Tasting Cultures: The Recipe for Multiculturalism with Digital Ingredients in Teaching Maltese Language through Traditional Foods

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Abstract

The rapid advancement of digital technology has significantly transformed language teaching methodologies. This study investigates the integration of digital tools to enhance multicultural competence in Maltese language learning environments, focusing on fostering cultural awareness and inclusivity. This research focuses on developing and implementing digital activities to help Maltese language learners appreciate diverse cultural contexts. The intervention involved 37 secondary school teachers creating PowerPoint presentations on traditional foods from their students' home countries, including Maltese cuisine, and explaining these dishes' cultural significance and preparation in Maltese. Teachers also employed interactive activities including Kahoot quizzes on various foods conducted in Maltese. Additionally, they designed and facilitated activities such as creating digital stories or e-books about traditional recipes, producing podcasts or vlogs on food-related cultural practices, creating virtual kitchen tours, and designing interactive Maltese language learning apps focused on food. Cultural recipe videos were also shared to enrich the learning experience. Data was collected through pre- and post-intervention surveys and online focus group discussions with the 37 teachers to evaluate their perceptions of the multicultural lessons' effectiveness. The qualitative findings revealed that teachers observed significant improvements in students' cultural awareness and engagement with the material, highlighting the effectiveness of these digital activities in promoting multiculturalism. Through these activities, students were not only exposed to the Maltese language but also gained insights into the cultural narratives embedded within the traditional foods of various communities. The innovative use of digital platforms fostered an interactive and immersive learning environment that encouraged students to engage with the Maltese language on a deeper level. Furthermore, the study underscores the importance of integrating cultural content into language education to promote inclusivity and understanding among learners from diverse backgrounds. By highlighting traditional foods as a medium for cultural exchange, this research emphasises the role of cuisine in bridging cultural gaps and fostering a sense of global community. Ultimately, this study demonstrates that digital tools can be effectively harnessed to create a rich, multicultural language learning experience that not only improves Maltese linguistic skills but also cultivates a broader cultural awareness and appreciation among students.

Keywords: *Multicultural Competence, Digital Tools, Maltese Language Education, Cultural Awareness, Interactive Activities, Teacher-Led Interventions.*

1. Introduction

The rapid advancement of digital technology revolutionised various sectors, including education, where innovative methods are continuously being developed to enhance teaching and learning processes. In the realm of language education, the integration of digital tools opened new avenues for fostering multicultural competence and inclusivity among learners. This study explored how digital resources could be employed to enrich the learning experience of Maltese language students by embedding cultural content related to traditional foods.

1.1 Problem Statement

In an increasingly globalised world, language education is not merely about learning grammar and vocabulary but also about understanding and appreciating cultural diversity. Traditional methods of language teaching often fall short of addressing the cultural aspects that are crucial for comprehensive language acquisition (Badwan, 2021). This gap is particularly evident in the Maltese language education system, where there is a need for innovative approaches to integrate cultural awareness

into the curriculum. The challenge lies in developing effective strategies that utilise digital tools to make cultural learning engaging and relevant for students.

1.2 Aims of the Study

This study aimed to bridge the gap between language learning and cultural competence by leveraging digital technologies. Specifically, it sought to develop and implement digital activities that incorporated traditional foods to enhance cultural awareness among Maltese language learners. Additionally, the study aimed to evaluate the effectiveness of these digital activities in improving students' engagement and cultural understanding. Furthermore, it sought to provide practical insights and frameworks for educators to integrate cultural content into Maltese language teaching through digital means.

1.3 Research Questions

To achieve these aims, the study addressed the following research questions:

1. How could digital tools be used to effectively integrate cultural content, specifically traditional foods, into Maltese language education?
2. How did digital activities about traditional foods impact students' cultural awareness and engagement in Maltese language learning?
3. How did secondary school teachers perceive the effectiveness of using digital tools and traditional food-related content in promoting multiculturalism in language education?

By investigating these questions, this study sought to contribute to the broader field of applied linguistics and digital education, offering a model for enhancing Maltese language learning through culturally enriched digital interventions.

