Developing Infographics of Cakeapp-Based Teaching Speaking Ideas for 11th Grade Tourism Vocational School English Teacher at SMK Negeri 2 Tabanan

Ni Luh Manik Santi Devi Sitangsu[1], IGA Lokita Purnamika Utami[2], Dewa Ayu Eka Agustini[3]

English Language Education, Universitas Pendidikan Ganesha, Indonesia
[1] manik.santi@undiksha.ac.id, [2] lokitapurnamika@undiksha.ac.id, [3] eka.agustini@undiksha.ac.id

Abstract

The integration of digital tools in teaching speaking skills has become essential in modern education, particularly in vocational schools in Indonesia. However, many English teachers in vocational schools, especially those in tourism, face challenges in utilizing advanced digital tools like CakeApp due to limited resources and inadequate training. This research aims to develop and evaluate CakeApp-based teaching infographics tailored for 11th-grade English teachers in the tourism sector at SMK Negeri 2 Tabanan. By employing the Design and Development (D&D) model, specifically the DDE framework, the research focuses on designing infographics that support speaking activities using CakeApp's interactive features. The development process consists of needs analysis, content creation, and expert evaluations. The study shows that the developed infographics align with curriculum objectives and improve the teachers' ability to deliver engaging speaking lessons. The quality evaluation results indicate that the infographics are of excellent quality, with high expert judgment scores and positive user feedback. This research contributes to the integration of digital tools in vocational education, enhancing speaking skills in a contextual and interactive manner.

Keywords: CakeApp; Infographics; Vocational Education; Teaching Speaking; Tourism

INTRODUCTION

The role of English in Indonesia has evolved significantly over the decades, especially since it was officially introduced as a foreign language in schools following the decision by the Minister of Education and Culture in 1967. English became part of the curriculum under the National Education Law No. 20/2003, which mandates local content in primary and secondary education (Sujarhati, 2010). Over time, English education in Indonesia has shifted its focus in different types of schools, with vocational institutions, particularly tourism schools, emphasizing the practical application of English skills. This shift underscores the importance of speaking skills for students pursuing careers in tourism, as they are required to communicate with clients and customers who predominantly use English as their primary language (Khoirunnisa, 2018). Consequently, speaking skills in tourism schools are considered paramount compared to other language competencies such as reading, writing, and listening. As the 4.0 era advances, technological tools have begun playing an increasingly critical role in enhancing education. The use of technology in classrooms has grown, with digital tools becoming integral to educational practices. However, despite the evident potential, the implementation of educational technology in Indonesian schools has been inconsistent, especially in rural areas and certain institutions. A study by Machmud et al. (2021) highlights that while Indonesian teachers generally have a good understanding of Information and Communication Technology (ICT), many face challenges in integrating technology effectively into their teaching (Machmud, 2021). The lack of facilities

and teachers' limited skills in utilizing advanced digital tools such as educational applications often impede the seamless incorporation of technology into the learning process.

At SMK Negeri 2 Tabanan, the use of technology in teaching speaking skills remains limited. Teachers primarily rely on traditional tools like YouTube videos, PowerPoint presentations, and LCD projectors. Although some teachers utilize digital platforms like Duolingo and Quizlet, there is little familiarity with more specialized tools such as the CakeApp, an English learning application designed to improve speaking, listening, writing, and reading skills. Despite the potential of CakeApp in enhancing speaking activities, its integration into the classroom has been minimal. Moreover, the available content on the app may not fully align with the specific topics required by the curriculum, creating a challenge for teachers in adapting the app to meet their educational objectives. The need for a structured guide to effectively integrate CakeApp into speaking lessons becomes evident, particularly through the development of infographics.

Infographics, as tools that simplify complex information into visually engaging and easily understandable formats, have shown promise in enhancing learning. Saptodewo (2014) defines infographics as data visualization tools that condense information for easy comprehension, which can be highly beneficial for teachers looking to integrate new technology into their teaching strategies (Saptodewo, 2014). Given the challenges at SMK Negeri 2 Tabanan, the development of infographics explaining how to use CakeApp for teaching speaking skills is a crucial step in addressing these educational gaps. Such infographics would provide a practical, accessible guide for teachers to navigate the app's features, ensuring that speaking lessons are aligned with students' needs and the curriculum's objectives.

