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Development and Validation of Digital BIPA Student Workbook

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Abstract: *The increasing integration of digital technology in language education has created a growing demand for learning resources that support learner autonomy, flexibility, and meaningful language practice. However, digital learning resources for Bahasa Indonesia bagi Penutur Asing (BIPA) remain limited, particularly those integrating task-based activities, self-assessment, reflection, and multimedia support within a single learning environment. This study aimed to develop and validate a Digital BIPA Student's Workbook for intermediate-level learners using the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) model. Employing a Research and Development (R&D) design, the study involved eight expert validators (specializing in BIPA content, instructional design, linguistics, and graphic design) during the Development phase and 14 intermediate-level BIPA learners for usability and user-perception testing during the Implementation phase. Data were collected via expert validation rubrics, learner feedback questionnaires, observations, and semi-structured interviews, then analyzed using descriptive percentage statistics and thematic analysis. Validation scores were calculated by converting expert evaluation Likert-scale averages into percentage agreements, categorized based on established construct validity criteria (>80% representing high validity). The results indicated high expert-validated quality across content appropriateness (95.00%), presentation feasibility (91.67%), linguistic suitability (87.50%), and graphic design (86.00%). Additionally, learner feedback confirmed high usability and positive user perceptions regarding the integration of four language skills with authentic communicative themes and Indonesian cultural content. These findings suggest that the Digital BIPA Student's Workbook is a highly valid, practical, and pedagogically sound resource well-suited for technology-enhanced BIPA instruction, though further empirical testing is recommended to evaluate its long-term instructional impact on learning outcomes.*

Keywords: *ADDIE Model, BIPA, Digital Workbook, Intermediate Learners, Material Development*

INTRODUCTION

The rapid advancement of digital technology has fundamentally transformed the design, accessibility, and utility of foreign language learning resources(Dmitrenko & Akhmadullin, 2023; Șișianu & Pușcașu, 2024). In foreign language contexts, digital platforms serve not merely as delivery media,

but as tools to foster learner autonomy, offer adaptive learning paths, and enhance engagement (Hardianti et al., 2024). While the adoption of e-books, Learning Management Systems (LMS), and mobile applications has expanded rapidly (Ainan, 2025; Rahmatika et al., 2025; Santiago et al., 2021). a critical gap remains in the contextual development of digital learning resources for Bahasa Indonesia bagi Penutur Asing (BIPA), particularly for intermediate-level (Madya) self-directed learners. Current BIPA digital materials predominantly rely on digitized static textbooks (PDF formats) or elementary grammar drills, offering limited interactive scaffolding, authentic cultural immersion, or autonomous self-assessment features necessary for B1-level learners to achieve communicative fluency independently. Consequently, there is an urgent need to design interactive, pedagogical-driven digital materials specifically tailored to support independent learning trajectories for intermediate BIPA students.

In *Bahasa Indonesia bagi Penutur Asing* (BIPA) context, digital transformation is becoming more important as international learners show increasing interest in studying the Indonesian language (Aini et al., 2025; Bakri et al., 2025). BIPA programs have expanded across various universities and language institutions both domestically and internationally, serving learners with diverse linguistic, cultural, and educational backgrounds (Andriyanto et al., 2025; Rahmat et al., 2024; Werdaningsih, 2026). Several technological innovations have begun to be implemented in BIPA instructions, such as e-learning, mobile learning, gamification, interactive multimedia, web-based learning platforms, and game-based language learning (Ainan, 2025; Rahmatika et al., 2025; Santiago et al., 2021). Various studies indicate that use of digital technology can enhance learning flexibility, expand access to materials, and support the language skills of BIPA learners (Aini et al., 2025; Nasrullah et al., 2024). However, the need for structured digital learning resources that support self-directed learning remains a challenge that requires further attention.

Several studies have contributed towards developing BIPA learning through developments instructional model, learning strategy, and teaching materials. According to Kusmiatun et al. (2017) emphasizes the importance of systematic instructional design in supporting BIPA learning for academic objectives, Meanwhile Susanto (2014) identify the role metacognitive strategy, cognitive, and social-affective in helps foreign students mastering Indonesian language. Moreover, Mediyawati et al. (2019) developed task-based BIPA teaching materials for business communication that are proven to support the achievement of learners' language competencies. Furthermore, studies by Kukulska-Hulme & Viberg (2018) and Mayer (2021) state that the development of digital technology has also driven the integration of various digital learning resources, including interactive multimedia, online learning platforms, and mobile-based learning apps, which allows language learning to take place in a more flexible and self-directed manner. These discoveries highlight the potential of digital innovation to support BIPA learning, thereby indicating the need to developed learning resources that are more responsive to learners' needs in the digital age.

Although previous research has made valuable contributions to BIPA instruction, significant pedagogical and structural gaps remain in the current landscape of digital learning resources. First, while recent studies have developed various digital BIPA materials—such as web-based local wisdom modules, interactive e-books, and mobile apps—these existing resources typically focus on isolated features, such as static reading content, gamified vocabulary practice, or standalone video media. They lack a holistic design that unifies input materials, structured language exercises, self-assessment, reflective practice, and multimedia support within a single, cohesive digital platform. (Faizin et al., 2023; Marsevani & Febria, 2025; Rahmat et al., 2024). Second, existing digital BIPA learning resources—such as web-based modules, interactive e-books, or gamified applications—typically focus on isolated features and do not yet integrate language input, structured skill practice, learning reflection, self-assessment, and multimedia support into a single, cohesive learning environment (Altınay, 2017; Meşe & Mede, 2023; Sharma et al., 2024). Third, most current digital resources remain predominantly teacher-guided or designed for supplementary classroom use, leaving the development of digital workbooks specifically engineered to foster learner autonomy, self-directed practice, and learning flexibility for BIPA learners largely unexplored.(Geetha, 2025; Zhang, 2024). If this gap is not addressed immediately, the development of BIPA learning resources risks falling behind the needs of language learning in the digital age, meaning that BIPA learners will continue to rely on fragmented learning resource that do not sufficiently support self-directed learning and are unable to accommodate flexible and sustainable learning needs. In the long term, this situation could limit the effectiveness od BIPA learning and hinder efforts to internationalize the Indonesian language through the use of increasingly advanced digital technology.

