Development of BIPANESIA Application Learning Media Based on Local Culture for Indonesian Language for Foreign Speakers (BIPA) Student

Aldi Dwi Saputra; Sumarwati; Atikah Anindyarini

Master of Indonesian Language and Literature Education, Universitas Sebelas Maret, Surakarta, Indonesia

Abstract

In accordance with the government's policy, teaching Indonesian to Foreign Language Speakers (BIPA) is not just about teaching the language but also imparting Indonesian local culture. Therefore, materials are provided to bring BIPA learners closer to Indonesian local culture. This research aims to develop the BIPANESIA smartphone application with a focus on Surakarta's local culture. The research was conducted using the Research and Development (R&D) method, applying the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation). The research involved 50 foreign BIPA learners studying at Universitas Sebelas Maret (UNS), Universitas Muhammadiyah Surakarta (UMS), and Universitas Islam Negeri Raden Mas Said Surakarta (UIN RMS). Data collection was done through observations of the BIPA learners' needs related to the local culture they wanted to learn. Expert judgment was involved in the development. The application was implemented and evaluated in 8 BIPA learning sessions. The application's suitability was evaluated through critical analysis. The research results showed that BIPA learners need materials on elements of culture that are still relevant as well as those left behind by the local community, such as batik, traditional food, traditional ceremonies, and folklore. The developed smartphone application was well-received by BIPA learners and was endorsed by BIPA instructors at Universitas Sebelas Maret. The BIPANESIA smartphone application can help them understand the local culture, and even the videos within the application are useful in bringing them closer to the authentic Indonesian local culture.

Keywords: *Applications; BIPA; Local Culture; Smartphones; Surakarta*

Introduction

Bahasa Indonesia ranks as the tenth most widely used language in the world after English, Mandarin, Spanish, French, Arabic, Bengali, Russian, and Portuguese (Lingua, 2022). The Indonesian government has made teaching Indonesian as a Foreign Language (BIPA) a priority in its efforts to internationalize the language for international communication (Tiawati, 2022). Currently, BIPA is already a subject in several countries, such as Australia, the United States, Thailand, Malaysia, Japan, and the Netherlands. Moreover, BIPA is also studied by many foreign students and speakers in Indonesia itself who wish to delve deeper into Indonesian culture and society.

BIPA learning has experienced rapid growth. In the 2021 academic year, 10,730 BIPA learners in 38 countries were facilitated through 279 BIPA instructors in 204 institutions. Additionally, in the 2019/2020 academic year, the Darmasiswa Program received 673 foreign learners from over 103 countries studying BIPA (Kemendikbud, 2019). This indicates that Indonesian is highly sought after by foreign learners from various countries. This interest is also reflected in BIPA programs at several universities in Indonesia, including those in Surakarta, where three universities, Universitas Sebelas Maret, Universitas Islam Negeri Raden Mas Said, and Universitas Muhammadiyah Surakarta, offer BIPA programs (Saddhono & Erwinsyah, 2018).

Despite the high interest in learning Indonesian by foreign speakers, there is a lack of suitable learning media to support their needs. Presently, the enthusiasm of foreign learners to study Indonesian is not met with learning media that align with their preferences (Jessica, 2022). This is evident in the scarcity of BIPA learning materials, both in textbooks and non-textbooks, that incorporate local wisdom. Therefore, there is a need for standardized BIPA learning media to balance the high interest from foreign speakers (Saputra et al, 2022; Saputra et al, 2023).

Not all BIPA learning materials cover the social and cultural aspects of Indonesian society (Sari & Ansari, 2021). Of the 43 BIPA books analyzed, only 24, or 56%, presented materials related to the social and cultural aspects of Indonesian society. Yunus & Anwari (2021) also analyzed the BIPA learning media "Lentera Indonesia" and concluded that the exercises inadequately train communication skills for foreign speakers as the integration of speaking and listening skills is limited to comprehension exercises. The demand for Indonesian language learning among foreign speakers is advancing rapidly, but there is still no standardized curriculum or learning media available (Kusuma & Ismail, 2017). Furthermore, much of the BIPA learning media used does not integrate cultural awareness (Rahmawati, 2019). Challenges arise when learners visit tourist destinations or historical sites, as they may not understand explanations from tour guides due to a lack of vocabulary and cultural knowledge (Amalia & Arifin, 2021).

Based on the observations and interviews conducted by the researcher regarding the BIPA program in Surakarta at three universities, namely Universitas Sebelas Maret, Universitas Islam Negeri Raden Mas Said, and Universitas Muhammadiyah Surakarta, the researcher concludes that the issues with Indonesian Language Learning for Foreign Speakers (BIPA) in Surakarta are related to limitations in development, accessibility, and the diversity of learning media. First, the BIPA programs in Surakarta have not fully utilized technology to develop interactive and engaging learning media. The limited use of technology can hinder the effectiveness of learning, especially for participants accustomed to digital media. Second, the available learning media lack integration with the local culture of Surakarta. Learning is still primarily focused on textbooks developed by the central government, which broadly represent Indonesian culture. This makes BIPA learners in Surakarta struggle to understand the learning materials because Indonesia is an archipelagic country with highly diverse local cultures. The culture in other regions differs from that of Surakarta, where BIPA learners reside and study at Universitas Sebelas Maret, Universitas Islam Negeri Raden Mas Said, and Universitas Muhammadiyah Surakarta.

To address the above-mentioned issues, efforts are needed to develop better and more diverse BIPA learning media. BIPA learning media should be carefully planned, executed, and evaluated (Susani, 2020). Additionally, the choice of teaching materials, learning media, and methods should be considered. The use of appropriate teaching materials, learning media, and methods can influence the success of foreign speakers in achieving their goals in learning Indonesian (Mardasari et al., 2022; Saputra et al., 2023). The use of digital technology, such as applications or online platforms, can also enhance the attractiveness and effectiveness of learning media (Wityastuti et al., 2022). Engaging learning media is expected to increase the interest of foreign learners in studying Indonesian. Integrating local culture is a smart innovation to enhance the interest of foreign learners, not only in learning the language but also in understanding Indonesian culture.

This research is highly urgent to keep up with the developments in technology and information in the digital age. Technology-based learning media are highly effective and practical for use anywhere and anytime (Sapura & Saddhono, 2021). Technology-based learning media in the form of applications are expected to facilitate access to BIPA learning. Application-based BIPA learning media allows BIPA learners to study Indonesian without attending face-to-face classes. Application-based BIPA learning media can offer a more engaging and interactive learning experience, such as videos, animations, or simulations. Engaging learning media can help learners or foreign speakers become more interested and motivated to learn Indonesian (Anindyarini et al., 2019; Rohmadi et al., 2023). Application-based BIPA learning media offer a wide range of learning materials that can be chosen according to the learners' needs. Application-based BIPA learning media can also enrich the learning experience through additional features such as quizzes, discussion forums, or social media. Application-based BIPA learning media can be a solution for distance learning in specific situations, such as during a pandemic, conflict, or natural disasters. This aligns with Ramadloni's opinion (2022) that technology-based BIPA learning media allow learning to take place from home or a safe location without the need for in-person classes.

The novelty in this research is the integration of Surakarta's local culture into an interactive application-based BIPA learning media. Previous research has also been conducted by Jannah (2021) on Indonesian language learning for foreign speakers (BIPA) using local indigenous knowledge. Similar research was also conducted by Alfayanti et al. (2017) on the use of audiovisual media applications with Indonesian national culture content for literary analysis competence for BIPA learners. Research on the development of BIPA learning media has also been carried out by Darihastining et al. (2022), who developed an E-PUB for BIPA instructors. Additionally, Saddhono et al. (2020) also developed an interactive book for BIPA learning with local wisdom content. What sets this research apart is the more specific utilization of local culture, namely the culture of Surakarta. The researcher also developed an application with local cultural content in three categories: tourism, traditional clothing (batik), and cuisine in Surakarta. This was done because BIPA learners are studying Indonesian in the city of Surakarta.

The aim of this research is to develop application-based learning media with Surakarta's local cultural content for foreign learners. This research is essential for enhancing Indonesia's competitiveness in the international arena. The BIPA program is a form of Indonesia's soft diplomacy on the international stage. Therefore, to bring foreigners closer to the culture in Surakarta and its surroundings, it is necessary to provide it through learning media in the form of an application. The results of this research can contribute to the development of BIPA learning and have an impact on the tourism industry. This research is expected to serve as a cornerstone for the preservation of Indonesian culture, especially the culture of Surakarta.

