

## Examine Students' Use of Digital Media in Culinary Application Course

Muhammad Anas

Politeknik Pariwisata Makassar  
muhammadanas@poltekparmakassar.ac.id

---

### Article History

accepted 1/5/2024

approved 1/6/2024

published 30/6/2024

---

### Abstract

The traditional approach to teaching culinary business applications often fails to fully engage students and prepare them for the dynamic, technology-driven industry. This study investigates the impact of digital media integration on students' learning experiences in culinary business learning at the Makassar Tourism Polytechnic. A qualitative approach was employed, utilizing semi-structured interviews with students from the Culinary Arts program. The study focused on the use of digital tools such as flipcharts, Padlet, and Kahoot during the 3rd and 4th meetings of a 15-week course. The research results show that digital media integration significantly increases students' emotional involvement and sensory integration towards complex culinary business concepts. Students have higher levels of motivation, better understanding, and a greater ability to connect theoretical knowledge with practical applications. The interactive nature of digital tools fostered a more engaging learning environment, promoting active participation and collaborative learning. The incorporation of digital media in culinary business education shows promising results in improving the quality of student learning experiences. It enhances engagement, facilitates a better understanding of complex concepts, and bridges the gap between theory and practice. However, further longitudinal research is needed to assess the long-term impact on learning outcomes and to develop best practices for integrating digital tools in culinary education curricula.

**Keywords:** *Digital Media, Culinary Education, Teaching, Experiential Learning*

### Abstrak

Pendekatan tradisional dalam pengajaran aplikasi bisnis kuliner sering kali gagal melibatkan siswa sepenuhnya dan mempersiapkan mereka menghadapi industri yang dinamis dan didorong oleh teknologi. Studi ini menyelidiki dampak integrasi media digital terhadap pengalaman belajar mahasiswa dalam pembelajaran bisnis kuliner pada Politeknik Pariwisata Makassar. Pendekatan kualitatif digunakan dengan wawancara semi-struktural terhadap mahasiswa program Seni Kuliner. Penelitian ini fokus pada penggunaan media digital seperti flipchart, Padlet, dan Kahoot pada pertemuan ke-3 dan ke-4 dari 15 tatap muka. Hasil penelitian menunjukkan bahwa Integrasi media digital signifikan meningkatkan keterlibatan emosional dan integrasi sensori mahasiswa terhadap konsep-konsep bisnis kuliner yang kompleks. Mahasiswa memiliki tingkat motivasi yang lebih tinggi, pemahaman yang lebih baik, dan kemampuan yang lebih besar untuk menghubungkan pengetahuan teoritis dengan aplikasi praktis. Sifat interaktif dari media digital mendorong lingkungan belajar yang lebih menarik, mempromosikan partisipasi aktif dan pembelajaran kolaboratif. Penggunaan media digital dalam mata kuliah bisnis kuliner menunjukkan hasil yang menjanjikan dalam meningkatkan kualitas pengalaman belajar mahasiswa. Peningkatkan keterlibatan, memfasilitasi pemahaman yang lebih baik terhadap konsep-konsep kompleks, dan mengurangi kesenjangan antara teori dan praktik. Namun, penelitian kuantitatif lebih lanjut diperlukan untuk mengevaluasi dampak terhadap hasil pembelajaran dan mengembangkan praktik terbaik untuk integrasi media digital dalam program studi seni kuliner.

**Kata kunci:** *Media Digital, Pendidikan Kuliner, Pengajaran, Pembelajaran Berbasis Pengalaman*



This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

## INTRODUCTION

In the past decade, culinary education research has witnessed a significant shift toward exploring innovative pedagogical approaches. A pivotal development within this domain is the integration of digital media, which has garnered substantial attention for its transformative impact, and the need for technology-based media is vital in the era of 21st-century education (Alenezi et al., 2023; Rukayah et al., 2022). (Nesenbergs et al., 2021; Suni et al., 2022) argues that the focus on digital media in culinary application courses highlights its potential to revolutionize learning experiences and enhance skill acquisition among students. By examining the intersection of digital media and culinary education (Cok. Istri Raka Marsiti et al., 2022; Lewis & Phillipov, 2018), this study aims to underscore its central role in shaping modern teaching practices. According to (Askren & James, 2021; Holik, 2019) encouraging an engaging and dynamic learning environment in culinary education is done by utilizing digital learning tools. This exploration therefore seeks to contribute insights into how educators can effectively utilize digital tools such as instructional videos, online recipe databases, and virtual cooking simulations to foster engaging and dynamic learning environments in culinary education.

Understanding students' use of digital media within the context of culinary application courses requires a broad examination of its impact across various educational settings. Generalizations can be made about how digital media influences learning outcomes (Aini et al., 2024; Lin et al., 2023), facilitates knowledge retention, and fosters creativity in culinary skill development (Ekincek & Günay, 2023). By synthesizing existing literature, this research aims to identify overarching trends and patterns that elucidate the broader implications of digital media integration in culinary education. However, the practice of digital media use by students in the Culinary Application Course at the Makassar Tourism Polytechnic Catering Study Programme is still unclear as to why aspects have not been fully explained in existing research. Although there is a growing emphasis on the role of digital media in educational contexts, there is a dearth of specific investigations into its application in culinary education at vocational institutions such as Makassar Tourism Polytechnic. Key questions remain regarding how different types of digital tools, such as instructional videos or virtual cooking simulations, impact students' learning experiences and skill acquisition in practical culinary settings. Furthermore, the unique challenges and opportunities posed by integrating digital media into culinary education programs remain unexplored, necessitating further research to uncover nuanced insights that can inform effective pedagogical strategies and curriculum development tailored to the needs of culinary students. In line with (Delott Baker et al., 2009; Lorbis, 2019; Mak & Hong, 2020), the learning curriculum develops contextually, which means it adapts to the needs of the learner's environment.