Given these identified gaps, this study aims to develop and validate a Digital BIPA Student Workbook for intermediate-level learners using the ADDIE framework. Unlike existing BIPA digital materials that typically offer standalone digital exercises or passive e-books, the novelty of this workbook lies in its systemic integration of four core language skills, authentic experiential task structures, self-assessment mechanisms, and interactive multimedia into a single, cohesive digital learning environment grounded in cybernetic information processing and Nation's language acquisition principles. By bridging the disconnect between isolated skill practice and self-directed learning, this study contributes theoretically to technology-enhanced second language material design and provides practical design guidelines for BIPA instructors, curriculum developers, and language institutions seeking pedagogically sound digital resources.

LITERATURE REVIEW

BIPA Learning and Instructional Materials

Instructional materials in Indonesian for Speakers of Other Languages (BIPA) serve as a crucial bridge integrating linguistic competency with pragmatic and intercultural awareness (Aulia et al., 2025; Muzaki, 2024). A

comparative synthesis of recent BIPA material development reveals a heavy research concentration at extreme proficiency ends, accompanied by fragmented contextual focus. At the elementary level, studies predominantly emphasize basic vocabulary acquisition and high engagement through visual storytelling, such as comic-based local folklore (Aulia et al., 2025) and localized cultural themes like Bugis or Riau Islands wisdom (Arisnawati et al., 2022; Marsevani et al., 2024). Conversely, materials for advanced learners bypass basic structural scaffolding to focus immediately on specialized critical reading or socio-political discourse, such as natural disasters and authentic literary texts (Muzaki, 2024; Nafi'ah, 2024). This bifurcation exposes a persistent empirical and pedagogical gap at the intermediate level (BIPA Madya). Intermediate learners face a documented "learning plateau" where basic grammatical drills become insufficient, yet unassisted authentic materials remain linguistically overwhelming. Existing BIPA materials rarely provide structured, transitional scaffolding that balances intermediate discourse functions with systematic pragmatic competence. Furthermore, while previous studies demonstrate that integrating local culture enhances learner engagement (Arisnawati et al., 2022; Marsevani et al., 2024), these materials are predominantly designed for teacher-led, face-to-face instruction. Consequently, there remains a lack of systematically designed intermediate BIPA materials capable of facilitating autonomous, self-directed learning without direct instructor intervention.

Digital Learning Materials for BIPA

The transition toward technology-enhanced language learning in BIPA education has accelerated, yet current digital offerings suffer from a fundamental pedagogical mismatch between technological features and learner autonomy. While general foreign language studies highlight that digital environments foster flexibility, interactive feedback, and learner autonomy (Andrianti & Widiyono, 2025; Karademir et al., 2021; Purnomo et al., 2024; Rice & Ortiz, 2021). BIPA-specific empirical literature reveals a much narrower application. Most current BIPA digital resources suffer from "digitization without digital pedagogy"—merely converting conventional print textbooks into static electronic formats (e.g., downloadable PDFs or passive video lectures) (Lestari et al., 2024). When compared to general language learning platforms that offer adaptive learning paths and dynamic formative assessments, existing digital BIPA materials remain functionally fragmented. Current digital BIPA tools typically isolate skills (e.g., standalone listening audio or vocabulary quizzes) rather than synthesizing all four macro-language skills (listening, speaking, reading, writing) into a unified, interactive environment (Lestari et al., 2024). Crucially, available BIPA digital platforms lack integrated self-assessment, reflective prompts, and immediate corrective feedback mechanisms required for self-directed learning. This leaves intermediate learners unable to monitor their own communicative progress independently. To bridge this gap, there is an urgent need for an integrated digital student workbook that synthesizes task-based language activities, authentic cultural scenarios, multi-skill practice, and embedded self-evaluation tools within a single, coherent digital interface.

Development Framework: Integration of the ADDIE and R&D Models

To ensure rigorous product development and empirical evaluation, a clear distinction must be established between the instructional design framework and the broader research methodology. In educational media development, the ADDIE model (Analysis, Design, Development, Implementation, Evaluation) serves strictly as the procedural instructional design engine, providing a systematic, iterative roadmap for structuring content, multimedia, and pedagogical tasks (Branch, 2009; Molenda, 2003). Conversely, the Research and Development (R&D) framework (Borg & Gall, 1983; Sugiyono, 2019).constitutes the overarching empirical research methodology, governing data collection, expert validation protocols, usability testing, and systematic field evaluations.

