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## Web-Based Design of BIPA Placement Test Instrument for Foreign Speakers

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**Abstract.** This study aimed to develop a web-based Indonesian-language placement test instrument for foreign speakers, commonly called BIPA (*Bahasa Indonesia bagi Penutur Asing*). The research method involved design-based research (DBR) with test instrument development procedures developed by the Association of Language Testers in Europe. The results show that 89% of respondents strongly agreed that the development of a BIPA placement test instrument was very much needed in BIPA learning. To triangulate the data from the interviews and questionnaire, a bibliometric analysis was performed. From the results of the bibliometric analysis, 117 studies were found on foreign-language placement tests in the 2012–2022 range and there was no research on the development of BIPA placement test instruments. The BIPA placement test is designed to measure the level of Indonesian-language skills of foreign speakers, which include listening, reading, writing, and speaking skills. This test can be used by teachers/institutions to determine the level of Indonesian-language skills of foreign speakers, starting from levels A-1, A-2, and B-1. This test is also useful for authorized institutions to provide Indonesian-language certification to foreign speakers who need it. Further research can be done with the development of BIPA test instruments for intermediate and advanced levels.

**Keywords:** *Bahasa Indonesia bagi Penutur Asing*; BIPA; Indonesian for foreign speakers; placement test

### 1. Introduction

BIPA is the acronym for *Bahasa Indonesia bagi Penutur Asing* or Indonesian language for foreign speakers, a course implemented in almost all universities and language institutions throughout Indonesia. Similar to other foreign-language

courses, BIPA prepares foreigners (learners) to be able to communicate in the Indonesian language (Muliastuni, 2016). The increasing interest in BIPA by students is an opportunity to deploy Indonesian as an international language (Muliastuti, 2017; Oktriono, 2019; Subali, 2015). BIPA is increasingly in demand due to the needs of foreigners to communicate in Indonesian for different purposes, such as for academic, work, and medical purposes (Defina & Sundari, 2016; Lopez, 2019; Muliastuni, 2016).

Since learners come from various countries, there is a range of language placement tests based on their first language, level of previous Indonesian-language proficiency, age, and socio-cultural background (Muliastuni, 2016; Subali, 2015). BIPA learners are divided into three levels according to the level of competencies, namely basic or beginner, intermediate, and advanced. These categories are based on Common European Framework of Reference for Languages (CEFR) standards, which start with the beginner user level (A), which is divided into basic beginner (A1) and advanced beginner (A2). The next level is the intermediate level (B), which is divided into basic intermediate (B1) and advanced intermediate (B2). The last level is the fluent or superior level, which is divided into proficient (C1) and mastery (C2) (Council of Europe, 2020).

The classification of the level of BIPA learners is based on the learner's level of acquisition of the Indonesian language, which determines whether they belong to the basic, intermediate, or advanced level (Muliastuni, 2016). Differences in the level of language skills of BIPA learners will have an implication on the selection of teaching materials, methods, evaluations, and other learning tools. This proves that it is crucial to carry out a placement test before a learning process begins, because foreign students need an instrument to measure their own Indonesian-language proficiency (Kusmiatun, 2019; Rahmawati et al., 2019a). The result of the placement test will provide teachers with information to create lesson plans and assessments that meet learners' needs (Umam, 2017).

However, a problem arises, as there is no known standardized test that can accurately measure the level of Indonesian-language skills for foreign students. One of the standardized tests available to the public is UKBI (*Uji Kemahiran Bahasa Indonesia*). However, results of interviews with coordinators from 10 BIPA institutions in Indonesia indicate that UKBI was not used as a test to measure the Indonesian-language skills of foreign speakers in tertiary institutions. These institutions include Universitas Indonesia, Universitas UIN Jakarta, Universitas Atmajaya, and other BIPA institutions, such as Puri Bahasa and BIPA Bloombank. UKBI needs to be developed as a placement test for foreign speakers to suit their needs. The lack of implementation of UKBI for foreign speakers is because all UKBI classification is designed for the native speaker (Kusmiatun, 2019; Mukti et al., 2017; Rahman et al., 2019). Compared to other countries, some countries distinguish between language tests for native speakers and language tests for foreign speakers.

This condition shows the urgency to develop a more sophisticated BIPA language placement test. Interviews with participants revealed that many BIPA institutions

require a standardized BIPA placement test. At present, there is no standardized form of Indonesian-language placement test that can be used by various BIPA institutions to measure learners' level of competencies. Some institutions have been trying to develop their own placement test, which creates a new problem, where there is no uniformity in the interpretation of test results between different institutions. The gap in this regard may prevent students to transfer their grades from one institution to another. As such, BIPA learners must take a new placement test whenever they want to enroll in a different institution (Pratiwi, 2019). A placement test, in this case, is used to determine students' classification in the Indonesian language. Students who have the same assessment results will be placed in the same learning group (Rahmawati & Gajewski, 2018). Therefore, it is necessary to evaluate students at the beginning of the course, hence the placement test (Kusmiatun, 2018).

Several countries have developed a foreign-language placement test to determine the level of language proficiency for foreign speakers. Examples are Japan with the Japanese Computerized Adaptive Test (J-CAT) and Japanese-Language Proficiency Test (JLPT), England and Australia with the Timed Yes/No (TYN) test, Thailand with the Test of English for Thai Engineers and Technologists (TETET), and Türkiye through the Turkish and Foreign Languages Research and Application Center (TÖMER) (Darasawang & Reinders, 2021; Fan & Jin, 2020; Hatasa & Watanabe, 2017; Karagöl, 2020; Roche & Harrington, 2018). Indonesia, on the other hand, has developed the UKBI tests for foreign-language speakers. The prototype of this test consisted of reading and comprehension tests that were developed by the Language Development and Fostering Agency based on the competency standards for BIPA graduates (Oktriono, 2019; Prasetyo, 2019; Rahmawati, 2019a). The four prototypes of the test are not intended to be used as BIPA placement tests.

