

New Designed Technology-Based Textbook of Indonesian for Foreign Speakers (BIPA)

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BIPA learning for academic purposes for Chinese students has been going quite well so far. The implementation of this program has not been optimal, one of which is due to the absence of teaching materials that are ready to be used. Teaching materials are one of the components that determine the success of learning. The absence of adequate teaching materials has caused BIPA learning for academic purposes to seem sporadic. Moreover, Chinese students have language and cultural characteristics that are different from students in other programs, so Chinese students cannot make use of teaching materials commonly used in other BIPA programs. For this reason, an effort is needed to develop BIPA learning teaching materials for academic purposes. The model for developing teaching materials used in this study is the Borg and Gall model. The results of this study are in the form of teaching materials BIPA for academic purposes for intermediate-level learners. The results showed that the developed teaching materials were feasible to be implemented with an average score of 91.25.

Keywords: Bahasa Indonesia learning, academic purpose, Augmented Reality

INTRODUCTION

The development of Indonesian for foreign speakers (*Bahasa Indonesia untuk Penutur Asing/BIPA*) from year to year has increased significantly. Along with the progress that has been made by the Indonesian people during the current global era, Indonesia's role in international relations has also placed Indonesian as one of the most essential languages in the world (Badan Pembinaan dan Pengembangan Bahasa, 2021).

In 2012, no less than 45 institutions had taught Bahasa Indonesia to foreign speakers (BIPA), both in universities and in course institutions (Badan Pembinaan dan Pengembangan Bahasa, 2021). This increase does not only occur in the country but also occurs abroad. Abroad, BIPA teaching has been carried out by around 36 countries globally with several institutions of not less than 130.

Universitas Negeri Malang (UM) is one of the successful universities in teaching BIPA in Indonesia. This can be seen from the increasing number of types of programs and the number of foreigners studying Indonesian at UM. The BIPA programs that already exist at UM and are running until now are; (1) the Indonesian Darmasiswa Program, (2) the Developing Country Partnership Program (KNB), (3) the In-Country Program, (4) the Critical Language Scholarship (CLS) Program, (5) AMINEF Program, (6) The Indonesian Flagship Language Initiative (IFLI) Program, (7) Indonesian Overseas Program (IOP), (8) Study Abroad Program, and others (Universitas Negeri Malang, 2021). These programs have been running smoothly so far. During the 2020 pandemic, BIPA also remains active in opening online BIPA teaching programs attended by 92 participants from 16 countries in the world. According to Suyitno (2007), the main goal of foreign students learning Indonesian is to fluently speak Indonesian and get to know Indonesian culture closely. They need fluency in Indonesian because (a) they take a program on Indonesia at their home university, (b) they may conduct research in Indonesia, (c) they will work in Indonesia, (d) they will research Indonesian language issues, and (e) they will stay in Indonesia for a long time.

Based on the objectives of learning Indonesian as stated above, BIPA learning can be divided into two types, namely (1) BIPA learning for general purposes and (2) BIPA learning for academic purposes. The General purpose of BIPA learning is oriented to communication needs. Learning is intended to equip students to be able to communicate using Indonesian well. However the purpose of implementing BIPA learning for academic purposes is to equip students with Bahasa Indonesian skills for the academic realm be it for further studies, research activities or other academic activities (Kusmiatun, et al., 2017). Students in BIPA for academic purposes have characteristics that include initial abilities, general characteristics, and learning styles.

So far, general-purpose BIPA learning has been quite good. Learning is carried out by following the curriculum developed by the Ministry of Education and Culture. The teaching material used is the book *Sahabatku Indonesia* which is also published by the Ministry of Education and Culture. However, BIPA teaching materials for academic purposes have never been developed before, so many BIPA teachers for academic purposes continue to use the *Sahabatku Indonesia* book in their learning process. This resulted in the learning objectives of BIPA with academic purposes being unable to run optimally because the characteristics of the teaching materials compiled in the book were not correspondingly the objectives of BIPA learning for academic purposes. Therefore, it can be said that teaching materials play an important role in determining the success of learning. BIPA teaching materials for academic purposes have a distinctive academic element which is reflected in the components and substance of the material. The Indonesian material taught is standard Indonesian, including standard vocabulary and practical sentences. Moreover, the topics of the material are appropriate for academic needs.