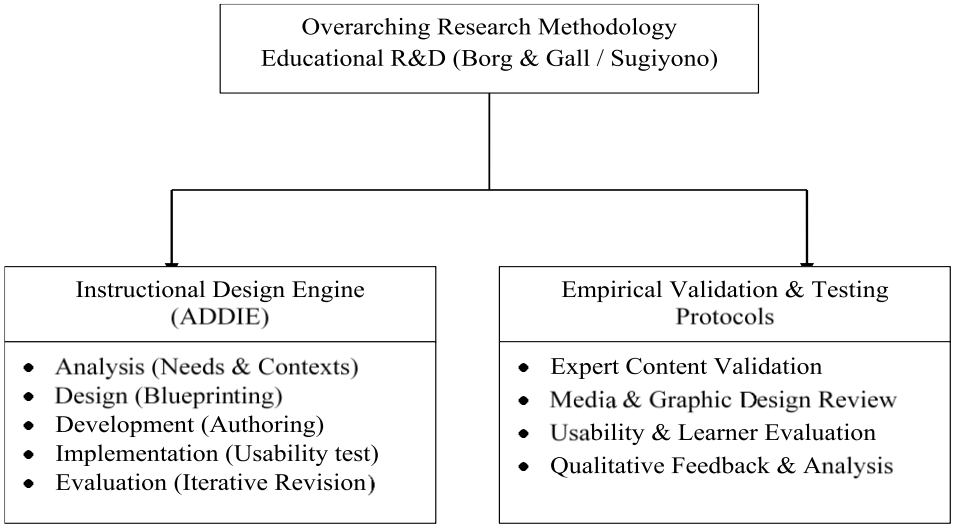


Figure 1. Integration of the ADDIE Instructional Design Model within the Educational R&D Methodology.

Rather than treating ADDIE and R&D as interchangeable or redundant models, contemporary instructional engineering operationalizes ADDIE within the R&D pipeline (Defina, 2018 ; Senjawati et al., 2023; Wongsonadi et al., 2025). The structural relationship between these two components is illustrated in Figure 1. The ADDIE phases guide the tangible creation and refining of the digital workbook, while the R&D design ensures that each phase is empirically anchored through expert judgment (content, linguistic, instructional, and graphic validity) and user-experience trials. While integrated ADDIE-R&D frameworks have been widely cited for improving instructional design quality (Lee & Owens, 2004), in the context of this study, their integration is specifically leveraged to establish high construct validity, feasibility, and user-perceived usability, rather than measuring summative learning gains or long-term cognitive outcomes.

RESEARCH METHOD

Research Design

This study employed Research and Development (R&D) approach to develop and validate digital BIPA students's workbook as digital learning resources for BIPA (Riawarda & Yahya, 2023; Umar et al., 2023). In development process, this study adopted ADDIE model (Analysis, Design, Development, Implementation, and Evaluation) because that model has been widely used in the developments of education product and has proven effective in producing systematic, relevant, and user-centered instructional materials (Brown & Green, 2018; Khoiriyah et al., 2025). Model ADDIE was chosen because it provides a structured process from need analysis, product design and development through implementation to evaluation, allowing for continuous revision and improvement of the product (Muhaemin & Muin, 2024; Tu et al., 2021). Moreover, the systematic and flexible nature of the ADDIE model allows the development of a digital workbook that aligns with the needs of BIPA learners and the principles of digital learning. By applying this model, the study goals to produce a Digital BIPA Student's Workbook that is valid, practical, and flexible for BIPA learners.

Research Participants

Participants were selected using a purposive sampling technique to ensure that all individuals possessed specific characteristics, background qualifications, and operational contexts strictly aligned with the development and validation requirements of the Digital BIPA Student Workbook. This targeted sampling approach was essential to collect actionable, highly relevant, and methodologically sound data across each phase of the ADDIE framework. The study involved 14 intermediate-level (B1) BIPA learners as the target user group, chosen because learners at this stage have mastered basic grammar and require structured, communicative tasks to achieve language fluency, while their prior experience with digital tools enabled them to rigorously evaluate the workbook's usability, digital features, and self-directed exercises during the needs analysis, implementation, and evaluation stages. Furthermore, a panel of eight expert validators was purposively selected based on their advanced academic credentials and professional expertise in key domains: two BIPA subject matter experts evaluated pedagogical alignment and cultural authenticity; three instructional design and content delivery experts assessed the integration of information processing principles and task progression; two graphic design experts evaluated visual ergonomics, layout, and readability; and one experienced BIPA teaching practitioner evaluated practical classroom adaptability. Additionally, two practicing BIPA educators were included during the needs analysis and evaluation stages to provide institutional perspectives regarding curriculum constraints and material gaps. By establishing these rigorous, criteria-based selection parameters, the study ensured that the empirical feedback gathered was directly capable of enhancing the validity and practical utility of the developed workbook.

Data Collection Procedure and Instruments

This study uses the ADDIE model as the framework for developing the Digital BIPA Student's Workbook. The ADDIE model was chosen because it provides a systematic, learner-centered procedure and allows for ongoing evaluation throughout the product development process (Sindu et al., 2021). Each stage in the ADDIE model is closely related to the others and is carried out sequentially to ensure that the workbook developed meets the needs of BIPA learners and the established learning objectives (Sindu et al., 2021). These steps can be seen in Figure 2.