In developing foreign-language test instruments, several approaches and terms of reference were found, such as that by the American Council on the Teaching of Foreign Languages (ACTFL) and the CEFR (Karagöl, 2020; Tremblay, 2011). The CEFR is the most widely used frame of reference for reference to language tests, curricula, and national education standards for foreign-language proficiency levels in Europe (Padilla et al., 2013). The CEFR was used in the development of the Test of English as a Foreign Language (TOEFL) in Germany and Switzerland; development of the Test of English as a Foreign Language internet-Based Test (TOEFL iBT); university entrance tests in Europe; and the Test of Proficiency-Huayu in China (Chang, 2017; Deygers et al., 2018; Fleckenstein et al., 2020; Wisniewski, 2017).

The test placement model developed in this study is a web-based test. Web-based tests, often called web-based testing (WBT), are computer-based tests done over the World Wide Web, usually using a standard web browser. Research has shown that web-based test takers have performed better than traditional group test takers (Marczak et al., 2016; Soleimani et al., 2012). The current study was conducted with the title of *Web-based design of BIPA placement test instrument for foreign speakers* to answer the following research questions:

1. What is needed for the development of foreign-language placement test research?
2. How can a BIPA placement test instrument be developed that can measure the language proficiency level of foreign students in terms of listening, reading, writing, and speaking?
3. How can a web-based BIPA placement test be designed?

To sum up, this research aimed to describe the need to develop a test instrument for BIPA placement, to develop the test itself, and to design the web-based BIPA placement test.

## 2. Literature Review

### 2.1 Foreign Learners' Language Proficiency

BIPA is the abbreviation for *Bahasa Indonesia bagi Penutur Asing*, which loosely translates to Indonesian language for the non-Indonesian-speaking person. Similar to other foreign-language learning courses, BIPA learning is influenced by the role of individual linguistic knowledge (L1); the Indonesian-language processing (L2); the learner's L2 profile, such as age; the length of staying in the region where L2 is used; and L2-language proficiency (ALTE, 2011). The learners are students who already have a first language (L1) and have a non-Indonesian cultural background. In addition, the learning objectives of BIPA learners are varied among learners. According to the level of competencies, BIPA learners are divided into basic or beginner, intermediate, and advanced levels. This system of levels is similar to that of the CEFR. CEFR levels start from the beginner user (A), which is then divided into basic beginner (A1) and advanced beginner (A2); intermediate level (B), which consists of basic intermediate (B1) and advanced intermediate (B2); and fluent or superior, which is divided into proficient (C1) and mastery (C2) (Council of Europe, 2020).

Based on *Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 27-year 2017* concerning competency standards for BIPA graduates, the BIPA student levels are divided into BIPA 1 through BIPA 7 (Kemendikbud, 2017). At BIPA 1, students are able to understand and use expressions in the context of self-introduction and fulfillment of daily and routine concrete needs in simple ways to communicate with a very cooperative speech partner. At BIPA 2, students are able to express feelings in a simple way, describe the surrounding environment, and communicate daily and routine needs. At BIPA 3, students are able to express their experiences, hopes, goals, and plans briefly and coherently accompanied by reasons in the context of daily life and work tasks (Kemendikbud, 2017).

There are four different factors that influence how foreign target-language learners (L2) learn language skills differently than native speakers (L1). First, the writing skills of foreign students are influenced by several factors, such as their mastery of the target language; the context; the availability of reading resources; and cognitive processes (Choi & Deane, 2021). Hughes (2003) explained that the ability to write requires creativity, imagination, and the ability to write scripts. The success of the writing test is also determined by the ability to describe ideas

and thoughts, and the ability to construct a series of arguments on a given topic (Hughes, 2003). Referring to the CEFR, basic writing skills cover the ability to provide information about personal things (e.g., likes and dislikes, family, pets); use simple words/signs and basic expressions; and produce isolated simple phrases and sentences (Council of Europe, 2020).

The second factor is the reading skills of foreign learners. Evaluated by the readers, the difference between L1 and L2 reading skills is influenced by both L1 and L2 reading skills, the student's cultural skills, reading strategies, memory, attention, motivation, age, and education (Godev et al., 2002). Barrett (in Nurbaya, 2019) compiled the classification of reading competence into four stages, namely literal comprehension, inferential understanding, evaluation, and appreciation (Nurbaya, 2019). Referring to the hierarchy of CEFR-based reading competencies, the basic-level reading skills cover the ability to understand very short and simple texts or single phrases at a time, picking up familiar names, words, and phrases (Council of Europe, 2020).

The third factor is the foreign-language learners' listening skills. Learning listening skills involves a process by which listeners are able to decode sounds, understand their linguistic implications, and interpret information gathered based on their sociocultural background (Castillo et al., 2017). In the classroom and in language testing, listening is supported by dividing the types of listening tests to find the topic (main idea), find specific details, and make inferences about the message (Brown, 2017). L2 listening ability is influenced by cognitive and physiological processes and attention to contextual and social conditions (Rost, 2011; Vandergrift & Baker, 2015). In detail, the CEFR has defined basic-level listening skills as the ability to follow language very slowly with long pauses to assimilate meaning as well as the ability to recognize concrete information about familiar topics (Council of Europe, 2020).

The last or fourth factor is the foreign-language learners' speaking skills. The speaking skills of foreign students (L2) are influenced by several components: (1) familiarity with accents, (2) familiarity with the topic of conversation, (3) cultural expectations, (4) attitude and motivation, and (5) the listener's linguistic awareness (Kang & Kermad, 2017). According to Grabe (2017), the assessment components of the speaking test are grouped into three parts: the aspects of linguistic knowledge, core speaking skills, and communication strategies. Concurrently, the basic-level speaking ability is the ability to produce simple phrases, especially isolated ones, about people and places (Council of Europe, 2020).

