

Implementation of 3D Page Flip Teaching Materials with Coffee Diplomacy Infographic for BIPA Teachers in Hamburg

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Abstract. The BIPA teaching program in Hamburg leverages cutting-edge technology. The primary focus of this program is the transformation of teaching materials presented in 3D Page Flip, featuring creative and technology-integrated coffee diplomacy infographics. Involving BIPA teachers as agents of change aims to positively impact the learning process of Indonesian for Foreign Speakers (BIPA) in Hamburg. Additionally, the program strengthens teachers' skills in integrating technology into teaching. Advanced training and community forums serve as avenues to enhance collaboration and exchange experiences among BIPA teachers. This partnership program continuously develops innovative learning experiences and offers a teaching model that can be adopted by other international BIPA teaching communities. The development of BIPA teaching materials presented in 3D Page Flip with coffee diplomacy infographics makes learning more engaging, effective, and relevant to current demands and trends that position coffee as a diplomacy tool. BIPA teachers are encouraged to present captivating topics to BIPA learners. This partnership program is not only about improving teaching quality but also about inviting teachers and learners to explore the potential of technology in enhancing international education as soft diplomacy.

Keywords: 3D page flip, BIPA, teaching materials, coffee diplomacy infographic

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INTRODUCTION

The development of the BIPA program on an international scale has progressed significantly. According to data from the "Jaga BIPA" page on the BIPA Daring website by the Ministry of Education and Culture, 44 countries, including Indonesia, hosted BIPA institutions. The total number of BIPA institutions worldwide has reached 530. The Agency for Language Development and Fostering Kurniawan et al. (2019) reported in 2018 that BIPA teaching was conducted in approximately 38 countries, encompassing no fewer than 130 institutions. These included universities, foreign cultural centers, Indonesian embassies, and private language courses. A comparison of data from 2018 and late 2020 revealed that the number of BIPA institutions increased by 205, representing a 157% growth over two years. This finding highlighted global

enthusiasm for Indonesian language teaching programs, particularly in regions such as America and Europe.

Hamburg, the largest port city in Germany, was situated in the northern part of the country along the Elbe River, providing access to the North Sea. The city historically played a significant role in trade and served as a hub for the economy, finance, and culture in northern Germany. Hamburg was also renowned for its architectural beauty, efficient transportation system, and maritime activities. According to Nurhaina (2019), the BIPA program had been established at the Indonesian Consulate General in Hamburg. In 2022, the Indonesian Consulate General in Hamburg, in collaboration with IKAT, launched BIPA classes for the fall and winter seasons (Konsulat Jenderal Republik Indonesia Hamburg, 2022). Previous BIPA teaching initiatives in Hamburg included workshops focusing on Indonesian language and

culture (Narang-Huth, 2019). Additionally, teaching materials featured on the APPBIPA Germany website incorporated Indonesian folklore (APPBIPA Jerman, 2024). These findings suggest that Indonesian language, culture, and folklore were actively employed in BIPA teaching materials in Hamburg.

This community service initiative aimed to introduce research outcomes to the BIPA community in Hamburg, particularly coffee enthusiasts, by implementing coffee diplomacy infographics in BIPA teaching materials. The integration of 3D Page Flip teaching materials with coffee diplomacy infographics represented a novel approach for BIPA teachers in Hamburg. The concept of coffee diplomacy infographic encompasses two essential elements: 'coffee diplomacy' and 'infographic.' Coffee diplomacy referred to using coffee as a medium for diplomacy to enhance the Indonesian economy, often through people-to-people (P-to-P) interactions (Erianto & Kaslam, 2021; Shertina, 2019; Widiastutie et al., 2022). Meanwhile, an infographic conveys information clearly and concisely using visual formats to ensure memorability and appeal (Bertin, 1983; Harjito, 2015; Intani, 2023; Sabarudin & Saimon, 2021). Therefore, the coffee diplomacy infographic combines diplomatic, cultural, and economic aspects of coffee into an engaging and informative visual representation. It was intended to positively influence BIPA learners in Hamburg.

This innovative teaching material was realized using the 3D Page Flip application, which functions as a digital magazine, e-paper, and e-book designer. The application transformed static files into interactive media by merging audio-visual elements to create engaging flipbooks accessible on laptops or smartphones (Hamidah et al., 2023; Patri & Heswari, 2019; Shavira et al., 2022). The ease of use and versatile features of 3D Page Flip make it a popular choice in educational settings (Sari et al., 2021; Setiyani et al., 2020). Several studies supported the use of 3D Page Flip in educational materials. For example, Adawiyah et al. (2022) and Martinopa & Amini (2023)

demonstrated the application's effectiveness in creating high-quality, interactive teaching modules. These studies confirmed that materials developed using 3D Page Flip were suitable for educational purposes and could be adapted to various learning needs. The primary objective of this community service was to assist BIPA teachers in Hamburg in designing innovative teaching materials that integrated coffee diplomacy infographics using 3D Page Flip. By doing so, the initiative aims to enhance the learning experience of BIPA learners while introducing Indonesian culture in a visually engaging and accessible manner.

