

Integrating environmental awareness local wisdom for developing BIPA flipbooks (project-based learning)

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Abstract: *Almost every region in Indonesia has its own local wisdom for environmental conservation. These local wisdoms can serve as valuable language material for teaching BIPA (Bahasa Indonesia bagi Penutur Asing, or Indonesian for Foreign Speakers). Incorporating local wisdom into BIPA lessons offers many benefits, such as providing authentic learning experiences, enhancing socio-cultural awareness, fostering character development, improving language skills, and promoting tolerance and mutual respect. Local wisdom can be a powerful asset or bargaining chip in engaging with the global community. This research developed flipbooks for BIPA using local wisdom for environmental awareness through a project-based learning approach. Following a research and development (R&D) design, the researchers created 12 flipbooks for BIPA beginner level, each featuring local wisdom related to environmental preservation, such as Subak-Bali, Mentari Bondar-Tapanuli, Paca Goya-Tidore, Buka Egek-Papua, Sasi-Maluku, Kapal Pinisi-Sulawesi, Taman Laut Karimunjawa-Jepara, Merti Code, Wiwitan, Sedekah Bumi, Nyadran, and Kirab Budaya from Java. They integrated the local wisdom in terms of photo, picture, text, and audio-lingual media for speaking, listening, reading, and writing language activities. However, this research only covered three stages of the ADDIE model for developing BIPA flipbooks: analysis, design, and development. The implementation and evaluation stages have not been conducted yet, due to the time constraints of waiting for foreign users in online clicking the flipbooks as well as expert feedback.*

Key Words: environmental awareness; local wisdom; BIPA; flipbook

Introduction

BIPA, which stands for *Bahasa Indonesia bagi Penutur Asing* or Indonesian for Foreign Speakers, is a language learning program specifically designed for non-native speakers. In this context, BIPA functions as a medium for teaching Indonesian as a Foreign Language (IFL), focusing on developing language skills—speaking, listening, reading, and writing—as well as language components such as grammar, pronunciation, and vocabulary. BIPA serves as an effective tool for promoting the internationalization of the Indonesian language, enhancing cultural diplomacy, and fostering cross-cultural understanding and engagement among its students (Simbolon et al., 2024). Other function of BIPA is to internationalize universities in Indonesia (Ningrum et al., 2017).

BIPA learners come from diverse backgrounds, including higher education students, professionals, tourists, and volunteers from various countries. They study Indonesian for a range of purposes, such as academic, occupational, tourism, and social goals. BIPA programs are offered through language centers or private courses, both online and offline, inside and outside Indonesia. Each institution offering BIPA programs designs specific competency levels tailored to their learners' needs. Some institutions provide six BIPA levels: pre-elementary, elementary, pre-intermediate, intermediate, upper intermediate, and advanced. Others offer

a three-level structure: BIPA 1 (Low Novice, Mid Novice, High Novice), BIPA 2 (Low Intermediate, Mid Intermediate, High Intermediate), and BIPA 3 (Low Advanced, Mid Advanced, High Advanced). Each level includes targeted learning materials aimed at achieving specific competencies.

Learning materials play a crucial role in teaching BIPA. Internalization of Indonesian culture in BIPA materials can be a strategy to attract foreign speakers to learn (Nurhuda et al., 2023). BIPA instructors are encouraged to introduce local culture to foreign learners through an integrated model within the teaching materials (Amin, 2021). Language and culture share a reciprocal relationship, where language serves as a reflection of a society's culture (Devianty, 2017). Language is a product of human culture, while culture itself is significantly shaped by language. Human culture cannot exist without language, as language plays a fundamental role in shaping and defining it. One strategy to increase cultural knowledge is by learning local wisdom (Pamenang, 2021). Local wisdom consists of local knowledge, local skills, local intelligence, local resources, local social processes, local ethics, and local customs (Gondwe & Longnecker, 2015). They strongly suggest creating learning environments that embrace different cultural knowledges and that promote explicit and enquiring discussions of values, attitudes, beliefs and identity associated with both knowledge domains.