## **2.2 Placement Test for Foreign Speakers**

A placement test is a test that is administered intentionally to provide information and place students at the level of a learning program that best suits their abilities (Hughes, 2003). Foreign-language placement tests usually measure reading comprehension, vocabulary, grammar, listening, and in some cases, cultural knowledge (Brantmeier, 2006).

Several countries have developed foreign-language placement tests to determine the level of language ability for foreign speakers, such as Japan with the J-CAT and JLPT (Hatasa & Watanabe, 2017). The United Kingdom and Australia use the TYN as a placement test for English as a foreign language (Roche & Harrington, 2018). China has also developed its own placement test for English as a foreign language in their respective universities (Fan & Jin, 2020). Furthermore, Thailand developed an English placement test for students majoring in technology at King Mongkut's University of Technology Thonburi, Bangkok, Thailand, called TETET (Darasawang & Reinders, 2021). In Türkiye, TÖMER developed a Turkish-language placement test for foreign speakers (Karagöl, 2020).

Some foreign-language placement tests include listening, reading, writing, speaking, and grammar skills tests. TETET consists of four skills: reading, writing, listening, and speaking (Darasawang & Reinders, 2021). The Turkish-language placement test for foreign speakers developed by TÖMER consists of a listening ability test, a reading ability test, a writing ability test, and a grammar test. The Turkish as a foreign-language placement test does not use a speaking proficiency test. Placement tests can be in the form of open-ended, fill-in-the-gap, multiple-choice, true/false, matching, and yes/no questions (Karagöl, 2020).

### **2.3 Common European Framework of Reference for Languages**

The CEFR was established by the Council of Europe and Language Education in the 1970s and 1980s. It was developed based on an action-based and communicative approach, which was then published in the publication *The threshold level* in the mid-1970s as a language requirement specification. The CEFR's terms of reference can facilitate transparency of curriculum, teaching, and assessment among institutions, education sectors, regions, and countries (Council of Europe, 2020). Specifically, the CEFR aims to provide the basics of syllabus elaboration, curriculum guidelines, evaluations, and textbooks. The CEFR comprehensively describes how language learners can learn a language so that they can use the language to communicate and acquire knowledge and language skills effectively.

The CEFR works not only to determine the level of language proficiency but also to set a language proficiency requirement for higher education entrance, visas, migration purposes, and professional certification. Referring to the language assessment, a large number of commercial and non-profit organizations and educational institutions use reports of language test results based on CEFR levels, such as Cambridge English qualifications, TOEFL iBT, IELTS, and language-school exams in Austria and Slovenia (Brunfaut & Harding, 2020). The CEFR is considered to be a frame of reference in determining a person's language proficiency. In a study in Norway, Carlsen (2018) explained how the CEFR scale can distinguish foreign students' language proficiency levels and their correlation with learning outcomes at Norwegian universities. The CEFR shows its importance in foreign language and L2 education, especially in Europe and outside Europe. The CEFR is considered to be able to provide a rich description of learning and using language. It includes a scale that defines what L2 language learners can do at different stages (levels) of proficiency. This grading can also be

taken as a general description of the developmental stages of L2 (Khushik & Huhta, 2020).

The CEFR framework indicates the level of learners' language proficiency and measures the progress at each stage of language learning (Council of Europe, 2020). Level A1 (breakthrough) is the lowest level of generative language use. At this level, students can interact in a simple way, asking and answering simple questions about themselves, where they live, people they know, and things they have, responding to simple statements in an area of relevance or about a topic that is relevant to them. Level A2 (waystage) reflects the level of social functioning where students can use simple everyday forms of greeting and polite greetings; greet people, ask how they reacted to the news; and handle very short social exchanges. In addition, students can ask and answer questions about what they do at work and in their free time; create and respond to invitations; discuss what to do, where to go, and make arrangements to meet; and make and accept offers. The B1 (threshold) level reflects the specifications of visitors to a foreign country and is probably best categorized by two features. The first feature is the ability to maintain interaction and convey what is desired in a variety of contexts. The second feature is the ability to deal with problems flexibly in everyday life. The development of a CEFR-based test instrument is an activity to align the test with the CEFR, which begins with adapting the CEFR into the context of a test (Council of Europe, 2020).

#### **2.4 Web-Based Test**

The computer-based test is connected to the internet, which allows the test to be carried out anytime and anywhere. There are several examples of computer-based testing tools connected to the internet, such as Hot Potatoes, Moodle, and WebCT. WebCT is an integrated testing system available for many types of assessments. The tools for creating tests on WebCT can be in the form of filling in the blanks, random sentences, matching, multiple choice, writing paragraphs, and short and true/false answers (Douglas, 2014). For language tests, reading and listening tests can be assessed easily with some of these exam models. However, the speaking test requires special expertise because in assessing speaking ability it is necessary to assess the abilities of the segmental and suprasegmental elements.

For the speaking test, the web-based test has been developed in several countries. In Taiwan, the MyET instrument was developed as an assessment of English-speaking ability for Taiwanese students. This instrument can distinguish students' speaking abilities at the initial and intermediate levels (Pi-Hua, 2006). MyET uses CAPT software that uses an automatic speech analysis system (ASAS). The listening skills test has been developed by DIALANG in Europe. Regarding the development of web-based writing tests, the internet-based TOEFL (ETS) (iBT) has been developed. Thus, the web-based language test development model can adapt the MyET model for the speaking test and the DIALANG test developed in Europe for reading, listening, and writing tests.

### 3. Methods

#### 3.1 Research Method

As research method, this study used design-based research (DBR) by following the test instrument development procedures developed by the Association of Language Testers in Europe, as depicted in Figure 1 and subsequently described.