This research is particularly significant as it focuses on the creation of CakeApp-based teaching infographics, an area that has not been extensively explored in previous studies. While studies by Paramita, et al. (2022) and Bimantara, et al. (2020) have demonstrated the positive impact of CakeApp and infographics on speaking skills, there is a notable gap in research concerning the development of infographics specifically tailored to CakeApp's integration in speaking lessons. The current study seeks to fill this gap by developing infographics that will serve as instructional tools for teachers at SMK Negeri 2 Tabanan. The goal is to bridge the gap between teachers' current capabilities and the integration of modern educational technology that can enhance students' speaking skills in the tourism field.

The research questions guiding this study are twofold, first, "How are the infographics of CakeApp-based teaching speaking ideas developed?" and second, "How is the quality of the infographics of CakeApp-based teaching speaking ideas assessed?" These questions will direct the development of the infographics and their evaluation in terms of both their effectiveness and their alignment with teaching objectives. The development of such infographics is expected to directly address the challenges faced by teachers in integrating digital tools into their lessons, particularly in enhancing speaking proficiency. This research holds both theoretical and practical significance. Theoretically, it contributes to the literature on the integration of technology in language teaching, especially in the context of vocational education. Practically, it provides a valuable resource for English teachers in tourism vocational schools, specifically those at SMK Negeri 2 Tabanan, by offering a structured and accessible guide for incorporating CakeApp into their speaking lessons. By doing so, this study aims to improve the quality of speaking instruction, preparing students for their future careers in the tourism industry while simultaneously advancing the use of educational technology in Indonesian classrooms.

METHOD

This study employs the Design & Development (D&D) model utilizing the ADDE (Analysis, Design, Development, Evaluation) framework (Cheong, 2023). The design phase involves

translating learning objectives into instructional designs, based on a needs analysis conducted through interviews with 11th-grade English teachers at SMK Negeri 2 Tabanan. This process identifies challenges in teaching English for Specific Purposes (ESP) and highlights the necessity for CakeApp-based infographics to enhance speaking lessons. During the development phase, infographics are designed using tools such as Canva or Adobe Illustrator, aligning with the curriculum to support speaking activities. These infographics introduce CakeApp features and provide structured speaking materials aimed at improving students' speaking skills. In the evaluation phase, expert assessments are conducted using a content analysis sheet and an expert judgment table to ensure content quality, relevance, and validity (Dick, 2014). The research is conducted at SMK Negeri 2 Tabanan, a leading tourism vocational school, focusing on 11th-grade English teachers as the subjects of the study. The object of the study is the development of CakeApp-based infographics designed to improve speaking instruction for 11th-grade tourism students. These infographics serve to introduce CakeApp's key features while providing structured materials tailored to enhance learning outcomes and address the challenges teachers face in teaching speaking skills.

Data collection involves a combination of interviews, document analysis, and infographic evaluation. Interviews are conducted with teachers to explore their instructional methods, challenges, and preferences regarding teaching tools. Document analysis includes reviewing syllabi, lesson plans, and textbooks to ensure alignment of the developed materials with curriculum and speaking objectives. The infographics are developed based on syllabus analysis and teacher input, and they are refined using expert feedback. Expert reviews, teacher interviews, and subsequent data analysis are conducted to assess the content validity and ensure alignment with instructional goals. Various instruments are used for data collection, including research notes to capture interview results, a syllabus analysis matrix for evaluating material alignment with speaking objectives, infographic blueprints to document the design process, expert validation rubrics to assess content and media validity, and Likert-scale questionnaires for participant responses. Content validity is determined using Gregory's Formula, with coefficients above 0.8 indicating high validity (Gregory, 2000). Statistical analysis includes calculating averages, standard deviations, and performing a one-sample T-test to assess the significance of expert responses. The Content Validity Index (CVI) further evaluates the effectiveness and relevance of the developed infographics for enhancing English-speaking instruction (Arikunto, 2003).