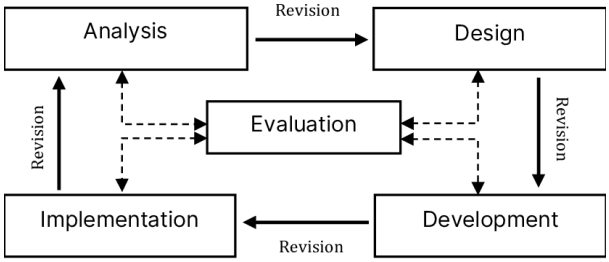


Figure 2. *Research Procedure*

During the analysis stage, the researchers identified the needs, preferences, and challenges of BIPA learners in using digital learning resources via questionnaires and interviews. The results of the analysis were used as the basis for developing the content and features of the Digital BIPA Student's Workbook. In the design phase, the researchers designed the materials structure, learning activities, multimedia elements, as well as validation, and evaluation instruments. Next, during the development phase, the workbook was developed and validated by eight experts covering aspects of content, language, instructional design, visual presentation, and usability. During the implementation phase, the revised product was pilot-tested with intermediate-level BIPA learners to gather feedback regarding ease of use and product suitability. Finally, in the evaluation phase, the validation results and user feedback were analyzed to refine the product, resulting in s Digital BIPA Student's Workbook that is valid and practical for use in BIPA learning. The research instruments used included a need analysis questionnaire, an interview guide, an expert validation form an obsevation sheet, and a user feedback questionnaire. These instruments were were used to collect the necessary data at each stage of the ADDIE model to support a comprehensive product development and validation process.

Data analysis

This study using quantitative and qualitative data analysis technique to obtain comprehensive understanding about the quality of Digital BIPA Student's Workbook (Abni et al., 2024). Quantitative data was obtained through need analysis survey, expert validation sheet, and user feedback survey. The data were analyzed using descriptive statistics including calculations of means scores and percentages, to assess the product's validity and practicality (Aithal & Aithal, 2020). Meanwhile, qualitative data were

obtained through interviews and open-ended comments from validators and BIPA learners. Qualitative data were analyzed through data reduction, theme clustering, and interpretation to identify feedback, user experiences, and recommendations for products improvements (Clarke & Braun, 2017; Kiger & Varpio, 2020). To enhance the validity of the findings, this study employed data triangulation by comparing the results of questionnaires, interviews, and expert validation, thereby yielding a more comprehensive evaluation of the quality of the developed Digital BIPA Student's Workbook.

FINDINGS AND DISCUSSION

The findings of the study are presented based on the phase of the ADDIE instructional design model: Analysis, Design, Development, Implementation, and Evaluation. This section describes the process of developing and validating the digital BIPA workbook, which was designed to support the BIPA learning. The results are presented with a focus on the procedures carried out and the outcomes obtained at each stage of development. Specifically, the research findings include the results of the need analysis, product design specifications, the development process, product implementation and the results of evaluation and validation. The quality of the developed digital BIPA workbook was evaluated through expert validation, user feedback, and implementation. Quantitative and qualitative data were analyzed to determine the product's validity, practicality, and effectiveness as instructional material supporting the BIPA learning process.

Analysis Phase

The analysis phase was conducted to identify the needs of teachers and students regarding the development of a Digital BIPA Student's Workbook based pm digital information processing. Data were collected via a needs assesment survey, semi structured interview with BIPA teachers, and observations of the learning process. The interview results indicate that teachers face several challenges in teaching BIPA. Teachers noted that the available teaching materials are still predominantly in print format and have not yet fully integrated listening, speaking, reading, and writing skills into a single, systematic learning resource. In addition, teachers emphasized the importance of linking learning materials to students' life experiences so that the language acquisition process becomes more meaningful. One teacher stated that *"student find it easier to understand and use Indonesian when the learning materials are linked to threir own experiences."* Teachers also highlighted the need for digital teaching materials that can be used independently both inside and outside the classroom.

The findings from these interviews were subsequently confirmed by the results of a needs assessment survey. A total of 85% of teachers stated that BIPA students need to process their experiences as a foundation for learning Indonesian. As many as 90% of teachers stated that honing the four language skills leads to high-quality outcomes for students in both speaking and writing. In addition, A total of 95% of teachers stated that teaching materials tailored to students' learning needs make it easier for them to understand the subject

matter. While all teachers 100% stated that, in the learning process, they need teaching materials and assessment tools that are systematically organized through student learning modules and teaching guides. From the student's perspective, the survey results show that 90% of students need to process information related to their various past experiences. All students 100% of students need the teaching material to be organized in a logical sequence. A total of 100% of students need language instruction focused on their life experiences. In addition, 90% of students need the taught material to be organized in a logical sequence. Additionally, 96% of students need a synthesis of the taught material. While, 95% of students agree with integrating meaningful input and output into the language proficiency process.

The results of classroom observations reinforce the findings from the interviews and surveys. The learning process s still dominated by the use of the textbooks and teacher explanations, while the use of digital media remains limited. Learning activities focus more on the delivery of content than on processing information based on students' experiences. Moreover, there are currently no digital teaching materials specifically designed to integrate the four language skills into a single, systematic, and easily accessible learning resource. As a whole, the results of the interviews, surveys, and observations indicate a strong need for development of a Digital BIPA Student's Workbook that is systematic, experience-based, and capable of meaningfully integrating language input and output. These findings serve as the foundation for designing the structure of the content, learning activities, and features developed during the design phase.

Design Phase

At this stage, the researchers developed a product in the form of the Digital BIPA Student's Workbook based on the results of the need analysisi and the blueprint that had been prepared during the design phase. Product development was carried out in reference to the ATP AMERTA BIPA Intermediate Level (B1), adapted from Ministry of Education and Culture Regulation No.27 of 2017, as well as the principles of digital information processing that emphasize the integration of learning experiences, meaningful input, information processing, and language output.