METHODS

The approach to addressing the identified challenges involved designing teaching materials that incorporated coffee diplomacy infographics and providing guidance to BIPA teachers in creating 3D Page Flip-based teaching resources can be seen in Figure 1. Initially, the needs of BIPA teachers in Hamburg were assessed through surveys and discussions with key stakeholders, including program administrators, to identify specific challenges in adopting innovative teaching methods. Based on these findings, teaching materials were developed with coffee diplomacy as the central theme. The design process included integrating infographics, animations, and multimedia elements to create engaging and culturally relevant content. Draft materials were first prepared using standard text-editing software and subsequently converted into 3D Page Flip format for enhanced interactivity.

Following the material development, a series of hybrid workshops and training sessions were conducted to equip BIPA teachers with the technical skills necessary to customize and adapt the materials. These sessions combined online discussions via Zoom and in-person engagements, providing a flexible learning environment. During the training, participants were guided through the steps of implementing the 3D Page Flip materials in their classrooms. Afterward, the materials were

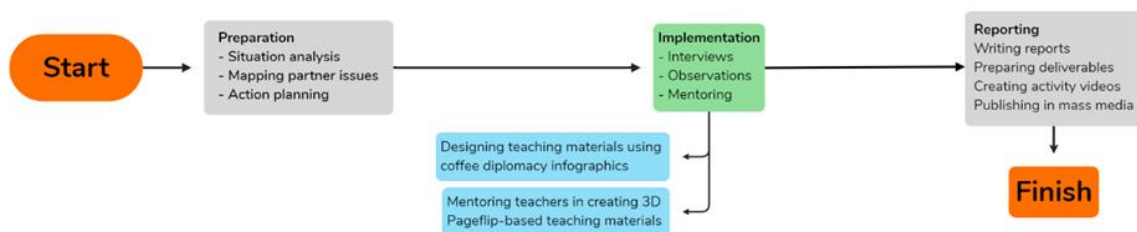


Figure 1. Flowchart of the Community Service Program Implementation for BIPA Teachers in Hamburg

piloted in real teaching scenarios, where feedback from both teachers and learners was collected through surveys and classroom observations. This feedback was instrumental in refining the materials and ensuring their relevance and effectiveness.

The evaluation of the initiative involved analyzing qualitative and quantitative data to assess its impact. Qualitative data, such as feedback from participants, were thematically analyzed to identify recurring challenges, strengths, and areas for improvement. Quantitative data, including workshop attendance rates, engagement metrics, and survey scores, were statistically analyzed to evaluate the program's overall effectiveness. The analysis revealed patterns in the usability of the materials and their alignment with the needs of learners and teachers. Key metrics, such as learner participation rates, comprehension levels, and satisfaction scores, were benchmarked against pre-implementation data to determine the initiative's success. By employing this mixed-methods approach, the analysis provided a comprehensive understanding of the program's outcomes, highlighting both its achievements and opportunities for future improvements.

RESULTS AND DISCUSSION

The community service program “Implementation of 3D Page Flip Teaching Materials with Coffee Diplomacy Infographics for BIPA Teachers in Hamburg” was successfully carried out as part of the third pillar of the Tri Dharma of Higher Education, focusing on community service and engagement. This initiative was a collaborative effort between Semarang State University as the implementing institution and IKAT Sprachenwerkstatt, a platform for BIPA teachers in Hamburg, as the community service partner. The program aims to design innovative teaching materials and provide technical mentoring to BIPA teachers to improve their teaching practices.

Designing Teaching Materials Using Coffee Diplomacy Infographics

The teaching materials developed under this program focus on integrating the concept of coffee diplomacy. Coffee diplomacy highlights Indonesia's cultural and economic significance as one of the world's largest coffee producers (Shertina, 2019). This approach was strategically chosen to introduce Indonesian culture to foreign learners in an engaging and meaningful way,

emphasizing coffee as a medium for soft diplomacy. As noted by Widiastutie et al. (2022), cultural narratives are powerful tools for fostering cross-cultural understanding and promoting national identity.

Figure 2 illustrates the pages from the 3D Page Flip teaching material entitled 'Coffee Diplomacy.' The material showcases the cover design, interactive visuals, engaging learner activities, and a comic strip highlighting the role of coffee in Indonesia's global diplomacy. This teaching material was developed to emphasize coffee's cultural and economic importance, blending multimedia elements with culturally relevant content to captivate learners.

