UKBI: Experimental development of web-based Indonesian language proficiency test for foreign speakers

K Oktriono
Language Center, Tourism Destination, Faculty of Humanities, Bina Nusantara University, Jl. Kemanggisan Ilir 3, No.45, Kemanggisan, Palmerah, Jakarta Barat, 11480, Indonesia
koktriono@binus.edu

Abstract. The web-based test is one of the tools for testing the learners’ ability and skills of a language. The research emphasized on UKBI-Uji Kemahiran Berbahasa Indonesia (Test of Indonesian Language Proficiency). In this context, testing of foreign language tests such as Bahasa Indonesia increasingly plays a prominent role in Indonesia because every foreign worker is required to qualify certification of Indonesian language proficiency at the standardized level. The requirement complies with Regulation of the President of the Republic of Indonesia No. 20, 2018. This study aims to propose the development of Indonesian language proficiency test for foreign speakers. The initiative of development contributes to foreign learners’ improvement beneficially. In this vein, it measures the ability of test-takers and then hones the language skills according to the description of the test results of the skills. This qualitative research involved 28 foreign students at BINUS University. This research revealed that the program accommodated students’ learning development plan effectively, especially the skills of Indonesian language. In addition, this test will assist the stakeholders such as the Indonesian government, foreign learners, teaching associations of BIPA (Indonesian for Foreign Speaker) and activists, and BIPA teachers in long term eventually.

1. Introduction

As an Austronesian language, the Indonesian language represents the lingua franca for multiethnic in Indonesia. The Indonesian government through its regulation, especially for foreign workers, further strengthens the existence of Indonesian in the millennium era. In this context, it is in accordance with the enactment of the ASEAN Economic Community (AEC) era. AEC symbolizes the interconnection of ASEAN in free trade among ASEAN countries. In this regard, foreign workers also discern job opportunities in Indonesia. According to data from the Ministry of Labor of the Republic of Indonesia, there are about 120,000 foreign workers from China, Japan, Singapore and some European countries working in Indonesia during 2017. The Government of Indonesia issued a Presidential Regulation related to the foreign workforce. Consequently, it is particularly important to note that article 26 paragraph (1) of section c requires each employer to facilitate Indonesian language education and training for foreign workers. On the other hand, the college as a community to educate the next generation also holds an obligation to pay attention to address the issue. In this spectrum, international students studying at the university level in Indonesia should also receive the same attention. The linguistic diplomacy form of the university also plays an important role in strengthening the Indonesian presence in Asia as a lingua franca for the following decades. In line with this, academics need to make breakthroughs and innovations to accelerate the goal. One of them is by providing...
Indonesian-testing tools for foreign speakers. Bina Nusantara University started developing Indonesian Language Proficiency Test for Foreign Speakers. In this sense, web-based testing is one of the important components in the learning process in higher education institutions. The instruments implemented in the test will provide students with more attractive and interactive learning experiences [1]. The notable issue in the modern educational environment emphasized on providing a web-based learning environment with e-testing content that corresponds to learners’ indispensable necessity and preferences [2].

2. Theoretical Background

2.1. UKBI (Uji Kemahiran Berbahasa Indonesia) – Indonesian Language Proficiency Test

UKBI (Indonesian Language Proficiency Test) is a type of language proficiency test. The language proficiency test emphasizes the situation of the participants’ language usage. The aim is to measure the written and spoken Indonesian language proficiency of the speakers. UKBI is confirmed by the Minister of National Education of the Republic of Indonesia with Minister of National Education Decree No. 152/U/2003 that has been replaced with Permendikbud No.70 of 2016 on Indonesian Language Proficiency Standards. Increasing the status of Indonesian as a national language and international language can be performed through a language proficiency test (UKBI). In this corridor, Law No.24 of 2009 and Government Regulation No.57 of 2014 reinforce this. In this context, UKBI tests one's Indonesian skills naturally. Specifically, this study involves a population of foreign students from China who are studying Indonesian at Binus University for one year. The skills tested include four skills, such as listening, speaking, reading, and writing. In addition, the Indonesian language rules are also included in the Indonesian language proficiency test. In this vein, the test results will determine the skills of a speaker in the Indonesian language in the form of a particular score. The expert of Ministry of Education and Culture of the Republic of Indonesia Proficiency test stated that the test focuses not only on the content or purpose of language learning that has been followed by the test participants but also on the specification of proficiency that should be accomplished to be proficient in the language, especially in the Indonesian language. It highlights that the introduction of UKBI as a test of proficiency and standardized tests mutually reinforces the figure of UKBI as a test equalized with standardized tests in other languages.

2.2. UKBI Levels and Scores

The agency of development and language coaching under the Ministry of Education and Culture of the Republic of Indonesia is responsible for the task of carrying out cultivation, development, and protection in the field of language and literature. In terms of language development, UKBI sets a particular level for test-takers. This level supports the test-takers to devise a learning plan. The Ministry of Education and Culture of the Republic of Indonesia standardizes and explains the UKBI levels as represented by Table 1 and following elaboration.