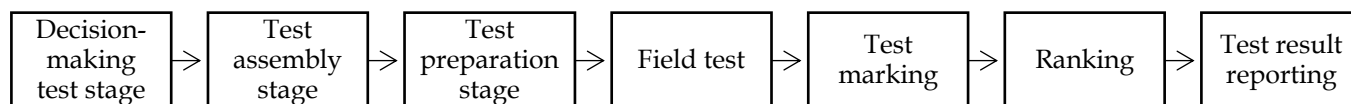


Figure 1: Test instrument development procedure (ALTE, 2011)

This study included three stages, namely the decision-making test stage, the test assembly stage, and the test preparation stage. The four other stages will be the topic of further research based on this research. The three stages of this research were carried out from September 2021 to October 2022. The first stage is the decision stage to make the test, which was carried out using interviews and bibliometric analysis. Interviews were conducted with 10 coordinators of BIPA institutions in Indonesia from September to December 2021. Participants were asked 10 questions related to the urgency of developing the BIPA placement test instrument. The bibliometric analysis involved 864 studies on placement tests from 2012 to 2022. The second stage is the test assembly stage, which included the stage of developing and validating the BIPA placement test instrument. The BIPA placement test instrument was developed through an analysis of the contents of the CEFR framework of reference, the Republic of Indonesia's BIPA graduate competency standards, and a synthesis of various theoretical constructs. The results of the BIPA placement test instrument were validated by five BIPA experts from the University of Indonesia, Muhammadiyah University of Malang, APBIPA Bali, Malang State University, and Yogyakarta State University, respectively. Finally, the validated instrument results were developed into web-based BIPA placement test items. This test will determine the level of foreign-language competence of learners at levels A-1, A-2, and B-1.

#### 3.2 Data Collection Techniques

The first stage, that is, the decision stage to make a test, was carried out through interviews with 10 BIPA-institution coordinators and bibliometric analysis. Bibliometric analysis is a quantitative method for assessing development trends or future research orientations using author keywords, title keywords, and plus keywords. The second stage is the test assembly stage, where the BIPA placement test instrument was developed. The technique used at this stage was the content analysis technique by analyzing the CEFR framework of reference, BIPA graduate competency standards, and the synthesis of different theoretical constructs. Table 1 shows the procedures to develop the BIPA placement test instrument.



**Table 1: Development of BIPA placement test instrument**

CEFR framework of reference	BIPA graduate competency standards	Synthesis of different theoretical constructs	BIPA placement test instrument
Listening skills levels A-1, A-2, and B-1	Listening skills for BIPA 1, BIPA 2, and BIPA 3	Listening skills for foreign speakers	Competency standards for listening skills levels A-1, A-2, and B-1
Reading skills levels A-1, A-2, and B-1	Reading skills for BIPA 1, BIPA 2, and BIPA 3	Reading skills for foreign speakers	Competency standards for reading skills levels A-1, A-2, and B-1
Writing skills levels A-1, A-2, and B-1	Writing skills for BIPA 1, BIPA 2, and BIPA 3	Writing skills for foreign speakers	Competency standards for writing skills levels A-1, A-2, and B-1
Speaking skills levels A-1, A-2, and B-1	Speaking skills for BIPA 1, BIPA 2, and BIPA 3	Speaking skills for foreign speakers	Competency standards for speaking skills levels A-1, A-2, and B-1

The BIPA placement test instrument that was developed was subsequently subjected to expert testing through questionnaires and interviews.

### 3.3 Data Analysis Technique

Data analysis was conducted at the second stage of this research. The developed BIPA placement test instrument was subjected through expert assessment. The results of the expert assessment were analyzed by a content validation test using the content validity ratio (CVR) test with the following calculation:

$$CVR = \frac{n_e - (N/2)}{N/2}$$

CVR stands for content validity ratio, and  $n_e$  is the number of panel members that shows the importance of the item, while  $N$  is the number of the panel member. The CVR coefficient indicates the validity or invalidity of an item used as a test preparation. CVR values range between -1.00 and +1.00. Determination of the CVR coefficient refers to the CVR critical table, where an item is said to be valid if the CVR result = 1 for five experts (Ayre & Scally, 2014). If  $CVR > 0.00$ , it means that more than 50% of the experts agreed that the item is essential. The greater the CVR value of 0, the more essential and the higher the validity of the content. Items that are declared valid are developed into test items on the web-based BIPA placement test.

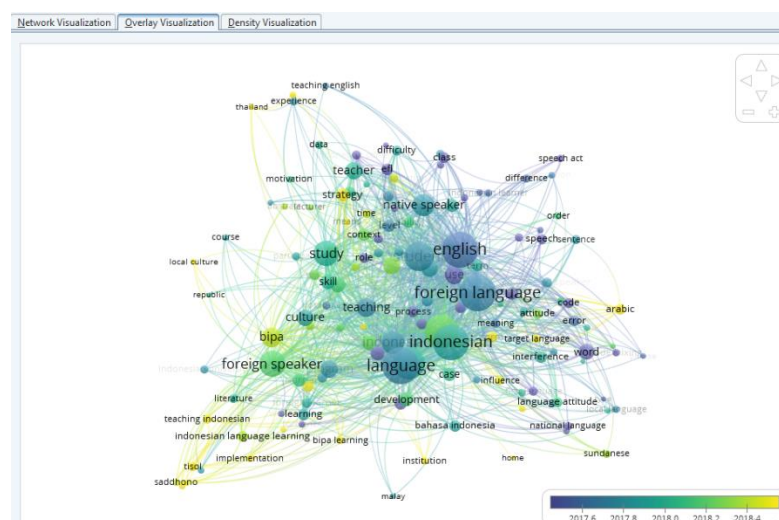
## 4. Results and Discussion

### 4.1 Needs Analysis for Web-Based BIPA Placement Test Development

Several previous studies have explained that foreign students need a measuring tool to measure their Indonesian-language skills (Kusmiatun, 2019; Rahmawati et al., 2019b). This study is in line with this finding. Interviews and bibliometric analysis were carried out to understand the need for developing a web-based BIPA placement test. The results of the questionnaire with 10 BIPA coordinators in Indonesia reveal that 89% of participants strongly agreed and 11% agreed that the development of a BIPA placement test instrument is crucially needed in BIPA

