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RESEARCH ARTICLE

Integrating everyday Javanese cultural practices into digital BIPA learning: A multimodal analysis of an interactive flipbook for basic-level learners

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ABSTRACT
This study examined how everyday Javanese cultural practices are represented and integrated in an interactive digital flipbook for basic-level (BIPA 1) learners of Indonesian for Speakers of Other Languages (BIPA). Using qualitative multimodal document analysis, the study analysed a 24-page Heyzine flipbook and its 18 interactive layers. Fifty-two cultural representation units (CRUs) were identified and coded across five dimensions: semiotic mode, cultural dimension, Javanese speech level, intersemiotic relation, and pedagogical stage. The analysis drew on social semiotic multimodality, intercultural communicative competence, and multimedia learning theory to examine cultural representation, pedagogical opportunities, and the coordination of semiotic modes. The findings show that cultural meaning was conveyed predominantly through written verbal (48.1%) and visual (40.4%) elements, while tasks (7.7%) and videos (3.8%) played more limited roles; no audio item modelled a Javanese expression. Although the six chapters establish a coherent representation of everyday East Javanese practices, including *salim*, visiting, *rewang*, shared meals, and leave-taking, several gaps remain. These include unexplained speech-level variation, verbal–visual inconsistencies, non-Javanese iconography, inactive audio, and limited opportunities for learners to practise or produce Javanese expressions. The study's novelty lies in connecting unit-based multimodal analysis with the pedagogical progression from cultural exposure to opportunities for practice and production. It proposes five design principles for developing culturally responsive digital BIPA materials, emphasising intermodal consistency, explicit register instruction, functional multimedia integration, and scaffolded cultural practice.

Keywords: BIPA; Javanese culture; multimodal analysis; interactive flipbook; intercultural pragmatics.

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INTRODUCTION

Indonesian for Speakers of Other Languages (Bahasa Indonesia bagi Penutur Asing, BIPA) has expanded alongside the internationalisation of Indonesian higher education, and with it the question of which culture should be taught with the language. Learners in Surabaya, Malang, or Yogyakarta do not meet an abstract national culture; they meet neighbours, lecturers, and host families whose daily interaction is shaped by Javanese norms of respect, hospitality, and mutual help. A learner who can say *Selamat pagi* but does not know how to enter a house, accept food, or take leave politely will still face communicative difficulty. Recent BIPA scholarship therefore argues that local communicative culture is a resource for pluricultural competence rather than optional background (Batitusta et al., 2025; Romadhon et al., 2026).

This need is most visible at the A1 level. In this article, A1-level, basic-level, and BIPA 1 learners refer to the same group: learners at the first level of the BIPA programme. Javanese cultural pragmatics means the conventions that govern how everyday acts such as greeting, inviting, offering, and taking leave are performed appropriately in Javanese-speaking communities (Purnomo, 2025). Beginners have very limited linguistic resources, yet the situations they meet early are governed by these conventions: being greeted by a neighbour, being invited in with *monggo*, being offered food, helping at a communal event (*rewang*), and asking permission to leave (*pamit*). These situations call for short formulaic expressions and bodily conduct such as *salim*, not for command of the full speech-level system, which is demanding even for Javanese speakers (Atmawati, 2021; Sumekto et al., 2022). Because knowing about a practice is not enough for learners who must act within it (Byram, 2021), A1 learners need a selected and simplified set of Javanese practices that they can recognise, understand, and, ideally, use.

Research on culture-based BIPA materials has grown quickly, with materials built around East Java (Susanto et al., 2024), Kediri (Nurjanah et al., 2026), North Sumatra (Febriyana et al., 2026), and other local wisdom (Hardika & Andriyanto, 2025). Most of these studies establish feasibility through expert validation and user questionnaires. They show that such materials are judged valid and practical, but say little about how cultural meaning is constructed through the modes of the material itself.

A second group of studies examines meaning-making, mainly in printed textbooks. Analyses of the national BIPA series *Sahabatku Indonesia* describe its cultural content (Chindy & Syafryadin, 2024; Fitria, 2025; Kurniawan et al., 2022) and its tourism discourse (Hakim et al., 2026), showing that culture is often presented as information about Indonesia

rather than as practice. Work on its images and texts indicates that images position learners, frame cultural practices, and can reinforce or contradict the verbal text (Atmawijaya et al., 2026). International research likewise treats language textbooks as selective "windows" onto the world (Risager, 2021) and calls for multimodal critical analysis (Weninger, 2021; Sasnitya et al., 2026; Zhou & Wang, 2025). A third group concerns Javanese itself, namely speech levels and politeness (Atmawati, 2021; Purnomo, 2025; Sumekto et al., 2022).

Read together, these groups leave three gaps. First, the multimodal analyses above focus on printed textbooks, whereas interactive digital books add audio, embedded video, hyperlinks, and online tasks. Flipbook platforms such as Heyzine combine a familiar page layout with multimedia (Munajah & Anggraini, 2025; Perdana et al., 2021), but research on them has mainly measured learning outcomes or product validity. Second, little attention has been paid to how Javanese pragmatic practices are selected, simplified, and packaged for A1 learners, who cannot yet handle the full complexity of *ngoko*, *krama*, and *krama inggil*. Third, textbook studies that find culture presented as information seldom ask how far cultural content is carried beyond display into practice and production. The novelty of this study lies in addressing these gaps together: its object is an interactive digital BIPA flipbook for A1 learners built around everyday Javanese practices; its approach is a unit-based multimodal analysis that examines each mode (written text, image, audio, video, and task) separately and then in relation to the others; and its analytical focus is the movement of each cultural unit through four pedagogical stages.

