



Developing Dynamic Digital English Flashcards with Integration of Visuals, Audio, and Real-World Examples in the Hospitality Industry Context

Sunani Sunani¹, Genta Ulina Hutagalung², Wirda Ningsih³

¹Sriwijaya State Polytechnic, Palembang, Sumatera Selatan, Indonesia
wirda.ningsih@polsri.ac.id

Abstract. In the globalized hospitality industry, effective communication in English is essential for service delivery and guest satisfaction. Workers often engage with international tourists, making proficiency in English a critical skill. This study aims to develop Dynamic Digital Flashcards, integrating visuals, audio, real-world examples, and context-based scenarios to facilitate English learning among hospitality workers. Following the ADDIE model, the research involved a systematic approach to identify the specific needs of employees at Hotel Emilia Palembang and create engaging, multimedia-enhanced flashcards. The integration of real-world examples not only made the learning process more relatable but also helped employees apply vocabulary in practical situations, enhancing their confidence and readiness to communicate effectively with guests. The implementation of these flashcards showed promising results in improving vocabulary mastery and increasing user confidence in communication. Feedback indicated a high level of acceptance and satisfaction with the learning tool. The findings underscore the potential of technology in enhancing language skills within the hospitality sector, paving the way for further development of digital resources tailored to industry needs.

Keywords: Dynamic Digital Flashcards, English, hospitality industry

1 Introduction

In the increasingly globalized hospitality industry, effective communication in English has become crucial. Workers in this sector, including hotel staff, tour guides, and restaurant employees, frequently interact with tourists from various countries. Thus, proficiency in English is essential to provide optimal service to guests [1].

Interactions between hospitality staff and tourists encompass a wide range of situations, from welcoming guests at the reception desk, explaining hotel facilities, and offering restaurant recommendations, to providing information about local tourist attractions. In each of these interactions, English, as the universal medium of communication, has an important role in providing quality service [1].

Moreover, proficiency in English helps staff understand the needs and preferences of guests from different cultures and backgrounds. Proficiency in English helps staff understand the diverse needs and preferences of guests, enabling them to provide more personalized services. Strong English communication skills are essential for anyone aspiring to work in the hospitality and tourism industries [2].

Besides direct guest interactions, English proficiency is also crucial for internal communication among staff members from various departments within a property or company. For example, in a hotel, effective collaboration between receptionists, housekeeping, and food and beverage services requires good English communication skills to ensure smooth operations and a seamless guest experience [1].

Thus, good English proficiency is not only a practical necessity in the hospitality industry but also a key element in delivering quality service and fostering positive relationships with guests worldwide. Therefore, developing educational resources that support the improvement of English language skills among hospitality industry workers is crucial to address communication challenges in this increasingly global environment.

This study aims to develop Dynamic Digital Flashcards with integrated visuals, audio, and real-world examples to facilitate English learning among hospitality industry workers. By leveraging digital technology, these flashcards provide an engaging and effective learning experience, enhancing workers' understanding and practical application of English terminology within the industry.

2 Literature Review

2.1. Importance of English in the Hospitality Industry

Workers in the hospitality industry often interact with guests from various countries who use English as a primary communication language. In this globalized industry, English proficiency is essential for effective communication with guests, colleagues, and stakeholders. With strong English skills, workers can communicate effectively with guests, understand their needs, and provide satisfying service. English acts as a *lingua franca*, facilitating interaction between individuals from different cultural and linguistic backgrounds [1]. When it comes to providing high-quality services, English is crucial for tourists. Individuals employed in the tourist and hospitality sectors are fully aware of the significance of having a strong command of the English language at work.[3]. Inadequate English skills can lead to communication errors, causing guest dissatisfaction and complaints.

2.2. Importance of Vocabulary Mastery in Enhancing English Skills

In addition to the four language skills (reading, writing, listening, and speaking), vocabulary mastery is critical for improving English proficiency. Knowing vocabulary involves more than just defining words but also understanding nuances, sentence functions, and effective communication. Vocabulary is crucial for several reasons:

1. Text Comprehension

Because the definitions of new terms are frequently stressed, whether in literature or in classroom settings, vocabulary development is a crucial component of learning a foreign language [4].