learning. As per the results, the urgency of developing the BIPA placement test was due to the unavailability of a standardized test that could measure the level of Indonesian-language ability of foreign speakers. The BIPA placement tests used so far by BIPA institutions were compiled by the institutions themselves and have not been validated. Institutions do not use UKBI, with participants considering that UKBI is a test for native speakers and is not suitable for foreign speakers. So far, there is no known existing test that complies with an international standard that can measure the level of Indonesian-language ability of foreign speakers.

To triangulate the results from interviews, a bibliometric analysis was carried out to determine the trends in the development of BIPA placement test research. First, a VOSviewer analysis was performed, with the results presented in Figure 2.



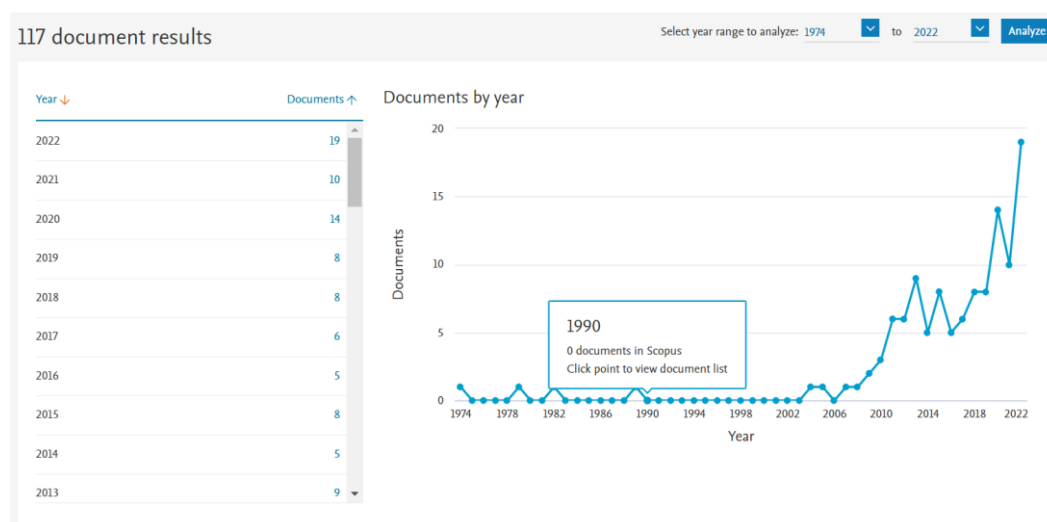
**Figure 2: VOSviewer analysis results**

VOSviewer is a software tool used for constructing and visualizing bibliometric networks. The image above from the VOSviewer analysis explains that research with the keyword “foreign language placement test” is still rarely carried out. The keyword “BIPA” is used even less frequently. Research on BIPA includes new research based on the results of the VOSviewer analysis. This means that the BIPA topic is a topic that is still new in the scope of research.

The bibliometric analysis was based on the Scopus database. Based on a search with the keyword “placement test”, 864 studies were found on placement tests from 2012 to 2022. However, when the analysis was narrowed down to the keyword “foreign language placement test”, 117 studies were found in the 2012 to 2022 range on foreign-language placement tests, consisting of 113 articles and 4 conference papers. The data show that there are still not many studies that examine foreign-language placement tests.

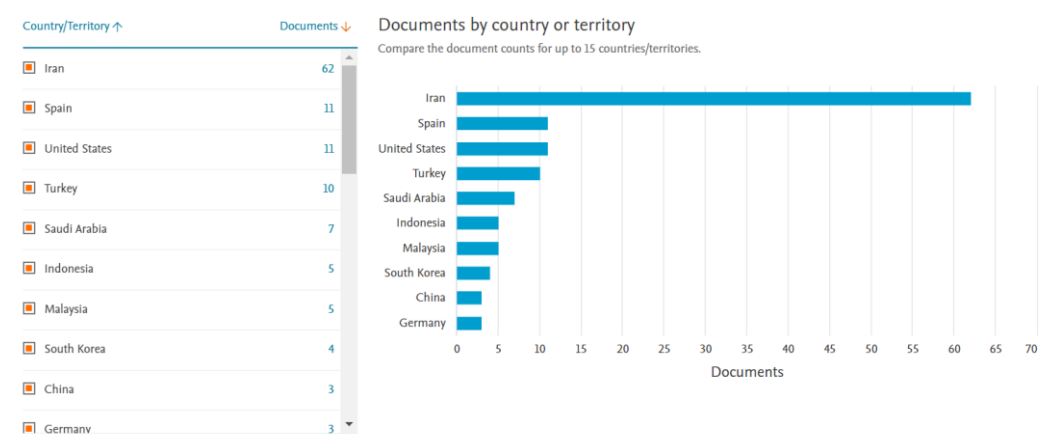
The analysis continued with the trend analysis of the development of foreign-language placement tests from 2012 to 2022. The results of this bibliometric analysis explain that the development trend of research on foreign-language placement tests has increased from 2019 to 2022, as shown in Figure 3. Results

show that there were 19 studies on foreign-language placement tests in 2022, 10 studies in 2021, 14 studies in 2020, and 8 studies in 2019.