The analysis draws on three complementary frameworks, each with a specific function. Social semiotic multimodality (Kress & van Leeuwen, 2021) describes how images and texts make representational, interactive, and compositional meanings and how modes relate to one another; here it is used to read cultural representation on the page, including whether an image agrees with its words. Intercultural communicative competence (Byram, 2021) clarifies what cultural learning involves beyond knowledge; here it supplies the logic of the stage criteria. Multimedia learning theory (Mayer & Fiorella, 2021) explains why coordinating words, pictures, and sound matters for novices, whose capacity to integrate separate channels is limited; here it is the basis for judging whether the announced modes are assigned to learning goals and work together.

To make these frameworks usable, the study works with the cultural representation unit (CRU): any visual element, verbal segment, media item, or task item that encodes a Javanese cultural product, practice, or perspective. Each mode has an explicit indicator. Written verbal units are Javanese expressions, terms, titles, or explanations, recorded with

their gloss and speech level (*ngoko*, *krama*, or mixed). Visual units depict a Javanese product, practice, place, or gesture that is recognisable from setting, objects, and conduct and can be checked against the accompanying text; symbols that are pan-Indonesian or associated with another region such as Bali count as non-Javanese iconography. Audio is coded when a recording models a Javanese expression; video is described by its placement, function, signalled cultural focus, and scaffolding; tasks are coded when an exercise requires a culturally appropriate response, noting whether it is expected in Javanese or only in Indonesian. Integration is traced through four pedagogical stages: exposure (seen, read, or heard without any response), explanation (meaning or use commented on explicitly), practice (an item asks for a response to a culturally situated scenario), and production (extended output within such a scenario). Practice and production are fully realised only when the expected response contains a Javanese expression, and partly realised when the behaviour is practised in Indonesian only. Table 3 gives coding examples.

Accordingly, this study analyses *Bahasa Indonesia dalam Kehidupan Sehari-hari*, an interactive flipbook for BIPA 1 learners that integrates everyday Javanese practices such as *salim*, *bertamu*, *rewang*, *makan bersama*, and *pamit* (Aulia & Asteria, 2026). The study does not evaluate learner outcomes or effectiveness but examines how cultural content is represented and organised in the material itself. Three research questions guide the analysis. (1) Which Javanese cultural elements are represented in the flipbook, and through which semiotic modes? (2) How do these modes relate to one another in constructing cultural meaning for basic-level learners? (3) To what extent is cultural content carried from exposure to practice and production, and what design gaps appear?

The study contributes a mode-sensitive, unit-based framework with operational indicators for analysing cultural representation in digital BIPA materials, an empirical profile of how everyday Javanese practices are distributed across modes and pedagogical stages, and five multimodal design principles for beginner-level materials, each tied to a specific finding in the Results and Discussion.

METHOD

The study employed a qualitative descriptive design using multimodal document analysis, which suits a stable, publicly accessible artefact that can be examined systematically without intervention (Morgan, 2022). The data source was the interactive flipbook *Bahasa Indonesia dalam Kehidupan Sehari-hari* on the Heyzine platform (Aulia & Asteria, 2026), accessed on 30 September 2026; its PDF export was used for page-level

coding. The flipbook has 24 pages: framing pages, six thematic chapters, a final writing project, and a closing page. Its story follows Daniel, a Spanish student in Surabaya, and his local friend Raka (Table 1). The illustrations were produced with the assistance of generative AI; because the flipbook is analysed as a finished artefact, the images were read as published, as multimodal research treats AI-generated images as semiotic artefacts in their own right (Putland et al., 2025).

Section	Pages	Javanese title / theme	Language focus	Interactive layers
Framing pages	1–4, 24	Cover, preface, contents, objectives, closing	Orientation	12 internal navigation links (p. 3)
Chapter 1	5–7	*Sugeng Rawuh!* – arriving in Indonesia	Self-introduction; S + P; *dan*	1 video, 1 audio (p. 5); Google Form (p. 7)
Chapter 2	8–10	*Piye Kabare?* – meeting a friend	*ini/itu*; *lalu/kemudian*	1 video (p. 9)
Chapter 3	11–13	*Monggo, Mampir!* – visiting a friend	*boleh/silakan* + verb; *tetapi*	1 video (p. 11)
Chapter 4	14–16	*Ayo Rewang!* – helping neighbours	*ber-/meN-*; *karena*	–
Chapter 5	17–19	*Monggo, Dipangan!* – eating together	Adjectives; *setelah itu*	–
Chapter 6	20–21	*Pamit Dulu, Ya!* – taking leave	*akan*, *sebelum*; *akhirnya*	–
Final project	22–23	Letter to a friend	Personal letter (5–6 sentences)	Google Drive submission link (p. 22)

Table 1. Profile of the Analysed Flipbook (Source: Researchers' analysis of Aulia & Asteria, 2026)

Before the analysis, the flipbook was validated by one content expert, who rated 20 items on a four-point scale using an expert content validation sheet. The items covered alignment with the BIPA Level 1 graduate competency standard, learning objectives, everyday and cultural context, vocabulary, grammar, graduated writing exercises, the final letter task, clarity of language, and systematic presentation. The total score was 76 out of 80 (95%), in the *very valid* category of the sheet (85–100%), and the version analysed here is the validated version.

