

Challenges Faced by Senior High School Students of Bread and Pastry Production: Basis for Digital Recipe Repository

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DOI: <https://doi.org/10.51244/IJRSI.2024.11110061>

Received: 21 November 2024; Accepted: 25 November 2024; Published: 16 December 2024

ABSTRACT

This study explored the challenges the senior high school students encountered in the Bread and Pastry Production of Florentino Torres Senior High School, District 2, Division of Manila during the school year 2022-2023 in the utilization of in-person learning modality. The qualitative phenomenological method of research was utilized in the study. The study participants were purposively chosen. The data were analyzed using thematic analysis. The study's findings revealed that the senior high school learners of the bread and pastry production in the use of in-person learning modality were confronted with various challenges. These challenges are insufficient time for practical applications of baking skills; limited resources due to budget constraints; and large class sizes for individualized attention and guidance. Since the learners were confronted with various challenges, a proposed innovative strategy through a digital recipe repository may be designed to enhance the skills and create an immersive learning experience of the senior high school students.

Keywords: challenges; bread and pastry production; digital

INTRODUCTION

In recent years, the field of education has experienced significant disruption due to the COVID-19 epidemic. The Department of Education (DepEd) plays a crucial role in facilitating the transition of learning modalities, setting policies and guidelines for effective adaptation to modular to gradual in-person modalities, as outlined in DepEd Order No. 034, Series of 2022. This shift allowed students to engage in virtual classrooms, breaking barriers of time and space.

The art of bread and pastry production demands a comprehensive understanding of ingredients, techniques, and precise execution. Bread and pastry production students exhibits passion about the culinary arts, mastering dough techniques and creating delicious pastries. For them, baking is more than following recipes; it's about the science behind it.

Hands-on training is crucial for these aspiring bakers as they take pride in sharing their creations, reflecting dedication and creativity. According to Haury and Rillero (2015), a hands-on learning strategy immerses the students in a comprehensive learning experience that improves their ability to think critically, both in virtual classrooms and in-person modalities.

As a result, any teaching technique skillful in this direction may be viewed as an activity-oriented teaching method. This approach aligns perfectly with the passion and commitment of bread and pastry production students, enhancing their understanding and mastery of the craft, whether they are learning remotely or in a physical bakery or pastry kitchen.

In the case of Torres Senior High School, several concerns need consideration, including resource limitations, time constraints, safety issues, class size, and skill level variations. A shortage of resources in the classroom

may be extremely stressful for students as well as teachers. Not only are students and instructors in distress, but they are also unable to study to their full capacity due to a lack of resources (Maffea, 2020).

Given the socio-economic situations of the learners, managing time for hands-on activities to acquire skills, and organizing small-group sessions for personalized attention, feedback, and rotations might be unfeasible. This situation could impact the acquisition of required competencies in bread and pastry production.

The severity of the problem is directly related to the quality of teaching and assessment of students, and lastly, the quality of graduates who enter the labor market. Other scholars, such as Anderson (2000), agree with this assumption, that class size and students' achievement are directly associated with teaching and learning.

With the mentioned issues and challenges in the implementation of the in-person mode of learning, students have been making efforts to cope with the challenges of in-person learning, which the study aims to explore. The research intends to provide an innovative strategy to address the challenges faced by bread and pastry production students during their transition from blended distance learning to face-to-face education. It focuses on the practicality gap, adjustment to hands-on learning, and the need to develop new skills in the face-to-face environment, aiming to empower students in their pursuit of culinary excellence by integrating theoretical knowledge and practical skills seamlessly.

The study is based on Dewey's (1938) theory of learning, which emphasizes the significance of learning by doing and active engagement with experiences. Dewey's theory highlights several key principles: learning as a continuous and interactive process, the central role of meaningful experiences in fostering deeper understanding and growth, the importance of reflective thinking to transform experiences into knowledge, and the value of problem-solving and hands-on experiences to apply theoretical knowledge in real-life situations and develop practical skills.

This was supported by Basic Education Learning Continuity Plan (BE-LCP) under DepEd Order No. 012, s. 2020 and the 1987 Constitution Section 1, Article XIV which states on the protection and promotion of the right of all citizens to quality education at all levels, and to take appropriate steps to make such education accessible to all. In addition, under Section 6, Chapter 1 of Republic Act No. 9155, otherwise known as the Governance of Basic Education Act of 2001, DepEd is vested with the authority, accountability, and responsibility for ensuring access to, promoting equity in, and improving the quality of basic education.