Integrating cultural aspect in terms of local wisdom has been carried out by some book writers. Setiawan et al. (2024) developed e-module of flipbook by introducing and understanding local Indonesian culture, such as customs, traditional arts, and social values. Through this e-module, students not only learn Indonesian but also study Indonesian culture, especially the city of Cirebon and material that contains local values. The integration of local wisdom in BIPA teaching materials can provide a more comprehensive learning experience and enrich understanding of Indonesian culture. Local wisdom encompasses culinary, artistic, and environmental aspects were presented not only through written resources but also through practical applications and activities to enhance BIPA teachers on the cultural competence and teaching skills in Australia (Yulianeta et al., 2024). Local wisdom can serve as pedagogical content knowledge, generally in Indonesia and specifically in Magelang so that learners have better understanding Indonesian language by paying attention to the value and character (Anggraeni & Ratnaningsih, 2020). Integrating culture and local wisdom in teaching BIPA will enable learners with good and correct communication as BIPA teaching has 3 important purposes i.e., language knowledge, language attitude, and language skills (Safitri et al., 2020). Furthermore, Saputra et al. (2022) engaged local wisdom videos as media of learning for BIPA students in Surakarta, consisting of tourist attractions, historical places, cuisine, and the local community's culture.

Although many authors and BIPA instructors have incorporated local wisdom into teaching materials, resources specifically emphasizing environmental awareness remain limited in variety and number. To address this gap, the researchers developed BIPA flipbooks that integrate local wisdom on environmental awareness from various regions across Indonesia. These materials aim to enhance learners' understanding, engagement, and

appreciation of environmental values while fostering comprehensive language proficiency, attitudes, and skills.

Method


To develop BIPA flipbooks, the researchers utilized the Research and Development (R&D) method, employing the ADDIE development model. This model encompasses five key stages: analysis, design, development, implementation, and evaluation. In an academic context, R&D plays a pivotal role in advancing science and technology. It addresses fundamental research questions and generates new knowledge that can be applied to various aspects of life (Rachman et al., 2024). However, this research only covered the first three stages of the process due to time constraints, while the remaining stages are still ongoing as they require user feedback through online interactions with the flipbook links. As part of a project-based learning initiative in the BIPA course in 2024, the fifth semester students from the English Education Department in Bojonegoro, Indonesia, developed flipbooks as group projects by incorporating elements of local wisdom and promoting environmental awareness. Assigning book project to pre-service teachers can raise their creativity in designing language contents, activities, and layout simultaneously (Indrasari, 2016). Meanwhile, a flipbook was chosen to present the language materials because innovation of flipbook teaching materials can support language learning independence in practical and flexible ways (Rahmadani & Bungawati, 2023). The pre-service teachers must follow several criteria of BIPA contents, layout, and language activities from the lecturer.

Results and Discussion

Product description

This research yielded 12 flipbooks for BIPA materials particularly for beginner levels by integrating local wisdom on environmental awareness from various regions in Indonesia. The flipbooks contain 4 language skills (speaking, listening, reading, and writing) and language components such as grammar, vocabulary, and pronunciation. They are also equipped with listening audio and game. The environmental local wisdom in the flipbooks comprises: 1) Taman Laut Karimunjawa in Jepara, 2) Merti Code in Yogyakarta, 3) Buka Egek in Papua, 4) Sasi in Maluku and Papua, 5) Nyadran dan Tari Piring, 6) Sedekah bumi in Jawa, 7) Kapal Pinisi in Makasar, 8) Kirab Budaya in Magelang, 9) Wiwitan in Java, 10) Subak in Bali, 11) Paca Goya in Tidore, 12) Mantari Bondar in North Sumatra. Tabel 1 presents the front cover of BIPA flipbook and their flip links.