Furthermore, the development of teaching materials is not only required to fulfil the curriculum but also must pay attention to the characteristics of the target. The characteristics of the target must be adjusted to the environment, abilities, interests, and background of the learners so that from these characteristics, the developer of teaching materials can determine the material presented, the level of difficulty of the material, and the learners' first language. The implementation of BIPA learning will run efficiently if the characteristics of the learners are well understood. Therefore, it is crucial to know the characteristics of the learners so that effective teaching materials can be produced in accordance with the characteristics of the learners' language.

One of the BIPA programs for academic purposes implemented at UM is the 3+1 program in collaboration with Guangxi Normal University (GXNU), China, for two semesters. This program has been running well since 2018, and the implementation of the collaboration is expected to increase more students and study programs are involved. Therefore, the implementation of this increasing program must undoubtedly be welcomed, one of which is realized by the development of teaching materials that are ready to be used for program implementation in the future.

In 2019, previous researchers conducted research on linguistic characteristics in spoken-written communication of Chinese students and their use for mapping BIPA teaching materials. From the results of the studies, it was found that the linguistic characteristics of BIPA students from China showed three things. First, from the phonological aspect, Chinese students do not master the pronunciation of Indonesian sounds, which can be seen from their inability and consistent errors in pronouncing certain sounds. Second, in terms of morphology, students are able to form words using affixes to form active verbs, form adjectives, and form nouns. However, students still have difficulty forming words using confixes and affixes to form passive verbs.

From these three findings, in 2020, researchers developed BIPA teaching materials for beginner-level academic purposes whose learning materials are based on the linguistic characteristics of Chinese students as outlined in the Listening, Speaking, Writing, Grammar, and Indonesian Culture courses. These teaching materials are used when students take the first semester of the 3+1 program at UM. In 2021, researchers will continue to develop BIPA teaching materials for the intermediate level, which will later be used when Chinese students take the 2nd semester in this 3+1 program.

The teaching materials developed are in the form of technology-based printed teaching materials, namely Augmented Reality. Augmented Reality (AR) is a new breakthrough in learning by using virtual and real technology that also improves the quality and quality of learning (Carreon, et al., 2020). Through Augmented Reality, a teacher becomes easier to transfer knowledge to students. Therefore, as a method/approach, Augmented Reality is currently a trend in education and learning research (Bacca, et al., 2014), both in learning in primary schools, secondary schools, or higher education.

Based on the described background, the purpose of this research is to develop BIPA teaching materials for academic purposes for Chinese learners. Therefore, the proposed title is Development of Indonesian Language Teaching Materials for Foreign Speakers (BIPA) with Technology-Based Intermediate Academic Aims for Chinese Learners. In addition, the teaching materials prepared will be based on the latest technology in creative learning, teaching, and research. Implementing this technology can increase learning independence, make it easier for students to learn, and increase the attractiveness of BIPA learning in the eyes of Chinese students or other international students.

This research was conducted to develop BIPA teaching materials for academic purposes, especially for Chinese learners. Therefore, the results of this study are expected to be used for the implementation of BIPA learning for academic purposes for students from China, especially at UM and in other institutions that administer the BIPA program, especially the BIPA program that has students from China. The high cooperation between Indonesia and China also increases the opportunities for Chinese citizens to learn Indonesian. In the context of UM, students from China are also increasing day by day, marked by the increasing number of admissions of students from China who study at UM. In the previous year, researchers developed BIPA teaching materials for the beginner level, which are planned to be used in the first semester of the BIPA program for Chinese learners. Therefore, it is necessary to immediately develop advanced BIPA teaching materials for the intermediate level, which will be used in the program's second semester. Expectantly, the BIPA program for Chinese students at UM can run well.