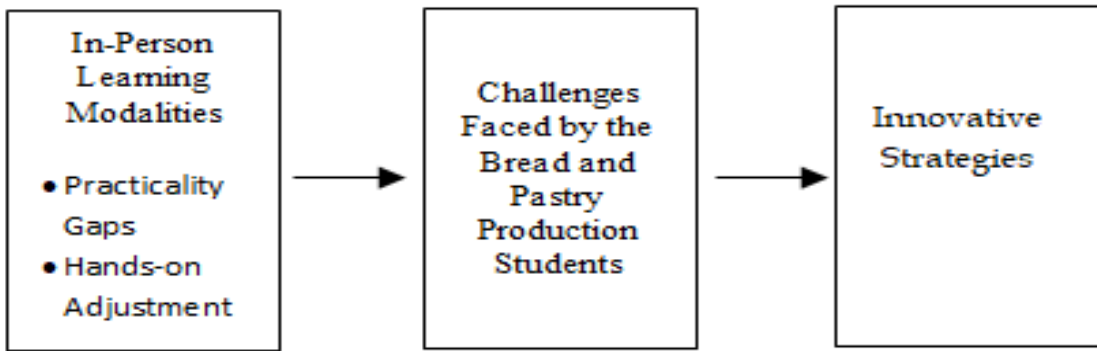
Framework of the Study

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Figure 1 shows the schematic diagram of the study showing the interplay of the variables. The first box shows the in-person learning modalities where the students of bread and pastry production experienced practicality gaps and hands-on adjustments. The second box presents the challenges faced by the students while the third box is the innovative strategies may be designed by the teachers to address the challenges. The arrows show the interconnection of the variables from the boxes.

Figure 1: Schematic Diagram



The in-person learning modality, refers to the face-to-face learning or the traditional educational setting where students and teachers are physically present in the classroom, lecture hall, or other designated learning space. This approach allows direct interaction, immediate feedback, hands-on activities, and the opportunity to engage in discussions and collaborative exercises with peers and instructors. In this study, in-person learning supports the experiential learning activities, practical and hands-on performance, and direct observation, making it particularly effective in settings that require hands-on training or where real-time communication enhances the learning experience.

The challenges denote the barriers, obstacles or difficulties that can hinder the effectiveness, accessibility, or overall experience of this learning modality. These challenges are issues that the bread and pastry production students and teachers may encounter, making it harder to achieve optimal learning outcomes or creating barriers to full participation.

Research Problem

This study explored the challenges experienced by the senior high school learners of Florentino Torres Senior High School, District 2, Division of Manila during the school year 2023-2024 during the transition to in-person mode of learning.

Specially, it sought to answer the questions:

1. What are the challenges encountered by the senior high school students in the use of in-person learning modality?
2. What innovative strategies can be designed to enhance the skills of the students and create an immersive learning experience for senior high school learners?

METHODOLOGY

The study used the qualitative phenomenological method of research where it focuses on the commonality of a lived experience within a particular group. It utilized the purposive sampling procedure where all the 39 Grade 12 senior high school learners under the Technical-Vocational Livelihood (TLE) strand taking up Bread and Pastry Production as one of their subject areas will be taken as the respondents of the study.

The research instrument used in the study was a researcher-made semi-structured interview guide for in-depth interview and motive questions for the focus group discussion to get the challenges encountered by the respondents during the transition period to in-person modality of learning. To analyze the data gathered, Creswell (2013) procedure of data analysis was employed.

RESULTS AND DISCUSSION

Challenges Encountered by the Senior High School Students of Bread and Pastry Production in the Use of In-Person Learning Modality

The in-depth interview revealed several challenges faced by senior high school students during in-person learning. Frame 1 highlights their struggle with *insufficient time for practical baking skills* application, leading to sacrifices in other subjects and extending their time beyond class hours. This finding aligns with previous research by Murphy et al. (2007), Powell-Moman and Brown-Schild (2011), Smolleck and Mongan (2011), Wang (2011), and Chen and Wei (2015), emphasizing the need for student-centered approaches in bread and pastry production specialization, which can be time-consuming for both students and teachers.