Previous research has investigated various aspects of digital media utilization in educational contexts, including its effectiveness in skill development, the level of engagement among students, and the role of technological tools in shaping the learning environment. (Setiawan & Mutiara, 2020) utilizes website-based learning media as a self-learning medium for Medan State University students with good achievements. (Homsinah, 2022) utilized digital comic learning media for non-individual service material used in learning restaurant arrangement and service courses for students of the Catering Education Study Program with the results being very feasible to use, according to (Alhambra & Abdullah, 2016; Sucahyo et al., 2016) Technology has been widely adopted in the learning environment to replace conventional face-to-face learning systems. However, there remains a particular gap in understanding its application in culinary courses. This study builds on existing research by critically examining students' interactions with digital media tools and platforms in a culinary applications course, aiming to fill this gap and contribute new insights to the field.

This study investigates the utilization of digital teaching media by students enrolled in the Culinary Business Applications course at the Makassar Tourism Polytechnic Culinary Arts Study Programme. This research aims to provide an in-depth exploration of how digital media tools are utilized in this particular educational context, highlighting their impact on learning outcomes and pedagogical practices. By focusing on student interactions with digital resources such as Flipchart, White Board, Colourful Markers, Padlet, and Kahoo Apps, this research seeks to address the gap in the literature regarding the effective integration of digital media in culinary education, particularly in vocational training programs such as those offered at Makassar Tourism Polytechnic.

The principal findings of this study endeavor to reveal insights into the effectiveness and challenges associated with the use of digital teaching media in culinary education at Makassar Tourism Polytechnic. Through a mixed-methods approach combining qualitative interviews and quantitative surveys, the research aims to uncover patterns in students' learning experiences, skill development, and engagement levels when utilizing digital tools. The structure of the study will begin with an introduction to the theoretical framework underpinning digital media integration in educational settings, followed by a detailed description of the research methodology employed. In achieving the research objectives, namely understanding the experience of students related to the use of digital teaching media such as Flipchart, White Board, Colourful Markers, Padlet, and Kahoo Apps in the Culinary Business Applications course, this research refers to the multi-sensory learning approach as an instrument of questioning. In achieving the research objective of understanding students' experiences with digital learning media in the Culinary Business Applications course, this study uses a multi-sensory learning approach as described by (Sanfilippo et al., 2022) which integrates visual, auditory, kinesthetic, and tactile (VAKT) feedback. Emotional impact, sensory integration, experiential quality, and personal significance are important considerations in this approach, which emphasizes the variety of educational programs, platforms, and technologies used to support student learning.

## RESEARCH METHODS

This research adopts a qualitative approach to explore the perceptions and experiences of students in the Culinary Business Applications course at Makassar Tourism Polytechnic. Data were collected through structured interviews with 8 students (4 males and 4 females) purposively selected to represent diverse backgrounds and learning experiences. Interviews were conducted during the 2nd and 3rd weeks of February 2024. The instrument used was an interview guide designed to explore the emotional impact, sensory integration, quality of experience, and personal significance in the context of digital learning. Questions were developed based on relevant theoretical frameworks, focusing on how these factors influence students' perceptions and learning experiences in the course (Al-Freih & Robinson, 2023).

Data analysis employed a content analysis approach to identify thematic patterns in the interview transcripts (Lexy J. Moleong, 2019; Sugiyono, 2020). The initial step involved thorough transcription of the interview recordings. Subsequently, the researcher identified units of analysis in the form of major themes emerging from the research questions related to emotions, sensory integration, quality of experience, and personal significance. Analysis proceeded by organizing these themes into broader categories and interpreting the findings. This qualitative approach allowed the researcher to delve into the subjective meanings from students' perspectives regarding the factors influencing their learning experiences in the context of digital media in the specific course

## RESULTS AND DISCUSSION

In the realm of culinary education, the course "Culinary Business Applications" (Course Code: ABK) stands as a cornerstone for students pursuing vocational studies. With a weight of 3 credits and spanning one semester, this course is designed to equip students with the essential skills and knowledge necessary for managing and executing small-scale projects within diverse hospitality settings. Led by instructor Muhammad Anas, the course focuses on imparting effective strategies and techniques tailored for project management in the hospitality industry. Through practical application and theoretical frameworks, students delve into the intricacies of culinary business operations, enhancing their abilities to navigate and succeed in this dynamic field.

This course places a significant emphasis on integrating digital media into culinary practices. By examining students' utilization of digital tools and platforms within culinary business contexts, this study aims to uncover insights into how digital media enhances learning outcomes and operational efficiencies in the culinary sector. Through qualitative analysis and student interviews, this research seeks to explore the impact of digital media on project management, creativity in menu development, customer engagement strategies, and overall business sustainability within the hospitality industry. By examining these facets, educators and industry professionals can gain valuable perspectives on optimizing digital integration in culinary education to prepare future professionals for the evolving demands of the global hospitality market.