Method

The research method employed in this study is research and development (R&D) with an adaptation of the approach developed by Branch (2009), which is the ADDIE model (Analysis, Design, Development, Implementation, & Evaluation).
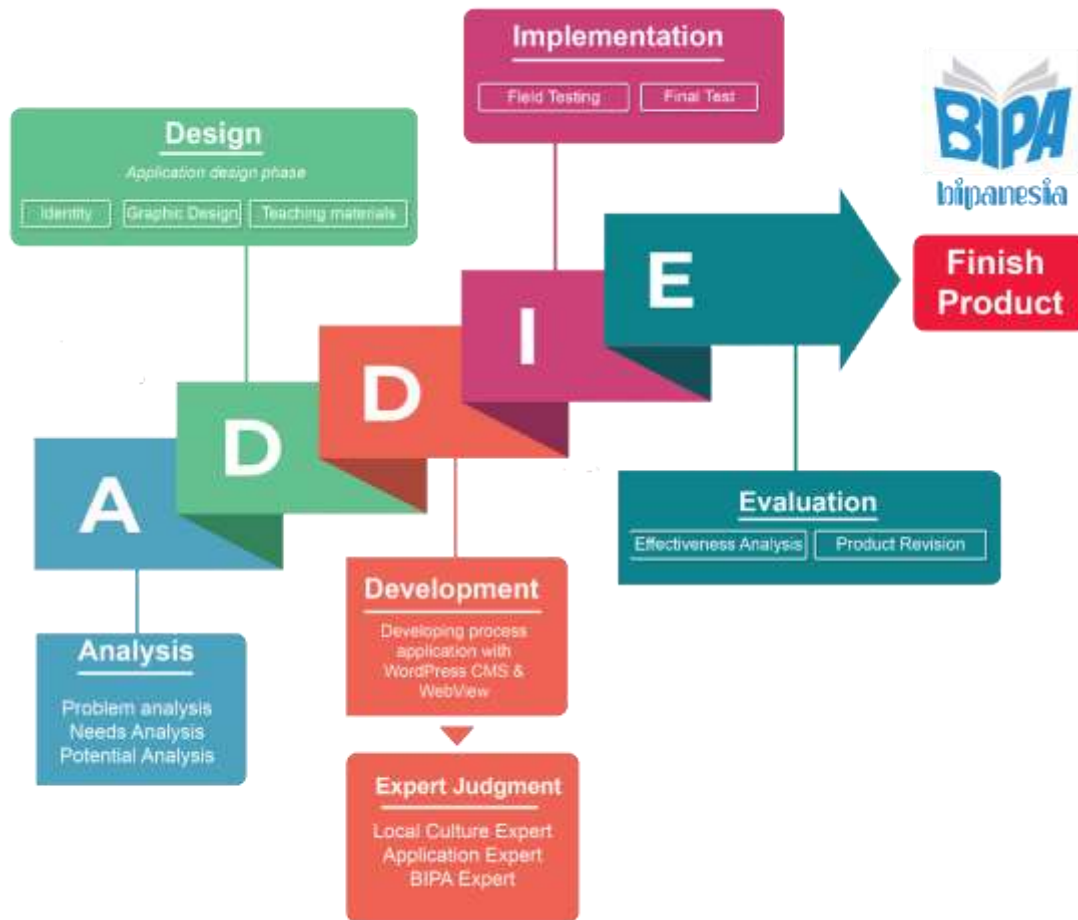
Figure 1. ADDIE model (Branch, 2009) with modifications

The stages in this research are as follows: (1) Analysis: In this phase, the researcher conducted interviews and observations with BIPA instructors and program managers at Universitas Sebelas Maret, Universitas Muhammadiyah Surakarta, and Universitas Islam Raden Mas Said to analyze issues related to teaching materials, assess the need for instructional media, and the potential use of IT-based media. The researcher collected information and data related to Surakarta's local culture that would be integrated into the application in the form of text, audio, and video. The analysis was carried out to understand the needs, goals, and objectives of BIPA learners tailored to address the issues in BIPA learning in Surakarta; (2) Design: In this stage, the researcher designed a prototype of the BIPANESIA application, including the structure, content, and research instruments. The design may encompass the development of the application product design, the development of instructional materials containing local culture to be integrated into the application, and lesson plans that utilize BIPANESIA as a learning medium; (3) Development: In this phase, the BIPANESIA application is developed, starting with the development of instructional materials containing Surakarta's local culture. Subsequently, the application design is created, aligning it with the instructional materials containing Surakarta's local culture. Finally, the application is designed using WordPress CMS with the DIVI Builder. The application will then be validated by experts (expert judgment), including: Cultural Expert from Keraton Kasunanan Surakarta (Local Culture Expert); Indonesian Language Lecturer at UNS (Language Expert); IT Practitioner in Surakarta Company (Application Expert); BIPA Instructor at Universitas Negeri Semarang (BIPA Expert); (4) Implementation: In this stage, the BIPANESIA application, which contains Surakarta's local culture, is field-tested with BIPA learners at Universitas Sebelas Maret, Universitas Muhammadiyah Surakarta, and Universitas Islam Negeri Raden Mas Said Surakarta. In this phase, the learning product is

presented and subjected to final testing to ensure its quality and effectiveness; (5) Evaluation: In the final stage, the researcher evaluates the effectiveness of the BIPANESIA application containing Surakarta's local culture during BIPA learning. The evaluation is conducted to determine if the BIPANESIA application meets the needs of BIPA learners, how effective it is in enhancing the understanding and language skills of BIPA learners, and to evaluate the strengths and weaknesses of the BIPANESIA application for future development.
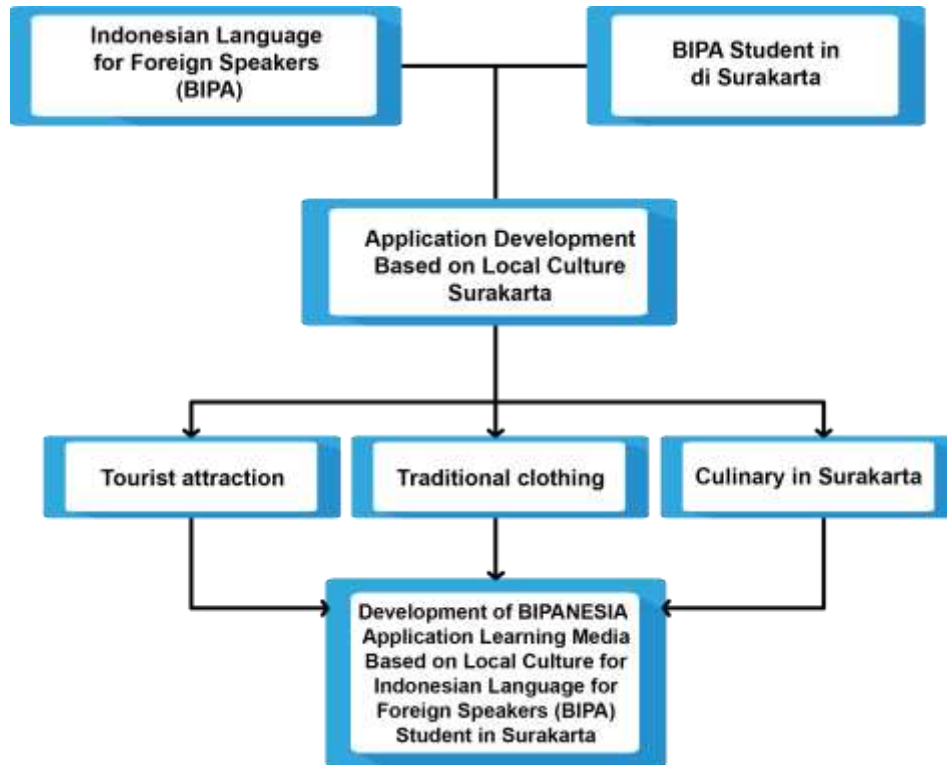
Figure 2. framework of thinking

The research took place at BIPA institutions in Surakarta, including Universitas Sebelas Maret, Universitas Muhammadiyah Surakarta, and Universitas Raden Mas Said. The data sources for this research were obtained through document analysis, observations, and interviews with BIPA learners in Surakarta. Data collection techniques included: (a) In-depth interviews with lecturers and BIPA learners in Surakarta; (b) Passive classroom observations. Observations were conducted to understand the utilization of the BIPANESIA application containing Surakarta's local culture; (c) Questionnaires were used to collect data on the perceptions of BIPA instructors and learners regarding the instructional media of the BIPANESIA application containing Surakarta's local culture. Data validity was ensured through method triangulation and source triangulation. Method triangulation involved analyzing documents, observations, and interviews to compare and cross-reference data from various research methods to identify the needs for BIPA instructional media in Surakarta. Source triangulation combined data from BIPA learners, BIPA instructors, and Indonesian language experts in Surakarta to support consistent findings regarding the integration of local culture into BIPA instructional media. The data analysis technique employed was the interactive analysis model.