Table 1. Front cover of BIPA flipbooks and links

		
<p>1. Taman Laut Karimunjawa in Jepara https://online.fliphtml5.com/mnfmo/uyqb/#p=1</p>	<p>2. Merti Code in Yogyakarta https://online.fliphtml5.com/zptcz/xjcv/</p>	<p>3. Buka Egek in Papua https://online.fliphtml5.com/qkbxt/iszf/</p>
		
<p>4. Sasi in Maluku & Papua https://online.fliphtml5.com/emdnq/dqck/.</p>	<p>5. Nyadran in Java & Tari Piring in Minangkabau https://online.fliphtml5.com/xtaho/ltio/.</p>	<p>6. Sedekah Bumi in Jawa https://online.fliphtml5.com/eshar/xxuk/</p>
		
<p>7. Kapal Pinisi in Makasar https://online.fliphtml5.com/ojmuu/syia/</p>	<p>8. Kirab Budaya in Magelang https://online.fliphtml5.com/ldawf/avhj/</p>	<p>9. Wiwitan in Jawa https://online.fliphtml5.com/bikzd/eboq/.</p>
		
<p>10. Subak in Bali https://online.fliphtml5.com/byymno/mfsw/</p>	<p>11. Paca Goya in Tidore, Maluku https://online.fliphtml5.com/tdbhi/nppr/</p>	<p>12. Mantari Bondar in Sumatra Utara https://online.fliphtml5.com/rbghd/gazm/</p>

Local wisdom on environmental awareness and language skills

1. Karimunjawa Sea Park in Jepara

Local wisdom: It has a natural beauty for a natural conservation on sea ecosystem. The population and traditions make Karimunjawa a tourist attraction admired by travellers. If people want to visit Karimunjawa, it would be beneficial to learn more about its culture such as larung kapal, barikan, crab festival, Minaraga traditional dance and Baruga martial art.

Language skill: Karimunjawa Sea Park is integrated in the BIPA flipbook in reading section. The language activities include reading a text and answering five wh-questions. One of the questions is connected to the grammar material of prefix “ber-”.
2. Merti Code in Yogyakarta

Local wisdom: To raise public awareness about preserving the environment of Code River, community groups and local associations of the Code riverside residents hold the *Merti Code* cultural procession. The *Merti Code* tradition is held annually and begins with a *ruwatan* ceremony using water sourced from seven springs.

Language skill: Merti Code becomes the reading section as a text in the flipbook and ask the learners to accomplish four multiple choice questions.
3. Buka Egek in Papua

Local wisdom: *Buka Egek* tradition embodies the practice of protecting nature by taking only what is needed, also extends to avoiding the use of environmentally unfriendly machinery. The Moi tribe prefers using traditional boats over motorized ones.

Language skill: The author presents the Buka Egek tradition in listening section. There is a barcode scan of listening audio and the learners are instructed to answer three questions based on the audio.
4. Sasi in Maluku and Papua

Local wisdom: *Sasi* is a traditional custom in Maluku and Papua to preserve nature and ensure the sustainability of natural resources. This tradition prohibits the harvesting of natural products, whether agricultural or marine, until a specified time.

Language skills: *Sasi* tradition is embedded in the reading activity by presenting it as the reading text and ask learners to answer five multiple choice questions.
5. Nyadran in Java and Tari Piring in Minangkabau

Local wisdom: *Nyadran* is a Javanese tradition performed ahead of Ramadan by cleaning the cemeteries of ancestors and pray for them. Meanwhile, *Tari Piring* (Plate Dance) is a traditional dance from the Minangkabau region of West Sumatra. This dance symbolizes the Minangkabau people's gratitude for an abundant harvest.

Language skill: *Nyadran* is available in the reading section and it is connected to grammar material of time preposition. *Tari Piring* is engaged in the listening section and the language instruction is to complete the sentences based on the audio.
6. Sedekah bumi in Jawa

Local wisdom: Sedekah Bumi is an annual tradition in Javanese communities to express gratitude for the harvest. This tradition also imparts values of togetherness, care for the environment, and love for the earth.