2. Speaking Fluency

The students' increased vocabulary will help them speak English more fluently [5].

3. Academic Success

A solid vocabulary helps students comprehend academic texts, participate in discussions, and perform well in exams [6].

4. Career Advancement

Good communication skills, linked to vocabulary mastery, contribute to career success and opportunities [7].

2.3. Dynamic Digital Flashcards

Flashcards are a popular tool for learning vocabulary and other concepts. Digital flashcards offer flexibility, incorporating multimedia elements such as visuals, audio, and video. When studying English vocabulary, kids are more engaged and do not become bored as easily when using flashcards [8]. Dynamic digital flashcards are more interactive and accessible, making the learning process more efficient and motivating [9].

2.4. Using Dynamic Digital Flashcards to Facilitate Vocabulary Mastery

Research shows that multimedia-enhanced digital flashcards significantly improve language acquisition. By integrating visuals, audio, and real-world examples, learners are exposed to authentic language use, enhancing understanding and retention. These tools also help learners practice pronunciation and listening skills [10]. The structured repetition of digital flashcards aids in vocabulary retention, making them a powerful tool for learning.

3 Methodology

The development of dynamic digital flashcards for hospitality workers is guided by a systematic approach that follows the ADDIE model, which encompasses five key stages: Analysis, Design, Development, Implementation, and Evaluation.

1. Analysis

This initial phase focuses on understanding the specific needs of hospitality workers. It involves conducting surveys and interviews with employees at Hotel Emilia Palembang to gain insights into their challenges in learning English. Key tasks include identifying relevant vocabulary and assessing workers' preferences for technology-based learning. Additionally, a technology analysis is conducted to explore available tools for creating the flashcards and selecting the most suitable platform.

2. Design

In the design phase, researchers formulate clear and measurable learning objectives based on the needs identified in the previous step. The content for the flashcards is created, ensuring it is engaging and relevant. This includes combining text, images,

audio, and video to enhance the learning experience. The design also considers individual learning styles and proficiency levels, ensuring that the flashcards cater to a diverse audience.

3. Development

During development, a prototype of the dynamic digital flashcards is created. This includes incorporating the planned features and content. Usability testing is conducted with a small group of hospitality workers to evaluate the ease of use and effectiveness of the flashcards. Based on feedback from these tests, the prototype is refined and improved to enhance the overall learning experience.

4. Implementation

Once the flashcards are finalized, they are launched and distributed to all workers in the hospitality industry. Training sessions are organized to guide users on how to utilize the flashcards effectively. Continuous monitoring is conducted to assess their usage and gather data on the learning outcomes.

5. Evaluation

The final phase involves evaluating the effectiveness of the dynamic digital flashcards in improving the English language skills of hospitality workers. This includes analyzing data collected during the research, such as test results and user feedback, to assess the overall impact of the flashcards on their learning experience.

Data Collection Methods

Data for the study is collected through various methods, including interviews, questionnaires, observations, documentation, and tests. These methods aim to gather comprehensive information to inform the development and evaluation of the dynamic digital flashcards.

- **Interviews:** Direct discussions with HR managers and front office staff at Hotel Emilia Palembang gather insights on the relevance of English vocabulary and technology preferences.
- **Questionnaires:** Various surveys are distributed to students and experts in language and material design to assess needs and product effectiveness.
- **Observations:** Continuous observation throughout the research process provides insights into the usability and effectiveness of the flashcards.
- **Documentation:** Existing English language learning materials and curriculum are reviewed to ensure alignment with industry standards.
- **Tests:** Pre-tests and post-tests are conducted to objectively measure the impact of the flashcards on learners' English proficiency.

- Pre-Test and Post-Test Design

To evaluate how well the dynamic digital flashcards improved English vocabulary skills, we conducted pre-tests and post-tests with front office staff at Hotel Emilia Palembang. These tests measured vocabulary knowledge in hotel and customer service situations.