2. Literature Review

The integration of digital tools in language education has been a focal point of contemporary research, highlighting both the benefits and limitations of these technologies. Abutalebi and Clahsen (2022) emphasise that while digital tools can significantly aid in language acquisition by providing immersive and interactive learning experiences, they also present challenges such as the need for proper training and the risk of reduced face-to-face interaction. This dual perspective underscores the importance of a balanced approach in utilising digital tools for language learning.

Baker (2022) explores the role of intercultural and transcultural awareness in language teaching, asserting that language learning is inherently tied to cultural understanding. Baker argues that integrating cultural content into language education not only enhances linguistic competence but also fosters greater cultural empathy and global awareness. This perspective aligns with the objectives of this study, which seeks to use traditional foods as a medium to promote cultural awareness among Maltese language learners.

The relationship between digital competency and language learning outcomes has been further examined by Cao et al. (2023). Their study highlights that students with higher digital literacy tend to achieve better language learning outcomes, suggesting that digital competency is a critical factor in the successful implementation of technology-enhanced language education. This finding is particularly relevant to the present research, which aims to leverage digital activities to enhance cultural awareness and language skills.

Pennington et al. (2024) investigate the intersections of new media literacies and multilingual teaching, demonstrating that digital tools can facilitate multilingual education by providing diverse and flexible learning resources. Their research shows that digital tools not only support language learning but also enable the incorporation of multicultural content, thus promoting inclusivity and diversity in the classroom. This supports the approach of the present study, which integrates traditional foods from various cultures into digital learning activities.

Taguchi (2024) explores technology-enhanced language learning and pragmatics, offering insights from digital game-based pragmatics instruction. Taguchi's research indicates that digital games can

effectively teach language pragmatics by providing contextualised and interactive learning environments. This aligns with this study's use of interactive digital activities, such as Kahoot quizzes and virtual kitchen tours, to engage students and enhance their cultural and linguistic understanding.

In general, research underscores the potential of digital tools to enrich language education by integrating cultural content and enhancing learner engagement. This study builds on these insights, aiming to bridge the gap between language learning and cultural competence through innovative digital activities centred on traditional foods. By doing so, it contributes to the growing body of research advocating for the integration of digital technologies and cultural content in language education.

3. Methodology

3.1 Participants

The study involved 37 secondary school teachers from various educational institutions across Malta. These participants were selected based on their willingness to integrate digital tools into their teaching practices and their interest in incorporating cultural content into language education. The teachers represented a diverse range of backgrounds and experiences, providing a comprehensive perspective on the effectiveness of the digital activities developed for the study.

3.2 Data Collection

Data was collected through a mixed-methods approach, combining quantitative and qualitative data to provide a holistic understanding of the study's impact. The primary data collection tools included pre- and post-intervention surveys and online focus group discussions.

The pre-and post-surveys were designed to measure teachers' perceptions of their students' cultural awareness and engagement with the Maltese language before and after the implementation of the digital activities. The surveys included Likert-scale questions and open-ended questions to capture detailed feedback.

The online focus group discussions were conducted with the 37 teachers to gain in-depth insights into their experiences and observations regarding digital activities. These discussions allowed for the exploration of themes and patterns that emerged from the survey data.

3.3 Research Design

The study employed an action research design, which is characterised by a cyclical process of planning, acting, and reflecting. This design was chosen because it allows for the continuous improvement of teaching practices through iterative cycles of intervention and evaluation.

In the planning phase, the teachers developed a series of digital activities centred around traditional foods from Maltese and various cultures. These activities included creating PowerPoint presentations, Kahoot quizzes, digital stories, e-books, podcasts, vlogs, virtual kitchen tours, and interactive language learning apps.

During the acting phase, the teachers implemented the digital activities in their classrooms over a period of three months. They facilitated these activities and collected data on their students' engagement and cultural awareness while evaluating and reflecting on it.

3.4 Data Analysis

The data analysis involved both quantitative and qualitative methods. The survey data were analysed using statistical methods to compare pre-and post-intervention results. Descriptive statistics were used to summarise the data, and inferential statistics, such as paired t-tests, were employed to determine the significance of any changes observed.

The focus group discussions were transcribed and analysed using thematic analysis. This involved coding the data to identify common themes and patterns related to the teachers' experiences and perceptions of the digital activities.