RESULTS AND DISCUSSION

Results

The findings highlight the development and evaluation of teaching materials integrating CakeApp and infographics to enhance speaking skills in vocational education. By addressing challenges like vocabulary and pronunciation issues, this study bridges traditional methods with modern digital tools. The materials align with curriculum requirements and demonstrate potential to improve student engagement and outcomes, setting the stage for discussions on development, implementation, and evaluation.

Needs Analysis

The needs analysis conducted for this research involved both teacher interviews and classroom observations, aimed at identifying the challenges faced by English teachers in teaching speaking skills to 11th-grade tourism vocational students at SMK Negeri 2 Tabanan. The primary objective of the analysis was to improve students' speaking abilities by addressing specific learning needs and target situations within the context of English for Specific Purposes (ESP). By exploring teachers' challenges and students' performance, the researcher sought to identify

key gaps in the existing teaching practices, particularly those related to vocabulary, grammar, pronunciation, and idea development (Kurniawan, 2022). The results of this analysis were intended to provide insights into how teaching methods could be adapted to better meet the needs of tourism students.

The classroom observations revealed several common instructional strategies employed by teachers, including problem-based learning, cooperative learning, peer work, role play, and project-based learning. While these methods were designed to engage students in meaningful speaking activities, teachers reported persistent challenges in students' speaking performance (Razi, 2021). Specifically, students struggled with a limited vocabulary, poor pronunciation, and difficulty in articulating ideas during speaking activities. Furthermore, teachers observed that students' lack of confidence in using English, particularly in tourism-related contexts, significantly hindered their speaking performance. These issues were exacerbated by the fact that English is not commonly used in students' daily lives, making it more difficult for them to practice the language in real-world situations. In response to these challenges, teachers have incorporated various digital tools, such as Duolingo, Quizizz, and YouTube, into their teaching practices to enhance student engagement and speaking skills. However, despite the use of these tools, teachers reported that they had never integrated the Cake App into their lessons. Technical difficulties, including limited internet access and insufficient device storage, were cited as barriers to adopting new digital tools. In light of these challenges, the teachers expressed a desire for additional instructional resources, particularly infographics, that would guide them in incorporating the Cake App into their speaking lessons (Bontisesari, 2022). These infographics were seen as a way to streamline lesson planning and offer clear, step-by-step instructions for using the Cake App to improve students' speaking skills.

Teachers specifically requested infographics that would provide practical guidance on how to integrate the Cake App into various stages of a speaking lesson, including pre-activity, while-activity, and post-activity phases. These infographics would be designed to help teachers structure lessons in a way that is both engaging and aligned with the specific needs of their students, especially in the context of tourism-related language use. The infographics would also address essential aspects of speaking instruction, such as sentence structures, social functions, and appropriate language use in context. Teachers believed that such resources would enable them to create more effective, contextually relevant speaking activities that could better engage students and improve their speaking performance.

The syllabus and curriculum analysis further confirmed that speaking competencies in the tourism program focus on essential communication skills, such as expressing opinions, giving directions, and conducting tourism-related conversations. These competencies are in line with the Indonesian National Competency Standards (*Standar Kompetensi Lulusan*) for vocational high schools. The integration of CakeApp, particularly its speaking-oriented features like conversation simulations, was found to support these learning outcomes by providing context-based speaking practice (Sujana, 2024). By aligning the Cake App with the curriculum, teachers can enhance students' language proficiency in a way that is directly applicable to the tourism industry, ensuring that students are better prepared for real-world communication in tourism-related contexts.

Based on the needs analysis, the researcher developed an infographic blueprint to align the curriculum with speaking activities, focusing on tourism-specific language skills. The blueprint consisted of four key components: Tourism Vocabulary (T-V), Essential Phrases (E-P), Scenario of Demonstration (S-D), and Lesson Plan (L-P). This framework aimed to create effective and relevant speaking lessons by integrating CakeApp's features with lesson topics and targeted learning outcomes. The researcher refined the syllabus and ensured alignment between the curriculum and the app's capabilities, resulting in pedagogically sound teaching

materials that enhanced students' speaking skills in real-world tourism contexts while meeting curriculum requirements (Anggraini, 2022).