In an increasingly interconnected digital era, the integration of technology has become a crucial element in education, including the Culinary Business Applications course at Makassar Tourism Polytechnic. The use of digital media such as flipcharts, colorful whiteboards, Padlet applications, and Kahoot platforms not only transforms our learning methods but also enriches students' experiences in grasping culinary business concepts. This study aims to explore how these technological tools influence students' emotional, and sensory integration, experience quality, and personal significance aspects in the learning process. By understanding both the positive impacts and challenges faced by students, this research endeavors to provide valuable insights for optimizing the use of digital media in culinary education.

### 1. Digital Media

#### 1.1 Flipchart and Whiteboard Colourful Markers



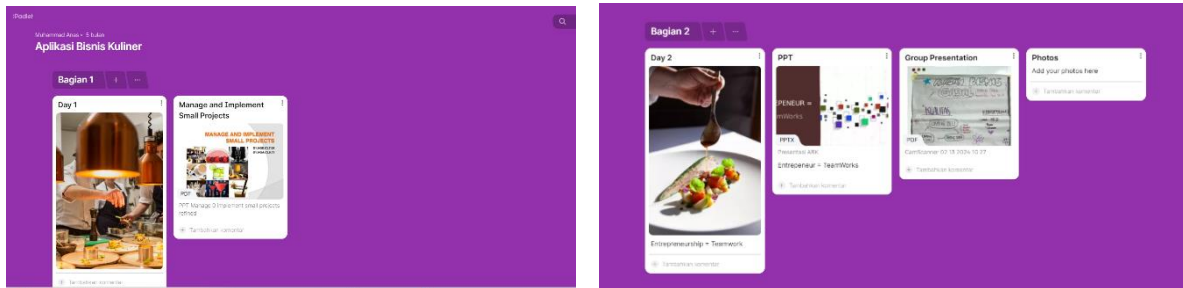
**Figure 1. Semester VI Culinary Arts students utilizing flipcharts and Whiteboard Colourful Markers for a planned project at the week 3 meeting.**

(Source: Researcher, 2024)

Figure 1 depicts Culinary Arts students in Semester VI actively utilizing flipcharts and colorful whiteboard markers during a project planning session in the second week of their semester. The students are engaged in collaborative discussions, utilizing the visual aids to brainstorm and organize their project ideas effectively. The use of flipcharts and colorful markers not only enhances the visual presentation of their project plans but

also fosters interactive learning and creative problem-solving among the students. This visual learning approach exemplifies the integration of practical tools in educational settings to enhance student engagement and comprehension in culinary arts education

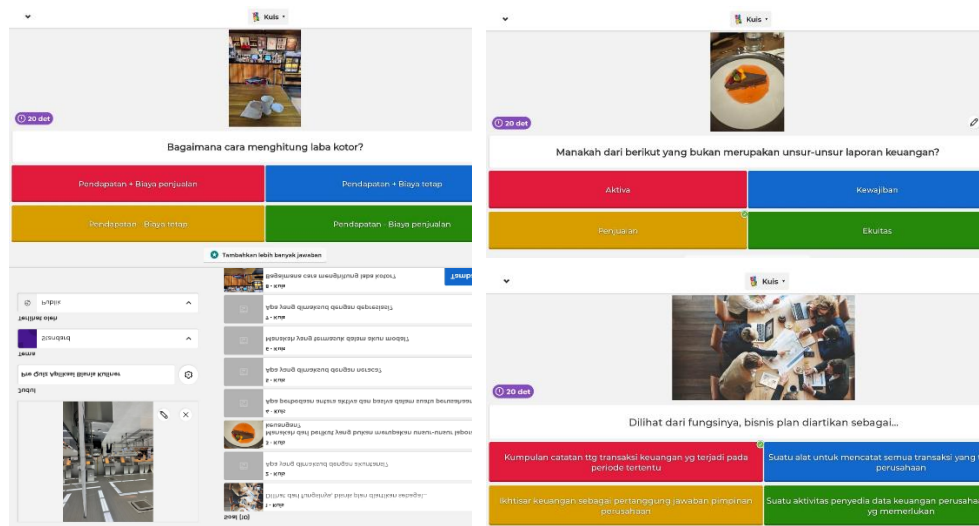
### 1.2 Media Padlet



**Figure 2. Padlet app as an online whiteboard, for writing, sending photos and videos, commenting, and doing portfolio assessment (Source: Researcher, 2024)**

Figure 2 illustrates the utilization of the Padlet application, serving as an online whiteboard, for a variety of interactive purposes. The interface displays multiple entries consisting of written content, photos, and videos, which are shared and commented on by users. The Padlet platform facilitates collaborative activities such as brainstorming sessions, project discussions, and portfolio assessments in an online environment. This digital tool enhances engagement and interaction among users, allowing for seamless communication and the sharing of multimedia resources. Overall, Padlet exemplifies a versatile digital platform that supports dynamic and interactive learning experiences, catering specifically to educational contexts where visual and multimedia elements play a crucial role.

### 1.3 Kahoot



**Figure 3. Utilization of Kahoot application for pre-opening class or end-of-session quiz (Source: Author, 2024)**

Figure 3 portrays the utilization of the Kahoot application for educational purposes, specifically for conducting pre-opening class quizzes or end-of-session evaluations. The image illustrates students engaging with their smartphones or devices, participating in a quiz session facilitated through the Kahoot platform. This interactive tool allows instructors to create quizzes, polls, and surveys that students can access in real time using their devices. It enhances student engagement through gamification elements such as points and leaderboards, making learning sessions more dynamic and enjoyable. Kahoot serves as an effective method for conducting pre-tests to gauge students' prior knowledge before a class begins, as well as for conducting assessments after a session to review learning outcomes and reinforce key concepts.