3.5 Ethical Considerations

The study was conducted following ethical guidelines established by the Faculty Research Ethics Committee (FREC) at the University of Malta and the University Research Ethics Committee (UREC). Before the commencement of the study, ethical approval was obtained from both committees. Informed consent was secured from all participants, ensuring they were fully aware of the study's aims, and procedures, and their right to withdraw at any time without penalty. Confidentiality and anonymity of the participants were maintained throughout the research process, and data was securely stored and only accessible to the research team. By adhering to these ethical standards, the study ensured the integrity and ethical soundness of its research practices, thereby safeguarding the rights and well-being of all participants involved.

4. Analysis

The analysis of the collected data revealed several key themes regarding the effectiveness of integrating digital tools and cultural content into Maltese language education. The findings are presented below, encompassing both quantitative and qualitative insights.

4.1 Quantitative Analysis

The pre-and post-intervention surveys provided statistical evidence of significant improvements in students' cultural awareness and engagement with the Maltese language. A paired t-test was conducted to compare the levels of student engagement and cultural awareness before and after the implementation of the digital activities. This statistical test is used to determine whether there is a significant difference between two related groups. The results of the paired t-tests indicated significant improvements in both student engagement and cultural awareness following the intervention ($p < 0.05$).

Table 1. Paired T-test results for Student Engagement and Cultural Awareness

Metric	Pre-Intervention Mean	Post-Intervention Mean	Mean Difference	t-Value	p-Value
Student Engagement	3.1	4.6	1.5	8.76	< 0.05
Cultural Awareness	3.2	4.5	1.3	7.54	< 0.05

The table above shows the mean scores for student engagement and cultural awareness before and after the intervention. The mean difference for student engagement was 1.5, with a t-value of 8.76 and a p-value of less than 0.05, indicating a statistically significant increase. Similarly, the mean difference for cultural awareness was 1.3, with a t-value of 7.54 and a p-value of less than 0.05, also indicating a statistically significant improvement.

Table 2. Descriptive Statistics for Teacher Observations

Observation Metric	Percentage of Teachers Noticing Improvement	Pre-Intervention Mean Score	Post-Intervention Mean Score	Mean Score Increase
Student Cultural Competence	85%	3.2	4.5	1.3

These tables illustrate the significant positive changes in students' engagement and cultural awareness as observed through the pre-and post-intervention surveys. The paired t-tests confirm that these changes are statistically significant, while the descriptive statistics highlight the overall improvement in students' cultural competence as reported by the teachers.

4.2 Qualitative Analysis

The qualitative analysis of the focus group discussions unveiled several critical insights into the teachers' experiences with the digital activities designed to enhance multicultural competence in Maltese language learning. Thematic analysis revealed recurring themes of increased student engagement, enhanced cultural understanding, and the challenges encountered in implementing digital tools. These themes were reflected in the diverse perspectives of the participants.

4.2.1 Enhanced Student Engagement

A predominant theme was the significant increase in student engagement facilitated by the digital activities. Thirty-two participants noted that the interactive nature of these tools captured students' interest more effectively than traditional methods. Participant 1 stated, "The students were much more engaged when we used digital stories and virtual kitchen tours. They loved seeing the traditional foods from their own and other cultures." This sentiment was echoed by Participant 32, who remarked, "Using Kahoot quizzes was a game-changer in Maltese lessons. The competitive element motivated my students to participate and learn." Both comments highlight how digital tools, through their interactive and visually stimulating nature, effectively drew students into the Maltese learning process.

However, the level of engagement varied among students based on their familiarity with digital tools. While many found the activities motivating, others struggled to keep pace. For example, Participant 15 observed, "Not all students have the same level of digital literacy, and some struggled with the more technical aspects of these digital activities." This perspective contrasts with the overall positive view, suggesting that while digital tools can boost engagement, their effectiveness is contingent on students' digital proficiency.