Results and Discussion

This research aims to meet the need for IT-based instructional media in the form of an application with Indonesian local cultural content. Application-based learning media that integrates local culture is a smart alternative for effective and engaging Indonesian language learning for foreigners. In the context of

this research, the local culture to be integrated is the culture of Surakarta City. The application-based learning media BIPANESIA can be developed to deliver comprehensive and engaging Surakarta's local cultural content to foreigners studying at Universitas Sebelas Maret, Universitas Muhammadiyah Surakarta, and Universitas Islam Raden Mas Said Surakarta. The following are the stages of the ADDIE method (Analysis, Design, Development, Implementation, and Evaluation) that can be applied in developing the BIPANESIA application:

Analysis

In this stage, the researcher will analyze problems and delve into the map of BIPA learning media needs at Universitas Sebelas Maret, Universitas Muhammadiyah Surakarta, and Universitas Islam Raden Mas Said Surakarta. The researcher will also analyze the potential development of the BIPANESIA application, including selecting suitable technology, designing an intuitive user interface, and compiling informative and engaging cultural content. Additionally, the researcher will analyze the potential of local culture by exploring relevant Surakarta's local cultural elements, including culinary, tourist attractions, traditional clothing, customs, and the daily lives of the local community, which can be effectively conveyed to foreigners.

1. Problem Analysis

Based on interviews with BIPA instructors and program managers at Universitas Sebelas Maret, Universitas Muhammadiyah Surakarta, and Universitas Islam Raden Mas Said Surakarta, several issues related to learning media were identified. One of them is the underutilization of IT-based technology. Instructors more often use PowerPoint and printed materials to teach BIPA. Furthermore, BIPA programs at these universities often do not fully integrate local Surakarta cultural content, which can reduce foreigners' deep understanding of the local culture. This is due to instructors' frequent use of teaching materials from the government with national Indonesian cultural content. The use of technology in BIPA learning is limited due to technology resource constraints. This can affect foreigners' learning experience. Additionally, instructor training in effective learning media development and educational technology usage is inadequate. The evaluation process and feedback for BIPA learning media are often not systematic enough. Improvement in this area requires more structured evaluation and effective feedback from foreigners.

2. Needs Analysis

The map of the needs for Indonesian Language for Foreigners (BIPA) learning media at Universitas Sebelas Maret, Universitas Muhammadiyah Surakarta, and Universitas Islam Raden Mas Said Surakarta can be categorized into several key aspects. First, it is essential to enhance the integration of Surakarta's local culture into the BIPA curriculum at these three universities. This can improve foreigners' understanding and appreciation of the local culture. Second, there is a need for improved development of BIPA learning materials, including textbooks, modules, and more relevant, interactive, and engaging digital resources. Third, the use of technology in BIPA learning needs to be enhanced, focusing on creating more interactive and accessible learning media. Instructor training in BIPA on effective learning media development and educational technology usage should also be improved. Fourth, a more systematic evaluation system needs to be established, and feedback from foreigners should be effectively integrated for continuous improvement in learning media. Fifth, the delivery methods of local culture materials need to be developed to be more engaging and profound. Sixth, stronger collaboration with the local community, artists, and cultural experts needs to be increased to enrich BIPA learning materials and experiences. Lastly, resource enhancement, including funding, facilities, and staff, will be a critical factor in supporting the development of better BIPA learning media. With a deeper understanding of these needs, universities and BIPA instructors can design more effective strategies to address challenges and enhance the quality of BIPA learning in their academic environments.

3. Potential Analysis

The development of application-based Indonesian Language for Foreigners (BIPA) learning media at Universitas Sebelas Maret, Universitas Muhammadiyah Surakarta, and Universitas Islam Raden Mas Said Surakarta has significant potential to address several identified issues. By integrating Surakarta's local culture into the BIPANESIA application, foreigners can gain a deeper understanding of the local culture. This application can provide content such as text, images, audio, and video that depict local culture, including culinary, tourist attractions, and traditional clothing. It is expected to help improve Indonesian language learning and enhance appreciation of Surakarta's local culture. Application-based learning media can serve as an effective platform for delivering better learning materials, including interactive modules, exercises, tests, and access to other digital resources. The use of technology in BIPA learning can be enhanced through this application, providing a more interactive learning experience, including digital-based teaching materials, instructional videos, and online quizzes. Application-based learning media can also interact through chat columns with instructors to track foreigners' progress. To address instructor training issues, the application can be used as a training tool to enhance instructors' abilities in technology usage and effective learning content development. The evaluation system becomes more systematic, and feedback from foreigners can be more effectively integrated for continuous improvement. The delivery of Surakarta's local culture content in the BIPANESIA application can incorporate local cultural elements in various ways, such as cultural exploration videos, interviews with locals, and direct interaction with artists or cultural figures. Stronger collaboration with the local community can be enhanced through this application, allowing universities to engage artists and cultural experts in contributing to the application's content and creating stronger collaborations to support local culture learning.

Desain

The development of application-based learning media products enters the design phase, which begins with the preparation of the product design. The product design phase starts with the identification of the application's identity, including the application's name, logo creation, mascot design, and prototype application interface.

1. Product Identity

This phase starts with the selection of the application's name, and according to Ismayani (2018), naming an application requires careful consideration. The name should clearly reflect the application's main purpose and functionality. The chosen name should be short, easy to remember, easy to pronounce, and unique. It is essential to ensure that the name is relevant to the intended purpose. Negative words should be avoided, and it should not infringe upon existing copyrights or trademarks.

Based on these considerations, the researcher has chosen the name "BIPANESIA" for the application, which means "Bahasa Indonesia untuk Penutur Asing" (Indonesian Language for Foreigners) with local Surakarta culture content. The name "BIPANESIA" was selected to clearly reflect the application's main focus, providing effective Indonesian language learning for foreigners. "BIPA" stands for "Bahasa Indonesia untuk Penutur Asing," clearly explaining the main focus of this application, while "NESIA" signifies the origin country, Indonesia.

After determining the name, the next step is creating the application's logo. According to Nugroho (2020), the process of creating an effective logo in the context of brand identity requires a deep understanding of design elements and principles involved. Simplicity, as one of the design principles, receives primary emphasis because a simple logo tends to facilitate the recognition and memorization process. Based on this, the researcher begins designing the logo using Adobe Illustrator. The researcher initiates sketching, adds color, and designs the BIPANESIA application logo. The BIPANESIA application logo highlights the identity of the Indonesian Language for Foreigners (BIPA) program by

using the letter symbols "B"-"I"-"P"-"A." The researcher aims to create a sketch where the BIPA letters form an open book, going beyond mere font representation.

Picture 1. BIPANESIA application logo

The revised "BIPANESIA" logo incorporates the letters B, I, P, and A, forming an open book, symbolizing the essence of an application accessible to anyone, anywhere, and anytime who wishes to learn Indonesian for foreign speakers (BIPA). The light blue color chosen is derived from the prominent color of Universitas Sebelas Maret, where the researcher developed this application. Light blue also reflects friendliness, trust, and inspiration.

The presence of two conversation icons within the letter "B" signifies the importance of interaction and communication in language learning. They create an impression of collaboration and interactivity, encouraging BIPA learners to speak, listen, and communicate in the Indonesian language. This reflects the philosophy that the BIPANESIA application can be used by BIPA learners to enhance language skills (listening, speaking, reading, and writing).