Language skill: Sedekah Bumi is available in the speaking section. It become the reading text and then learners are asked to work in pairs. One will retell the content and the other will give questions about it.

7. Kapal Pinisi in Makasar

Local wisdom: The *Pinisi* ship is a traditional vessel made of wood originating from Makassar, South Sulawesi. The process of building a *Pinisi* ship reflects social and cultural values, such as teamwork, hard work, and respect for the natural environment since it uses environmentally friendly material.

Language skill: Pinisi ship becomes a text in reading activity and the learners have to state true or false upon five sentences based on the text.

8. Kirab Budaya at Borobudur Temple in Magelang

Local wisdom: Kirab budaya or cultural parade is a procession involves the community in carrying cultural symbols, such as the Gunungan (mountain-shaped offerings) of agricultural products. It can be one way to preserve and celebrate Borobudur Temple.

Language skill: Kirab budaya is presented in the reading section and the language activity is asking the learners to answer 5 wh-questions.

9. Wiwitan in Java

Local wisdom: Wiwitan is a ceremony or a traditional ritual performed by the Javanese community before the rice harvest. It is conducted as an expression of gratitude to God Almighty for the abundant rice harvest. This practice reflects the values of nature conservation, respect for the environment, and human responsibility as the Earth keeper.

Language skill: Wiwitan is provided in the reading, writing, speaking, and listening sections. The reading activity asks learners to answer three multiple choice questions. In terms of listening, the text of Wiwitan is used to explain grammar of time conjunction. Meanwhile, in writing activity, the learners are instructed to use time conjunctions in the Wiwitan text to make sentences. In speaking, Wiwitan is integrated in speaking activity by providing a dialog and then practicing it.

10. Subak in Bali

Local wisdom: Subak is a traditional Balinese irrigation system that plays a crucial role in preserving nature and environment. It provides an effective and sustainable way of managing water. The Balinese community applies environmental justice, such as refraining from cutting down certain trees and ensuring the natural flow of rivers.

Language skill: Subak is integrated in all language skills. In reading, Subak becomes a text that must be answered before doing 6 questions of stating true or false. In writing, learners are instructed to make sentences related to the text using S-P-O-K pattern. In speaking, Subak is presented in the dialog and the learners are asked to practice it. Last, in listening, Subak serves as the reference to learn S-P-O-K formula.

11. Paca Goya in Tidore

Local wisdom: Paca Goya is a traditional custom of the Kalaodi village community in Tidore aimed at preserving nature. **Paca** means cleaning, while **goya** refers to a sacred place. This tradition is carried out to foster harmony and friendship with nature and to pray to God for fertile and bountiful lands.

Language skill: Paca Goya becomes a reading text and the learners have to answer 5 multiple choice questions. It is displayed in speaking activity in a dialog and practice.

12. Mantari Bondar in North Sumatra

Local wisdom: Mantari Bondar is a local wisdom tradition from Hatabosi Village, North Sumatra, aimed at preserving nature and water resources. This tradition, which has existed for hundreds of years, is a legacy from ancestors that governs the ways of protecting forests and water sources.

Language skill: Mantari Bondar is comprehensively engaged in three language skills. It becomes the reading text which ask to answer 5 wh-questions. There is also a game about Mantari Bondar. In writing, there is a material containing prefixes of me-, ber-, and di. In listening, BIPA learners will have activity of listening an audio and completing the dialog.

Conclusion

Local wisdom on environmental awareness from various regions in Indonesia can be used for BIPA materials in four language skills and language components. By presenting them in flipbooks, BIPA learners are expected to have independence, simplicity, and flexibility in learning the language. The barcode scan containing video and listening audio will support BIPA learners in pronunciation and grammar.

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