To create these materials, infographics were employed to visually present information on coffee production, regional varieties, historical significance, and economic impacts. Infographics have been shown to enhance comprehension and retention among learners by combining visual and textual elements (Sabarudin & Saimon, 2021). Harjito (2015) also highlighted that infographics facilitate the delivery of complex information in a concise and visually appealing manner. These materials were further enhanced using the 3D Page Flip application, which allowed for the integration of animations, interactive features, and multimedia elements.

The design process began with drafting the teaching materials in Microsoft Word, ensuring alignment with the BIPA curriculum. These drafts were then converted into PDF format and subsequently transformed into interactive 3D Page Flip materials. The team also used Canva to create supporting 3D videos and animations. These digital materials were made accessible through an online platform, ensuring ease of access for both teachers and learners. According to Shavira et al. (2022), the use of interactive digital tools like 3D Page Flip enhances learner engagement by providing a dynamic learning experience.

The feedback from teachers and learners indicated that the materials effectively captured the attention of BIPA learners in Hamburg. Teachers observed increased enthusiasm among learners when discussing topics related to Indonesia's coffee heritage. This aligns with findings by Intani (2023), who demonstrated that culturally relevant materials improve learner motivation and engagement. Learners expressed particular interest in the visual aspects of the materials, which helped them better understand complex concepts. The inclusion of coffee diplomacy as a theme also resonates with learners, offering a unique perspective on



Figure 2. Pages from the 3D Page Flip teaching material titled 'Coffee Diplomacy,' featuring the cover, interactive visuals of Indonesian coffee culture, engaging learner activities, and a comic strip highlighting the role of coffee in Indonesia's global diplomacy

Indonesia's cultural and economic assets.

Mentoring Teachers in Using 3D Page Flip

The second component of the program involved mentoring BIPA teachers in Hamburg to use the 3D Page Flip application effectively. A total of 17 teachers participated in the mentoring sessions, which were conducted in a hybrid format. The hybrid approach combined online sessions via Zoom with in-person activities, providing flexibility for participants. This format was particularly beneficial given the logistical challenges of organizing in-person sessions for all participants.

Figure 3 depicts a slide from the Zoom workshop featuring the interactive activity 'Five Basic ABCs.' This activity challenged participants to name Indonesian cities starting with the letter 'S,' integrating cultural learning with interactive engagement. The activity served to introduce learners to Indonesian geography while fostering a playful and dynamic learning environment.

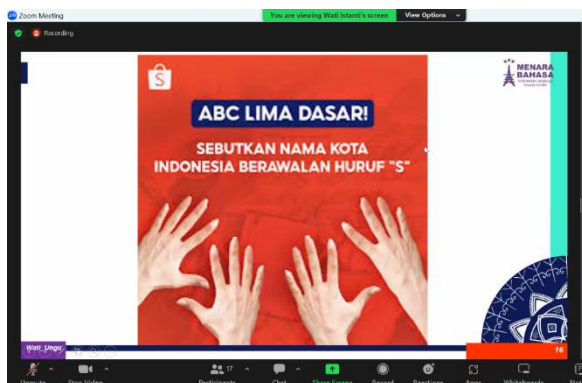


Figure 3. Interactive activity slide from the Zoom workshop.

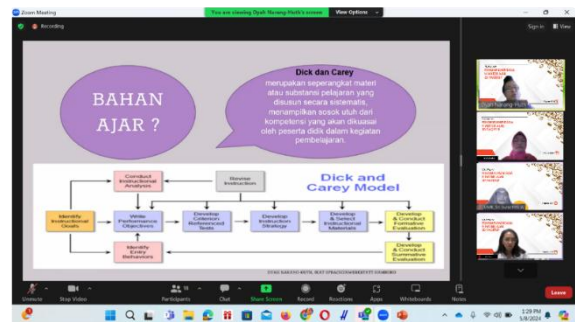


Figure 4. Slide presentation during the Zoom workshop explaining the Dick and Carey Model.

The mentoring sessions begin with an introduction to the theoretical foundations of teaching materials, emphasizing the importance of cultural integration in language instruction. Participants were then guided through the technical aspects of using the 3D Page Flip application, including how to convert static teaching materials into interactive formats. Hamidah et al. (2023)

emphasizes the importance of equipping teachers with technical skills to ensure the successful implementation of digital tools in the classroom.

Figure 4 illustrates a slide presentation from the Zoom workshop, explaining the Dick and Carey Model. This systematic approach to instructional design was used to align teaching materials with learning objectives and competencies. Participants were introduced to the step-by-step process of material development, ensuring the alignment of content with learners' needs.

During the sessions, teachers learned how to integrate multimedia elements such as animations, hyperlinks, and videos into their teaching materials. These features were highly appreciated by participants, as they allowed for the creation of dynamic and engaging resources. According to Fudin & Purwandari (2021), the use of interactive multimedia in teaching materials enhances the learning experience by catering to different learning styles.