The interactive layer inventory was obtained from the flipbook's public viewer configuration. It comprised 18 layers: 12 internal page links in the table of contents, one Google Form link, one Google Drive link, three embedded YouTube videos, and one audio file (Table 2 profiles the videos). None of the videos was produced by the developers, and none was transcribed, so they were analysed only at the level of placement, pedagogical function, and the cultural focus signalled by their titles, channels, and visible descriptions. The page 5 video is an animated self-introduction in standard Indonesian with no Javanese content, so it was inventoried but not coded as a CRU. The other two videos signal a Javanese cultural focus in their titles and were each coded as one unit.

Page	Video title	Channel	Format and metadata	Treatment in the analysis
5	*Perkenalan 1 – BIPA 1* (*Sahabatku Indonesia* series, Kemendikbud)	Mustika Nur Amalia	Animation; uploaded about five years before access	Inventoried; no Javanese content, not coded
9	*Cara bersalaman dengan guru/orangtua yang baik!* (*salim* with teachers and parents)	mts Attaraqqie	School video; uploaded 20 July 2022	Coded as one unit (*salim*)
11	*Kulanuwun dan Nuwunsewu*	BAROE VLOG PITUTUR	Single-speaker vlog, 3 min 38 s	Coded as one unit (*kulanuwun*, *nuwun sewu*)

Table 2. Profile of the Third-Party Videos Embedded in the Flipbook (Source: Researchers' inventory of the video pages)

Analysing the videos at this level limits the findings in three ways. First, claims about video concern its role in the flipbook's design (placement, pairing, intended function), not the accuracy, language, or speech levels inside the videos; the intersemiotic relation assigned to each video unit is the one signalled by its placement and title. Second, "unscaffolded" refers to the absence of captions, glossaries, or viewing tasks in the flipbook, not to the quality of the videos. Third, because the videos are hosted by third parties, the findings relate to their state at the time of access.

The unit of analysis was the CRU as defined in the Introduction (examples in Table 3). Each CRU was coded on five dimensions: semiotic mode, cultural dimension, Javanese speech level (an attribute of written verbal units), intersemiotic relation (repetition, elaboration, complementarity, or tension; Atmawijaya et al., 2026; Kress & van Leeuwen, 2021), and pedagogical stage (Figure 1). Table 3 gives the operational indicator, categories, and a coding example for each dimension.

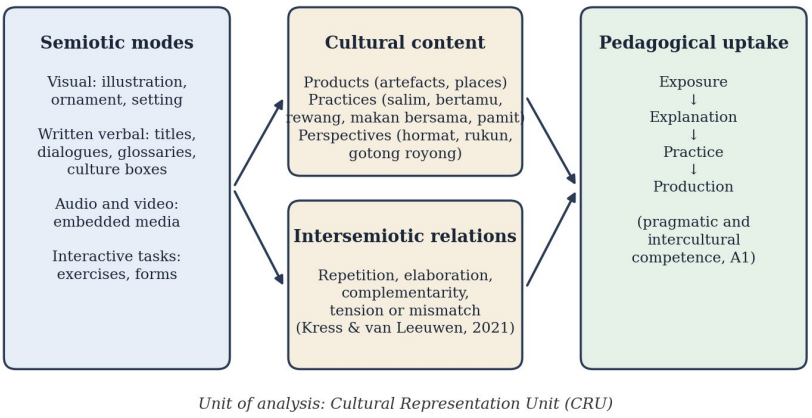


Figure 1. Analytical framework of the study

Dimension	Operational indicator	Categories	Coding example from the flipbook
(a) Semiotic mode	The channel that carries the cultural meaning	Visual; written verbal; audio; video; task	Visual: cover with the Sura and Baya monument (p. 1). Written verbal: chapter title *Sugeng Rawuh* (p. 5). Video: *salim* video (p. 9). Task: item on what to say when entering a house. Audio: *Dengarkan* button with no audio layer (p. 12), recorded as absent audio, not as a unit
(b) Cultural dimension	The kind of culture encoded: a visible thing, an act in interaction, or a value explaining the act	Product; practice; perspective	Product: *joglo* roofs. Practice: *salim* (p. 9). Perspective: culture box linking *rewang* to *gotong royong* (p. 15)
(c) Javanese speech level	The speech level signalled by the form, checked against sources on Javanese speech levels	*Ngoko*; *krama*; mixed	Ngoko: *Piye kabare?* Krama: *Matur nuwun*. Mixed: *Apik, matur nuwun* (all p. 6)
(d) Intersemiotic relation	How the unit relates to the modes that co-occur on the same page or task	Repetition; elaboration; complementarity; tension	Elaboration: definition of *rewang* and two cooking scenes (p. 14). Complementarity: *kulanuwun* video beside the dialogue (p. 11). Tension: text presents *salim* at leave-taking, but the illustration shows a handshake-like gesture (p. 21)
(e) Pedagogical stage	What the learner is asked to do with the content, and whether a Javanese form is involved	Exposure; explanation; practice; production (fully realised only if a Javanese expression is expected, partly realised if the response is in Indonesian only)	Exposure: chapter opening illustration. Explanation: *Kenal Budayanya* box (p. 6). Practice (partly): item expecting *Permisi, boleh saya masuk?*, not *nuwun sewu*. Production (partly): final letter (pp. 22–23) with no Javanese expression

Table 3. Operational Indicators and Coding Examples for the Five Dimensions of the Cultural Representation Unit (Source: Researchers' analysis)

The analysis combined two processes with different purposes. Structured coding identified the CRUs and classified each on the five dimensions in Table 3. Thematic interpretation then read the coded units for patterns of cultural representation, intermodal relation, and pedagogical uptake. The two were kept apart because they rest on different quality criteria: structured coding requires consistent application of fixed definitions, whereas reflexive thematic interpretation depends on the researchers' engagement with the data and does not treat agreement between coders as its measure of quality (Braun & Clarke, 2021).