METHOD

This research has a product output in the form of teaching materials equipped with Augmented Reality. The implementation of this development research was adapted from the Borg and Gall development research model (Arifin, 2011), which consisted of ten stages. The research started from a preliminary study, planning, initial product development, limited trial, revision of the first phase, more comprehensive trial, revision of phase two, field implementation, revision of the final product, and dissemination. However, in this activity, not all processes in the model are applied. Only eight processes were used, namely: (1) preliminary/pre-development, (2) planning, (3) initial product development, which includes the design and preparation of product content, (4) expert and practitioner validation, (5) initial revision, (6) trial, (7) final revision, and (8) dissemination.

The preliminary/pre-development stage consisted of two activities, namely the initial study and needs analysis. The initial study was conducted by analyzing empirical data and theoretical data. Empirical data analysis was carried out by analyzing BIPA learning activities that had been carried out so far, while theoretical data analysis was carried out to analyze learning media that had been developed in BIPA learning. The results of empirical and theoretical data analysis show that no Augmented Reality integrated learning media has been developed for BIPA learning materials. The analysis results resulted in a decision in the form of the importance of developing Augmented Reality integrated BIPA teaching materials. Needs analysis is carried out by analysing the results of field surveys, literature studies, and various library sources.

FIGURE 1
RESEARCH DESIGN AND PRODUCT DEVELOPMENT



The planning stage was carried out by identifying learning objectives and indicators, collecting materials and materials, selecting programs used to develop teaching materials and Augmented Reality, determining product designs to be developed, and making storyboards. After these activities were carried out, the initial production was executed.

The initial product development stage was carried out using the prototyping method for Augmented Reality. According to Pressman (2012), the design of the system to be developed can use the prototyping method [32]. Therefore, at this stage, the initial design was also carried out. Model prototyping is a software approach whose goal is to develop a model into a final system. This stage consisted of three sub-stages, namely: (a) making use of case diagrams, (b) making architectural designs, and (c) collecting materials consisting of selecting materials, compiling examples and exercises, and (d) uploading materials, examples, and exercises to the database application. After Augmented Reality was developed, the initial product of teaching materials was also developed.

The validation stage was carried out by conducting expert validation and practitioner validation. Expert validation consisted of material expert validation, linguist validation, and media expert validation. Material validation was carried out to BIPA learning experts; media expert validation was carried out to learning media experts; language validation was carried out to Indonesian language lecturers. During the validation activity, the validator was allowed to provide their assessment, comments, and suggestions to improve the developed product.

The initial revision stage was performed after validation was carried out. The product received ratings, comments, and suggestions from the validators at this stage. These ratings, comments, and suggestions were used to improve the products developed. The trial phase was carried out after the product was revised. Product trials were carried out the beginner-level BIPA learners. The test subjects were also allowed to provide ratings, comments, and suggestions for product improvement during the trial.

The final revision stage is carried out after the product trial stage. At this stage, revisions or product improvements were made based on the ratings, comments, and suggestions that have been given during the trial. This revision produced a final product that can be implemented in classroom learning. The final step taken after a series of activities that have been carried out is product dissemination. Dissemination was carried out in several ways, including implementing products in actual classes and publishing research results in scientific journals/forums.

Data and Data Sources

The types of data in this study were quantitative and qualitative data. Quantitative data in the form of scores were obtained from the results of filling out a questionnaire containing the responses of the validators and the test subjects to the developed teaching materials. The qualitative data was in the form of suggestions, comments, and criticisms from validators and test subjects on the developed android-based application. These data were used to determine the level of revision and product feasibility to be applied.

Validation was divided into two, namely expert validation and practitioner validation. Expert validation was carried out by three experts, namely BIPA experts, learning media experts, and language experts. Practitioner validation was carried out by BIPA teachers. The trials carried out were small-scale trials with the test subjects being BIPA students who had or were taking the BIPA program.

Research Instrument

The instrument used in this study was a questionnaire to the respondents for validation and testing. The questionnaire was in the form of a score indicating the response to the questions. The responses given consisted of five categories, namely: strongly agree / SS (score 5), agree / S (score 4), disagree / KS (score 3), disagree / TS (score 2), and strongly disagree / STS (score 1). There are also comments, suggestions, and criticism columns that respondents can use to provide input on android-based applications developed by the researchers.

RESULT

Product Description

The teaching materials developed are in the form of printed books. The content of this book is compiled based on the needs and linguistic characteristics of students participating in the BIPA program for academic purposes, especially (BIPA participants for academic purposes) the participants from China.

