. Prefer listening to information that is presented vocally	4.32	0-.88	Often
2. Focus on the written word, reading and writing	4.42	0.81	Often
3. Hands-on thrive when engaging all of the senses during coursework	4.01	0.88	Often
4. Prefer learning by doing	4.43	0.78	Often
5. Present visual learners through seeing	4.23	0.87	Often
Over-all	4.28	0.86	Often
Legend: 4.50 – 5.00 <i>always/highly practiced</i> 1.50 – 2.49 <i>rarely/less practiced</i> 3.50 – 4.49 <i>often/moderately practiced</i> 1.00 – 1.49 <i>never/not practiced</i> 2.50 – 3.49 <i>sometimes/practiced</i>			

The perception of student factors as to learning style is displayed in Table 7. Indicator 4 has the highest mean score of 4.43 and a standard deviation 0.78.

These show that the students often prepare for learning by doing. This implies that students learn more through experiential learning in a constructivist classroom.

Indicator 3 has the lowest mean score of 4.01, with a standard deviation 0.88. The respondents show that they often have hands-on and thrive when engaging all of the senses during coursework.

The overall mean is 4.28, with a standard deviation of 0.86, and is verbally interpreted as “often.” The result implies that student learning styles such as focusing on the written word, reading, and writing, preferring listening to

information, and visual learning are ways of improving their performance.

Students with different learning styles approach the subject differently (Balakrishnan, 2016). According to learning style theories, every person thinks and learns best in a particular way. These preferences for processing specific information or doing so in distinct ways are not distinctions in ability. Since student accomplishment would result from the interaction between education and the student's style, if learning styles theories are right, they could have significant ramifications for instruction. There is reason to believe that learning styles theories are widely accepted, although little scientific evidence supports them. Educators should devote more time and effort to theories that could improve instruction (Willingham, 2015).

Table 8: Summary of Student Factors

	Overall Mean	Overall SD	Interpretation
1. Attitude	4.16	0.90	Often
2. Interest	4.19	0.87	Often
3. Learning Styles	4.28	0.86	Often
Legend: 4.50 – 5.00 <i>always/highly practiced</i> 1.50 – 2.49 <i>rarely/less practiced</i> 3.50 – 4.49 <i>often/moderately practiced</i> 1.00 – 1.49 <i>never/not practiced</i> 2.50 – 3.49 <i>sometimes/practiced</i>			

Table 8 presents a summary of student factors. The learning styles got the highest overall mean of 4.28. This implies that the students mostly have different learning styles regarding their study habits or during the class

discussion followed by their interests. Attitude got the lowest overall mean of 4.16. It means that students have different attitudes in terms of their studies.

Table 9: Performance as to Written Tests/Works

Indicators	Mean	Std. Deviation	Verbal Interpretation
1. Use Tools and Bakery Equipment	7.83	2.14	Very Satisfactory
2. Perform Mensuration and Calculation	8.76	3.63	Satisfactory
3. Maintain Tools and Equipment	7.91	1.73	Very Satisfactory
4. Practice Occupational Health and Safety Measures	12.27	2.71	Excellent
Over-all	9.19	3.20	Very Satisfactory
Legend: 24.0 – 30.0 excellent 6.0 – 11.99 fair 18.0 – 23.99 very satisfactory 0 – 5.99 Poor 12.0 – 17.99 satisfactory			

The performance of written works is displayed in Table 9. The result shows that the overall mean is 9.19, with a standard deviation 3.20. It shows that the student respondents' performance scores are very satisfactory in written works.

Indicator 4, "Practice Occupational Health and Safety Precautions," has the highest mean score of 12.27 and a standard deviation 2.71. These show that the students are interested in answering written test 4 under practice occupational health and safety procedures in lesson 4.

Indicator 3, "Maintain Tools and Equipment," has the lowest mean score of 7.91 with a standard deviation of

1.73. The respondents show that the students are slightly interested in answering written test 3 under maintaining tools and equipment in lesson 3. The data implies that students study in different ways. It is about their techniques or style in studying to have a better grade in both written and hands-on activities.

Schools must implement assessment and grading procedures that can most effectively foster student growth and adapt to various circumstances (Mateo, 2020). For students who study differently, written tasks could include critiques of books or articles, essays, diaries, papers for reactions or reflection, reports, data recording and analysis, lab reports, and creating work designs and charts.