Structured coding had three steps. First, every page was rendered as an image, and all verbal text and interactive layers were inventoried. Second, the first and second authors coded all pages independently using written code definitions based on Table 3. The two coding sheets were compared unit by unit and dimension by dimension, and every discrepancy was discussed against the written definitions until one code was agreed.

Agreement was thus reached by consensus, not measured with a reliability coefficient, which suits the descriptive use of the counts; the agreed sheet is the basis for all counts, which show the distribution of cultural content and make no inferential claims. Third, intersemiotic relations were coded by reading each image together with its surrounding text, audio, video, and tasks, attending to representational processes, interactive meaning (gaze, distance, and viewer position), and compositional salience.

Thematic interpretation followed the reflexive approach of Braun and Clarke (2021) in six recursive phases, using the agreed coding sheet as data. The authors (1) familiarised themselves with the page images, layer inventory, and coding sheet; (2) used the CRU codes, supplemented by analytic notes on intersemiotic relations, as the systematic coding of the data set; (3) grouped codes into candidate themes, such as visual place-making, glossing and register mixing, and exposure without practice; (4) checked each theme against the page images; (5) organised the themes under the three research questions; and (6) wrote them up with page references. Interpretations were developed through discussion, and the authors' position as members of the development team was kept explicit, as described below.

The first and second authors, who coded the data, also developed the flipbook (Aulia & Asteria, 2026). This gave them close knowledge of the material but risks reading the product charitably, overlooking weaknesses, or interpreting a design choice by its intention rather than by what appears on the page. Four measures limited these risks. First, design intentions were not used as evidence: a feature was coded as present only when observable in the PDF export or viewer configuration, which is why a button without an audio layer was recorded as missing audio. Second, the two coders worked independently with the same written definitions. Third, an audit trail of page images, the layer inventory, and the coding sheet allows each claim to be traced to a page. Fourth, weaknesses were actively sought and are reported even where they concern the authors' own design decisions. Complete neutrality cannot be claimed, and replication by researchers outside the development team would strengthen the findings.

RESULTS AND DISCUSSION

Data Units and the Distribution of Cultural Content Across Modes

The analysis identified 52 CRUs, which must be distinguished from the 18 interactive layers in Table 1 because only some layers carry Javanese content. The 12 navigation links and the Google Form and Google Drive links serve navigation and submission and were not coded. The page 5 audio file models an Indonesian self-introduction only, so it produced no

audio unit. Of the three videos, the page 5 video has no Javanese content, whereas the *salim* video (page 9) and the *kulanuwun* video (page 11) each count as one unit. Table 4 and Figure 2 therefore use the CRU count throughout.

Table 4 shows each mode's share and function. Cultural meaning was carried mainly by written verbal (25 units, 48.1%) and visual elements (21 units, 40.4%); tasks contained four culturally loaded items (7.7%), the two video units accounted for 3.8%, and no audio item modelled a Javanese expression. As Figure 2 shows, Chapter 3 (*Monggo, Mampir!*) had the densest verbal integration, with seven written units in a dialogue, a trilingual table, and a culture box, whereas the framing pages were dominated by visual elements (five of seven units).

Mode	CRUs	%	Function in the flipbook	Example
Written verbal	25	48.1	Names, glosses, and explains Javanese expressions and practices	Chapter titles; culture boxes; trilingual table (pp. 6, 12)
Visual	21	40.4	Builds place and models practices and conduct	Cover with the Sura and Baya monument (p. 1); *salim* illustration (p. 9)
Task	4	7.7	Asks for responses to culturally situated items, mostly in Indonesian	Visiting exercise (Chapter 3); final letter (pp. 22–23)
Video	2	3.8	Signals a practice through third-party material placed beside the text	*Salim* video (p. 9); *kulanuwun* video (p. 11)
Audio	0	0.0	Announced by a button, but no Javanese expression is modelled	*Dengarkan* button without audio (p. 12)
Total	52	100.0		

Table 4. Distribution and Function of Cultural Representation Units by Mode (N = 52) (Source: Researchers' analysis)

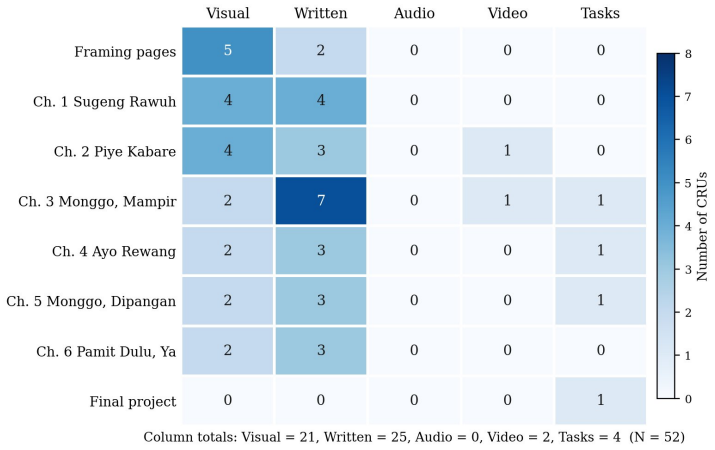


Figure 2. Distribution of cultural representation units by section (N = 52)

The modes that show and explain thus carry 88.5% of the cultural content, whereas the modes that let learners hear Javanese or act in it carry only 11.5% (six units). Culture is shown and explained far more often than heard or used, a pattern also reported for *Sahabatku Indonesia* (Chindy & Syafryadin, 2024; Fitria, 2025). The difference is that this

flipbook has the technical means to do otherwise, since its platform supports audio, video, and linked tasks.