**Figure 3: Development trend of foreign-language placement test research from 2019 to 2022**

To determine the research trends on foreign-language placement tests in Indonesia, a bibliometric analysis was conducted by region. The research findings are displayed in Figure 4.



**Figure 4: Development trend of foreign-language placement test research by region**

The results of this bibliometric analysis strengthen the research basis that the BIPA placement test needs to be developed. The results reveal that there were only five studies on foreign-language placement tests in Indonesia. These five studies examine case studies and the development of English placement tests for Indonesian students. The data explain that there is no research on the development of the BIPA placement test in Indonesia.

In Indonesia, several studies have developed a BIPA test prototype, but no research has developed a BIPA placement test. Examples of BIPA tests that have

been developed include the web-based UKBI test for foreigners, namely the test adapted from the UKBI test administered by the Ministry of Education, Culture, Research and Technology, Republic of Indonesia (Oktriono, 2019); prototype of an Indonesian reading test for foreign students (Rahmawati et al., 2018); reading comprehension test for foreign speakers (Prasetyo, 2019); and a BIPA competency test based on a communicative approach (Rahmawati, 2019). Therein lies the novelty of this research.

#### 4.2 Development of a Web-Based BIPA Placement Test Instrument

Based on the needs analysis, it can be concluded that it is necessary to develop a BIPA placement test for foreign-language students of the Indonesian language. The instrument will categorize the BIPA students into levels A-1, A-2, and B-1. Decisions on levels A-1, A-2, and B-1 are determined by the test taker's ability to answer BIPA placement test questions based on the test instrument developed. Similar to several other countries, the frame of reference used in the development of this BIPA placement test instrument is the CEFR reference framework. The CEFR is thought to be capable of distinguishing foreign students' level of language proficiency and correlating learning outcomes in tertiary institutions (Carlsen, 2018). The difference lies in the test instruments in this study, which were not only developed with the CEFR but also based on an analysis of the CEFR, BIPA graduate competency standards, and theoretical constructs. Experts have also validated the BIPA placement test instrument that was developed. The development of the BIPA test instrument on the web passed expert validation, with the results displayed in Tables 2 to 4 for levels A-1, A-2, and B1, respectively.

**Table 2: Instrument validation results level A-1**

	Test	Competency standard (CS)	Ne	N	CVR	Result
Level A-1	Listening	CS1	5	5	1	Valid
		CS2	4	5	0.6	Invalid
		CS3	5	5	1	Valid
		CS4	5	5	1	Valid
	Speaking	CS1	5	5	1	Valid
		CS2	5	5	1	Valid
	Reading	CS1	5	5	1	Valid
		CS2	5	5	1	Valid
		CS3	3	5	0.2	Invalid
	Writing	CS1	5	5	1	Valid
		CS2	5	5	1	Valid
		CS3	5	5	1	Valid
CS4		5	5	1	Valid	

**Table 3: Instrument validation results level A-2**

	Test	Competency standards (CS)	Ne	N	CVR	Result
Level A-2	Listening	CS1	5	5	1	Valid
		CS2	4	5	0.6	Invalid
		CS3	5	5	1	Valid

	Speaking	CS1	5	5	1	Valid
		CS2	5	5	1	Valid
		CS3	5	5	1	Valid
		CS4	5	5	1	Valid
	Reading	CS1	3	5	0.2	Invalid
		CS2	5	5	1	Valid
		CS3	5	5	1	Valid
		CS4	5	5	1	Valid
	Writing	CS1	5	5	1	Valid
		CS2	5	5	1	Valid

**Table 4: Instrument validation results level B-1**

	Test	Competency standards (CS)	Ne	N	CVR	Result
Level B-1	Listening	CS1	5	5	1	Valid
		CS2	4	5	0.6	Invalid
	Speaking	CS1	5	5	1	Valid
		CS2	5	5	1	Valid
		CS3	5	5	1	Valid
	Reading	CS1	5	5	1	Valid
		CS2	5	5	1	Valid
		CS3	5	5	1	Valid
		CS4	5	5	1	Valid
	Writing	CS1	5	5	1	Valid
		CS2	4	5	0.6	Invalid
		CS3	5	5	1	Valid

Determination of the CVR coefficient refers to the critical CVR table, where an item is said to be valid if the CVR result = 1 for five experts. The item is said to be invalid when the CVR coefficient < 1. The item is also considered invalid when the competency standards prepared are deemed unable to assess Indonesian-language proficiency at a certain level; and the language/readability used in the preparation of the test instrument is considered not straightforward, unclear, and inappropriate.

Instruments that were considered valid were developed into BIPA placement test questions. The following is an explanation of the BIPA levels A-1, A-2, and B-1 placement test instruments for the listening test, reading test, writing test, and speaking test. The BIPA placement test has three levels, namely A-1, A-2, and B-1 placement tests for the listening, reading, writing, and speaking tests.

The reading skills test measures the score obtained from the ability to identify words/phrases in the reading text, the ability to find information in the reading text, the ability to identify main ideas in the reading test, the ability to understand the reading text, and the ability to conclude the reading text. The following is a BIPA reading ability test instrument for beginner level.

Test takers are at level A1 (breakthrough) if they can:

- CS1 : Identify words/phrases related to personal information, directions, location, and surroundings
- CS2 : Find information in advertisements/posters/leaflets/flyers/announcements

Test takers are at level A-2 if they can:

- CS2 : Find the main idea of the exposition text in magazines and news texts
- CS3 : Identify specific information in manuals, telephone books, letters, brochures, short stories, advertisements, and messages
- CS4 : Conclude the contents of the descriptive text

Test takers are at level B-1 if they can:

- CS1 : Understand narrative texts that relate to common things found while working, studying, and relaxing
- CS2 : Understand descriptive text in personal letters, emails, or social media posts
- CS3 : Understand explanatory texts related to work in magazines, letters, brochures, or the web
- CS4 : Understand argumentative text in articles or report quotes

The speaking skills test measures the score obtained from the ability to express words, phrases, and sentences in speech and the ability to express information accompanied by reasons/explanations by paying attention to pronunciation, grammar, vocabulary, fluency, understanding, coherence, and cohesion. The following is a BIPA speaking skills test instrument for beginner level.