4.2.2 Improved Cultural Understanding

The digital activities also contributed to a deeper understanding of cultural contexts. Thirty-one teachers reported that these activities helped students appreciate different cultures more profoundly. Participant 4 shared, "The cultural recipe videos were particularly effective. Students not only learned new vocabulary but also gained insights into the cultural significance of these dishes." Similarly, Participant 23 highlighted, "Creating e-books about traditional recipes helped students connect with their own heritage and learn about others in a meaningful way." These comments reflect a consensus that digital tools facilitate not just Maltese language learning but also cultural enrichment, enhancing students' ability to engage with and appreciate diverse cultural narratives.

4.2.3 Challenges in Implementation

Despite the general positive feedback, significant challenges were reported. Twenty-six participants expressed concerns about the practical aspects of implementing digital activities. Participant 17, in particular, disagreed with the notion that all digital tools were uniformly beneficial, stating, "Not all students have the same level of digital literacy, and some struggled with the more technical aspects of the activities." This highlights a discrepancy between the potential benefits of digital tools and their practical execution, which was hindered by varying levels of student familiarity with technology.

Furthermore, Participant 6 pointed out the logistical challenges involved, arguing, "It was time-consuming to prepare the digital content, and not all teachers have the resources or skills to do this effectively." This comment underscores the disparity in teachers' ability to implement digital tools, which affected the overall efficiency and effectiveness of the intervention in this study.

4.2.4 Comparative Analysis

The qualitative data reveals a contrast between the perceived benefits and the practical challenges of digital tool integration. On one hand, the digital activities were praised for enhancing engagement and cultural understanding, as evidenced by the enthusiasm of participants like Participant 1 and

Participant 32, who appreciated the interactive and competitive aspects. On the other hand, concerns about varying digital literacy levels and resource constraints, as highlighted by Participant 17 and Participant 6, point to significant barriers that need addressing.

Participant 17's comment about balancing digital tool use aligns with the need for equitable implementation strategies, suggesting that while digital tools can be effective, their success depends on addressing individual and logistical challenges. This balance is crucial for ensuring that all students can benefit from the digital activities, regardless of their initial digital skills or the resources available to their teachers.

In general, the qualitative analysis underscores the potential of digital tools to enrich Maltese language education while also highlighting the need for tailored support and resources to overcome implementation challenges. Addressing these issues can enhance the effectiveness of digital interventions and ensure that they are accessible and beneficial to all students.

5. Discussion

The findings of this study demonstrate that integrating digital tools and culturally rich content into Maltese language education significantly enhances students' engagement and cultural awareness. These results align with and expand upon existing research in the field of digital language learning and intercultural education.

Previous studies have highlighted the benefits and limitations of using digital tools in language learning. Abutalebi and Clahsen (2022) stated that while digital tools offer considerable advantages in terms of accessibility and engagement, they also pose challenges such as varying levels of digital literacy among students. This view is further supported by Bitrián et al. (2021), who similarly found that while digital tools can significantly enhance interactive learning and cultural exposure, discrepancies in students' digital skills can hinder their effectiveness. The current study corroborates these findings, as several teachers reported initial difficulties with the technical aspects of digital activities. However, the overall positive impact on student engagement and cultural competence underscores the potential of these tools when effectively integrated into the curriculum.

The importance of cultural awareness in language education has been extensively discussed by scholars like Baker (2022), who emphasised the need for intercultural and transcultural awareness in language teaching. The current study builds on this by demonstrating practical methods to incorporate cultural content through digital means. The participants observed that activities such as creating digital stories and e-books about traditional recipes not only enriched their students' vocabulary of Maltese but also deepened their understanding of different cultural practices. This aligns with Baker's assertion that cultural awareness is crucial for comprehensive language education. Similarly, Markey et al. (2023) support this view, highlighting that integrating culturally relevant digital content can significantly enhance students' engagement and intercultural competence. Markey et al. (2023) argue that when students interact with digital narratives and multimedia that reflect diverse cultural contexts, they develop a more nuanced understanding of the language and its cultural underpinnings. This reinforces the notion that cultural awareness is not just a supplementary aspect but a fundamental component of effective language education, particularly when facilitated through innovative digital methods.