The utilization of the Kahoot application in the Culinary Business Applications course during the project planning stage (First Week) is highly beneficial. Before commencing lectures, students are required to participate in quizzes through this application as a pre-test. The objective of this pre-test is to assess students' initial understanding of fundamental concepts that will be taught in the course. Additionally, the pre-test results are used to determine and develop a resource strategy that aligns with students' learning needs. Financial viability evaluation is also conducted to ensure that all planned learning activities and projects can be executed efficiently without compromising quality. Moreover, during this stage, the administrative structure to support effective and efficient teaching and learning activities is evaluated. By integrating the Kahoot application effectively in this project planning phase, it is expected that the learning process can be more structured and oriented towards achieving optimal learning outcomes.

## 2. Student Experience

Exploring the multifaceted impact of digital media on student learning experiences in this course not only sheds light on their emotional engagement, sensory integration, and perceived quality of learning but also examines the personal significance of culinary business concepts. By delving into these dimensions, this study aims to uncover insights into how digital technologies can optimize educational practices and prepare students for dynamic careers in the hospitality industry.

### 2.1.1 Emotional Influence

Understanding the emotional influence of digital media in educational contexts is crucial, particularly in culinary business applications. Research suggests that emotions play a significant role in shaping learning experiences, affecting motivation, engagement, and cognitive processes (Acosta-Gonzaga & Ramirez-Arellano, 2021). In the context of this study, emotional influence is examined through qualitative analysis of student interviews conducted during the Culinary Business Applications course at Makassar Tourism Polytechnic.

Participants expressed varying emotional responses towards the use of digital media such as flipcharts and Padlet in their project planning and portfolio assessments. For example, an informant interview quote (Initials MMS, Thursday, 24 February 2024) commented:

*"Using colorful markers on the flipchart makes our ideas more visually appealing and easier to remember during discussions."*

Other comments suggested that the use of digital media is more connected to the learning process and motivates to participate actively. This is contained in an interview with (AA, Thursday, 24 February 2024), a student said,

*"I find using Padlet very interesting because it allows us to collaborate in real-time, share visuals, and exchange ideas collectively".*

This sentiment highlights how visual aids can enhance emotional engagement by making learning materials more stimulating and memorable (Brown & Wilson, 2020). Furthermore, another participant noted (SA, Thursday, 24 February 2024):

*"Padlet allowed us to collaborate effectively, and share ideas instantly with visuals, which made me feel more connected to my peers and engaged in the learning process."*

This statement underscores the role of digital tools in fostering a sense of community and emotional connection among students, thereby enhancing their overall learning experience (Li et al., 2024; Zheng et al., 2024). Thus, the integration of digital media in culinary education not only facilitates learning but also positively influences students' emotional experiences. This qualitative exploration provides valuable insights into harnessing emotional affect to optimize educational strategies and increase student engagement in the educational environment of Makassar Tourism Polytechnic, particularly in the Culinary Arts Study Program.

#### 2.1.2 Memorable Use of Learning Media

The statement from Informant BGP underscores the effectiveness of visual aids, specifically colorful markers on a whiteboard, in enhancing the memorability of learning experiences. (Informant BGP, Thursday, February 23, 2024):

*"In our class, using the colorful markers on the whiteboard during discussions stands out. It helps us visualize complex concepts and makes the learning process more memorable."*

Visual elements not only simplify complex information but also stimulate engagement and retention among students (Shabiralyani et al., 2015). This aligns with the findings that incorporating visual learning techniques can significantly improve learning outcomes by making concepts more tangible and accessible (Bobek & Tversky, 2016). Moreover, the use of such tools fosters a dynamic learning environment where students are actively involved in discussions and collaborative activities, thereby reinforcing their understanding and application of culinary business concepts.

Quote from Interview (Informant NF, Thursday, February 29, 2024):

*"I remember when we used Padlet to brainstorm ideas for our project. It was interactive and allowed us to see everyone's contributions in real time. This made the learning process engaging and memorable."*

Informant NF's account highlights the role of digital collaboration tools like Padlet in creating memorable learning experiences. The ability to interact in real time and visualize collective ideas enhances student engagement and encourages active participation (Hapsari & Fatimah, 2021). Such platforms facilitate a collaborative learning environment where students can share diverse perspectives and collectively develop innovative solutions (Brown & Wilson, 2020). This supports the notion that interactive digital tools not only facilitate learning but also contribute to the overall engagement and retention of course material.

Informant FF's perspective on using Kahoot emphasizes its impact on creating memorable learning experiences through gamification. (Informant FF, Thursday, February 29, 2024)

*"Using Kahoot for quizzes at the end of sessions sticks with me. It's fun, competitive, and helps us review what we've learned. It makes me look forward to assessments."*

Kahoot's interactive quizzes enhance motivation and stimulate learning by incorporating elements of competition and instant feedback (Mdlalose et al., 2021; Rayan & Watted, 2024). Research indicates that gamified learning environments promote active participation and improve retention of information by making assessments enjoyable and meaningful (Hellín et al., 2023). Thus, the integration of Kahoot as an assessment tool not only reinforces learning outcomes but also contributes to the positive emotional experiences of students in the Culinary Business Applications course.