In addition to the logo, the researcher also created a mascot, choosing the orange-knobbed hornbill as the BIPANESIA application's mascot. The orange-knobbed hornbill is an endemic bird to Sumba Island, East Nusa Tenggara, with an endangered status. This bird was chosen due to its remarkable intelligence and learning abilities, including the capacity to mimic sounds and simple language. As a mascot, the orange-knobbed hornbill reflects BIPANESIA's focus on learning and communication in the Indonesian language. Furthermore, the hornbill is a symbol of Indonesia's rich cultural heritage and the diversity of languages in the country. Beyond that, the hornbill is a long-lived bird, with a lifespan of up to 50 years. Therefore, the hornbill can symbolize sustainability and growth.

Picture 2. BIPANESIA application mascot

The preparation of the prototype design for the BIPANESIA application product begins with the creation of an appealing user interface (UI/UX) that focuses on the elements of local culture in Surakarta. This includes the selection of colors, fonts, and visual elements that reflect the local culture. Subsequently, the next step involves identifying the key features that will be present in the prototype, such as language learning, cultural exploration, quiz tests, and user interactions, and ensuring that each feature aligns with user needs.

Picture 2. BIPANESIA application prototype design

Wireframes, or basic frameworks of each screen in the application, are created to determine the layout of key elements. Subsequently, a more detailed visual design is applied by incorporating local cultural elements. Next, the interaction flow and navigation between pages are designed to ensure user-friendly navigation, and interactive elements function properly. Local cultural content, such as images, videos, and text reflecting the culture of Surakarta, is integrated into the design while considering its relevance to language learning contexts. This process creates a prototype design that combines local cultural elements with language learning needs, providing a comprehensive and engaging user experience.

Development

The development of the BIPANESIA application utilizes the WordPress CMS, which will later be adapted into a webview system for both Android and iOS. The initial steps involve purchasing a domain and hosting. Following this, the installation of the WordPress CMS on the hosting server is a key step, followed by basic configurations like language selection, time settings, and initial security measures. The subsequent stage is creating a flowchart related to the BIPANESIA application system to be developed. The researcher uses Adobe Illustrator to create the flowchart for the BIPANESIA application system.
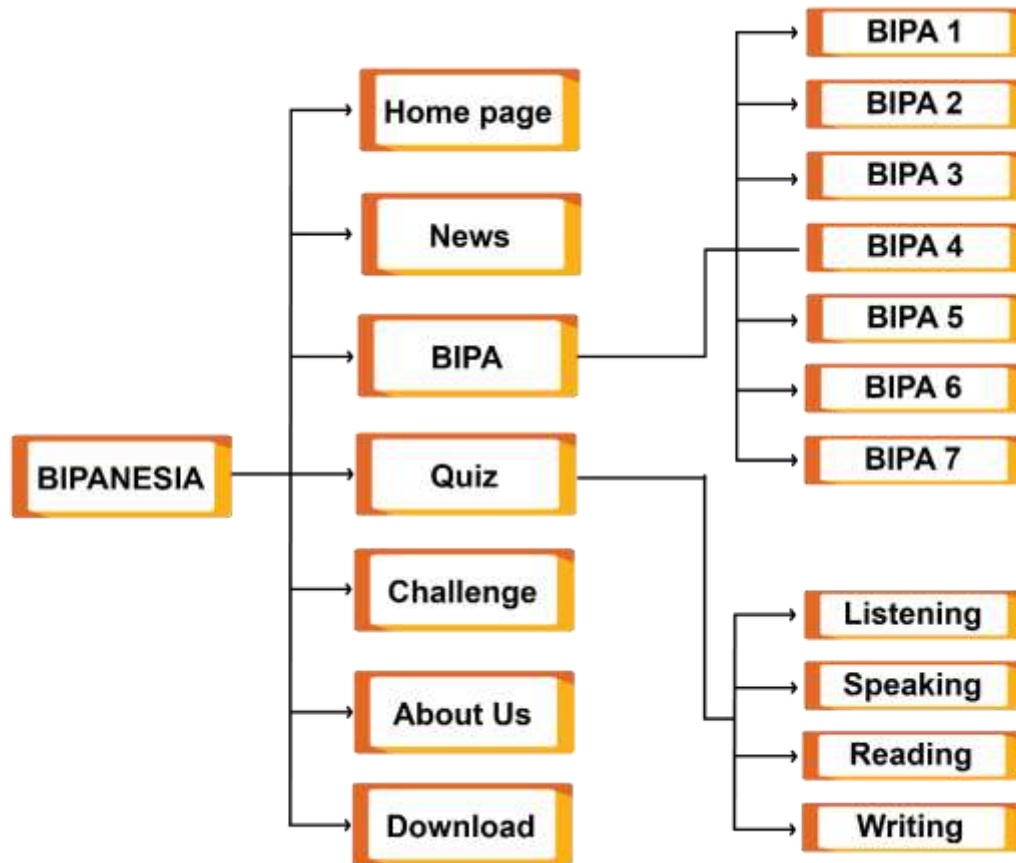
Figure 3. BIPANESIA Application System Flow Chart

The flowchart describes that there will be 7 menus in the BIPANESIA application. These menus consist of home, news, BIPA, quizzes, challenges, about, and download. The "home" menu in the BIPANESIA application contains the main screen that appears when users open the application. This page aims to provide users with important information, navigation, and access to various features and content available within the application.

The "home" menu is designed to make it easy for users to explore and utilize various resources provided by the application. The "Home" menu includes information on the vision-mission. Furthermore, it provides information on how users can contribute to publishing their work on BIPANESIA. BIPANESIA users can publish news, learning media, teaching materials, information about activities, and other related materials about Indonesian for Foreign Speakers (BIPA). Additionally, the "Home" menu also includes "Testimonials," which contains user feedback about the BIPANESIA application. The home menu will also feature our profile, aimed at providing brief information about the BIPANESIA application in the form of a video. After that, there is a "Supported by" section that provides information about the institutions that have collaborated and contributed to the development of BIPANESIA.

The "News" menu in the BIPANESIA application serves to provide the latest news and information, offering users various educational articles, cultural explorations, current news, stories from BIPA teachers, and things related to BIPA. In this menu, users can explore the available news articles. Additionally, users can also contribute by submitting their own news articles, making the BIPANESIA application a platform for BIPA teachers and learners to publish news and activity information.

The "BIPA" menu in the BIPANESIA application provides access to various structured Indonesian language learning materials for foreign speakers, organized into seven levels, from BIPA 1 to BIPA 7. Each level is designed to meet the needs of users with different language comprehension levels, ranging from beginners to advanced learners. BIPA 1 contains initial language learning materials in the journey of learning the Indonesian language. In the BIPA 1 submenu, users will learn the basics of the language, such as the alphabet, common vocabulary, and simple phrases. The BIPA 1 materials help users establish a foundation in the Indonesian language. BIPA 2 focuses on developing speaking, listening, and reading skills. Users will learn more vocabulary, phrases, and more complex grammar. BIPA 3 expands the understanding of foreign learners about the Indonesian language by introducing more complex concepts, such as verb forms and questions in Indonesian. This helps foreign learners communicate more fluently. BIPA 4 contains materials on more complex sentence construction, as well as the use of adjectives and adverbs. This helps users to speak and write more in-depth. BIPA 5 focuses on the development of more in-depth writing skills following language norms, allowing BIPA learners to produce more structured and diverse texts. BIPA 6 directs BIPA learners to a deeper understanding of Indonesian culture and literature, allowing BIPA learners to connect more with the cultural context when using the language. BIPA 7 is the highest level offered in the "BIPA" menu. BIPA 7 materials delve deep into Indonesian language and culture, including discussions of complex topics and language competence enhancement. Each level in the "BIPA" menu, consisting of submenus BIPA 1 - BIPA 7, is designed to meet different needs and levels of language comprehension. BIPA learners can choose the level that suits their abilities and goals in learning the Indonesian language.

The "Quiz" menu in the BIPANESIA application functions as practice and enrichment for BIPA learners in learning the four language skills: listening, speaking, reading, and writing. In the Listening Quiz, BIPA learners will listen to various audio and video materials, such as conversations, interviews, dialogues, monologues, animations, documentaries, and films. Afterward, BIPA learners will take quizzes based on the audio or video content presented. The Speaking Quiz allows them to practice speaking in Indonesian by answering questions and narrating stories as instructed by the quiz. The Reading Quiz assesses their reading and comprehension skills, with BIPA learners required to respond to questions or describe their understanding of the written text. The Writing Quiz prompts BIPA learners to express themselves in Indonesian by writing diaries, descriptive texts, essays, letters, and more. The Quiz menu provides an opportunity for BIPA learners to test their abilities in all four language aspects, allowing significant improvement in their Indonesian language learning process. The quiz menu can be a valuable assessment tool for both teachers and BIPA learners to identify weaknesses, measure progress, and strengthen their language competence over time.