The workbook consists of 16 learning units systematically organized to meet the communication needs of intermediate-level of BIPA learners. Each unit includes learning objectives, experiental activation activities, input materials in the form of text, audio, or video, information processing activities, language skill exercises, language production tasks, learning reflections and assessment. The themes covered in the Digital BIPA Student's Workbook. Include: Introduction, Family, Daily Activities, The Market, Aspirations and Professions, Hobies and Sports, Hospitals, Pharmacies and Medications, Happy Experiences, Bad Experiences, Indonesian Films, Indonesian Songs, Indonesian Geography, Picnics, Camping, and Travel. Each theme is designed to integrate listening, speaking, reading, and writing skills within authentic communication contexts that are relevant to learners' daily lives. To provide a

more detailed overview of the product that was developed, the unit structure of the Digital BIPA Student's Workbook is presented in Appendix 1.

Development Phase

The development phase is the process of transforming the blueprint designed in the previous phase into a ready-to-use leaarning product. Product development begins with determining the competencies to be achieved by intermediate-level (B1) BIPA learners, as well as identifying the necessary learning resources and supporting tools. The product is developed based on cybernatic learning theory (Wiener, 1961) and Theory of language acquisition (Nation, 2007), which form the conceptua; foundation of the digital-based systemic configuration learning model. The development process consists of five main steps, namely: (1) analysis of cybernatic learning theory, (2) analysis of Paul Nation's theory of language acquisition, (3) integration of the two theories as the basis for model development, (4) identification of conceptual; intersections that support language learning, and (5) development of learning materials based on the systemic configuartion model. The results of this process are four main products: the Digital BIPA Textbook, Students Worksheets (LKM), The Lecturer's Guidebook, and the Assessment Guidebook.

Digital BIPA Textbook

The following is the cover of the textbook compiled by the author:



Figure 3 *Cover Textbook*

The textbook developed in this study contains 16 themes, including introductions, family, daily activities, the market, aspirations and professions, hobbies and sports, hospitals, pharmacies and medicine, happy experiences, bad experiences, Indonesian films, Indonesian songs, Indonesian geography, picnics, camping, and tourism. For each theme, several learning objectives have been established and designed to help BIPA students understand the material covered in each theme. The explanations are accompanied by engaging illustrations that aid in the comprehension and understanding of the meanings of the words used in the textbook.

The following are examples of material found in the theme "Introduction" unit in the textbook:



Figure 4 *The "Introduction" Theme in the Textbook*

Student Worksheet

Supplementary materials for students, in the form of exercises, assignments, and questions in accordance with the Course Syllabus, which students must complete individually or in groups. The following is an example of a student worksheet integrated into the textbook. Each chapter in the textbook is accompanied by various assessment tools that help students gauge their level of understanding after using the instructional materials.



Figure 5 *Student Worksheet*

The Lecturer's Guidebook

A guidebook for instructors on the teaching process, which includes the course syllabus, course materials, and preparation steps, along with instructions for use. The instructor's guide is aligned with the 16 chapters in the student textbook. An example is provided below.

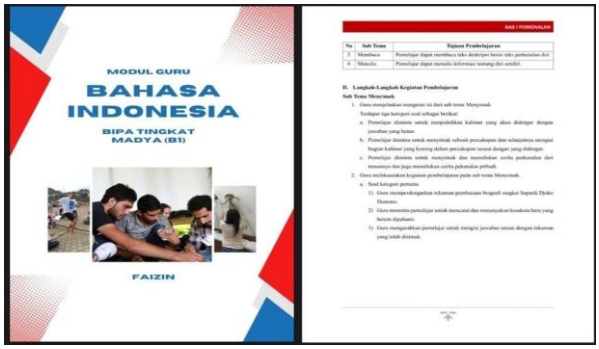


Figure 6 *The Lecturer's Guidebook*

The Assessment Guidebook

The assessment guidebook was developed to ensure that the evaluation process is conducted consistently and objectively. This guide includes assessment procedures, learning outcome indicators, language skills assessment rubrics, and guidelines for interpreting learning outcomes. With this guide, the evaluation process can be conducted more systematically and in line with the established learning objectives. An example is provided below:

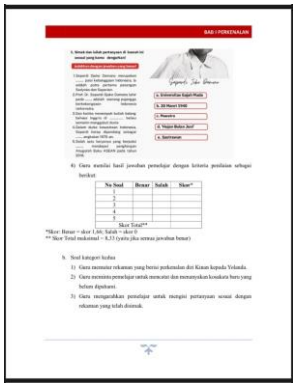


Figure 7. *The Assessment Guidebook*

Implementation Phase

The implementation phase was conducted to assess the effectiveness of the Digital BIPA Student's Workbook in intermediate-level BIPA instructions. During this phase, the products that had been developed and revised based on feedback from validators were directly applied in classroom activities to test their material their content appropriateness, presentation feasibility, linguistic suitability, and the product's relevance to learners' needs. The implementation took place at the BIPA Center of Muhammadiyah University of Malang during the even semester of the 2022/2023 academic year, involving intermediate-level BIPA learners as users of the product. The following is a description of the implementation activities carried out during the learning process using the Digital BIPA Student's Workbook.