Table 1. Indonesian standard skills rating table.

| Ranking | Predicate                  | Score     |
|---------|----------------------------|-----------|
| I       | Advanced (Istimewa)        | 725—800   |
| II      | Exceptionally Distinguished (Sangat Unggul) | 641—724 |
| III     | Distinguished (Unggul)     | 578—640   |
| IV      | Intermediate (Madya)       | 482—577   |
| V       | Pre-intermediate (Semenjana) | 405—481 |
| VI      | Elementary (Marginal)      | 326—404   |
Rank I: Advanced (Score 725-800)
This predicate indicates that the test takers possess perfect skills in communicating using the Indonesian language, both oral and written. In terms of proficiency, the speaker encounters no difficulty in delivering intention for personal, social, professional, and scientific purposes.

Rank II: Exceptionally Distinguished (Score 641-724)
This predicate indicates that the test participants hold an exceptional proficiency in communicating using the Indonesian language, both oral and written. In this level, speakers have no constraints in communicating for social, and professional purposes. In dealing with complex academic interests, the speakers encounter constraints.

Rank III: Distinguished (Score 578-640)
This predicate indicates that the test participants hold a very good proficiency in communicating using the Indonesian language, both oral and written. In this level, speakers encounter no problem in delivering intention for individual and social purposes. Participants are also not constrained in conveying the usefulness of profession, either simple or complex profession.

Rank IV: Intermediate (Score 482-577)
This predicate indicates that the test participants hold sufficient skill in communicating using the Indonesian language, both oral and written. In this level, speakers are able to communicate for survival and societal needs well, but still, experience constraints in the complex profession.

Rank V: Pre-intermediate (Score 405-481)
This predicate indicates that the test participants hold sufficient skill in communicating using the Indonesian language, both oral and written. In communicating for scientific purposes, speakers encounter obstacles. In other context, speakers are still experiencing difficulties, except for the needs of uncomplicated professional and societal setting.

Rank VI: Elementary (Score 326-404)
This predicate indicates that test takers hold inadequate proficiency in communicating using the Indonesian language, both oral and written. In communicating for modest social needs, speakers experience some obstacles. However, for complex societal needs, speakers are still experiencing difficulties. It signifies that the speaker is unready to communicate for professional and scientific purposes.

Rank VII: Beginner (Terbatas) (Score 251—325)
This predicate indicates that the test participants hold very inadequate proficiency in communicating using the Indonesian language, both oral and written. The test participants are only able to communicate for the need of survival. At the same time, this predicate also illustrates the enormous potential of improvement opportunities in terms of communication.

2.3. Web-based Test
The assessment systems in higher education institutions are emerging through the decades in line with technology enhancement [3]. Web-based systems evolve rapidly and inevitably from a variety of modifications. This is due to technological advances, economic attributes, and input from its users as addressed by Ricca et al [4]. In this point of entry, web-based applications serve to support salient activities in a variety of contexts, ranging from business transactions, scientific activities, to the medical system [5]. Moreover, the challenges on the web-based test associated with the client-server model, control connections, process-thread-object management, state management techniques, and development approach [6]. In a specific context, a web-based application is considered as a distributed system consisting of a client-server or multi-tier architecture with the following characteristics: a total of users, heterogeneous execution environments, nature, and the capability to generate software components [7]. In this line, the web-based method offers a myriad of advantages such as a big number of test takers, heterogeneous sample, effective, and accessibility to test-takers [8]. For all the
reasons, a web-based test symbolizes a computer-based test delivered by means of the internet, written in HTML (Hypertext Markup Language), and possibly enhanced by scripts [9].

3. Experimental Simulation

3.1. Design Interface

The main interface of the UKBI Test represents the authenticity of Indonesian cultural background. Figure 1 exhibits the website interface by accessing https://ukbi.lc. Figure 2 depicts the registration page and profile of registrants.

Figure 1. Website interface.  
Figure 2. Registration page.

The following page, as shown in Figure 3, displays the login page. Figure 4 exhibits the main menu of the UKBI test. In this page, the page informs the test-takers the information related to Introduction, Module, Ranking, Test Chronology, and UKBI Info Detail. In this part, test-takers acquire the details regarding the background of the UKBI, variation of modules, the ranking of UKBI test, and the history of the test.

Figure 3. Login page.  
Figure 4. UKBI main menu.

3.2. Test Skills Interface

In this part, the interface of each skill will be displayed one after one. Figure 5 and 6 represent listening test and grammar interface. This part informs the instructions of each test section in details.
Furthermore, Figure 7 and 8 describe the reading and writing test interface. In this section, test-takers obtain particular instructions and time allocation for the test. It assists the test-takers to devise the strategy in managing the time.