Test takers are at level A-1 if they can:

- CS1 : Express words, phrases, and expressions related to personal information and other people (name, address, occupation, country of origin, favorite objects and colors, and family)
- CS2 : Express direction, location, surroundings, and daily activities

Test takers are at level A-2 if they can:

- CS1 : Describe feelings, objects, places, experiences, work, and events
- CS2 : Express feelings and opinions about personal matters
- CS3 : Use words, phrases, and sentences in describing, expressing, and explaining something
- CS4 : Explain information and brief instructions related to daily activities

Test takers are at level B-1 if they can:

- CS1 : Convey information and announcements about daily events in tourist attractions/public places
- CS2 : Tell narrative stories
- CS3 : Express feelings about experiences/events/hopes/aspirations with reasons

The listening skills test measures the score obtained from the ability to: identify words/phrases in the reading material, find information in the reading material, find the main topic/idea in the reading material, conclude the reading material, and interpret the expressions in the reading material. The following is a BIPA listening ability test instrument for beginner level.

Test takers are at level A-1 if they can:

- CS1 : Identify words and phrases that are conveyed clearly and slowly in a context that is familiar with everyday life
- CS3 : Summarize the results of the study in the context of introductions, announcements, and buying and selling
- CS4 : Interpret expressions and adverbs in the context of introductions, announcements, and buying and selling

Test takers are at level A-2 if they can:

- CS1 : Find the main topic/idea in spoken texts in the form of instructions, announcements, TV news, interviews
- CS3 : Identify information in instructions, announcements, hints, and conversations

Test takers are at level B-1 if they can:

- CS1 : Find the main idea in radio programs, speeches, and short narratives

The writing skills test measures the score obtained from the ability to use words, phrases, and sentences in writing descriptive texts, expositions, narratives, persuasions, and arguments by paying attention to content, how to organize content, use of grammatical forms and syntactic patterns, power, and mechanics. The following is a BIPA writing ability test instrument for beginner level.

Test takers are at level A-1 if they can:

- CS1 : Fill out forms related to personal information: name, address, occupation, country of origin, family, and other
- CS2 : Use words and phrases related to things that are personally relevant, directions, locations, and the surrounding environment in descriptive texts
- CS3 : Make simple sentences related to personal matters, directions, locations, and surroundings in the descriptive text
- CS4 : Write short and simple descriptive texts about things that are relevant to the person, direction, location, and environment in the descriptive text

Test takers are at level A-2 if they can:

- CS1 : Use appropriate words, phrases, and expressions in writing descriptive texts about personal information
- CS2 : Write descriptive text related to personal biodata, circumstances, and events

Test takers are at level B-1 if they can:

- CS1 : Write descriptive texts related to work, school, and leisure time
- CS3 : Write explanatory texts about daily facts and information

This BIPA placement test instrument can be developed into instrument items for BIPA placement tests. Some foreign-language placement tests in different countries cover listening, reading, writing, speaking, and grammar skills, while the BIPA placement test in this study integrated the grammar test into the other four language skills tests.

#### 4.3 Design of the Web-Based BIPA Placement Test

The BIPA placement test items were developed using the web. Web-based tests have many advantages. This includes the flexibility of test implementation, the effectiveness and efficiency of time, the effectiveness of assessing test results, as well as the accountability and transparency of test results. The BIPA placement test instrument was developed on a web basis, as shown in Figures 5 and 6.