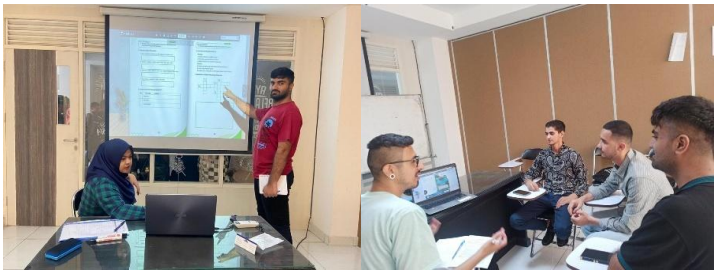


Figure 8. *figure of implementation phase*

Content Appropriateness

The subject matter experts or validators who assessed the suitability of the Textbook, Student Worksheets, and Instructor's Guide in this study were Prof. Dr. Ribut Wahyu Eriyanti, M.Si., M.Pd. (Validator I) and Dr. Arif Budi Wurianto, M.Si. (Validator II), as well as Dr. Titik Indarti, M.Pd., specifically serving as Validator II for the content of the Course Outline (RPS) and syllabus. The following are the assessment results from these experts, broken down by the types of products developed in the digital-based systemic configuration learning model. The following is a summary of the textbook's suitability assessment based on the opinions of two subject matter experts:

Table 2. *Results of the Validation of BIPA Textbooks by Content Appropriateness*

No.	Items	Validator		Amount	Assessment percentages
		I	II		
1	The content of CPMK or Sub-CPMK is presented explicitly or implicitly	5	4	9	90,00%
2	Alignment between the content of the instructional materials and the CPMK and Sub-CPMK (the material ranges from an introduction to concepts to the interactions between concepts, in accordance with the CPMK and Sub-CPMK)	5	4	9	90,00%
3	The content of the book integrates Indonesian cultural values with the Sub-CPMK and language skills	5	5	10	100,00%
4	Choosing a theme title to boost student motivation	4	5	9	90,00%
5	The material presented helps students develop their language skills	5	5	10	100,00%
6	The material is illustrated with images or text to make it more accessible to students	5	5	10	100,00%
	Mean	29,00	28,00	57,00	
	Assessment percentages	96,67%	93,33%	95,00%	

As shown in Table 2, Items 1, 2, and 4 received a score of 90%, while Items 3, 5, and 6 achieved 100%. Validator I and Validator II assigned overall scores of 96.67% and 93.33%, respectively, resulting in an average score of 95.00%, which falls into the Highly Valid category. These findings indicate that the Digital BIPA Student's Workbook is highly appropriate in terms of content, learning outcomes alignment, cultural integration, and language-skill development. The validators also provided several suggestions for improvement, including standardizing the difficulty level of assessment tasks

across units and strengthening the alignment between the learning materials and the CPMK and Sub-CPMK. Accordingly, revisions were made by balancing the number of learning activities and assessment tasks across themes and ensuring that all units integrated the four language skills (listening, speaking, reading, and writing). These revisions enhanced the consistency and instructional alignment of the workbook.

Presentation Feasibility

The validators who assessed the suitability of the textbooks for use in this study were Dr. Titik Indarti, M.Pd. (Validator I) and Dr. Hari Windu Asrini, M.Si. (Validator II). The following are the evaluation results from these experts, broken down by the type of product developed in the digital-based systemic configuration learning model. The following is a summary of the assessment of the suitability of the textbook for use, based on the opinions of two validators:

Table 3. *Results of the Validation of BIPA Textbooks Based on Presentation Quality Components*

No.	Items	Validator		Amount	Assessment percentages
		I	II		
1	The title page of each unit can help students read and study more easily	5	5	5	100,00%
2	Themes presented visually to further enhance students' language skills	5	4	4,5	90,00%
3	Elaborating on various technological adaptations and other supporting measures	4	4	4	80,00%
4	Consistently present the learning objectives in each unit	5	5	5	100,00%
5	The questions provided at the end of each Sub-CPMK correspond to the material covered	5	5	5	100,00%
6	A reference list that follows proper citation guidelines	4	4	4	80,00%
	Mean	4,67	4,50	4,58	
	Assessment percentages	93,33%	90,00%	91,67%	

As presented in Table 3, the presentation component of the Digital BIPA Student's Workbook obtained an average score of 91.67%, indicating a *"Highly Valid"* category. Validator I and Validator II assigned scores of 93.33% and 90.00%, respectively. The highest scores (100%) were achieved in the visual presentation of themes, the alignment of assessment tasks with learning materials, and the accuracy of the reference list. Meanwhile, the presentation of learning objectives in each unit and the integration of supporting technologies received slightly lower scores (80% and 90%, respectively),

suggesting areas for further refinement. The validators noted that the workbook was well organized and visually engaging, supporting learners' language development through clearly structured themes and activities. Based on their recommendations, minor revisions were made to strengthen the presentation of learning objectives across units and enhance the integration of digital learning resources. These improvements contributed to a more coherent and learner-friendly presentation of the workbook.

Linguistic Suitability

The validators who assessed the linguistic appropriateness of the Textbook, in this study were Dr. Ali Nuke Affandy, M.Si. (Validator I) and Dr. Daroe Iswatingsih, M.Si. (Validator II). The following are the results of the experts' assessments, broken down by the types of products developed in the digital-based systemic configuration learning model. The following is a summary of the linguistic suitability assessment of the textbook based on the opinions of two validators:

Table 4. *Results of the Validation of BIPA Textbooks by Linguistic Suitability Components*

No.	Items	Validator		Amount	Assessment percentages
		I	II		
1	The language used is appropriate for the students' level of development	4	5	4,5	90,00%
2	Communicative (including students' understanding of the message)	4	5	4,5	90,00%
3	Dialogic and interactive (the ability to motivate learners to respond to messages)	5	5	5	100,00%
4	Formal correctness according to the rules of the Indonesian language	3	4	3,5	70,00%
	Mean	4,00	4,75	4,38	
	Assessment percentages	80,00%	95,00%	87,50%	