The "Challenges" menu in the BIPANESIA application is a feature that challenges BIPA learners to engage in a series of Indonesian local culture experiences. In the context of this research, Surakarta local culture is the choice. These challenges provide BIPA learners with the opportunity to gain a deeper understanding of local culture while honing their Indonesian language skills in real-world situations. One form of challenge is "Buying Local Cuisine." This challenge invites BIPA learners to explore traditional markets or visit typical culinary spots in Surakarta. BIPA learners will be provided with a list of local foods or dishes they need to find and purchase. In addition to practicing their speaking and interacting with vendors, this allows them to savor delicious local cuisine, making the culinary experience more meaningful. The "Visiting Tourist Attractions" challenge encourages BIPA learners to visit well-known tourist destinations in Surakarta, such as Kasunanan Palace, Mangkunegaran Palace, Keris Museum, Lokananta Museum, Solo Zoo, and more. BIPA learners will be asked to explore these places, observe, and interact with tourists around them. Through the "Challenges" menu, BIPA learners not only deepen their understanding of Surakarta's local culture but also engage in memorable experiences. This menu is a unique and engaging way to blend Indonesian language learning and local cultural exploration, making BIPANESIA a distinctive and meaningful learning platform for BIPA learners who wish to understand Indonesian while experiencing the richness of local culture.

The "About" menu provides information to BIPA learners and instructors about the BIPANESIA application development team and the team's goals in creating this application. Visitors to the application will find a brief profile of the development team, including their backgrounds and experiences in the field of BIPA. This information helps users understand that the application is created by individuals or a team that is competent and committed to providing a high-quality language and culture learning experience. In addition, visitors will also learn about the goals of the BIPANESIA application, such as assisting foreigners in understanding the Indonesian language while experiencing the richness of local culture. The "About" menu creates transparency between developers and users, helping to build trust and motivate users to continue using this application in their language and culture learning journey.

The "Download" menu is a means that allows BIPA learners and instructors to access and save learning materials in a downloadable format. This includes PowerPoint presentations, learning modules, audio, video, reading materials, and more that are available within the application. Users can easily download these materials to their devices, enabling them to access them offline or for use outside the application. For learners, the "Download" menu provides flexibility in learning wherever they are, even without an internet connection. Meanwhile, BIPA instructors can utilize the downloaded materials to integrate them into their classroom teaching or as additional reference sources.

Expert Judgment

The initial phase of product testing involves expert validation, which involves three groups of experts who play a crucial role in ensuring the application's alignment with the objectives and user needs. The process begins with preparation, where the researcher contacts local Surakarta cultural experts, BIPA experts who are BIPA instructors from Semarang State University, and BIPA media experts who are BIPA researchers from Sebelas Maret University. The researcher then conducts an application presentation session to provide a deep understanding of the application's objectives, structure, and features to the experts. The experts subsequently evaluate the application from their respective group perspectives. Cultural experts ensure that the application accurately reflects Surakarta's culture, BIPA experts assess the effectiveness of the learning methods and the quality of the teaching materials, while BIPA media experts evaluate the visual and media aspects of the application. The evaluation results and feedback provided by the experts will serve as the basis for revisions and improvements to the application.

1. Local Cultural Experts

After validation by local Surakarta cultural material experts on the local cultural content within the "BIPANESIA" application, the results indicated that the overall local cultural content in the application was positively assessed. The cultural material was found to be highly informative and accurate, providing a good understanding of Surakarta's local culture. The assessors also found that the local cultural content was highly relevant to the needs of BIPA learners who want to understand Surakarta's local culture.

The assessors recommended placing greater emphasis on traditional ceremonies that are distinctive to Surakarta's identity. Therefore, the researcher should add material that includes traditional ceremonies, not just culinary, tourist attractions, and batik. Additionally, material experts recommended improving the presentation of Surakarta's local history in the application, including significant events and historical figures who played a role in shaping local culture. The assessors also desired more content on local performing arts, such as Javanese dance, gamelan music, masks, and wayang puppetry to enrich the cultural experience of BIPA learners.

Furthermore, the local cultural experts positively assessed the presence of the local tour guide within the application in the "Challenges" menu, which helps users explore Surakarta and get to know interesting tourist spots. Local cultural experts appreciated that the local cultural content was well integrated into the BIPA material, making users feel engaged in cultural learning. They emphasized the

importance of maintaining a good balance between local cultural content and basic Indonesian language material, and recommended that the application continuously monitor this balance.

Based on the results of the local cultural expert validation, the assessors found the application suitable with revisions. Revisions by local cultural experts include adding content about traditional ceremonies, Javanese dance, gamelan music, mask art, and wayang puppetry. These findings will serve as the basis for the necessary changes and revisions to be added to the "BIPANESIA" application to ensure that Surakarta's local cultural material remains relevant, accurate, and beneficial to BIPA learners in learning the Indonesian language and understanding local culture.

2. Application Experts

The validation results by media experts on the "BIPANESIA" application, particularly related to its use in teaching Indonesian to Foreign Speakers (BIPA), provide valuable insights for application improvement and development. Media experts acknowledge that the application has significant potential in supporting BIPA learning; however, they also highlight several aspects that require improvement.

Firstly, media experts view the application's user interface positively, deeming it intuitive and easy to use. The ease of navigation in the application is considered to allow users to access various learning materials quickly. Nonetheless, media experts recommend enhancing the search feature and providing a more comprehensive index to help BIPA learners easily find content that suits their needs.

Furthermore, media experts emphasize the diversity of content formats within the application, including text, audio, and video, as a positive aspect. However, they stress the importance of production quality in audio and video content to ensure a better learning experience. Revisions may include audio improvements, image quality, and enhanced video content clarity.

Application experts also recommend making the application available in English to support foreign learners who wish to learn Indonesian in their own language. Adding connectivity features for user support through a chat bubble will facilitate users in obtaining assistance and answers to their application-related questions. The last recommended revision is the development of the application not only for Android but also for other operating systems like IOS. This will enable easier and more flexible access for BIPA learners using various devices.

Based on the results of the application expert validation, the assessors find the application suitable with revisions. These revisions will serve as the foundation for improving and enhancing the quality of the "BIPANESIA" application in supporting BIPA learning. The focus is on updating the logo to make it simpler and more memorable, interactive features, feedback features, availability in English, and cross-device accessibility for the application.

3. Indonesian Language for Foreign Speakers (BIPA) Experts

In the validation results by Indonesian Language for Foreign Speakers (BIPA) experts concerning the utilization of the "BIPANESIA" application for BIPA learning, some crucial findings were discovered. BIPA experts appreciate the great potential of this application in assisting foreign speakers in comprehending and mastering the Indonesian language. The development of the application as a BIPA learning tool represents an innovative and renewable product. One aspect that received praise is that the application as a learning medium allows BIPA learners to study wherever and whenever they want, providing high flexibility in the digital era.

Regarding the content, the "BIPANESIA" application already provides exercises for all four language skills (listening, speaking, reading, and writing). Although comprehensive, BIPA experts criticize the limited material available for BIPA Level B1, and it would be better to include all levels from BIPA 1 to BIPA 7. While the application already includes Surakarta's local culture, it would be preferable for the local cultural content to be more extensive for use by BIPA learners worldwide. Additionally, in developing content with Surakarta's local cultural elements, it should adhere to the Competency Standards

(SKL) as established in Ministry of Education and Culture Regulation No. 27 of 2017 regarding the Competency Standards for BIPA Graduates (SKL BIPA).

BIPA experts recommend expanding the content and exercises in specific areas. Particularly, improving the understanding of the local cultural context in Surakarta is of utmost importance. Learners need to understand how the language is used in everyday situations involving local culture, and stronger integration in this aspect would provide a deeper understanding of the regional culture. Additionally, vocabulary development becomes a primary focus for revision. BIPA experts suggest enhancing the variety and intensity of Indonesian vocabulary exercises. This will help users master Indonesian vocabulary in various conversational contexts.

Variation in listening exercises also draws attention from BIPA experts. It would be beneficial to provide captioning for the videos. By adding captions to the listening exercises, the application will be more easily understood by beginner-level BIPA learners. BIPA experts also desire the application to facilitate interaction between instructors and BIPA learners by introducing additional features.