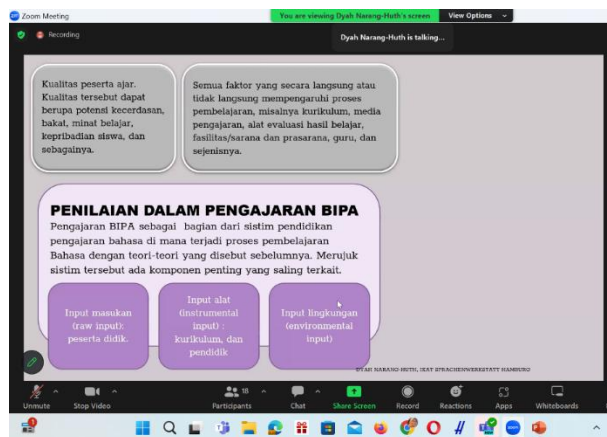


Figure 5 Slide from the Zoom workshop discussing assessment in BIPA teaching.

Figure 5 shows a slide from the Zoom workshop discussing assessment in BIPA teaching. The slide details key components such as learner input, curriculum input, and environmental input, emphasizing the importance of a holistic approach to assessment in language education. This session guided teachers in evaluating the effectiveness of their teaching materials and strategies.

Participants provided valuable feedback during the mentoring sessions. One of the key suggestions was the inclusion of audio elements to support beginner-level learners who might struggle with text-based materials. This recommendation aligns with findings by Setiyani et al. (2020), who highlighted the importance of audio-visual support in language learning materials. Teachers also

suggested expanding the thematic scope of the materials to include other Indonesian cultural assets, such as spices and textiles, to provide learners with a broader understanding of Indonesia's cultural diversity.

The program demonstrated the potential of integrating cultural narratives into language instruction through the use of digital tools. By focusing on coffee diplomacy, the teaching materials offered a unique and engaging way to introduce Indonesian culture to foreign learners. This approach aligns with the findings of Nurhaina (2019), who emphasized the importance of cultural integration in BIPA programs to foster cross-cultural understanding.

The use of the 3D Page Flip application proved to be highly effective in enhancing learner engagement and comprehension. The interactive features of the application allowed learners to explore the materials in a dynamic and self-paced manner, which is consistent with the findings of Sari et al. (2021). Teachers also reported that the visual and interactive elements of the materials made them more appealing and easier to use in the classroom.

However, the program also highlighted several areas for improvement. First, the inclusion of audio elements was identified as a critical enhancement to make the materials more accessible to beginner-level learners. Audio support has been shown to improve comprehension and retention in language learning (Patri & Heswari, 2019). Second, the need for offline access to the materials was emphasized, as the current reliance on internet connectivity could limit their usability in certain contexts. Lastly, participants suggested diversifying the thematic content to include other aspects of Indonesian culture, such as spices, textiles, and culinary traditions, to provide learners with a more comprehensive understanding of Indonesia's cultural heritage.

The findings from this program have several implications for the development of BIPA teaching materials and the integration of technology in language instruction. The use of culturally relevant themes, such as coffee diplomacy, can significantly enhance learner engagement and motivation. This approach not only promotes language learning but also serves as a platform for cultural exchange and soft diplomacy. As noted by Widiastutie et al. (2022), the integration of cultural narratives in teaching materials helps learners develop a deeper appreciation for the target culture.

The adoption of digital tools like 3D Page Flip offers new opportunities for innovation in language

instruction. The interactive and multimedia features of the application provide a dynamic learning experience that caters to diverse learner needs. However, as highlighted by Hamidah et al. (2023), successful implementation of digital tools requires adequate training and support for teachers. This underscores the importance of including mentoring and capacity-building components in similar programs.

The feedback from participants underscores the need for continuous evaluation and improvement of teaching materials. The inclusion of audio elements, offline access, and diverse cultural themes can further enhance the usability and effectiveness of the materials. These findings align with the recommendations of Kurniawan et al. (2019), who emphasized the importance of iterative development and user feedback in the design of educational resources.

CONCLUSION

The implementation of the 3D Page Flip teaching materials with coffee diplomacy infographics for BIPA teachers in Hamburg demonstrated the potential of integrating cultural narratives and digital tools in language instruction. The program successfully enhanced the teaching practices of BIPA teachers while providing learners with an engaging and culturally enriched learning experience. The feedback from participants highlighted the importance of continuous improvement and adaptation to meet the evolving needs of learners and educators. Moving forward, future initiatives could expand the thematic scope of the materials to include other aspects of Indonesian culture and heritage. Additionally, addressing technical limitations, such as the reliance on internet connectivity, will ensure broader accessibility and usability of the materials. By leveraging technology and cultural content, this program serves as a model for innovative approaches to language instruction and cultural exchange in international BIPA programs.

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