The Visual Mode: Place-Making, Positioning, and Iconographic Accuracy

The visual mode performs a place-making function. Illustrations situate the learner in Surabaya and a Javanese social world before any expression is taught: the cover combines the Sura and Baya monument with the title, the arrival scene in Chapter 1 shows a *candi bentar* gate (Figure 3a–b), the houses have *joglo* and *pendopo* roofs associated with traditional Javanese architecture (Idham, 2018), and characters wear batik. In Kress and van Leeuwen's (2021) terms, these are mainly conceptual and symbolic representations of setting and identity: they tell learners where the story takes place and what kind of community it is, but do not yet show a practice being performed.



Figure 3. Visual place-making: (a) cover with the Sura and Baya monument, p. 1; (b) arrival scene with a *candi bentar* gate, p. 5; (c) *meru* shrine, p. 4; (d) split gate and frangipani, p. 3

To judge the accuracy of Javanese iconography beyond impression, three indicators were applied to every culturally coded image. Regional specificity asks whether the symbol, building, dress, or gesture can be attributed to Javanese (here East Javanese) culture rather than to Indonesia in general or to another region. Verbal–visual agreement asks whether the image shows what the text on the same page says. Cross-chapter consistency asks whether a practice is depicted in the same way wherever it recurs (Table 5).

Image element (page)	Regional specificity	Verbal–visual agreement	Cross-chapter consistency	Judgement
Sura and Baya monument, cover (p. 1)	Specific (Surabaya)	Agrees with the Surabaya setting	Setting recurs in Chapter 1	Accurate
Candi bentar gate, arrival scene (p. 5)	Specific in context (red-brick split gate of the Majapahit type; the gate type also occurs in Bali)	Agrees with the arrival narrative	Not applicable	Accurate
Joglo and *pendopo* roofs (Chapters 1–2)	Specific (Javanese architecture)	Agrees with the visiting settings	Recur across chapters	Accurate

Image element (page)	Regional specificity	Verbal–visual agreement	Cross-chapter consistency	Judgement
Salim to an older woman (p. 9)	Specific	Agrees with the culture box and the title of the adjacent video	Serves as the reference depiction	Accurate
Leave-taking illustration (p. 21)	Specific gesture intended	Disagrees with the text and icon sequence on the same page	Inconsistent with p. 9	Inconsistent
Meru shrine, frangipani, and misty volcano (pp. 3–4)	Not specific to Java (associated with Bali and tourist imagery)	Not tied to the verbal text	Not recurring	Iconographic drift

Table 5. Indicators and Judgements for the Accuracy of Javanese Iconography (Source: Researchers' analysis)

Most images of Javanese settings and practices pass all three indicators, which supports their place-making function. The exception is the paratextual pages that frame the learning objectives: the tiered *meru* shrine, frangipani, and misty volcano (Figure 3c–d) are iconic of Bali and of a tourist image of Indonesia rather than of everyday life in Surabaya, and so fail regional specificity. The split gate is borderline, because the *candi bentar* type is shared by Javanese and Balinese architecture: the gate in the Surabaya arrival scene (p. 5) is read as East Javanese, whereas the gate on page 3, shown with frangipani beside the *meru*, is read as part of a Balinese ensemble. We interpret this as iconographic drift: decorative images chosen to evoke Indonesia in general pull the visual identity of the material away from the culture it claims to teach. The risk matters for novices, who cannot yet distinguish Javanese, Balinese, and national symbols, and generalised imagery can reproduce tourist-oriented images of a culture (Hakim et al., 2026; Sasnitya et al., 2026). Because the illustrations were AI-assisted, the drift is also consistent with evidence that such tools reproduce stereotypical visual templates unless closely curated (Putland et al., 2025).

The illustrations also position the viewer. Characters mostly face each other in medium shots, so the viewer observes as a third party, an offer rather than a demand in Kress and van Leeuwen's (2021) terms; few images use a direct gaze or a gesture addressed to the viewer. This suits a story-based sequence, but it invites learners to watch Javanese practices rather than take part in them.

The Written Verbal Mode: Javanese Expressions, Speech Levels, and Glossing

The written verbal mode carries the largest share of cultural meaning through naming, glossing, and explaining. Five of the six chapter titles are Javanese; only *Pamit Dulu, Ya* is Indonesian. Javanese expressions appear in dialogues, are glossed in a trilingual table with

Indonesian and English equivalents (Figure 4b), and are explained in *Kenal Budayanya* culture boxes (Figure 4a).



(a) (b)

Figure 4. Verbal integration of Javanese expressions: (a) culture box on *Piye kabare?*, p. 6; (b) trilingual table and guest–host exchange, p. 12 (the marked button has no audio layer attached)

Trilingual glossing is a sensible choice for A1 learners: it maps an unfamiliar Javanese form onto a known Indonesian function and onto English and, in terms of Mayer and Fiorella (2021), keeps the verbal channel manageable by presenting form, function, and gloss together.

The accuracy of the Javanese forms was checked on three indicators. Form accuracy asks whether the expression and its spelling are standard, judged against Poerwadarminta (1939), Robson and Wibisono (2002), and the Javanese orthography guideline (Balai Bahasa Daerah Istimewa Yogyakarta, 2011). Speech-level accuracy asks whether the assigned level matches the vocabulary and the addressee, judged against research on Javanese speech levels (Atmawati, 2021; Sumekto et al., 2022). Pragmatic fit asks whether the expression is used in the situation, and toward the kind of interlocutor, for which Javanese convention prescribes it. Table 6 reports the results.