As presented in Table 4, the linguistic appropriateness component obtained an overall score of 87.50%, indicating a *"Highly Valid"* category. Validator I assigned a score of 80%, while Validator II awarded 95%. Item 3 received the highest score (100%), whereas Items 1 and 2 obtained 90%. Item 4 received the lowest score (70%), suggesting the need for minor linguistic revisions. The validators highlighted several issues related to typographical errors, sentence effectiveness, and the use of difficult vocabulary in certain topics. Accordingly, revisions were made by correcting typographical errors in titles, subtitles, and the main text, improving sentence clarity and conciseness, and replacing complex vocabulary with more accessible synonyms. These

revisions enhanced the readability and linguistic accessibility of the workbook for intermediate-level BIPA learners.

Graphic Design Suitability

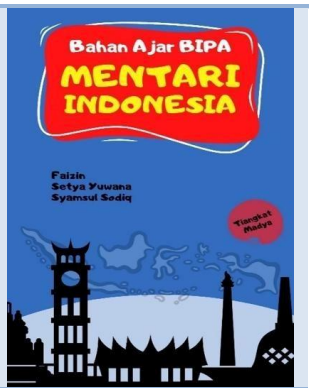
The validators who assessed the graphic design of the Textbook, in this study were Mr. Ngadi Saliro from Intrans Publishing (Validator I) and Mr. Ahmad Andi Firmansah, S.Pd., from UMM Press (Validator II). The following are the results of the experts' evaluations, broken down by the types of products developed in the digital-based systemic configuration learning model. The following is a summary of the graphic design evaluation of the textbook based on the opinions of two validators:

Table 5. *Results of the Validation of BIPA Textbooks Based on Graphic Design Suitability Components*

No.	Items	Validator		Amount	Assessment percentages
		I	II		
1	Book cover (the overall design of the cover is presented in an appealing way, including the choice of typeface, illustrations, colors, and so on)	3	5	4	80,00%
2	The book's content is presented in an engaging way	4	5	4,5	90,00%
3	Readability (appropriateness of font selection, illustrations, and formatting)	4	4	4	80,00%
4	Print quality (clarity, uniformity, and print color)	4	5	4,5	90,00%
5	The physical durability of a textbook (paper, cover material, and binding)	4	5	4,5	90,00%
	Mean	3,80	4,80	4,30	
	Assessment percentages	76,00%	96,00%	86,00%	

As presented in Table 5, the graphical feasibility component obtained an overall score of **86.00%,** indicating a **Highly Valid** category. Validator I assigned a score of 76%, while Validator II awarded 96%. Items 2, 4, and 5 received scores of 90%, whereas Items 1 and 3 obtained 80%. These results suggest that the visual design of the Digital BIPA Student's Workbook was generally appropriate and supportive of the learning process. The validators provided several recommendations regarding the workbook's visual presentation. These included removing distracting design elements from the cover page and incorporating additional illustrations to support learning materials, particularly those related to Indonesian cultural content. In response, as shown in table 6, revisions were made by simplifying the cover design and adding relevant visual illustrations throughout the workbook. These improvements enhanced the visual appeal, clarity, and cultural representation of the learning materials.

Table 6. *Revisions to BIPA Textbooks*

Before the Revisions	After Revisions
	

Evaluation Phase

The evaluation phase aimed to synthesize the findings obtained from the needs analysis, expert validation, product revision, and implementation stages to determine the overall quality of the Digital BIPA Student's Workbook. Evaluation was conducted continuously throughout the development process, allowing iterative improvements to be made based on empirical evidence and expert feedback. The results demonstrated that the workbook achieved high levels of validity across all evaluation components, including content appropriateness, presentation, language, and graphical design. Expert reviewers consistently rated the workbook within the highly valid category, indicating that the materials were aligned with the intended learning outcomes, learners' needs, and the characteristics of intermediate-level BIPA instruction. Furthermore, the validators' recommendations contributed to the refinement of instructional activities, assessment tasks, language use, and visual presentation, thereby enhancing the overall quality of the workbook.

The implementation stage further confirmed the suitability of the workbook for classroom use. Observational data indicated active learner participation and effective integration of language skills and cultural content throughout the learning process. The workbook also facilitated a structured learning sequence that supported learners in developing communicative competence within authentic Indonesian contexts. Taken together, these findings suggest that the Digital BIPA Student's Workbook constitutes a valid and pedagogically appropriate instructional resource for intermediate-level BIPA learners. The iterative evaluation process ensured that the final product was theoretically grounded, contextually relevant, and aligned with the instructional needs of BIPA programs. Consequently, the workbook is considered suitable for wider implementation and future adaptation in diverse BIPA learning contexts.

Discussion

This study aims to develop and validate the Digital BIPA Student's Workbook for intermediate-level BIPA learners using the ADDIE Model. The results show that the developed workbook was rated as "highly valid" in terms of content appropriateness, presentation, linguistic, and graphics. These findings indicate that the developed workbook meets the needs of intermediate-level BIPA learners and is capable of integrating language skills and Indonesian cultural content into a single, structured digital learning resource. Thus, the results of this study demonstrate that the development of digital teaching materials based on need analysis and expert validation can produce products that are relevant and suitable for use in BIPA instructions.