Pre-Test

The pre-test assessed participants' initial vocabulary knowledge. Here are the key features:

- **Content Selection:** We chose 30 vocabulary words commonly used in hotel scenarios, like "reservation" and "check-in," based on the needs analysis that identified gaps in language skills.
- **Test Structure:** The pre-test included multiple-choice questions and fill-in-the-blank exercises where participants had to select the right vocabulary for specific guest interactions.

Post-Test

The post-test was given after two weeks of using the flashcards. Here's how it was designed:

- **Consistent Vocabulary:** The post-test included the same vocabulary words and question types as the pre-test for accurate comparison.
- **New Situational Questions:** We added a few new scenarios to assess how well participants could use the vocabulary in real-life situations, such as responding to a guest inquiry.

- Results Analysis

Comparing the pre-test and post-test scores showed a clear improvement due to the flashcards. Participants reported feeling more comfortable and confident using English at work. In summary, the pre-test and post-test results demonstrated that the dynamic digital flashcards significantly improved vocabulary skills for hospitality workers.

4 Result and Discussion

4.1 Development of Dynamic Digital Flashcards

The development of this learning tool followed the ADDIE model, which includes five main stages: analysis, design, development, implementation, and evaluation.

4.1.1 Needs Analysis

Needs analysis is a crucial first step in determining appropriate learning objectives. Through interviews and surveys conducted with 15 front office employees, we identified gaps in their English language skills.

Findings:

80% of respondents reported difficulties in understanding and using English vocabulary in customer service contexts. This indicates that many employees feel unprepared to communicate with foreign guests.

Interviews revealed that many employees rely on direct translation, which often leads to confusion. One respondent noted, "I often get confused when guests ask questions because I don't know the right words."

Supporting Literature: These findings align with the research by [11], emphasizing the need to identify specific learner requirements to enhance learning effectiveness. This is also supported by [12] needs analysis, which highlights the importance of understanding the context and specific goals of learners in curriculum design.

4.1.2 Design and Development

Once needs were identified, the design phase aimed to create dynamic digital flashcards. This design was based on multimedia learning principles that have proven effective in education.

Flashcard Design Components:

1.Text: Each flashcard presents new vocabulary along with definitions and example sentences. For instance, the word "reservation" is accompanied by a sentence like, "I would like to confirm my reservation for tonight." Research indicates that using context in vocabulary learning can enhance retention [13].

2.Images: Relevant visuals for each vocabulary word help associate the word with a visual context, reinforcing memory. [14] found that images can enhance memory by creating deep visual connections.

3.Audio: Including audio pronunciations by native speakers is vital. This aligns with information processing theory, where listening to accurate pronunciations can improve speaking skills. According to [15], teaching correct pronunciation can reduce misunderstandings and enhance communicative competence.

The prototype was tested by a small group of employees to ensure an intuitive interface. Testing results showed that users could easily understand and use the tool quickly, with 85% of respondents stating the flashcard design was very user-friendly.

4.1.3 Implementation

The product was implemented in two learning sessions, starting with a pretest to assess initial vocabulary mastery. This pretest included 30 vocabulary words from everyday hotel contexts. The average pretest score was 65 out of 100, indicating significant room for improvement.

Usage Duration: After the pretest, employees were given access to the dynamic digital flashcards for two weeks, with a recommendation to practice for at least 30 minutes daily. This activity aimed to increase their exposure to new vocabulary.

4.1.4 Testing Results

Following the usage period, a posttest was conducted to evaluate changes in vocabulary mastery. The average posttest score rose to 85, showing significant improvement with a significance level of $p < 0.05$.

Result Analysis:

Descriptive Statistics: The average difference between pretest and posttest scores was 20, with a standard deviation of 3.45. This increase indicates not only individual improvement but also consistency among respondents.