Expression	Page	Speech level	Pragmatic function	Accuracy and analytical note
Sugeng rawuh	5	Krama	Welcome to a guest	Standard form; *rawuh* is respectful (*krama inggil*) vocabulary. Used as a chapter title only, not glossed
Piye kabare?	6	Ngoko	Greeting among peers	Standard colloquial *ngoko*; suits peers, as in the story
Pripun kabaripun? (printed as *Pripun kabarpun?*)	6	Krama	Greeting to an older or respected person	Level and function correct; the printed spelling is a slip, and the standard form is *kabaripun*
Apik, matur nuwun	6	Mixed	Reply to the greeting	Combines *ngoko apik* with *krama matur nuwun*; a fully *krama* reply would use *sae* (Robson & Wibisono, 2002)
Nuwun sewu	11–12	Krama	Excusing oneself or asking permission when passing or intruding	Form correct; use on arrival simplifies the convention, in which *kulanuwun* is the usual call at the door. The p. 11 video title pairs the two, but its content was not analysed

Expression	Page	Speech level	Pragmatic function	Accuracy and analytical note
Monggo	11–12, 18	Krama	Invitation to enter or to eat	Correct in level and function and usable with any age; *monggo* is the popular spelling, the standard is *mangga* (Robson & Wibisono, 2002)
Matur nuwun	6, 12, 18, 24	Krama	Thanking	Correct; the standard *krama* expression of thanks
Ayo rewang	14	Ngoko	Inviting a neighbour to help	Peer-level *ngoko*; suits neighbours of similar age
Monggo, dipangan	17–18	Mixed	Offering food to a guest	*Monggo* (standard *mangga*) is *krama* and *dipangan* is *ngoko*; toward elders the respectful form is *dipundhahar*

Table 6. Javanese Expressions in the Flipbook: Speech Level, Pragmatic Function, and Accuracy Check (Source: Researchers' analysis)

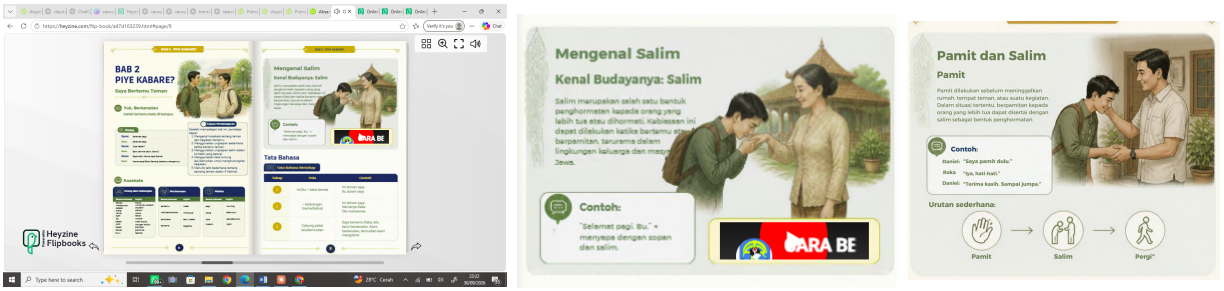
Three observations follow from Table 6. First, the flipbook mixes speech levels within single exchanges (*Apik, matur nuwun*; *Monggo, dipangan*). Such mixing is common in speech but unexplained, so learners cannot tell which part is respectful and which is casual. Second, the clearest orthographic problem is the printed *kabarpun*; in addition, the flipbook uses the popular spelling *monggo* throughout, whereas the standard Latin-script spelling is *mangga*, which should at least be noted beside it. Third, the expressions that guests most need (*nuwun sewu*, *monggo*, and *matur nuwun*) are all *krama*. This is pedagogically sound, because a foreign guest is rarely penalised for being too polite; what is missing is an explanation of when *ngoko* would be appropriate. Because these judgements rest on dictionaries, the orthography guideline, and published research rather than on a panel of Javanese speakers, consultation with Javanese language experts is advisable before the flipbook is revised.

The Audio and Video Modes: Announced Affordances and Authentic Material

The audio mode is the clearest case of an announced affordance that is not realised. The *Dengarkan* button on page 12 has no audio layer (Figure 4b), and the only audio file, on page 5, models an Indonesian self-introduction, so no Javanese expression in the flipbook can be heard. Pronunciation, including the contrast between dental *d* and retroflex *dh* in forms such as *dhahar*, cannot be learned from spelling alone, and adding the spoken form to written input supports the learning of new word forms (Malone, 2018). The flipbook thus leaves unused the mode that would help most with the Javanese forms it presents.

The video mode shows a more deliberate use of the medium, at least in its placement. Two videos whose titles signal practices that are hard to convey in static form are embedded where those practices are explained: the *salim* video on page 9, showing students and teachers at school, and the *kulanuwun* video on page 11, a single-speaker vlog (Figures 5a and 6). Placed beside the written explanation and still images, they create potential for

multimodal complementarity, because moving images can add the sequence and movement that a single illustration shows only at one moment. However, because the videos were not transcribed, their precise contribution to the linguistic and pragmatic meanings in the flipbook cannot be established.