Design Phase

The Design Phase of this study focused on creating an infographic blueprint that would enhance students' speaking skills in vocational education, specifically for 11th grade tourism students at SMK Negeri 2 Tabanan. The blueprint was developed using the ADDE instructional model, which emphasizes a structured and systematic process from analysis to evaluation (Branch, 2009). This model guided the creation of an engaging and educational tool aimed at supporting students' oral communication development, with particular attention given to real-life scenarios relevant to the tourism industry. The use of CakeApp, a mobile application that offers pronunciation feedback and interactive conversation simulations, was integrated into the design to supplement traditional classroom activities, providing students with additional opportunities for speaking practice in authentic contexts.

During the Analysis Phase, the design aimed to align learning goals with speaking competency standards by focusing on communicative tasks relevant to the tourism and hospitality fields, such as introducing job roles, ordering food, and describing culinary processes. These tasks were chosen to help students build confidence and fluency in real-life situations. The design also integrated CakeApp's features, such as pronunciation feedback and conversation simulations, to complement classroom activities. In the Design Phase, the infographic was divided into three sections: Descriptive Text, Procedure Text, and Simple Report Text. The first section, Descriptive Text, included a role-play activity titled "Catching Up with an Old Friend," where students described job roles using functional expressions, helping them practice workplace-related vocabulary in tourism contexts.

The second section, Procedure Text, focused on teaching students how to order food in a restaurant. A role-play titled "Ordering Food at a Restaurant" helped students practice food-related vocabulary and common phrases used in restaurant settings, such as "Can I get...?" and "Hold the sauce, please." This exercise not only reinforced vocabulary retention but also equipped students with the language needed for real-world situations in the tourism and hospitality industry. The third section, Simple Report Text, involved a role-play titled "Culinary Presentation," where students described food preparation steps, practicing culinary terminology like "chop," "boil," and "seasoning," while using phrases like "First, we need to chop the vegetables..." During the Implementation Phase, the infographic was used as a teaching guide, supported by CakeApp's video lessons in a flipped classroom approach. This allowed students to learn key expressions and receive pronunciation feedback independently before class. In-class role-plays, supported by the infographic, created a blended learning environment, combining traditional methods with digital tools for dynamic language practice. Canva was used to design visually engaging infographics, ensuring clarity and learner engagement, and the development process involved expert validation and iterative refinements to meet both technical and aesthetic standards (Gustafson, 2002).

Figure 1. Content Products

The Evaluation Phase assessed students' speaking skills using both the role-plays and CakeApp-based quizzes. The evaluation criteria included vocabulary usage, pronunciation accuracy, fluency, and context-appropriate language use. Teachers provided immediate feedback during role-play activities, while the CakeApp's automatic feedback system reinforced learning outside the classroom. This dual approach to feedback ensured that students received timely, constructive critiques on their speaking performance, helping them address weaknesses and improve their skills progressively. The combination of structured role-play scenarios, real-time feedback, and technology-supported learning offered a comprehensive framework for enhancing students' speaking competencies in real-life contexts.

Development Phase

The development phase focuses on creating CakeApp-based speaking infographics for 11th-grade tourism vocational students at SMK Negeri 2 Tabanan. Using Canva, the researcher transformed the syllabus-aligned learning framework into visually appealing and interactive infographics that integrate CakeApp features, including pronunciation practice, vocabulary development, and conversation simulations. These materials were designed to support speaking tasks in real-life culinary contexts, such as role-plays on describing jobs, presenting recipes, and customer service scenarios. Each section highlights key vocabulary, phrases, and learning outcomes to enhance students' fluency and confidence in communicative tasks (Yan, 2024).