Table 10: Performance as to Hands-on-Activities

Indicators	Mean	Std. Deviation	Verbal Interpretation
1. Use Tools and Bakery Equipment	25.10	3.44	Excellent
2. Perform Mensuration and Calculation	26.97	3.41	Excellent
3. Maintain Tools and Equipment	26.90	2.03	Excellent
4. Practice Occupational Health and Safety Precautions	21.70	4.00	Very satisfactory
Over-all	25.17	3.92	Excellent
Legend: 24.0 – 30.0 excellent 6.0 – 11.99 fair 18.0 – 23.99 very satisfactory 0 – 5.99 Poor 12.0 – 17.99 satisfactory			

The performance of hands-on activities is also displayed in Table 8. The results show that the overall mean is 25.17, with a standard deviation of 3.92. It shows that the student respondents' performance scores are excellent in hands-on activities.

Indicator 2, "Perform Mensuration and Calculation," has the highest mean score of 26.97 and a standard deviation 3.41. These show that the students are interested in answering or performing hands-on activities using tools and bakery equipment in lesson 1.

Indicator 4, "Practice Occupational Health and Safety Precautions," has the lowest mean score of 21.70 with a standard deviation 4.00. The respondents show that the students are slightly interested in doing hands-on activity 4 under practice occupational health and safety procedures in

Lesson 4. The data imply that students are interested in different lessons. Also means that it can be group or individual performances that might help them improve their grades.

(Petrich, 2013) and his team had come up with more than a hundred methods for using practical tasks to assess students' knowledge. (Hampden, 2013) said that collaboration with classmates and were advice active and hands-on and extended beyond the scope of one lesson.

The usefulness of a learners' intervention booklet in enhancing students' handicraft abilities was examined (Chozas, 2022). Using the Learner's Intervention Booklet, her study evaluated the handicraft abilities of challenging Grade 7 students at San Pablo City Integrated High School.

➤ **Teacher Factor**

The table below presents the relationship between determinants such as teacher factors (knowledge and pedagogy, skills, and teaching strategy) and student

factors (attitude, interest, and learning style), and students' performance (written works and hands-on activities) in Bread and Pastry Production.

Table 11: Test of Correlation between Teacher Factors and Students' Performance

Teacher Factors	Students' Performance	
	Written Works	Hands-on Activities
Knowledge and Pedagogy	0.134	0.154
Skills	0.033	0.095
Teaching Strategies	0.113	0.124

****.** Correlation is significant at the 0.01 level (2-tailed).

***.** Correlation is significant at the 0.05 level (2-tailed).

Table 11 shows that in knowledge and pedagogy, written works and hands-on activities obtained R-values of 0.134 and 0.154, while in skills, written assignments, and hands-on activities gained R-values of 0.033 and 0.095, and in teaching strategies, written works, and hands-on activities attained R-values of 0.113 and 0.124 respectively which reveals no significant relationship at .05 level of significance. As shown in the table, data imply that teacher factors such as knowledge and pedagogy, skills, and teaching strategies are not significantly correlated with students' performance in written works and hands-on activities. This result means that these teacher factors did not greatly influence the student's performance in class. Based on the study results, these teacher factors have little significance and impact on student achievement. Teachers need to support the classroom environment, apply critical thinking skills to consider the best interests of the students and get students collaboration in productive ways. These are the factors that teachers have to consider for the better performance of the students both in writing and hands-on.

The dedication to the success of their students sets apart passionate teachers. Teaching success requires commitment, which is a crucial component. Committed teachers struggle with maintaining their students' learning because they care about their student's growth. They foster curiosity and enthusiasm for studying in the children. Motivating kids can be aided by demonstrating a dedication to their education. Committed teachers know their obligations to their students and work hard to fulfill them. One of the characteristics that sets committed teachers apart from others is their level of dedication to their line of work. Teachers who are passionate about their work and dedicated to learning are vital to students' growth (Mrt, 2013). The significance of the classroom environment as a possible indicator of student results is one of the most significant findings from decades of research on educational efficacy. Therefore, teachers aim to synthesize the strongest supporting data from studies on teacher development and successful teaching in this review (Muijs, 2014).

Table 12: Test of Correlation between Student Factors and Students' Performance

Student Factors	Students' Performance	
	Written Works	Hands-on Activities
Attitude	0.252*	0.371**
Interest	0.321**	0.219*
Learning Style	0.189	0.306**

****.** Correlation is significant at the 0.01 level (2-tailed).

***.** Correlation is significant at the 0.05 level (2-tailed)

Table 12 shows that in student factors such as attitude, the R-values with written works and hands-on activities are 0.252 and 0.371 consecutively, and in interest, the R-values with written works and hands-on activities are 0.321 and 0.219 consecutively, which means these two student factors are statistically significant at 0.05 level of significance. These results imply that attitude and interest have a significant impact on student's performance. These are vital factors for students to perform well in class and excel in classroom activities and tasks. Attitude is the value of every student in the world, their personality, on how they act daily during class discussion. A student with a good attitude

toward studies will be successful someday. It also has a great impact on their performance.