Based on the validation results from BIPA experts, the assessors find the application suitable with revisions. The recommended revisions by BIPA experts will be implemented in the "BIPANESIA" application to ensure it becomes a more effective tool for learning Indonesian for foreign speakers. By focusing on developing richer and more relevant content, the application can provide a more beneficial and in-depth learning experience for BIPA learners.

Implementation

The implementation of the "BIPANESIA" application at Universitas Sebelas Maret involved 24 Japanese BIPA learners from Kokushikan University. The implementation began with an orientation session aimed at introducing the application to the learners. They were guided to download and install the application on their devices, as well as create user accounts. Subsequently, learners could choose the learning level that matched their Indonesian language proficiency, ranging from beginner to intermediate and advanced. This allowed them to commence their learning at a level that suited their skill level.

The use of the "BIPANESIA" application allowed learners to study independently by accessing grammar materials, vocabulary, listening exercises, reading, and writing exercises anytime and anywhere according to their schedules. In addition to self-study, the program included group activities at the university, where BIPA learners gathered in classes for BIPA learning, engaging in conversation exercises, language games, and discussions on the materials they had learned through the application.

Interactive features such as text-based conversations and voice recordings were used by learners to practice speaking and listening. They could take quizzes and other language exercises that provided instant feedback. The feedback feature within the application helped learners receive assessments and corrections in their Indonesian speaking and writing. They could also submit their conversations or writings for evaluation by instructors or fellow learners.

In this research, the researchers conducted an advanced test of the implementation of the "BIPANESIA" application, involving the "Challenge" feature that combines Indonesian language learning with real-life experiences in the surrounding environment. BIPA learners were invited to explore the local culture of Surakarta by visiting some interesting places, namely the Keris Museum, Solo Zoo, and enjoying typical Selat Solo cuisine.

The use of the "Challenge" feature in the application enabled learners to apply the Indonesian language knowledge they acquired through the application in real-life situations. They were given specific challenges that involved interacting with local people, tour guides, and culinary experiences. For instance, they were asked to interact with other visitors at the Keris Museum, ask questions to the guides, or attempt to speak in Indonesian while at Solo Zoo.

BIPA learners were also challenged to taste Selat Solo's culinary delights, which was also part of their challenge. They were provided with a menu and food descriptions in Indonesian, and they were

expected to order food correctly when visiting culinary establishments. This challenge helped them experience the local culture while practicing the Indonesian language in everyday situations.

Activities involving visits to the Keris Museum, Solo Zoo, and enjoying typical Selat Solo cuisine through the "Challenge" feature in the "BIPANESIA" application yielded valuable results for Japanese BIPA learners. They not only improved their ability to speak Indonesian through direct interactions with locals and practical communication experiences but also gained a deeper understanding of the local culture in Surakarta. Visits to the Keris Museum and Solo Zoo provided insights into cultural artifacts and Indonesia's natural wealth, while enjoying Selat Solo cuisine deepened their understanding of Indonesian culinary culture.

In addition to language learning and cultural understanding, learners also experienced valuable cultural exchanges and built confidence in speaking a foreign language. They felt more prepared to communicate with locals and appreciated cultural differences. This experience enriched their worldview and taught them tolerance toward cultural diversity.

Moreover, they acquired practical skills that they could apply in their daily lives while staying in Indonesia. All these outcomes illustrate the importance of integrating language learning with direct experiences to enrich the learning journey and personal development. Through the "Challenge" feature in the "BIPANESIA" application, Japanese BIPA learners achieved numerous valuable results and became better prepared for communication and interaction in the context of the Indonesian language and culture.

Evaluasi

The results of the evaluation of the "BIPANESIA" application development process indicate that the project has successfully achieved most of its goals. The application has been successful in enhancing the learning of the Indonesian language for foreign speakers and facilitating an understanding of the local culture of Surakarta. The evaluation also shows that the project planning has been executed effectively, with resource management and risk management performed efficiently. The application development process was well executed, and technical testing has ensured adequate technical quality. Security of the application has been a priority, and its vulnerability to cyberattacks has been minimized. Users have reported a positive experience with the application, noting an easy-to-use and intuitive user interface. Responsiveness to changing user needs during development has been well handled. The development team has shown good capabilities in providing post-launch maintenance and support, including timely bug fixes and updates.

The "BIPANESIA" application has complied with relevant standards and regulations, and user feedback has provided a positive overview of their satisfaction with the application. Sustainability plans and further improvement strategies have been identified to keep the application relevant and evolving. However, the evaluation also identified areas for improvement. For example, the application development should consider expanding more diverse interactive features to enhance the quality of learning. Additionally, a stronger marketing strategy is needed to reach more potential BIPA learners. The evaluation also highlights the importance of focusing on the development of deeper content related to the local culture of Surakarta to enhance cultural understanding. Thus, this evaluation provides a comprehensive overview of the success of the "BIPANESIA" application development project and offers direction for further improvements and developments to meet user needs and expectations.

Discussion

The development of applications as learning tools has significant benefits in the advancement of modern education systems. As expressed by Sundgren (2017), applications have a positive impact on the education system by introducing the concept of improved accessibility to the world of education. Maja (2023) states that with learning applications, learners and educators are not constrained by place and time. Users can access learning materials anytime and anywhere. In agreement with this, Wong (2023) suggests

that application-based media eliminates geographical barriers and enables more flexible learning. Learning through application-based media is highly relevant in the era of distance and online learning.

Application-based learning media not only offer flexibility but also often provide high interactivity. Features such as interactive exercises, quizzes, and immediate feedback allow learners to actively participate in the learning process. As seen in the research conducted by Rahmatullah, Ruchliyadi, & Sufyadi (2023) on the use of Duolingo application for independent English language learning, Duolingo offers various interactive features, making learning more engaging even when used independently. This demonstrates that the learning process with application-based media is no longer passive. Learners are not just receiving information but are actively involved in shaping their own understanding. This aligns with the study conducted by Sofi, Bali, Rached (2023), which suggests that application-based media can enhance information retention as learners have the opportunity to apply their knowledge directly to the relevant learning materials.

Application-based media can also be tailored to individual needs, as mentioned by Hidayatullah et al. (2023). They argue that application-based media holds urgency in Indonesian education, as digital-based media is a step towards personalized differentiated learning based on individual desires and abilities. Applications can design learning experiences that align with learners' levels of knowledge and abilities. This allows each learner to study at a level that suits their capabilities, maximizing learning outcomes and avoiding boredom or frustration that can occur when learners find the material too easy or too difficult. This aligns with the research conducted by Gea et al. (2023), which shows that over 80% of students found learning with the SikMa-based application concept more enjoyable, and independent learning at home increased.

Based on the benefits of using application-based learning media, the use of applications in education is becoming increasingly important in advancing education. Learning applications open doors to more flexible, inclusive, interactive, and adaptive learning, which provides significant benefits to learners from various backgrounds and skill levels. Over time, by continuously developing and utilizing technology-based media, we can achieve more efficient and effective learning and improve the quality of education in Indonesia.

Therefore, researchers have developed a learning media for Indonesian Language for Foreign Speakers (BIPA) based on an application called "BIPANESIA." The development of applications for BIPA learners is still relatively rare. Some research on BIPA applications has been conducted, such as the work of Setiawan, Kosasih, & Abidin (2020), who developed listening materials through an Android application for basic-level BIPA. Additionally, the development of BIPA applications has been carried out by Sandy, Ulfa, Wedi (2020), who created the "BIPAJAR" application to train pronunciation for BIPA program students. Rahmawati, Asiyah, & Mustikasari (2020) also developed an application named "Klonosewandono" for basic-level reading skills in BIPA. The advantage of the BIPANESIA application is that it offers various language skills (listening, speaking, reading, and writing). Moreover, the BIPANESIA application can be accessed on various electronic devices, not just smartphones. It can also be accessed through the website at www.bipanesia.com. Therefore, the BIPANESIA application offers high flexibility.

The BIPANESIA application integrates local culture into its teaching materials. BIPA learning with culturally enriched materials is considered effective and engaging. This is supported by various research studies, such as the one conducted by Saddhono & Erwinsyah (2018), which proved that teaching materials featuring Banjarnegara folk stories are attractive for BIPA learning. Similar research by Saddhono et al. (2020) demonstrated that interactive books with Javanese local culture content enhance the understanding of language and culture for BIPA learners. In their study, Ambarwati et al. (2023) also found that teaching materials with Javanese cultural content can boost the motivation of novice BIPA learners in Thailand. Furthermore, research by Budiawan (2017) showed that the integration of "nasi tumpeng" culinary culture into BIPA teaching materials, media, and methods can enhance language skills for BIPA learners.