Figure 5: Front page of the developed web-based BIPA test

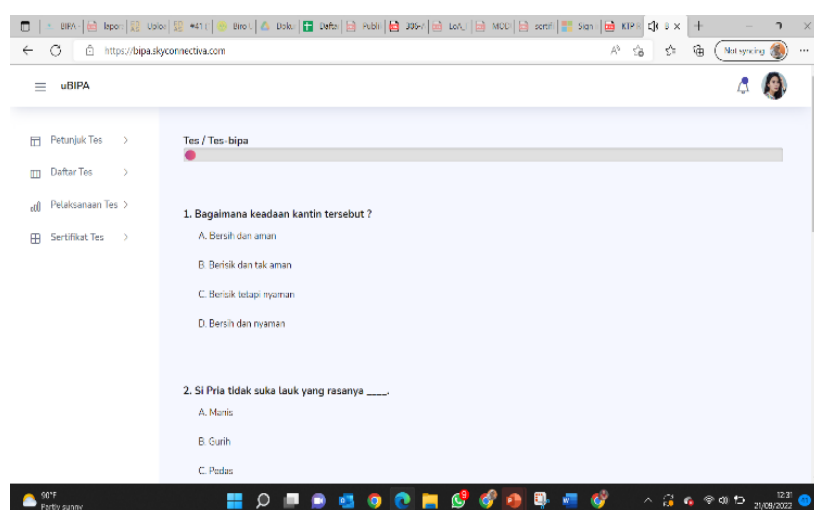
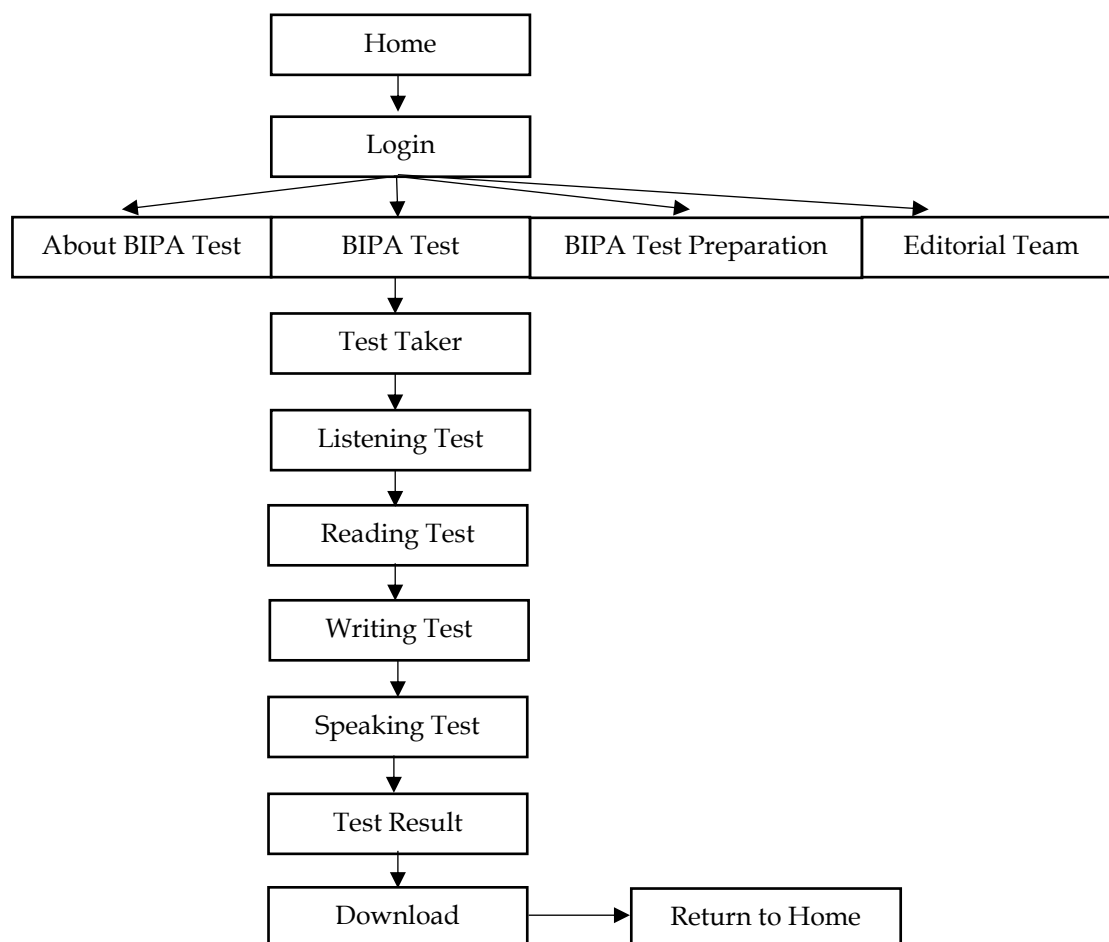


Figure 6: BIPA placement test page



The web-based BIPA placement test includes a listening test, a reading test, a writing test, and a speaking test for foreign-language speakers. Figure 7 presents a flowchart for the display of the web-based BIPA placement test.



**Figure 7: Flowchart of BIPA placement web test**

The “Home” page contains the logo and login menu and information regarding the test and how to register. Participants will be able to log in if they have registered an account on the webpage. The data needed include the participant’s name, username, password, and email account. Participants can log in if their account has been verified via email. The “About the BIPA Test” page contains the test background, test objectives, test development framework, and test leveling. The “Test Preparation” page contains information regarding what prospective participants need to prepare before taking the BIPA placement test. The “Editor Team” page contains information about the compilers and developers of the test, as well as contacts that participants can contact. The main page is the “BIPA Test” page. On this page, participants are ready to take the BIPA placement test, including the listening, reading, writing, and speaking tests. The results of the BIPA test placement will place test takers at levels A-1, A-2, or B-1.

This web-based BIPA placement test is beneficial for institutions, teachers, students, and policy-makers. For institutions, this test can be used as a basis for

grouping BIPA students based on their level of Indonesian-language ability. For teachers, the results of the web-based BIPA placement test can be used as a basis for selecting teaching materials, teaching methods, and teaching strategies. Teachers can choose learning tools based on the Indonesian-language level of foreign students. For students, the results of the BIPA placement test will be very useful for measuring their Indonesian-language skills so that they are in the right study group. For policy-makers, this test can be used to provide language certification to foreign speakers who need it.

## 5. Conclusion

The urgency of developing a BIPA (Indonesian language for foreign speakers) placement test instrument was due to the absence of a standardized test that can measure the Indonesian-language ability of foreign speakers. The BIPA placement test instrument was developed based on an analysis of the CEFR, the Republic of Indonesia's BIPA graduate competency standards, and a synthesis of various theoretical constructs. This instrument was validated by experts and a content analysis test was carried out with the CVR test. The CVR coefficient indicates whether the items used as test preparation are valid or not. Items that are declared valid are used in preparing the web-based BIPA placement test.

The web-based BIPA placement test contains four language skills tests: a listening test, a reading test, a writing test, and a speaking test. The results of the web-based BIPA placement test will determine the level of Indonesian-language ability of foreign students, that is, whether students are at level A-1, A-2, or B-1. This test can be used by BIPA teachers or institutions to determine classes or groups of BIPA students so that teachers/institutions can choose appropriate learning tools and are in accordance with students' Indonesian-language abilities. Stakeholders can also use this test to provide language certification to foreign speakers who need it.

This research only reached the test design stage. Research can be continued by testing the validity and reliability of the items of the BIPA placement test. In addition, this research was limited to developing a language proficiency test instrument at the beginner level. Research can be continued with the development of the BIPA test instrument for intermediate and advanced levels. Another research recommendation is the development of BIPA teaching materials based on the test instruments developed in this study.

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