### 2.1.3 Use of media affects emotions following the course

Overall, the analysis of these quotes highlights that the use of learning media such as colorful markers, flipcharts, and interactive applications like Kahoot can significantly enhance the learning experience in Culinary Business Applications. They not only aid in understanding the taught material but also increase student engagement and sustain their interest in the learning process. In the context of modern education, leveraging such media is key to creating a memorable and effective learning experience for students.

Visual elements and colors can increase student engagement and make the learning process more interesting and memorable. This underlines the importance of visual stimulation in conveying complex information, especially in courses such as Culinary Business Applications. This is like the interview excerpt (Informant LSK, Thursday, February 29, 2024):

*"I found that using colorful markers on the whiteboard helped in capturing my attention. It made the learning process more engaging and memorable."*

Besides helping to capture attention, flipcharts are effective in visually illustrating complex concepts. This makes it easier to understand the information compared to just listening to a lecture. This is in line with the following interview quote (Informant FF, Thursday, February 29, 2024);

*"Kahoot was a fun addition to the class. It not only tested our knowledge but also created a competitive atmosphere that motivated me to participate actively in the learning activities."*

The use of this media shows that visualization can help in conveying difficult information better, which is crucial in courses that require deep understanding such as Culinary Business Applications. Visual elements and colors play a crucial role in boosting student engagement and making the learning process more captivating and memorable. This emphasizes the importance of visual stimulation in effectively conveying complex information, particularly in specialized courses such as Culinary Business Applications. According to a study by (Özgür & Altun, 2021) multimedia principles in educational settings enhance emotional engagement, improving learning outcomes.



## 2.2 Sensory Integration

### 2.2.1 Visualisation through Learning Media helps understand culinary business concepts

The use of learning media such as flipcharts, colorful markers, Padlet, and Kahoot plays an important role in helping students visualize and understand culinary business concepts. These media not only increased student engagement but also facilitated a deeper and more applicable understanding of the material taught in a real-world context.

Informant initials MMS highlighted that the use of flipcharts and colorful markers helped her to effectively visualize complex culinary business concepts. It makes abstract ideas more concrete and easier to understand. The following is an interview excerpt (Informant MMS, Thursday, February 29, 2024):

*"The use of flipcharts and colorful markers helped me visualize complex culinary business concepts effectively. It made abstract ideas more tangible and easier to grasp."*

The use of visual media such as this helps in making difficult-to-understand concepts clearer and applicable to everyday culinary business contexts.

Padlets help organize and display information in a structured way. Padlet helped in organizing and displaying information in a structured manner, allowing him to see the connections between different topics, which enhanced his understanding of how culinary business principles are applied in real-world scenarios. The use of Padlet as a visualization tool helped in understanding and connecting information better, as well as providing more in-depth context. This is the interview excerpt with (Informant AA, Thursday, February 29, 2024):

*"Padlet was instrumental in organizing and displaying information in a structured way. It allowed me to see connections between different topics, which enhanced my understanding of how culinary business principles apply in real-world scenarios."*

Besides encouraging active participation, Kahoot also reinforces key concepts through interactive quizzes. This is consistent with the interview (Informant GFP, Thursday, February 29, 2024):

*"Kahoot was a game-changer in our classes. It not only engaged me actively but also reinforced key concepts through interactive quizzes. It's a fun way to visualize and recall information."*

Thus, it can be concluded that the use of visual media is key to creating an effective and memorable learning experience in the Culinary Business Applications course. The integration of visual learning media is crucial for creating an effective and memorable learning experience in Culinary Business Applications. These tools stimulate engagement, facilitate clearer comprehension of complex concepts, and foster practical application of knowledge in real-world contexts. To support the importance of visual media in education, a study by (Çeken & Taşkın, 2022; Skuballa et al., 2018) demonstrates how multimedia principles, including visual aids, enhance learning outcomes by improving cognitive processing and engagement among students.

## 2.3 Quality of Experience

### 2.3.1 Impression of use and Engage in the learning process

The use of various learning media such as flipcharts, colorful markers, Padlet, and Kahoot has a significant impact on improving students' engagement and understanding in learning culinary business concepts. These media not only make learning more interactive but also deepen their understanding of the application of theoretical concepts in the practical context of culinary business. Visualization of concepts with visual media helps make learning more interactive and facilitates understanding of the material being taught. The following is an interview excerpt (Informant MMS, Thursday, February 29, 2024):

*"The use of diverse learning media such as flipchart paper and colorful markers significantly increased my engagement in learning culinary business concepts. It makes the lesson more interactive and easier to understand."*

The use of Padlet made a significant impact in the classroom. It allows students to organize information visually and collaborate with classmates effectively, which deeply enhances their understanding of how theoretical concepts can be applied practically. By the interview quote (Informant AA, Thursday, February 29, 2024):

*"Padlet was quite impactful in our classes. It allowed me to organize information visually and collaborate with peers effectively, which deepened my understanding of how theoretical concepts apply practically."*

In addition, it was also recognized that the use of Kahoot provided a competitive and fun element to learning. This not only encourages Culinary Arts students to actively participate but also reinforces their understanding of culinary business principles through interactive quizzes. This statement is supported by an interview quote with (Informant SA, Thursday, February 29, 2024):

*"Kahoot added a fun and competitive element to our learning. It motivated me to participate actively and reinforced my retention of key culinary business principles through interactive quizzes."*

Thus, the integration of varied learning media can make a positive contribution to improving the quality of learning in the Makassar Tourism Polytechnic Culinary Arts Study Programme environment who take the Culinary Business Application course.