Integrating local culture as a learning medium for Indonesian Language for Foreign Speakers (BIPA) learners has significant benefits in supporting deeper and more meaningful learning. In agreement with this, Ramdhan & Ramlina (2023) also state that the integration of local culture allows BIPA learners to understand the cultural context in which the Indonesian language and culture are implemented in everyday life. This not only helps them master the language more authentically but also enables them to communicate more effectively in real-life situations.

Local culture serves as a window into the values, norms, and ethics embraced by the local community (Batubara, 2017). This allows BIPA learners to gain a deeper understanding of the social context and culture in Indonesia. Knowing the local culture is essential for BIPA learners to interact with local residents with respect and an understanding of the local culture. Additionally, the integration of local culture enriches the learners' experience. They are not just learning the language but also gaining insights into the local culture, including places of interest, arts, music, dance, cuisine, and other local customs. In agreement with this, research conducted by Purwanti (2022) suggests that the integration of Balinese local culture makes learning more interesting and motivates learners to be more engaged in the learning process.

Therefore, this research integrates local cultural content into the application. The researchers have integrated Surakarta's local culture into this study because it will be implemented in BIPA institutions in Surakarta, which include Universitas Sebelas Maret, Universitas Muhammadiyah Surakarta, and Universitas Islam Raden Mas Said Surakarta. It is not out of the realm of possibility that the BIPANESIA application will continue to be developed by integrating local cultures from various regions in Indonesia. It is important to note that integrating local culture into BIPA learning allows BIPA learners to have a deeper sense and understanding of the cultural diversity in Indonesia. Thus, the integration of local culture is not merely an additional context but an integral aspect of effective and sustainable language learning. The development of the BIPANESIA application with local cultural content becomes a research endeavor with unique, renewable, and highly beneficial value for the mission of internationalizing the Indonesian language.

Conclusion

The research results indicate that the use of the "BIPANESIA" application has yielded positive outcomes in improving the Indonesian language proficiency of BIPA learners in Surakarta, especially for Japanese BIPA learners at Universitas Sebelas Maret. BIPA learners are satisfied with their user experience with this application as both a learning medium and a self-study companion. The "BIPANESIA" application effectively helps BIPA learners understand the local culture. Various features like text, images, audio, and videos in the application contribute to bringing them closer to the authentic Indonesian culture.

Based on the evaluation results, several areas for improvement have been identified, including the development of more diverse interactive features and enhanced local cultural content. With the right improvements, the "BIPANESIA" application has great potential for continued growth and delivering greater benefits to BIPA learners in the future. Overall, this research makes a significant contribution to the development of Indonesian language learning applications with a focus on local culture, enabling BIPA learners to gain a deeper understanding of the Indonesian language and Surakarta's culture.

The researcher provides recommendations that will have a positive impact on the development and use of this application. First, the development of the "BIPANESIA" application should continue by integrating more diverse interactive features, such as contextual conversation exercises, cultural scenario simulations, and more detailed feedback. This will enrich the learning experience for BIPA learners. Second, the introduction of the application needs to be strengthened, including promotion through various government institutions and institutions that offer BIPA programs in both public and private universities. The introduction of the application to BIPA program providers abroad should also be a focus. Third, the

development of local cultural content within the application should continue to expand, encompassing not only the culture of Surakarta but also the culture of every region in Indonesia. This is aimed at making the application usable throughout Indonesia and the world. Fourth, regular evaluations and feedback from BIPA learners and user experiences are essential to continually improve and develop the application to meet user needs. Fifth, collaboration with educational institutions such as universities, language schools, and Indonesian language training centers can expand the reach of the "BIPANESIA" application and increase its impact in Indonesian language learning. Finally, planning for ongoing improvements and updates, as well as considering the right business model, is essential to maintain the sustainability of this application. By implementing these recommendations, it is expected that the "BIPANESIA" application will continue to grow and provide greater benefits to BIPA learners in Surakarta and worldwide.

References

Alfayanti, L., Suwandi, S., & Winarni, R. (2017, June). Penggunaan Media Audio Visual Aplikasi Pembacaan Cerpen Bermuatan Budaya Nasional Indonesia Untuk Kompetensi Menelaah Karya Sastra Bagi Pemelajar BIPA. In Proceedings Education and Language International Conference (Vol. 1, No. 1).

Amalia, N., & Arifin, M. (2021). Desain Bahan Ajar Keterampilan Menyimak BIPA "Aku Suka Indonesia". Fon: Jurnal Pendidikan Bahasa Dan Sastra Indonesia, 17(2), 265-271. https://doi.org/10.25134/fon.v17i2.4677 .

Ambarwati, A., Laksono, P. T., Wahyuni, S., & Sari, I. N. (2023). The Needs of Beginning Thai BIPA Learners on Indonesian Cultural Content. Athena: Journal of Social, Culture and Society, 1(4), 239-246. https://doi.org/10.58905/athena.v1i4.153.

Anindyarini, A., Sumarwati, K. R. M. A., & Sayful, M. (2019). The Comic Media of Folklore for BIPA Learning. KEBIPAAN 2019: Proceedings of the 2nd Konferensi BIPA Tahunan by Postgraduate Program of Javanese Literature and Language Education in Collaboration with Association of Indonesian Language and Literature Lecturers, KEBIPAAN, 9 November, 2019, Surakarta, Central Java, Indonesia, 1.

Batubara, S. M. (2017). Kearifan lokal dalam budaya daerah kalimantan barat (etnis melayu dan dayak). Jurnal Penelitian IPTEKS, 2(1). https://doi.org/10.32528/ipteks.v2i1.564.

Branch, R. M. (2009). Instructional Design-The ADDIE Approach. New York: Springer.

Budiawan, R. Y. S. (2017). Integration of the use of "Nasi Tumpeng" in the teaching of BIPA as one of Indonesian local cultural wisdom. Hortatori: Jurnal Pendidikan Bahasa dan Sastra Indonesia, 1(1), 01-07. https://doi.org/10.30998/jh.v1i1.28.

Darihastining, S., Sujinah, S., Qomariyah, U. N., Suyoto, S., & Chalimah, C. (2022). Developing E-Pub for Improving the Competence of BIPA (Indonesian Language for Foreign Speakers) Instructor in The Digital Era. Jurnal Pendidikan: Teori, Penelitian, dan Pengembangan, 7(9), 352-356. http://dx.doi.org/10.17977/jptpp.v7i9.15639.

Gea, A. F., Sadewo, J. D., Hasanah, U., Prasetyawan, E., Saputro, T. V. D., Rahmawati, S., ... & Suprapti, S. (2023). Application of Gamification with" SIKMA" to Increase Motivation and Learning Independence Attitudes. Asian Journal of Community Services, 2(1), 145-152. https://doi.org/10.55927/ajcs.v2i1.2361.

Hidayatullah, M. T., Asbari, M., Ibrahim, M. I., & Faidz, A. H. H. (2023). Urgensi Aplikasi Teknologi dalam Pendidikan di Indonesia. Journal of Information Systems and Management (JISMA), 2(6), 70-73. https://doi.org/10.4444/jisma.v2i6.785.

Ismayani, A. (2018). Cara Mudah Membuat Aplikasi Pembelajaran Berbasis Android dengan Thunkable. Elex Media Komputindo.

Jannah, R., Gusti Yanti, P., Hikmat, A., & Solihati, N. (2021, September). Learning Indonesian for Foreign Speakers (BIPA) Based Teaching Materials Local Wisdom. In Proceedings of the 5th International Conference on Learning Innovation and Quality Education (pp. 1-7).

Jessica, D. (2022). Perancangan UI/UX Media Belajar Program BIPA UMN (Doctoral dissertation, Universitas Multimedia Nusantara).

Kemdikbud (2019, Februari 18). Badan Bahasa Targetkan 100.000 Pemelajar Baru BIPA pada Tahun 2024. Badan Pengembangan dan Pembinaan Baahasa Kemendikbud. https://badanbahasa.kemdikbud.go.id/berita-detail/3270/badan-bahasa-targetkan-100.000-pemelajar-baru-bipa-pada-tahun-2024 .