Frame 1

- Insufficient time for practical applications of baking skills
- Limited resources due to budget constraints
- Large class size for individualized attention and guidance

Furthermore, the students faced challenges with *limited resources caused by budget constraints*, particularly concerning the availability of ingredients required for their recipes. Participants mentioned that due to budget limitations, they couldn't explore more sophisticated recipes and had to use cheaper substitute ingredients. However, this situation also taught them the value of resourcefulness without compromising the quality of their recipes.

The Bread and Pastry Production Curriculum Guide (2016) places significant emphasis on teaching baking ingredients and their substitution within its specialized area content. Additionally, Thompson and Haigh (2017) define resourcefulness as a way to save meals, while Michalec et al. (2018) assert that resourcefulness entails chefs' ability to re-use surplus ingredients to avoid wastage caused by spoilage. This concept is also referred to as 'skilful cooking' in the literature, as mentioned by Burke and Napawan (2020).

The investigation revealed a significant issue related to the class size, indicating that individualized attention and guidance are compromised with *large class sizes*. To address this, it is suggested that smaller groups of students should be involved, allowing more time for teaching baking skills and competencies. Additionally, the classroom's limitations in accommodating a large number of students during laboratory performances, especially in baking, were identified.

The findings of the investigation align with DepEd Order No. 20, Series of 2022, which emphasizes the importance of providing Learning Tools and Equipment for Science, mathematics, and Technical-Vocational Livelihood (LTE-SM and TVL) to public schools. This allocation of funds is essential for enhancing the quality of teaching and learning in Science and Mathematics subjects, as well as for developing students' technical, vocational, and Livelihood skills through hands-on experiences.

Proposed Innovative Strategy to Enhance the Skills and Create an Immersive Learning Experience for Senior High School Students

As an intervention to address the challenges and enhance the skills of the senior high school students in bread and pastry production, a digital recipe repository may be designed. This strategy may also create an immersive learning experience while performing the skills at home through access to these digital recipes designed by the researcher.

A digital recipe repository for bread and pastry production is an organized and accessible online platform designed for students that stores and manages a collection of recipes. Specifically, it is designed for the convenience of students in the digital realm. It serves as a central database where various types of culinary recipes, including those related to bread and pastry production, are stored in a digital format. These repositories are accessible through web-based interfaces or mobile applications, allowing students to browse, search, and access recipes anytime, anywhere.

Objective: To provide senior high school students in bread and pastry production with a comprehensive and accessible digital recipe repository, enhancing their practical learning experience and encouraging creativity in

the culinary arts.

The key features and components are:

1. **User-Friendly Interface:** The digital recipe repository will have an intuitive and user-friendly interface, designed to cater to the needs of senior high school students. The layout will be visually appealing, with clear navigation and search functionalities for easy recipe exploration.
2. **Recipe Categorization:** Recipes will be categorized based on different types of bread and pastry products, including bread loaves, cakes, croissants, cookies, and more. Each category will further be divided into subcategories for different flavors and variations.
3. **Detailed Recipe Pages:** Each recipe entry will include detailed instructions, a list of ingredients with precise measurements, step-by-step preparation methods, and baking guidelines. High-quality images and videos will complement the recipe, aiding students in visualizing the final product.
4. **Student Recipe Contributions:** As part of an engaging and interactive learning experience, students will be encouraged to contribute their own innovative recipes to the repository. A review and approval process will ensure the inclusion of high-quality and well-tested recipes.

CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of the study, the following conclusions were formulated:

1. The senior high school learners of the Bread and Pastry Production in the use of in-person learning modality were confronted with various challenges. Different themes have emerged namely: insufficient time for practical applications of baking skills; limited resources due to budget constraints; and large class size for individualized attention and guidance.
2. Since the learners were confronted with various challenges, a proposed innovative strategy through digital recipe repository may be designed to enhance the skills and create an immersive learning experience of the senior high school students.

Based on the findings and conclusions drawn from the study, the following recommendations are given:

1. The senior high school teachers of the Bread and Pastry Production may implement strategies to immediately address some issues and challenges that the students may encounter.
2. The teachers may establish mechanisms to help the students who have limited resources.
3. The teachers may utilize the proposed intervention strategy to enhance the skills of the students in bread and pastry production.
4. The teachers with the school administrators may collaborate to address the challenges faced by the students.

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