Respondent Feedback: 90% of respondents reported increased confidence in communicating with foreign guests. Feedback indicated that the flashcards helped them feel more prepared. One respondent noted, "I feel much better answering guests' questions after using the flashcards."

4.2 Discussion

This discussion connects the research findings with existing literature, exploring implications and contributions to language learning practices in the hospitality industry.

4.2.1 User Engagement and Acceptance

The high acceptance rate of the dynamic digital flashcards indicates that employees experienced positive effects from this method. This aligns with [16] motivation theory, which suggests that enjoyable and relevant learning experiences can enhance intrinsic motivation. Research by [17] also shows that users who feel engaged with technology-based learning methods are more likely to achieve positive outcomes.

Engagement Implications:

Employees reported that using the flashcards made the learning process more interactive and enjoyable. Surveys revealed that 85% of respondents preferred this method over traditional approaches.

These findings are consistent with [18] research, which found that technology-based learning can increase participation and interest. They argue that interactive elements in digital learning encourage deeper engagement and facilitate better learning outcomes.

4.2.2 Impact on Vocabulary Learning

The increase in vocabulary mastery demonstrates that dynamic digital flashcards are effective in helping employees learn new vocabulary. The improvement in scores from pretest to posttest supports previous research on the effectiveness of flashcards in language learning [19].

Influencing Factors:

Interactivity: The high interactivity of the flashcards allows employees to engage more deeply, creating a richer learning experience.

Media Variety: The use of text, images, and audio caters to different learning styles [20] found that a multimodal approach can accommodate the diverse needs of learners. By combining visual and auditory elements, the flashcards enhance the overall learning experience.

4.2.3 Impact on Long-Term Vocabulary Retention in Hospitality Settings

The consistent use of dynamic digital flashcards appears to support not only short-term vocabulary acquisition but also long-term retention, which is critical in hospitality settings where English vocabulary proficiency directly influences employee performance and guest satisfaction.

Retention Insights:

Spaced Repetition Effectiveness: Repeated exposure to vocabulary over time helps move words from short-term to long-term memory. This benefit was echoed in feedback from employees who reported remembering words even days after the sessions concluded.

Contextual Relevance: Employees reported that flashcards with vocabulary embedded in realistic hotel scenarios helped them recall the words when similar situations arose in their daily tasks. This observation aligns with [23], which emphasizes the importance of contextual learning for retention. Employees noted that, by practicing vocabulary relevant to their actual roles, they felt more confident and less reliant on direct translations when interacting with foreign guests.

Continued Use and Self-Study: Respondents expressed interest in continuing the use of flashcards for ongoing learning, with 80% indicating they would use the tool independently if it remained available.

Implications for Hospitality Training:

These findings suggest that integrating digital flashcards into regular employee training could improve not only short-term language skills but also vocabulary retention, potentially decreasing the need for frequent refresher courses. Further research could investigate the impact of sustained flashcard usage over several months to determine optimal retention strategies for hospitality vocabulary.

4.2.4 Challenges and Recommendations for Implementation

Despite achieving positive results, challenges arose during implementation. Some employees reported initial confusion using new technology, particularly those with limited experience with digital tools.

Recommendations:

1. **Ongoing Training:** Additional training should be provided to ensure employees feel comfortable and confident using the tool. Research by [21] highlights that adequate training support is critical for successful technology integration in education. This is essential to maximize the benefits of the flashcards and prevent employees from feeling overwhelmed by new technology.

2. **Continuous Feedback:** A platform for user feedback is vital to identify necessary improvements and adapt the tool to meet their needs. Involving users in the product improvement process can enhance satisfaction and effectiveness.

4.3 Implications for Language Learning Development in the Hospitality Industry

The findings from this study highlight the importance of technology integration in language learning within the hospitality sector. The use of dynamic digital flashcards not only enhances employees' language skills but also prepares them to meet globalization challenges.

Future Development:

Training institutions in the hospitality industry should consider using technology like digital flashcards to address language skill needs among workers. This approach could serve as an effective model for improving communication skills in multicultural environments. Research by [22] shows that technology can play a key role in enhancing workers' communication skills in the hospitality sector.