The composition of questions for each skill is divided into the following area:

| Section  | No. of Question | Allotted time (minutes) | Remarks                                                                 |
|----------|-----------------|-------------------------|-------------------------------------------------------------------------|
| I (Listening) | 40              | 30                      | Spoken discourse: 4 dialogues and 4 monologues. Each dialogue and monologue contains 5 questions. |
| II (Grammar)  | 25              | 20                      | Participants choose the wrong answer option.                             |
| III (Reading) | 40              | 45                      | Written discourse amounted to 5 discourses.                               |
| IV (Writing)   | 1               | 30                      | Participants present written discourse in accordance with the display picture / diagram / table. |
| V (Speaking)   | 1               | 15                      | Participants present oral discourse in accordance with the image / diagram / table display. |

4. Result Findings
Based on the experiment, it involved 28 test-takers from China. In this case, the students have studied the Indonesian Language for almost one year at Binus University. In order to measure their capability in the Indonesian Language, they undertook the UKBI test at the same time. Based on the result, it depicts that the percentages of the ranking are 6%, 21%, 29%, 36%, 4%, and 4% respectively as shown in Figure 9.
Figure 9. The Achievement of Test-takers.

Based on Focus Group Discussion with the test-takers and the data, the researcher found that 86% test-takers encounter the biggest challenge in listening section, 57% test-takers experienced a problem in grammar section, and 100% test-takers faced difficulties in reading part. The major challenges include monolog and dialog for the listening part. The following challenge involves multiple choices for formal context for the grammar part. The preceding challenge encompasses reading comprehension with a myriad of topics. The subsequent challenge includes writing an essay based on the indicator of content, plot, vocabulary, and Indonesian grammatical rules. The final challenge is related to speaking activity based on a particular topic. The result for each test-takers will be displayed in test chronology. It also informs the score and its breakdown. In this part, the test-takers not only receive the scores but also in plan the learning to upgrade the following lesson. The test-takers implied that the test will assist them in preparing more effective learning.

5. Conclusion
Since its inception, technology becomes inseparable from its application. In the context of language assessment, web-based test support the learners in preparing the mastery of language skills. At a closer look, the research underscores UKBI-Uji Kemahiran Berbahasa Indonesia (Test of Indonesian Language Proficiency). From this angle, foreign workers require a certification of Indonesian language proficiency at the standardized level to work in Indonesia. In this point, the regulation of the President of the Republic of Indonesia No. 20 in 2018 reinforced the requirements compliance. Coupled with the regulation, this study intends to offer the development of UKBI for foreign speakers. Based on the findings, the application allows the test-takers to measure the one’s skills in varied context. In this spectrum, it prepares the test-takers to optimize the learning process based on test results. As stated by foreign students in this research, it conveyed that the test expedited students’ learning process effectively, especially for Indonesian language mastery. At the same time, the test providers will save the time in undertaking the test. Ultimately, this test will assist the stakeholders in organizing the future UKBI plan, planning the implementation of the test inside or outside of Indonesia, implementation of the comprehensive and secure test, and control the implementation of UKBI test. It resulted in beneficial output, outcomes, and value for related stakeholders such as the Indonesian government, test-takers, association and activists, and BIPA teachers in a sustainable way, especially in terms of the action plan and learning.

References
[1] Bayrak T and Akcam B 2015 Exploring Benefits of a Web-based Testing and Training Tool, Procedia-Social and Behavioral Sciences 195 pp 1032-1041.
[2] Mustakerov I and Borissova D 2011 A conceptual approach for the development of the educational Web-based e-testing system Expert Systems with Applications 38 (11) pp 14060-14064.
[3] Stephens D, Bull J, and Wade W 1998 Computer-assisted Assessment: suggested guidelines for an institutional strategy Assessment & evaluation in higher education 23(3) pp 283-294.
[4] Ricca F and Tonella P 2001 Analysis and testing of web applications In Proceedings of the 23rd
international conference on Software engineering IEEE Computer Society pp 25-34.

[5] Arora A and Sinha M. 2012 Web application testing: A review of techniques, tools, and state of art International Journal of Scientific & Engineering Research 3(2) pp 1-6.

[6] Donley B and Offutt J. 2009 Web Application Testing Challenges Software Engineering George Mason University.

[7] Di Lucca G A and Fasolino A R 2006 Testing Web-based applications: The state of the art and future trends Information and Software Technology 48(12) pp 1172-1186.

[8] Romero C, Ventura S, and De Bra P 2009 Using mobile and web-based computerized tests to evaluate university students Computer Applications in Engineering Education 17(4) pp 435-447.

[9] Reips U D 2006 Web-based methods Handbook of multimethod measurement in psychology pp 73-85.

Acknowledgment
This research was supported by Bina Nusantara University.