On the other hand, student factors such as learning style and R-values of 0.189 showed no significant relationship with written works. This result means that how the students learn did not contribute greatly to the performance of the students in their written works. While in learning style, R-values of 0.306 showed a significant relationship with hands-on activities. It implies that the student's learning style is essential in accomplishing and doing hands-on activities in TLE.

While learning facilities are a significant factor in students' learning and academic achievement (Singh, Malik, 2016). The availability and the quality of the learning facility affect and improve students' achievement (Limon, 2016; Suleman & Hussain, 2014). Students' attitudes toward school can be interpreted as a tendency toward education, collaboration, and participation in a social institution. This is one of the reasons why the Pearson Foundation and the Quaglia Institute for Student Aspiration (Brown, 2014) identified eight prerequisites for students to achieve academic, social, and personal success. They emphasized that the first and most important prerequisite is students' attitude toward school, also known as their sense of belonging.

In Interest, the correlation between written works and hands-on activities are 0.321 and 0.219, resulting in a significant relationship at 0.01 and 0.05 levels, respectively. Many students are experiencing low academic performance because of not showing attention or interest in their studies and not participating well in class, especially boys. Lack of interest in an activity or discussion is the biggest problem that can cause a certain student's low academic performance.

As noted by (Kpolovie 2014), interest in learning may be a very strong affective psychological trait and a very strong knowledge emotion as well as an overwhelming magnetic positive feeling, a sense of being captured, enthralled, invigorated, and energized to cognitively process information much faster and more accurately as well as the most effective application of psychomotor traits like self-regulation skills, self-discipline, working harder, and smarter. He suggested that psychologists do studies to determine the precise impact of learning interest on students' academic achievement at all levels of the educational system.

In learning style, the correlation between written works is 0.189, insignificant, and hands-on activities are 0.306, demonstrating a significant relationship at 0.01 level. Learning style is significantly correlated to written works. The implication of this is that there is a significant positive correlation between learning style and written works. Learning styles refer to theories that account for differences in individuals' learning. It is a theory that learners can be categorized depending on how they take in information. Therefore, teaching students according to their specific learning styles will improve learning. Students are hands-on learners who prefer to touch, move, build, or draw what they learn and tend to learn better when some type of physical activity is involved. Learning style can affect students' hands-on activities through students who do not show attention or interest in their hands-on training and do not participate well in class. Learning styles will affect the hands-on activity of the students. Students with different learning styles approach the subject differently (Balakrishnan, 2016). According to learning style theories, every person thinks and learns best in a particular way. These preferences for processing specific information or doing so in distinct ways are not distinctions in ability. Since student accomplishment would result from the interaction

between education and the student's style, if learning styles theories are right, they could have significant ramifications for instruction. There is reason to believe that learning styles theories are widely accepted, although little scientific evidence supports them. They proposed that educators should devote more time and effort to theories that could improve instruction (Willingham, 2015).

IV. CONCLUSION

The study attempted to find the determinants of students' performance in Bread and Pastry Production in Junior High School.

The study's respondents included ninety (90) Grade 8 students from Grade 8 – Acacia, Narra, Maulawin, Fire Tree, Oak Tree, and Gmelina sections enrolled at San Pablo City Integrated High School for the school year 2022-2023.

The study utilized a questionnaire on the perception of the teacher's and students' factors in Bread and Pastry Production with thirty (30) items and five (5) questions for each indicator. The researcher also prepared four (4) written tests and hands-on activities on each lesson as provided by the Curriculum Guide by the Department of Education, with the essential learning competencies. The result of the student's written and hands-on activity scores and the research questionnaire provides the data for the study.

➤ *The Following are the Salient Findings of the Study:*

- The result shows that the extent of respondents' perception of teacher factors in knowledge and pedagogy has a mean score of 4.62, 4.37 for skills, and 4.62 for teaching strategies.
- The result shows that the mean perception of the respondents on student factors in terms of attitude is 4.16, interest 4.19, and learning style 4.28.
- The result shows that the mean level of students' performance in Bread and Pastry Production in terms of written works is 9.19, and hands-on activities 25.17.
- The result reveals no significant relationship between students' performance in Bread and Pastry Production and Teacher Factor.
- The result reveals a significant relationship between students' Bread and Pastry Production performance and Students' factors.
- Based on the findings of the study, the following conclusions were drawn:

A significant relationship exists between students' Bread and Pastry Production performance and Students' factors. Therefore the null hypothesis stating that there is no significant relationship between students' performance in Bread and Pastry Production and Students' Factor is not sustained.

No significant relationship exists between student factor and their performance in Bread and Pastry Production and Teacher Factor; therefore, the null hypothesis states that there is no significant relationship

between students' performance in Bread and Pastry Production and Students' Factor is sustained.

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