Practical Challenges:

While digital tools like flashcards can benefit hospitality workers, several challenges may arise, especially for those with limited technology experience. Many workers may struggle with basic digital tasks due to a lack of familiarity, making effective use of flashcards difficult. Providing thorough training and user-friendly resources can help bridge this gap. Additionally, access to devices and reliable internet may vary among employees, limiting their use of digital tools. Providing access to shared devices or ensuring a robust Wi-Fi connection in training areas can help mitigate this challenge.

5 Conclusion

This study successfully developed Dynamic Digital Flashcards for English language learning, integrating visuals, audio, and real-world examples specifically designed for the hospitality industry. By employing the ADDIE model—Analysis, Design, Development, Implementation, and Evaluation—the Dynamic Digital Flashcards was created as an interactive and user-friendly educational tool. It enables hospitality workers to engage in independent and contextual learning, allowing them to enhance their understanding and mastery of essential vocabulary relevant to their roles, particularly when interacting with foreign guests.

The needs analysis, conducted through surveys and interviews with hotel staff, highlighted the critical importance of mastering English vocabulary for daily tasks, such as effective guest communication and information delivery. The Dynamic Digital Flashcards successfully addresses the gap between the language needs of hospitality workers and the practical applications in their jobs, offering them the flexibility to learn anytime and anywhere. Testing results demonstrated significant improvements in users' vocabulary mastery and communication skills, with participants expressing that the Dynamic Digital Flashcards was engaging, easy to navigate, and closely aligned with their work situations. This positive feedback underscores the tool's effectiveness in motivating workers to enhance their language skills in a practical context.

References

- [1] A. Prabhu and P. Wani, "A study of Importance of English Language Proficiency in Hospitality Industry and the Role of Hospitality Educators in Enhancing the Same Amongst The Students," *ATITHYA: A Journal of Hospitality*, vol. 1, no. 1, 2015, doi: 10.21863/atithya/2015.1.1.009.
- [2] "Peranan Keterampilan Berbahasa Inggris Dalam Industri Pariwisata," *Journey : Journal of Tourismpreneurship, Culinary, Hospitality, Convention and Event Management*, vol. 2, no. 1, 2019, doi: 10.46837/journey.v2i1.42.
- [3] N. Zahedpisheh, Z. B. Abu bakar, and N. Saffari, "English for Tourism and Hospitality Purposes (ETP)," *English Language Teaching*, vol. 10, no. 9, 2017, doi: 10.5539/elt.v10n9p86.
- [4] M. ALQAHTANI, "The importance of vocabulary in language learning and how to be taught," *International Journal of Teaching and Education*, vol. III, no. 3, 2015, doi: 10.20472/te.2015.3.3.002.
- [5] "The Correlation Between Students' Vocabulary Achievement and Fluency in Speaking English," *English Teaching and Linguistics Journal (ETLiJ)*, 2021, doi: 10.30596/etlij.v2i1.5507.
- [6] A. Masrai and J. Milton, "Vocabulary knowledge and academic achievement revisited: General and academic vocabulary as determinant factors," *Southern African Linguistics and Applied Language Studies*, vol. 39, no. 3, 2021, doi: 10.2989/16073614.2021.1942097.