(a) (b)

Figure 5. The practice of *salim* in two chapters: (a) culture box with embedded video, p. 9; (b) leave-taking sequence *pamit–salim–pergi*, p. 21

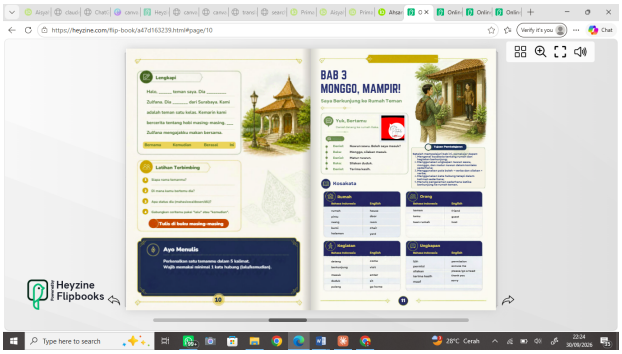


Figure 6. Opening page of Chapter 3 showing the visiting dialogue, the Javanese house, and the embedded video on *kulanuwun* and *nuwun sewu*, p. 11

Two limitations follow from Table 2: the videos were made for Indonesian audiences, not foreign learners, and the flipbook provides no captions, glossary, or viewing task, which makes authentic input demanding at A1. As explained in the Method, these observations concern the role of the videos in the design, not the language inside them.

Intersemiotic Relations: How the Modes Work Together

Table 7 lists the clearest intermodal relations and their evidence. Most image–text pairs relate through repetition or elaboration. Complementarity is signalled where a video is placed to add what neither image nor text supplies, although for the videos this rests on placement and title rather than spoken content. Tension appears in a few places and is the most instructive.

Page	Verbal evidence	Visual or audiovisual evidence	Relation	Interpretation
14–15	Culture box defining *rewang* and linking it to *gotong royong*	Scenes of Daniel cooking with neighbours (Figure 7)	Elaboration	The scenes show what the definition names; the value is tied to a concrete activity
17–18	Culture box on *Monggo, dipangan* as an offer of food	A host extends an open palm to a guest at a communal meal (Figure 8)	Repetition	Gesture and utterance express the same speech act, which strengthens recognition
9	Culture box on *salim*	Illustration of a young man taking an older woman's hand, plus the embedded video (Figure 5a)	Elaboration	The still image fixes the key moment; the video is positioned to add sequence and movement
11	Written dialogue using *nuwun sewu* on arrival	*Kulanuwun* video (Figure 6)	Complementarity	The video title pairs *kulanuwun* with *nuwun sewu*, signalling the arrival call the dialogue lacks; whether the video clarifies the distinction was not verified
21	Text and icon sequence *pamit–salim–pergi*	Main illustration shows a handshake-like gesture with a hand to the face (Figure 5b)	Tension	The image contradicts the text and the *salim* on p. 9
3–4	Learning objectives in Indonesian	*Meru* shrine, frangipani, and misty volcano (Figure 3c–d)	Tension	The imagery points to Bali and tourism, not to the Javanese setting the text announces

Table 7. Intersemiotic Relations With Verbal and Visual Evidence (Source: Researchers' analysis)



Figure 7. Representation of *rewang*: (a) Daniel cooking with neighbours, p. 14; (b) culture box on *rewang* and *gotong royong*, p. 15



Figure 8. Eating together as a cultural practice: (a) communal meal, p. 17; (b) culture box on *Monggo, dipangan*, p. 18

Read across chapters, the cooperating relations build a coherent hospitality script, from arrival and greeting (Chapters 1–2) to visiting (Chapter 3), mutual help (Chapter 4), shared meals (Chapter 5), and leave-taking (Chapter 6). Within each chapter, Javanese expressions are paired with Indonesian and English glosses and with an image of their situation of use, the kind of mutual support between modes that helps novices (Mayer & Fiorella, 2021).

The multimodal reading also exposes three tensions. The first is the verbal–visual mismatch in Chapter 6: the text and icon sequence present *salim* at leave-taking, but the main illustration shows a handshake-like gesture with a hand touching the face rather than the *salim* modelled on page 9 (Figure 5), so learners receive two models of the same practice. The second concerns roles in *rewang* (Figure 7): women cook in the foreground while men carry tables and sweep in the background. Presented without comment, this may be read as a fixed norm. The chapter opening, however, shows Daniel cutting vegetables beside an older woman, quietly positioning the foreign guest as someone who may cross that boundary; a discussion prompt making this visible would turn a potential stereotype into an opportunity for critical cultural awareness (Byram, 2021; Weninger, 2021). The third is the iconographic drift discussed above (Table 5). Each mode may be acceptable alone, yet their combination can send mixed signals, as Atmawijaya et al. (2026) also found for *Sahabatku Indonesia*.

From Cultural Introduction to Practice and Production

The third research question asks how far cultural content is carried beyond display. Three things are kept apart: cultural introduction corresponds to the exposure and explanation stages; opportunities for practice in using Javanese correspond to the practice stage when the expected response contains a Javanese expression; and opportunities for

culturally situated production correspond to the production stage when learners generate extended output that enacts a culturally appropriate interaction, the kind of task through which the skills of interaction and critical cultural awareness (Byram, 2021) could develop. These categories describe what the flipbook asks learners to do, not the intercultural communicative competence they actually develop. Table 8 shows how each chapter meets them.