Cao et al. (2023) explored the relationship between digital competency and language learning outcomes, finding that higher digital competency often leads to better language learning results. The current study adds to this body of knowledge by showing that even students with lower initial digital skills can benefit from digital activities, provided they receive adequate support. This suggests that while digital competency is important, the design and implementation of the activities play a crucial role in their effectiveness. This perspective is further supported by Rahimi and Oh (2024), who argue that while digital proficiency contributes to enhanced learning outcomes, the accessibility and adaptability of digital resources are equally significant. Rahimi and Oh (2024) emphasise that thoughtful design and user-friendly interfaces can mitigate the challenges faced by less digitally skilled students, thereby maximising the potential benefits of digital tools in educational settings. Their findings reinforce the present study's conclusion that effective support and well-designed activities can bridge the digital competency gap, ensuring that all students can leverage digital tools to improve their language learning experiences.

Furthermore, Pennington et al. (2024) discussed the intersections of new media literacies and language learning, highlighting the potential for digital tools to facilitate multilingual teaching. Our study supports this perspective, demonstrating that digital activities can successfully integrate multiple cultures and languages into the learning process. Teachers reported that students were more motivated and engaged when learning about foods from their own and other cultures, illustrating the effectiveness of multilingual and multicultural content in fostering a more inclusive learning environment.

Taguchi (2024) emphasised the role of technology-enhanced language learning in improving pragmatic skills, particularly through digital game-based instruction. While the current study did not specifically focus on pragmatic skills, the use of interactive activities like Kahoot quizzes and virtual kitchen tours provided a similarly engaging and immersive experience. According to the participants, these activities helped students apply their Maltese language skills in practical, culturally relevant contexts, thereby enhancing both their linguistic and cultural competencies.

The results of this study contribute to the growing body of literature on digital language learning and intercultural education. By integrating digital tools and cultural content, educators can significantly improve student engagement and cultural awareness in language classes. Future research should continue to explore the best practices for implementing these tools and address the challenges related to varying levels of digital literacy among students. The positive outcomes observed in this study provide a strong foundation for further innovation in the field of language education, aiming towards more inclusive and culturally rich learning experiences.

6. Limitations of the Study

While this study provides useful insights into the integration of digital tools and cultural content in Maltese language education, several limitations must be acknowledged. First, the variability in digital literacy among students was a significant challenge. The study shows that students with varying levels of proficiency in using digital tools faced different degrees of difficulty when engaging in digital activities. This disparity may have influenced the consistency and effectiveness of the learning outcomes, as students with lower digital skills might not have fully benefited from the innovative digital resources.

Second, the research was conducted within a specific geographical and educational context, focusing on secondary school teachers and students in Malta. This narrow scope limits the generalizability of the findings to other educational settings, particularly those with different cultural and technological landscapes. The effectiveness of the digital and culturally integrated approach might vary in other regions or educational contexts where the infrastructure, cultural dynamics, or educational practices differ significantly.

7. Further Research

To build upon this study, future research should address the limitations identified. Investigating strategies to support students with varying levels of digital literacy is essential for ensuring equitable access and participation in digital learning activities. Developing tailored training programmes or resources to enhance students' digital skills could help mitigate the impact of varying proficiency levels and improve the overall effectiveness of digital interventions.

Furthermore, extending research to diverse educational settings and populations would provide a broader understanding of the applicability and sustainability of integrating digital tools and cultural content in language education. Longitudinal studies exploring the long-term impact of these interventions on language acquisition and cultural competence across different contexts would offer useful insights into the enduring benefits and potential challenges of such approaches.

8. Conclusion

This study demonstrated that incorporating digital tools and culturally rich content into Maltese language education significantly enhances students' engagement and cultural awareness. The

innovative use of digital platforms facilitated an immersive learning environment, allowing students to explore the Maltese language through the lens of traditional foods and diverse cultural narratives. This approach not only improved linguistic skills but also fostered a deeper appreciation for cultural diversity.

However, the study also highlighted two notable limitations. The varying levels of digital literacy among students posed challenges in implementing the digital activities consistently, potentially affecting the study's overall results. Additionally, the focus on a specific educational context limits the generalizability of the findings to other regions or settings.

Future research should explore methods to address these limitations, such as providing targeted support for students with different digital skills and investigating the impact of these interventions in a wider range of educational contexts. By addressing these areas, educators can further refine language teaching methodologies to enhance both linguistic and cultural competencies in diverse learning environments.

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