- [7] I. Sukendra, "THE CORRELATION BETWEEN VOCABULARY COMPLEXITY MASTERY AND STUDENTS' SPEAKING SKILL," *Indonesian Journal of English Language Studies (IJELS)*, vol. 9, no. 1, 2023, doi: 10.24071/ijels.v9i1.5619.
- [8] A. A. P. Arsana and A. A. P. Maharani, "the Use of Flashcard in English Vocabulary Learning," *JOSELT (Journal on Studies in English Language Teaching)*, vol. 2, no. 2, 2021.
- [9] I. Elgort, "Deliberate Learning and Vocabulary Acquisition in a Second Language," *Lang Learn*, vol. 61, no. 2, 2011, doi: 10.1111/j.1467-9922.2010.00613.x.
- [10] A. Rasti-Behbahani and M. Shahbazi, "Investigating the effectiveness of a digital game-based task on the acquisition of word knowledge," *Comput Assist Lang Learn*, vol. 35, no. 8, 2022, doi: 10.1080/09588221.2020.1846567.
- [11] M. F. F. Abbas and S. Syaifullah, "Investigasi Kebutuhan Pelajar English as a Foreign Language (EFL) dalam Pembelajaran Keterampilan Menulis," *Jurnal Pendidikan*, vol. 11, no. 1, 2023, doi: 10.36232/pendidikan.v11i1.3046.
- [12] I. S. P. Nation, *Learning vocabulary in another language*. 2013. doi: 10.1016/s0889-4906(02)00014-5.
- [13] Y. Ghonivita, J. Pahamzah, and M. Ayu Wijayanti, "Improving Students' Listening Skills and Vocabulary Mastery through Contextual Teaching and Learning by Using Online Learning," *Journal of English Language Teaching and Cultural Studies*, vol. 4, no. 1, 2021, doi: 10.48181/jelts.v4i1.10557.
- [14] F. G. Birinci and A. Sariçoban, "The effectiveness of visual materials in teaching vocabulary to deaf students of EFL," *Journal of Language and Linguistic Studies*, vol. 17, no. 1, 2021, doi: 10.52462/jlls.43.
- [15] A. H. Mubarak, S. Asari, and R. Thiprak, "Incidental Vocabulary Learning Through Audio-Assisted Comic: An Experimental Study on Vocabulary Gain," *Journal Universitas Muhammadiyah Gresik Engineering, Social Science, and Health International Conference (UMGESHC)*, vol. 2, no. 1, 2023, doi: 10.30587/umgeshic.v2i1.5214.
- [16] R. M. Ryan and E. L. Deci, "Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions," *Contemp Educ Psychol*, vol. 25, no. 1, 2000, doi: 10.1006/ceps.1999.1020.
- [17] V. L. Kieu, D. T. Anh, P. D. B. Tran, V. T. T. Nga, and P. V. P. Ho, "The Effectiveness of Using Technology in Learning English," *AsiaCALL Online Journal*, vol. 12, no. 2, 2021.
- [18] I. Restu Kurnia and Titin Sunaryati, "Media Pembelajaran Video Berbasis Aplikasi Canva Untuk Meningkatkan Minat Belajar Siswa," *Jurnal Educatio FKIP UNMA*, vol. 9, no. 3, 2023, doi: 10.31949/educatio.v9i3.5579.
- [19] F. Angreany and S. Saud, "KEEFEKTIFAN MEDIA PEMBELAJARAN FLASHCARD DALAM KETERAMPILAN MENULIS KARANGAN SEDERHANA BAHASA JERMAN SISWA KELAS XI IPA SMA NEGERI 9 MAKASSAR," *Eralingua: Jurnal Pendidikan Bahasa Asing dan Sastra*, vol. 1, no. 2, 2017, doi: 10.26858/eralingua.v1i2.4410.
- [20] P. Xu, X. Zhu, and D. A. Clifton, "Multimodal Learning With Transformers: A Survey," *IEEE Trans Pattern Anal Mach Intell*, vol. 45, no. 10, 2023, doi: 10.1109/TPAMI.2023.3275156.
- [21] H. Haeranah, A. Firman, and A. R. Oktaviani, "Pengaruh Pendidikan, Pelatihan, dan Teknologi Terhadap Peningkatan Kinerja," *Paradoks : Jurnal Ilmu Ekonomi*, vol. 6, no. 1, 2023, doi: 10.57178/paradoks.v6i1.602.

- [22] P. Kansakar, A. Munir, and N. Shabani, "Technology in the Hospitality Industry: Prospects and Challenges," *IEEE Consumer Electronics Magazine*, vol. 8, no. 3, 2019, doi: 10.1109/MCE.2019.2892245.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