Kusuma, E. R., & Ismail, A. (2017). Karut-Marut dalam Kurikulum Pembelajaran Indonesian Language for Foreign Speakers (BIPA) di Indonesia. FKIP e-PROCEEDING, 99-104.

Lingua (2022, Juni 4). The 20 most spoken languages in the world in 2022. Lingua Language Center, Florida. https://lingua.edu/the-20-most-spoken-languages-in-the-world-in-2022/.

Maja, M. M. (2023). Teachers' Perceptions of Integrating Technology in Rural Primary Schools to Enhance the Teaching of English First Additional Language. Journal of Curriculum Studies Research, 5(1), 95-112. https://doi.org/10.46303/jcsr.2023.8.

Mardasari, O. R., Susilowati, N. E., Luciandika, A., Minerva, P., & Yanhua, Z. (2022). New Designed Technology-Based Textbook of Indonesian for Foreign Speakers (BIPA). Journal of Higher Education Theory & Practice, 22(8).

Nugroho, Y. W. (2020). Khazanah Fotografi & Desain Grafis. DeepPublish.

Parwati, S. A. P. E. (2022). Bali Culture as A Motivation Medium in Learning Indonesian For Foreigners (BIPA) For Beginner Level. Aksara, 33(2), 323-333. http://dx.doi.org/10.29255/aksara.v33i2.654.323-333.

Rahmatullah, R., Ruchliyadi, D. A., & Sufyadi, S. (2023). Pemanfaatan Aplikasi Duolingo Sebagai Media Pembelajaran Mandiri Bahasa Inggris. J-Instech, 5(1), 128-136. https://doi.org/10.20527/j-instech.v5i1.9841.

Rahmawati, I. Y., Asiyah, S., & Mustikasari, D. (2020). AplikasiI Klonosewandono Sebagai Bahan Ajar BIPA Pada Ketrampilan Membaca Tingkat Dasar. Jurnal Dimensi Pendidikan dan Pembelajaran, 8(3), 118-124. https://doi.org/10.24269/dpp.v8i3.2996.

Rahmawati, L. E., Suwandi, S., Saddhono, K., & Setiawan, B. (2019). Need analysis on the development of writing competency test for foreign university students. Humanities and Social Sciences Reviews, 7 (3), 467-471. https://doi.org/10.18510/hssr.2019.7368.

Ramadloni, S. (2022). Pemanfaatan Laman BIPA Daring dalam Konteks Multimodalitas bagi Pemelajar BIPA. Madah: Jurnal Bahasa dan Sastra, 13(1), 80-90. https://doi.org/10.31503/madah.v13i1.431.

Ramdhan, V., & Ramliana, R. (2023). Pembelajaran Budaya Melalui Media Gamelan pada Mahasiswa BIPA. JAGADDHITA: Jurnal Kebhinnekaan dan Wawasan Kebangsaan, 2(2), 46-53. https://doi.org/10.30998/jagaddhita.v2i2.1936.

Rohi, A. (2015). Web Programming is Easy. Jakarta: PT. Elex Media Komputindo.

Development of BIPANESIA Application Learning Media Based on Local Culture for Indonesian Language for Foreign Speakers (BIPA) Student

531

Rohmadi, M., Sudaryanto, M., Susanto, D. A., Saddhono, K., & Saputra, A. D. (2023). Sociopragmatic study of Javanese oral discourse in big city communities as an effort to maintain indigenous language. Research Journal in Advanced Humanities, 4(4). https://doi.org/10.58256/rjah.v4i4.1290.

Sa'ad, M. I. (2020). Otodidak Web Programming: Membuat Website Edutainment. Jakarta: PT Elex Media Komputindo.

Saddhono, K., & Erwinsyah, H. (2018). Folklore as local wisdom for teaching materialsin Bipa program (Indonesian for foreign speakers). KnE Social Sciences, 444-454. https://doi.org/10.18502/kss.v3i10.2926.

Saddhono, K., & Erwinsyah, H. (2018). Folklore as local wisdom for teaching materialsin Bipa program (Indonesian for foreign speakers). KnE Social Sciences, 444-454. https://doi.org/10.18502/kss.v3i10.2926.

Sandy, T. A., Ulfa, S., & Wedi, A. (2020). BIPAJAR: Aplikasi Mobile Untuk Melatih Pelafalan Mahasiswa Program BIPA. Wacana: Majalah Ilmiah Tentang Bahasa, Sastra Dan Pembelajarannya, 20(1), 16-26. https://doi.org/10.46444/wacanasaraswati.v20i1.199.

Saputra, A. D., Ginting, D. O. B., Pramadhanti, D. F., Muftihah, N., & Saddhono, K. (2023). Indonesian language learning based on ecological intelligence: A case of Bengawan Solo Nature School. Research Journal in Advanced Humanities, 4(3). https://doi.org/10.58256/rjah.v4i3.1276.

Saputra, A. D., Annisa, F. N., Al Aziz, I. S. A., & Lubis, S. A. F. (2023). Pengaruh Komik Strip Bermuatan Kearifan Lokal Terhadap Kemampuan Menulis Puisi Siswa SMA. LINGUA: Jurnal Bahasa, Sastra, dan Pengajarannya, 20(2), 273-287. https://doi.org/10.30957/lingua.v20i2.750.

Saputra, A. D., Fauziah, F. N., & Suwandi, S. (2022). Pemanfaatan materi ajar bahasa Indonesia bermuatan kearifan lokal di SMA Negeri 1 Karanganyar. KEMBARA: Jurnal Keilmuan Bahasa, Sastra, dan Pengajarannya, 8(2), 335-348. https://doi.org/10.22219/kembara.v8i2.21726.

Saputra, A. D., & Saddhono, K. (2021). Pembelajaran bahasa indonesia menggunakan Microsoft Office Team 365 untuk SMA di masa pandemi. LINGUA: Jurnal Bahasa, Sastra, Dan Pengajarannya, 18(1), 16-26. https://doi.org/10.30957/lingua.v18i1.669.

Sari, D. E., & Ansari, K. (2021). Pengembangan Aplikasi smartphone BIPANESIA BIPA Bermuatan Budaya Sumatera Utara Berbantuan Media Audio Visual Bagi Tingkat Pemula. Kode: Jurnal Bahasa, 10(1), 138-147. https://doi.org/10.24114/kjb.v10i1.23963.

Setiawan, R., Kosasih, E., & Abidin, Y. (2020). Pengembangan Media Pembelajaran Menyimak Melalui Aplikasi Android Untuk BIPA Tingkat Dasar. In Seminar Internasional Riksa Bahasa (pp. 44-50). Retrieved from http://proceedings.upi.edu/index.php/riksabahasa/article/view/1324 .

Sofi-Karim, M., Bali, A. O., & Rached, K. (2023). Online education via media platforms and applications as an innovative teaching method. Education and Information Technologies, 28(1), 507-523.

Sundgren, M. (2017). Blurring time and place in higher education with bring your own device applications: a literature review. Education and Information Technologies, 22(6), 3081-3119.

Susani, R. G. (2020). Penerapan dan evaluasi pendekatan berbasis teks dalam pembelajaran BIPA di Hanoi, Vietnam. Jurnal Indonesian Language for Foreign Speakers (JBIPA), 2(2), 60-69. https://doi.org/10.26499/jbipa.v2i2.2845.

Tiawati, R. L., Rahmat, W., Kemal, E., & Chen, W. (2022). The Importance of Guidance in Understanding Cultural Discourse in Thinking and Speaking for Foreign Students in BIPA Program. Journal of Pragmatics and Discourse Research, 2(1), 39-47. https://doi.org/10.51817/jpdr.v2i1.203.

Wityastuti, E. Z., Masrofah, S., & Salsabila, U. H. (2022). Implementasi Penggunaan Media Pembelajaran Digital di Masa Pandemi COVID-19. Jurnal Penelitian Inovatif, 2(1), 39-46. https://doi.org/10.54082/jupin.39.

Wong, R. (2023). When no one can go to school: does online learning meet students' basic learning needs?. Interactive learning environments, 31(1), 434-450. https://doi.org/10.1080/10494820.2020.1789672.

Yunus, M., & Anwari, M. R. (2021). Nilai Pendidikan Karakter dalam Lagu-Lagu Anak Sebagai Media Pembelajaran BIPA. Stilistika: Jurnal Bahasa, Sastra, dan Pengajarannya, 6(2), 160-171. https://doi.org/10.33654/sti.v6i2.1603.