The researcher accessed Canva via its website or app, utilizing its Pro features for enhanced design capabilities. A suitable infographic template was selected from Canva's library, customized with elements like backgrounds, text types, and color schemes to align with the syllabus analysis. Content development included sections for titles, learning outcomes, culinary vocabulary, and lesson plans, incorporating role-play scenarios such as job descriptions, recipe presentations, and creating advertisements. Creativity was applied in adjusting text, colors, and visuals to ensure the infographics were both educationally relevant and visually engaging.

Figure 2. The Infographic Contents Display

The researcher utilized Canva's built-in QR Code feature to embed access links to supporting documents stored in Google Drive, enabling teachers to scan and access materials instantly. Final design adjustments included adding relevant design elements using Canva's 'Elements' feature, with careful attention to color and layout consistency to ensure a visually engaging and balanced presentation.

Figure 3. The QR Code in the Complete Design of Infographics

Once completed, the infographic prototypes were shared with English teachers at SMK Negeri 2 Tabanan for usability testing, focusing on clarity, alignment with learning objectives, and user-friendliness to support culinary-related speaking practice effectively.

Evaluation Procedures

To evaluate the quality of the Cake App-based teaching speaking infographics, expert judgment was used. Two field experts assessed the infographics based on two categories: content expert judgment and product expert judgment. After collecting scores from both evaluations, the data were processed using the percentage formula (Tegeh, 2013). The results were analyzed using the Level of Accomplishment framework, where a product is deemed successful if it scores in the top two qualification levels (Excellent or Good) (Ghofur, 2018). The evaluation outcomes indicated that the infographics were rated as excellent learning tools, with no further revisions required.

The content experts evaluated the infographic in December 2024, focusing on content validity, usability, and design quality. They praised the alignment of the infographic with instructional goals, recommending minor revisions to enhance usability and design, such as simplifying text and reorganizing task sequences (Findawati, 2014). The content experts provided an average score of 72.5 out of 80, equating to 90.625%, classifying the infographics as excellent learning tools. These scores below confirm that the infographics were effective, requiring only minor adjustments.

Table 1. Result of Content Expert Judgement Rubric

Assessor (Judges)	Percentage
Expert 1	90%
Expert 2	91%

Product experts evaluated the infographic in December 2024, focusing on product quality, functionality, and alignment with instructional goals. They highlighted the infographic's clear integration of speaking tasks and interactive components. Recommendations included improving visual consistency, simplifying the flow of information, and enhancing readability. Both product experts gave a score of 38 out of 40, resulting in a percentage of 95%, indicating the product's high quality with no need for revisions.

Table 2. Result of Product Expert Judgement Rubric

Assessor (Judges)	Percentage
Expert 1	95%
Expert 2	95%

Thus, the evaluation of the Cake Application-based speaking teaching infographic was conducted by field experts in two categories, namely content and product expert assessments. Content experts rated the infographic very good, with an average score of 90.625%, and suggested minor adjustments to improve usability and design. Product experts also gave a high rating, with a score of 95%, highlighting the infographic's strong integration between speaking tasks and interactivity, and recommended improvements in visual consistency and readability. Overall, both evaluations showed that the Cake Application-based speaking teaching infographic is a high-quality teaching tool that meets the required standards, and does not require further revision.

Discussion

The integration of CakeApp and infographics into teaching speaking skills for tourism vocational students has proven highly effective, combining interactive digital tools with visually engaging instructional materials. This approach enhances both linguistic proficiency and industry-specific communication skills by providing contextual learning scenarios relevant to the tourism sector. Students reported increased speaking confidence, and teachers noted the flexibility of using multimedia tools to cater to diverse learning preferences. The approach successfully bridges theoretical language instruction with real-world communication, suggesting its scalability to other vocational education programs. Despite its effectiveness,

several challenges were encountered during implementation. Digital literacy gaps among teachers, technical limitations like unreliable internet access, and inconsistent student engagement posed significant barriers. Additionally, ensuring that the content caters to students with varying proficiency levels remains a concern. To overcome these challenges, investment in teacher training, technological infrastructure, and continuous content updates is necessary. Tailored orientation programs for students and collaborative partnerships between educational institutions and technology providers could help address these issues and ensure the sustainability of the approach.