The findings of this study are consistent with various previous studies (Andriyanto et al., 2025; Aram & Khany, 2025; Bakri et al., 2025; Faizin et al., 2023; Sukarno & Riyadini, 2024) that emphasize the importance of developing learner-centered instructional materials, expert validation, and the integration of cultural context in second language acquisition. Research on the development of digital instructional materials fot BIPA indicates that the integration of local culture and digital technology can amplify the relevance and authenticity of foreign learners' learning experiences (Oktora & Khairina, 2023; Setiawan et al., 2024). Moreover, a study on the development of multimedia and digital instructional materials for BIPA also reported that the integration of learning objectives, language activities, and cultural context contributes to the quality of the products developed (Herawati et al., 2025; Khaerunnisa et al., 2023). Nevertheless, this study makes a unique contribution by developing and validating a Digital BIPA Student's Workbook that was systematically designed using the ADDIE model and integrates the four language skills, digital activities, and Indonesian cultural themes into a single, comprehensive learning resource (Simanjutak et al., 2024). Thus, this study not only confirms previous findings regarding the importance of digital and culture-based teaching materials but also expands the literature by providing a validated model for developing digital workbooks for intermediate-level BIPA learners (Herawati et al., 2025; Khaerunnisa et al., 2023; Oktora & Khairina, 2023; Setiawan et al., 2024).

One of the main strengths of this study is the use of the ADDIE model, which allows the development process to be carried out systematically, from needs analysis to product evaluation. This structured development approach is recommended in various studies on instructional material development because it ensures alignment between learner needs, learning objectives, and the characteristics of the resulting product (Almunawaroh & Steklács, 2023; Khaerunnisa et al., 2023; Yusuf et al., 2024). Furthermore, validation involving

experts in subject matter, presentation, language, and graphics provides a strong foundation for the academic quality of the developed workbook. However, this study has several limitations. The product was implemented in only one BIPA program and at the intermediate level; therefore, generalizing the results to other BIPA contexts should be done with caution. Furthermore, this study focused on the validity and feasibility of the product and therefore did not evaluate its long-term impact on learners' language competence development. Nevertheless, the high validation scores across all aspects indicate that these limitations do not diminish the fundamental quality of the resulting product.

The high level of validity of the developed workbook is likely due to the alignment between the product design and the learning needs of BIPA learners identified during the analysis phase. The material is organized progressively based on communicative themes and learners' authentic experiences, thereby enabling more meaningful and contextual learning. This finding is consistent with research on language teaching material development, which indicates that alignment between learners' needs and instructional design contributes to the quality and acceptance of teaching materials (Almunawaroh & Steklács, 2023; Khaerunnisa et al., 2023). Furthermore, the integration of Indonesian culture into each learning unit is believed to be a key mechanism that enhances the quality of the workbook. Recent research on the development of BIPA teaching materials indicates that cultural context not only serves as a source of content but also helps learners understand language use in authentic social situations (Oktora & Khairina, 2023; Setiawan et al., 2024). From the perspective of technology-based language learning, presenting material in a digital format also allows for more flexible access, greater interaction, and a more engaging learning experience compared to conventional teaching materials (Deng, 2026; Rahmawati et al., 2025). Therefore, it can be assumed that the combination of needs-based design, cultural integration, and the use of digital media are the main factors underlying the high quality of the workbook that was developed.

The findings of this study have several implications for the development of BIPA instruction. First, the development of digital instructional materials should begin with a comprehensive needs analysis to ensure that the resulting products align with learners' characteristics and learning objectives. Second, listening, speaking, reading, and writing skills should be integrated into contextual themes so that learning takes place in a more authentic manner. Third, Indonesian cultural content needs to be systematically integrated into BIPA teaching materials to support the development of learners' communicative competencies and cross-cultural understanding. Future research could test the effectiveness of this workbook across various

proficiency levels and different learning contexts to obtain broader empirical evidence regarding its benefits in BIPA instruction.

CONCLUSION

This study addressed the limited availability of integrated digital learning resources for Bahasa Indonesia bagi Penutur Asing (BIPA), specifically the need for digital materials that combine language activities, self-assessment, reflection, and multimedia support within a single learning environment. Using the ADDIE framework, this study developed and evaluated the preliminary validity of a Digital BIPA Student Workbook for intermediate-level learners. The evaluation results demonstrated that the developed workbook achieved high expert validity across content appropriateness (95.00%), presentation feasibility (91.67%), linguistic suitability (87.50%), and graphic design (86.00%). These findings indicate that the workbook offers a pedagogically sound structure that successfully integrates listening, speaking, reading, and writing skills with authentic communicative themes and Indonesian cultural content. The study implies that needs-based, systematically designed digital materials hold strong potential for providing structured learning resources that support flexible BIPA instruction. However, because this research focused primarily on product development and initial expert/user validation, conclusions regarding its broader educational impact must be drawn with caution. The current findings demonstrate the workbook's content validity, technical feasibility, and perceived suitability for self-directed practice, rather than empirical proof of improved student language proficiency or direct learning outcomes. Furthermore, the scope of this study is limited by its pilot implementation within a single BIPA institution and its exclusive focus on intermediate-level learners. Consequently, future empirical research should examine the actual effectiveness of the workbook in enhancing language proficiency through rigorous experimental, control-group, and longitudinal research designs across diverse proficiency levels and institutional settings. Future studies may also explore integrating adaptive learning features or artificial intelligence tools to further personalize the learning process. Overall, this study provides an empirically validated digital workbook framework that serves as a feasible and contextually relevant resource for technology-enhanced BIPA education.

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