## 2.4 Personal Significance

### 2.4.1 Relevance and Linkage of Course Material

In this theme, students highlighted the importance of using learning media to facilitate in-depth understanding and practical application of learning materials in the context of the culinary business, as well as preparing students to face real-world challenges in the industry. The use of learning media such as flipcharts and the Padlet app helps to illustrate this relationship, allowing students to understand how the theories learned can be applied in the everyday context of a professional kitchen. This emphasizes the importance of not only understanding theoretical concepts but also being able to apply them in practical situations in the culinary industry. This statement is supported by an interview quote with (Informant MMS, Thursday, February 29, 2024):

*"It is very important for us to ensure that the material we teach is relevant to the real world of the culinary business. The use of learning media such as flipcharts and the Padlet app helps us*

*illustrate the connection between theoretical concepts and practical applications in the culinary industry. This helps students see how the theories taught can be applied in everyday situations in a professional kitchen."*

The use of learning media such as colorful markers and interactive platforms like Kahoot! helped in creating discussions that focused on the relevance of the material to the challenges and opportunities faced in the culinary industry. This demonstrates the endeavor to not only teach theory but also prepare students to face real conditions in the field. This statement is supported by an interview quote with (Informant AA, Thursday, February 29, 2024):

*"Learning tools such as colorful markers and Kahoot! helped us build strong connections between the course content and real life in the culinary business. Through the use of these, we were able to facilitate discussions that focused on the relevance of the material to the challenges and opportunities in today's culinary industry."*

The use of whiteboards and digital applications helps in illustrating the business decision-making process in the kitchen, from menu planning to raw material inventory management. This emphasizes the importance of integration between the theories learned and practical applications in the field to prepare students to become competent professionals in the culinary industry. This statement is supported by an interview quote with (Informant SA, Thursday, February 29, 2024):

*"For me, the importance of learning media in the culinary business applications course is to show students how theory and practice are closely related to each other. By using whiteboards and various digital applications, we can illustrate how business decisions are made in the kitchen, from menu planning to ingredient stock management."*

By ensuring that the material taught is relevant to the actual needs and challenges in the culinary industry, study programs can increase the attractiveness and value of education for students. This helps to ensure that graduates have not only the theoretical knowledge but also the practical skills necessary for success in a culinary career. Relevance and interconnectedness of course materials" in the context of culinary education, focusing on the importance of using learning media to bridge theoretical concepts with practical applications. Because the primary obligation of the college is to provide graduates who are professional and meet the ongoing needs of the industry. (Gössling & Michael Hall, 2021) said Restaurants are at the heart of these developments, and their decisions to purchase regional foods, or to prepare menus that are healthier and less environmentally problematic, have great influence on food production processes.

This study shows that the use of various digital media such as flipcharts, Padlet, and Kahoot has a positive impact on students' learning experience. The implication is that culinary education institutions should consider integrating various digital media into their curriculum to increase student engagement and understanding. The research findings emphasize the importance of visualization in understanding complex culinary business concepts. The implication is that educators should focus on developing visually rich learning materials to help students more easily understand and remember important

concepts. Research shows that the use of digital media can increase students' emotional engagement in the learning process. The implication is that teaching strategies should be designed to capitalize on this emotional aspect to increase student motivation and active participation. To effectively implement these technology-based teaching methods, the implication is that institutions need to invest in professional development for educators to improve their skills in using various digital media.

This study has limitations, although the research discussed several digital learning media (such as flipcharts, Padlet, and Kahoot), this broad scope may limit in-depth analysis of the effectiveness of each specific tool. This research focuses on the use of digital media without directly comparing it to traditional teaching methods. In essence, the passage about the study's limitations and suggestions for future research aligns with (Haryanti et al., 2019) Experiential Learning model by emphasizing the importance of direct experience (using digital media), reflection (acknowledging limitations), conceptualization (suggesting quantitative research), and experimentation (implementing new research methods). This approach aims to deepen understanding and effectiveness in the use of digital media in educational settings, similar to how Experiential Learning seeks to enhance learning through direct engagement and reflection on experiences. This limits understanding of the relative advantages of digital media compared to conventional approaches. The addition of a quantitative component with a larger sample size will increase the validity and reliability of the research findings, enable more robust statistical analysis, and provide a more comprehensive understanding of the impact of digital media use in culinary business learning. Thus, future research can be conducted with quantitative approaches such as class action research, and the effect of digital media on student learning outcomes. In addition, the research conducted at the end of the semester (week 15) will be better able to assess how students integrate the various concepts learned using digital media throughout the course.

### CONCLUSION

The integration of digital media, such as flipcharts, Padlet, and Kahoot, in culinary business education has shown significant positive impacts on students' learning experiences. These tools have enhanced emotional engagement, creating a more interactive and motivating learning environment that fosters active participation. Moreover, the visualization of concepts through digital media has aided students in comprehending and integrating complex culinary business concepts more effectively. The use of colors, graphics, and other visual elements has improved students' ability to process and retain information, contributing to a higher quality of overall learning experience. Students reported increased levels of engagement, deeper understanding, and more enjoyable learning experiences compared to traditional teaching methods.