This study contributes to the existing literature by integrating CakeApp and infographics into a unified teaching model tailored to the tourism sector. Previous studies typically explored the benefits of these tools separately, but this research demonstrates that combining interactive digital content with visual aids enhances the learning experience. The study's focus on tourism-specific tasks, such as hotel check-ins and guided tours, provides new insights into how technology can be applied to English for Specific Purposes (ESP) courses, offering a contextualized approach to language acquisition. The findings align with earlier research on the motivational and instructional benefits of both CakeApp and infographics. However, this study extends the research by focusing specifically on tourism-related speaking activities, an area often overlooked in previous studies. By integrating teacher feedback and industry-specific content, this research offers a scalable teaching framework that can be adapted to other vocational education fields, addressing the evolving demands of modern education and providing a replicable model for enhancing speaking skills across various educational contexts.

The integration of CakeApp and infographics into teaching speaking skills offers both practical and theoretical contributions to vocational education, particularly in tourism. Practically, this approach enhances active learning by providing real-world communication scenarios, such as hotel check-ins and guided tours, while fostering essential 21st-century skills like digital literacy and problem-solving. These tools not only simplify complex language structures but also support blended learning environments, making them adaptable to various vocational and language learning contexts. The success of this model suggests its potential for broader application, including in fields such as healthcare, business communication, and hospitality. Theoretically, this study aligns with Mayer's Cognitive Theory of Multimedia Learning, demonstrating that dual-channel processing—through interactive app-based exercises and visually engaging infographics—enhances language acquisition. By integrating multimedia and constructivist pedagogy, the research contributes to instructional design theories, offering a framework for creating effective, context-specific learning environments. This study also highlights the potential for interdisciplinary collaboration and further exploration of adaptive learning technologies to personalize instruction, providing a foundation for future research in digital learning and instructional media development.

CONCLUSION

This research aimed to design and evaluate CakeApp-based infographics as a tool for enhancing speaking skills among 11th-grade tourism students. Through a comprehensive needs analysis, the study identified key challenges in teaching speaking, such as vocabulary acquisition, pronunciation, and idea development. The developed infographics integrated CakeApp features like pronunciation feedback and conversation simulations, tailored to tourism-specific language and real-life scenarios. These materials, created using Canva, provided structured guidelines for teachers to effectively implement the app in lessons, focusing on Descriptive Text, Procedure Text, and Simple Report Text. The final tools engaged students in role-play activities involving industry-specific vocabulary and tasks, such as hotel check-ins and culinary presentations. The evaluation of the CakeApp-based infographics showed positive results from

both content and product experts. The materials were highly rated for content validity, usability, and alignment with instructional goals, receiving an average score of 90.5%. Feedback from both students and teachers confirmed the effectiveness of the tools in the classroom, with improvements noted in student engagement, confidence, and speaking skills. By combining digital tools like CakeApp with infographics, the study demonstrated that such tools can enhance student learning through both visual and interactive elements that cater to diverse learning styles, making the learning environment more dynamic and effective. Based on the findings, it can be concluded that CakeApp-based infographics significantly improve speaking skills in 11th-grade tourism students. The integration of CakeApp's interactive features allowed students to engage in contextual learning activities that mirrored real-world tourism scenarios, thereby enhancing their vocabulary, pronunciation, and fluency. Teachers found the tools efficient for lesson planning and catering to diverse student needs, while students appreciated the practical and engaging nature of the tasks. This research underscores the value of multimedia tools in vocational education, where practical language skills are critical for success.

The study offers several recommendations for future implementation. Teachers should be trained on how to effectively integrate CakeApp-based infographics into their lessons, ensuring personalized guidance for students. Schools are encouraged to invest in digital infrastructure to support the use of such tools, providing students with the resources they need for interactive learning. Future research could explore the integration of other digital tools alongside infographics, expanding the scope of the study to other grade levels and educational settings. This would offer further insights into the adaptability of CakeApp-based infographics across various vocational disciplines beyond tourism.

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