The teaching materials compiled consist of three main parts: the initial part, the core part, and the closing part. The initial section consists of a cover, book identity page, foreword, and table of contents. The core section consists of four main sections that consist of explanations of concepts, examples, and exercises for each language skill. The final part involves a bibliography and authors' biodata.

This teaching material is named *Cakrawala Indonesia: Indonesian Language Teaching Material for Foreign Speakers with Intermediate Academic Purposes*. The choice of name is based on consideration of the book's contents, which contains insights about Indonesia. This book contains concepts, examples, and exercises for (a) three language skills, namely listening, speaking, and writing, and (b) grammar. The

examples of concepts and insights presented in these teaching materials are linked to Indonesian insights. Therefore, this book is called *Cakrawala Indonesia*. By giving this name, it is hoped that the participants of the BIPA program for academic purposes, apart from being able to learn Indonesian academic purposes, are also able to have Indonesian insight.

FIGURE 2
BOOK COVER OF INDONESIAN HORIZON



The cover of this teaching material is designed in blue because it represents the book's title. Furthermore, the word horizon refers to the sky that overshadows the earth, and the sky is identical to the colour blue. In addition, the colour blue can also mean the need for order and direction in life. Thus, this teaching material is expected to be a necessity and guide in learning Indonesian, so the students' learning becomes more focused.

The core part of this book consists of four main segments, namely segments for learning Listening, Speaking, Writing, and Grammar. The four lessons are the main learnings in the BPA program for academic purposes, especially BIPA learning for academic purposes with participants from China. Therefore, the presentation of the material in this teaching material is not divided into chapters but based on the four learning segments.

BIPA learning for academic purposes for participants from China is indeed different from other BIPA learning programs. For example, in other BIPA lessons, learning is integrated between the four language skills; listening, speaking, reading, and writing and grammar. Therefore, the presentation of teaching materials in books for BIPA learning is generally divided into chapters which consist of the integration of the four language skills and grammar. However, in BIPA learning for academic purposes for students from China, learning is separated by subjects, so the students completely understand each of these subjects. Therefore, this teaching material's presentation is divided into main segments according to the courses taken by students and not based on chapters.

Furthermore, the subjects that BIPA students must study for academic purposes in China are Listening, Speaking, Writing, and Grammar courses. Consequently, the teaching materials that have been compiled also contain these four courses. The presentation of the material in this book is the material for Listening, Speaking, Writing, and Grammar courses, respectively. The material in each course is thoroughly discussed in the teaching materials, then moves on to the next course. Each course consists of 14 learning materials assuming that one learning material is taught in one meeting. There are fourteen active meetings for learning in one semester.

The implementation of learning is done separately per subject. Thus, learning integrity can be maintained, and a theme that binds each lecture material is set. The themes developed in this teaching materials are (1) introduction, (2) daily activities, (3) profession, (4) learning environment, (5) creativity,

(6) achievement, (7) lifestyle, (8) natural environment, (9) creative economy, (10) tourism, (11) culture, (12) social, (13) technology, and (14) mass media. These themes were chosen based on the needs of the students, their suitability to the students' initial abilities, their suitability to academic topics, and their closeness to the students' academic life. These themes become "binders" between courses, so, for example, in the learning of Listening with the theme of creativity, learning speaking, writing, and grammar are also themed creativity. By having a thematic topic, learning can still have a connection even though it is taught separately per subject.

In each learning material, the presentation of teaching materials consists of concepts, examples, and exercises. Concepts can be definitions, features, procedures, or tricks. Examples also accompany the presented concepts, so the students' understanding of the learning material becomes more complete and concrete. In addition, exercises are also presented to check students' understanding of the learning material. This exercise varies, depending on the materials and indicators of learning achievement.

Moreover, each learning material consists of two activities. Hence, the students have adequate time and opportunity to understand the learning material because there are two learning activities in each material and two exercises according to the presentation of the learning activities. To ensure product quality, validation tests are carried out. The validation tests are carried out in the form of expert validation tests and practitioners validation tests. The following are the descriptions.