Furthermore, the use of digital media has helped students connect course material with practical applications in the culinary industry, enhancing the relevance of the curriculum and preparing them for real-world challenges in their future careers. Although this research was limited to observations during the 3rd and 4th meetings, initial results suggest that the use of digital media has the potential to improve long-term learning effectiveness. This study also highlights the importance of adapting teaching methods to incorporate digital technology in culinary business curricula, not only to increase student engagement but also to prepare them for an increasingly digital business environment. However, further research is needed to confirm the long-term impact of these digital learning tools and to fully understand their potential to enhance pedagogical approaches in culinary education.

### ACKNOWLEDGMENTS

Thank you to the Director of Makassar Tourism Polytechnic for allowing the author to attend the CAE-TTC TEACHING TRAINING COURSES for Adult Educators at SHL Schweizerische Hotelfachschule Luzern. The module consists of 90 hours of net attendance time, 165 hours of self-study, and 150 hours of documented practical experience which results in a total course time of 405 hours. The expected application of the activity is to create a memorable classroom atmosphere through the utilization of digital media in the learning process.

### REFERENCE

- Acosta-Gonzaga, E., & Ramirez-Arellano, A. (2021). The Influence of Motivation, Emotions, Cognition, and Metacognition on Students' Learning Performance: A Comparative Study in Higher Education in Blended and Traditional Contexts. *SAGE Open*, 11(2). <https://doi.org/10.1177/21582440211027561>
- Aini, W., Darmayasa, D., Rinda, R., Karim, A. T. A., Sugiarto, A., Sejati, A. E., & Ridwan, M. (2024). Website learning media to enhance planning tour packages competencies: A case study from Makassar Tourism Polytechnic, Indonesia. *Jurnal Pendidikan Geografi: Kajian, Teori, Dan Praktek Dalam Bidang Pendidikan Dan Ilmu Geografi*, 29(1). <https://doi.org/10.17977/um017v29i12024p43-59>
- Alenezi, M., Wardat, S., & Akour, M. (2023). The Need of Integrating Digital Education in Higher Education: Challenges and Opportunities. *Sustainability (Switzerland)*, 15(6). <https://doi.org/10.3390/su15064782>
- Al-Freih, M., & Robinson, H. (2023). A Qualitative Exploration of Students' Perception of Care When Learning Online. *International Journal of Online Pedagogy and Course Design*, 14(1). <https://doi.org/10.4018/ijopcd.333715>
- Alkhabra, S., & Abdullah, N. (2016). Impact of Technology from Learning Environment to Organizational Practices. *International Journal of Social Sciences and Management*, 3(2). <https://doi.org/10.3126/ijssm.v3i2.14781>
- Askren, J., & James, W. (2021). Experiential Learning Methods in Culinary Course Can Bridge the Gap: Student Perceptions on How Hands-On Curriculum Prepares Them for Industry. *Journal of Hospitality and Tourism Education*, 33(2). <https://doi.org/10.1080/10963758.2020.1791134>
- Bobek, E., & Tversky, B. (2016). Creating visual explanations improves learning. *Cognitive Research: Principles and Implications*, 1(1). <https://doi.org/10.1186/s41235-016-0031-6>
- Çeken, B., & Taşkın, N. (2022). Multimedia learning principles in different learning environments: a systematic review. In *Smart Learning Environments* (Vol. 9, Issue 1). <https://doi.org/10.1186/s40561-022-00200-2>
- Cok. Istri Raka Marsiti, I Wayan Santyasa, Sudatha, G. W., & Sudarma, I. K. (2022). Multimedia for Culinary Students: Food and Beverage Processing Subject. *Journal of Education Technology*, 6(4). <https://doi.org/10.23887/jet.v6i4.53518>
- Delott Baker, E., Hope, L., & Karandjeff, K. (2009). Contextualized Teaching & Learning: A Promising Approach for Basic Skills Instruction. *The Research & Planning Group for California Community Colleges*.