Chapter	Exposure	Explanation	Practice	Production
1 *Sugeng Rawuh*	✓ images, title	✓ *Piye kabare?* box	–	– (self-description only)
2 *Piye Kabare?*	✓ images, video	✓ *salim* box	–	– (describe a friend)
3 *Monggo, Mampir!*	✓ dialogue, video	✓ trilingual table	◐ items test Indonesian equivalents	◐ visit narrative; Javanese optional
4 *Ayo Rewang!*	✓ images	✓ *rewang* box	◐ items on helping activities	◐ write about helping others
5 *Monggo, Dipangan!*	✓ images	✓ *Monggo, dipangan* box	◐ item: reply *terima kasih*	◐ write about eating together
6 *Pamit Dulu, Ya!*	✓ images, icons	✓ *pamit/salim* box	– (no exercise page)	–
Final project	–	–	–	◐ letter recalls practices, no Javanese expressions

Table 8. Pedagogical Stages Reached by the Cultural Content in Each Chapter (Note: ✓ = present; ◐ = partly present, meaning that practice is addressed but not the Javanese form; – = absent) (Source: Researchers' analysis)



Figure 9. The final project: (a) task instructions and letter structure; (b) model letter, p. 22

Cultural introduction is complete: every chapter exposes learners to Javanese culture visually and verbally and explains at least one expression or practice in a culture box. Opportunities for practice in using Javanese are not fully realised in any chapter. The exercises in Chapters 3 to 5 address culturally situated behaviour, asking what to say when entering a friend's house or receiving food, but the expected answers are *Permisi, boleh saya masuk?* and *terima kasih*, not *nuwun sewu* or *matur nuwun*. Opportunities for culturally situated production are the weakest. The writing tasks in Chapters 3 to 5 specify only the target conjunction (*tetapi*, *karena*, *setelah itu*), and the model letter of the final project

(Figure 9b) recounts visiting, eating together, helping, and taking leave without any of the Javanese expressions taught in the book. Chapter 6, which introduces *pamit* and *salim*, has no exercise page. The flipbook therefore takes learners from seeing to knowing about Javanese practices but does not yet offer structured opportunities to move from knowing to acting.

Javanese culture is thus something learners see and read about, whereas Indonesian is the language they practise and produce. This division is defensible at A1, but it separates the cultural purpose of the flipbook from its language practice; it is a finding about design, not learner outcomes.

Implications: Multimodal Design Principles for Beginner-Level BIPA Materials

Table 9 links five design principles for beginner-level BIPA materials to the findings that motivate them, the research questions they answer, and concrete design actions.

Principle	Finding that motivates it	RQ	Concrete design action
1. Activate every announced mode	No audio unit models Javanese; the *Dengarkan* button on p. 12 has no audio layer (Table 4)	1	Record and attach audio for every Javanese expression in the trilingual table; check each button before release
2. Make register choices teachable	Mixed forms such as *Apik, matur nuwun* and *Monggo, dipangan* are unexplained (Table 6)	1, 2	Mark which word is *krama* and which is *ngoko* in each exchange, and say when each is used
3. Check intersemiotic consistency	The p. 21 illustration contradicts the *salim* text and p. 9; *meru* and frangipani imagery is not specific to Java (Tables 5 and 7)	2	Review every image against its text and earlier depictions of the practice; replace imagery not specific to the target culture
4. Scaffold authentic video	The two cultural videos have no captions, glossary, or viewing task (Table 2)	2	Add a pre-viewing question, a short glossary, and a post-viewing task to each embedded video
5. Recycle culture into practice and production	Practice and production accept Indonesian only; the final letter requires no Javanese expression (Table 8)	3	Require one or two Javanese expressions in each practice item and the final letter, with a prompt on when to use them

Table 9. Multimodal Design Principles Linked to Findings and Research Questions (Source: Researchers' analysis)

These principles extend work showing that local-culture materials can be valid and practical (Nurjanah et al., 2026; Susanto et al., 2024) and that printed textbooks often present culture as information (Chindy & Syafryadin, 2024; Fitria, 2025) by adding that, in an interactive flipbook, the question is also whether the modes the platform offers are used for cultural practice. Because they derive from one artefact and have not been tested with learners, they are design guidance to be examined in later studies, not evidence of learning effectiveness.

CONCLUSION

This study examined how everyday Javanese cultural practices are represented and organised in an interactive flipbook for A1-level BIPA learners. Culture is carried mainly by written verbal and visual elements (88.5% of 52 CRUs), while audio is absent and video and tasks play minor roles. The modes cooperate to build a recognisable East Javanese world and a coherent hospitality script, but they also produce three tensions: unexplained speech-level mixing, a depiction of *salim* that contradicts the text, and decorative imagery not specific to Java. Cultural content is introduced and explained in every chapter, yet opportunities for practice in using Javanese are not fully realised in any chapter, and the final task requires no Javanese expression.

The novelty of the study lies in connecting unit-based multimodal analysis with the progression from cultural exposure to opportunities for practice and production. It contributes a mode-sensitive framework with explicit stage criteria, an empirical profile of Javanese practices across modes and stages, and five design principles: activating every announced mode, making register choices teachable, checking intersemiotic consistency, scaffolding authentic video, and recycling culture into practice and production. Multimodal richness alone does not create opportunities for intercultural practice; it must be coordinated across modes and linked to practice and production.

These findings describe what one flipbook offers learners, not what learners do or learn, so the study makes no claim about learning effectiveness. Its other limits are developer-coders, a single content validator, untranscribed third-party videos, and the absence of a panel of Javanese speakers. Future research should test the revised flipbook with BIPA 1 learners, involve coders outside the development team, and compare materials based on other regional cultures.

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DECLARATIONS

Ethical considerations

Not applicable. The study analysed a publicly accessible digital learning material and did not involve human participants. Third-party videos embedded in the flipbook were analysed only at the level of their placement and publicly available titles.

Use of artificial intelligence (AI)

The authors declare that the generative artificial intelligence (AI) tool Claude was used exclusively for language editing and/or grammatical improvement. The use of AI did not influence the scientific content, study design, data analysis, data interpretation, results, or conclusions of the manuscript. Full responsibility for the content remains with the authors.

Conflict of Interest

The authors declare no conflicts of interest.

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