Teaching Material Validation Test Results

The validation test of teaching materials consists of experts' validation test and practitioners' validation test. Experts validation tests are carried out for BIPA experts, while practitioners validation tests are carried out for BIPA practitioners/teachers. The validation test results of teaching materials are presented in the following table.

TABLE 1
TEST RESULTS OF VALIDATION ON VARIOUS ASPECTS

No	Aspects of Assessment	Average Score
1.	Content compatibility with learning outcomes	83
2.	Accuracy of material content	84
3.	The emergence of technological aspects in teaching materials	88
4.	Supporting content of teaching materials	84
5.	Presentation equipment	100
6.	Conclusion of presentation	79
7.	Sentence and paragraph accuracy	100
8.	The accuracy of language rules	92
9.	Message readability	85
10.	Cover design	100
11.	Image illustration	100
12.	Typography	100

Based on the various validation aspects carried out by the three validators, the average percentage of assessment results is 91.25. By seeing this average percentage, it can be concluded that the product is feasible to be implemented without revision. However, there are still minor suggestions from the validators in the form of (1) improving the level of difficulty of the listening material, (2) improving the clarity of the instructions for working on the questions, and (3) improving the order in which the questions are presented. Nevertheless, suggestions from the validators are used to improve the product, so the developed product is genuinely feasible to be widely implemented.

DISCUSSION

The development of teaching materials is something that is very much needed in supporting the success of learning. In this regard, Tomlinson (1998) states that teaching materials are anything that can be used to help students achieve learning goals. Furthermore, Tomlinson's view is reinforced by Suyitno (2007:65), who states that learning materials, especially in BIPA learning, are essential tools used to teach BIPA students, which are directly used as learning materials to achieve predetermined learning goals. Based on these views, it can be seen that teaching materials are needed by students to achieve their learning goals.

The teaching materials developed in this study have been validated and tested. The validation results show that the teaching materials are very feasible to be implemented, while the test results show that the teaching materials are feasible to be implemented with a few revisions. These two findings have something in common; they both conclude that the teaching materials developed in this study are feasible to be implemented. Moreover, up to this point, there have been no teaching materials specifically prepared for the implementation of BIPA learning for academic purposes, especially BIPA learning for academic purposes for Chinese learners and integrated technology.

BIPA students with academic goals from China have different characteristics from BIPA students from other regions. The differences can be seen in their ability to pronounce Indonesian sounds, which are influenced by their first language (Mandarin). These BIPA learners from China tend to be unable to pronounce the sound /r/ and have difficulty distinguishing the sounds /p/ with /b/, /k/ with /g/, /t/ with /d/, and /c/ with /j/. This disability makes it difficult for students to understand Indonesian words and sentences. Therefore, the development of these teaching materials that are adapted to the characters of the learners can make it easier for Chinese students to learn Indonesian.

Moreover, BIPA students with academic goals from China also have difficulty with verbal communication in Indonesian, especially communication for academic purposes. Most of the BIPA students from China who came to Indonesia have a beginner level of Indonesian language. Most of them cannot speak Indonesian at all. However, in the second semester of their learning program, they must conduct field experience lectures in the form of teaching Mandarin activities for Indonesian language learners. Therefore, like it or not, they must be able to master spoken Indonesian for academic purposes, so the teaching materials developed are prepared by considering the needs of these learners.

CONCLUSION

Based on the product development and analysis results, it can be concluded into four points. First, the development of product teaching materials found that the product developed was feasible to be implemented. Second, the integration of Augmented Reality in teaching materials makes it easier for students to understand because Augmented Reality can bring a learning atmosphere as if it were in an authentic context. Third, the Augmented Reality integrated teaching materials that are developed can increase the independence of BIPA students for academic purposes. Fourth, Augmented Reality developed is exciting for students because Augmented Reality is developed based on android, and students are very familiar with using android in their daily lives.

ACKNOWLEDGEMENTS

This research was funded by the Non-Tax Revenue Grant (PNBP). The researchers send appreciation to the research assistants for their great efforts in helping this project. The researchers are also grateful to the families, students, school staff, and colleagues for their participation and support in helping and assisting this research.

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