- Ekincek, S., & Günay, S. (2023). A recipe for culinary creativity: Defining characteristics of creative chefs and their process. *International Journal of Gastronomy and Food Science*, 31. <https://doi.org/10.1016/j.ijgfs.2022.100633>
- Gössling, S., & Michael Hall, C. (2021). The Sustainable Chef: The Environment in Culinary Arts, Restaurants, and Hospitality. *The Sustainable Chef*.
- Hapsari, I. I., & Fatimah, M. (2021). Inovasi Pembelajaran Sebagai Strategi Peningkatan Kualitas Guru Di SDN 2 Setu Kulon Pendidikan Guru Sekolah Dasar , Universitas Muhammadiyah Cirebon. *Standarisasi Pendidikan Sekolah Dasar Menuju Era Human Society 5.0*.
- Haryanti, A., Suhartono, S., & Salimi, M. (2019). Penerapan Model Experiential Learning untuk Meningkatkan Hasil Belajar IPA Tema Panas dan Perpindahannya di Sekolah Dasar. *Jurnal Pijar Mipa*, 14(1). <https://doi.org/10.29303/jpm.v14i1.1046>
- Hellín, C. J., Calles-Esteban, F., Valledor, A., Gómez, J., Otón-Tortosa, S., & Tayebi, A. (2023). Enhancing Student Motivation and Engagement through a Gamified Learning Environment. *Sustainability (Switzerland)*, 15(19). <https://doi.org/10.3390/su151914119>
- Holik, M. (2019). The Flipped Classroom and its Impact on Student Engagement and Academic Performance in a Culinary Arts, Career and Technical Education Program. *Journal of Research in Technical Careers*, 3(2). <https://doi.org/10.9741/2578-2118.1072>
- Homsinah, S. (2022). Pengembangan Media Pembelajaran Komik Digital Materi Non Individual Service dalam Mata Kuliah Penataan dan Pelayanan Restoran. *Jurnal Sikola: Jurnal Kajian Pendidikan Dan Pembelajaran*, 3(4). <https://doi.org/10.24036/sikola.v3i4.191>
- Lewis, T., & Phillipov, M. (2018). Food/media: eating, cooking, and provisioning in a digital world. In *Communication Research and Practice* (Vol. 4, Issue 3). <https://doi.org/10.1080/22041451.2018.1482075>
- Lexy J. Moleong, Dr. M. A. (2019). Metodologi Penelitian Kualitatif (Edisi Revisi). *PT. Remaja Rosda Karya*. <https://doi.org/10.1016/j.carbpol.2013.02.055>
- Li, Y., Chen, D., & Deng, X. (2024). The impact of digital educational games on student's motivation for learning: The mediating effect of learning engagement and the moderating effect of the digital environment. *PLoS ONE*, 19(1 January). <https://doi.org/10.1371/journal.pone.0294350>
- Lin, X., Tang, W., Ma, W., Liu, Y., & Ding, F. (2023). The impact of media diversity and cognitive style on learning experience in programming video lecture: A brainwave analysis. *Education and Information Technologies*, 28(8). <https://doi.org/10.1007/s10639-023-11608-9>
- Lorbis, J. C. C. (2019). Utilization of Contextualized Teaching And Learning (CTL) Approach in Grade Two Araling Panlipunan. *Eric, April*.
- Mak, C., & Hong, J. (2020). Creating learning organization 2.0: a contextualized and multi-stakeholder approach. *Learning Organization*, 27(3). <https://doi.org/10.1108/TLO-01-2020-0020>

- Mdlalose, N., Ramaila, S., & Ramnarain, U. (2021). Using Kahoot! As A Formative Assessment Tool in Science Teacher Education. *International Journal of Higher Education*, 11(2). <https://doi.org/10.5430/ijhe.v11n2p43>
- Nesenbergs, K., Abolins, V., Ormanis, J., & Mednis, A. (2021). Use of augmented and virtual reality in remote higher education: A systematic umbrella review. In *Education Sciences* (Vol. 11, Issue 1). <https://doi.org/10.3390/educsci11010008>
- Özgür, A., & Altun, A. (2021). Emotional design and engagement with multimedia learning materials in E-learning. In *Motivation, Volition, and Engagement in Online Distance Learning*. <https://doi.org/10.4018/978-1-7998-7681-6.ch008>
- Rayan, B., & Watted, A. (2024). Enhancing Education in Elementary Schools through Gamified Learning: Exploring the Impact of Kahoot! on the Learning Process. *Education Sciences*, 14(3). <https://doi.org/10.3390/educsci14030277>
- Rukayah, Daryanto, J., Atmojo, I. R. W., Ardiansyah, R., Saputri, D. Y., & Salimi, M. (2022). Augmented Reality Media Development in STEAM Learning in Elementary Schools. *Ingenierie Des Systemes d'Information*, 27(3). <https://doi.org/10.18280/isi.270313>
- Sanfilippo, F., Blazauskas, T., Salvietti, G., Ramos, I., Vert, S., Radianti, J., Majchrzak, T. A., & Oliveira, D. (2022). A Perspective Review on Integrating VR/AR with Haptics into STEM Education for Multi-Sensory Learning†. In *Robotics* (Vol. 11, Issue 2). <https://doi.org/10.3390/robotics11020041>
- Setiawan, B., & Mutiara, E. (2020). Pengembangan Media Pembelajaran Makanan Indonesia Berbasis Website Sebagai Media Belajar Mandiri. *Garnish (Jurnal Pendidikan Tata Boga)*, 4(1).
- Shabiralyani, G., Hasan, K. S., Hamad, N., & Iqbal, N. (2015). Impact of Visual Aids in Enhancing the Learning Process Case Research: District Dera Ghazi Khan. *Journal of Education and Practice*, 6(19).
- Skuballa, I. T., Dammert, A., & Renkl, A. (2018). Two kinds of meaningful multimedia learning: Is cognitive activity alone as good as combined behavioral and cognitive activity? *Learning and Instruction*, 54. <https://doi.org/10.1016/j.learninstruc.2018.02.001>
- Sucahyo, Y. G., Utari, D., Budi, N. F. A., Hidayanto, A. N., & Chahyati, D. (2016). Knowledge management adoption and its impact on organizational learning and non-financial performance. *Knowledge Management and E-Learning*, 8(2). <https://doi.org/10.34105/j.kmel.2016.08.025>
- Sugiyono. (2020). Metodologi Penelitian Kualitatif. In *Metodologi Penelitian Kualitatif*. In *Rake Sarasin* (Issue March).
- Suni, M., S, Muh. T., & Ridwan, M. (2022). Adapting Culinary Business Model as a Source of Teaching Material in Hospitality Business Course. *AL-ISHLAH: Jurnal Pendidikan*, 14(3). <https://doi.org/10.35445/alishlah.v14i3.1369>
- Zheng, Y., Zhang, J., Li, Y., Wu, X., Ding, R., Luo, X., Liu, P., & Huang, J. (2024). Effects of digital game-based learning on students' digital etiquette literacy, learning motivations, and engagement. *Heliyon*, 10(1). <https://doi.org/10.1016/j.heliyon.2023.e23490>