Needs analysis on Indonesian language learning materials about agriculture for foreign speakers

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ABSTRACT

The aim of this research was to analyze the needs on integrative content-based Indonesian language learning materials about agriculture for foreign speakers A2 level. Research and development design was used employing the Dick and Carey’s model combined with Borg and Gall’s model, as well as the model of learning materials development proposed by Tomlinson, Brown, and Jolly and Bolitho. This research was conducted during the foreign students’ Indonesian course, Bogor Agricultural University on academic year 2015-2017. The procedure comprised: pre-study, students’ and teachers’ needs analysis on teaching materials at BIPA IPB. The findings indicated that the teaching materials about agriculture are not available yet at IPB. Besides, the needs on integrative content-based Indonesian language learning materials about agriculture for students at A2 level and the teachers were indicated high. Therefore, Indonesian language teaching material is needed for foreigners specifically for agriculture.

Keywords: Needs analysis, BIPA teaching materials about agriculture, Integration

1. INTRODUCTION

Currently, Indonesian language is been encouraged to be one of the internationally used languages. As an emerging world language, this suggests that Indonesian language is also of interest to other nations of the world. The growing interest of those nations to learn Indonesian language leads to the growing number of Indonesian language for foreign speakers (BIPA) offices in both Indonesia and other countries, and even the initiation of Indonesian language and literature departments or study programs in some universities in other countries.

Sudaryanto [1] said that the total BIPA program organizers reached 251 institutions, and BIPA program organizers reached 22 countries, one of which is the PRC with two organizations. The number of BIPA organizers in China has now increased to nine. This shows an annual increase in Indonesian enthusiasts overseas with the rise of BIPA organizers.

In line with this issue, have the BIPA organizers developed learning materials in the process of internationalizing Indonesian language? One of the universities in Indonesia assigned by the Directorate General of Higher Education (henceforth Dikti) to accept postgraduate students through the fellowship program with developing countries (henceforth KNB) is Bogor Agriculture Institute (henceforth IPB). Every year, BIPA IPB provides language coaching to the students. However, the teaching materials are still for BIPA students at beginner level (A1). BIPA IPB is planning to develop the teaching materials for primary level (A2 level) students. Moreover, BIPA IPB offers foreign students going to continue their study at
postgraduate program of IPB, it needs particular teaching materials for them to learn agricultural sciences. Thus, this circumstance becomes the background of conducting a research on needs analysis for integrative content-based Indonesian language learning materials about agriculture for foreign speakers. Besides, needs analysis on BIPA teaching materials about agriculture has not been done yet.

Such analysis has actually been done before by Suyitno, Suyitno [2] concluded that teaching materials needed by BIPA teachers are highly dependant on the students’ needs and learning objectives. It is hence, suggested to the organizers and teachers of BIPA to select reading materials with various topics so that it can fulfill the students’ needs. Also, learning materials chosen should include language skills, grammar, pronunciation, and cultural contents.

Under such circumstances, this research aimed at a) analyzing the syllabus condition and teaching materials that have been used or arranged for BIPA learning at IPB and b) analyzing the needs of BIPA content-based teaching materials in the field of agriculture A2 level.

2. METHODOLOGY
The method used in this study was research and development or the R and D cycle. Regarding the application of this method, there were two supporting methods employed. They were survey and descriptive methods. According to the concept within the model of research and development proposed by Borg and Gall, stage one; data collection and research; and Dick’s and Carey’s model [3], stage three, survey and descriptive methods were used. These methods were used to obtain adequate information related to: 1) syllabus transparencies as well as the learning materials; 2) students’ needs; and 3) teachers’ needs. The data collecting techniques were document analysis, questionnaire, interview guideline, and observation sheet, conducted within BIPA program at IPB. It took 2 months; from December, 2015 to January, 2016.

3. RESULT AND ANALYSIS
3.1. Findings from identification of teaching materials of BIPA IPB
Identification of teaching materials before conducting the development is in line with the concept proposed by Borg and Gall [4]. On the first stage out of ten, they stated that before needs analysis is conducted, there must be a pre-study including classroom observation, and preparation of report of state of the art. From the pre-study, two points were drawn.

3.1.1. General exposure of the classroom, students, and teachers
The classroom condition was not conducive for the students to interact easily. The seat and table arrangement hinders them from having good discussion because they have to move back and forth. The teachers also they are always in front of the class and rarely approach to them at the back row. For a more communicative and integrative learning, there should not be a gap between the teachers and students in the interaction process. This classroom condition leads to teacher-centered learning. Also, some of the classrooms lack few facilities like writing boards, so that the teachers use handouts related to the materials attached to a small board in front of the class.

Second, Brown [5] asserted that there are four contexts in a foreign language learning. They are 1) learners’ age, 2) learners’ proficiency level, 3) sociocultural, political, and institutional contexts, as well as 4) mastery of teaching techniques, teaching materials, and learning technology or media. In terms of learners’ age, Brown [5] categorizes it into three: 1) young learners, 2) teenage learners, and 3) adult learners. From the observation and questionnaire results, most of the BIPA IPB students are adult learners. Their ages are above 20 years.

Lindeman (in Uno) [6] stated that there are four things that should be avoided, which comprise: a) excessive interference or intervention in which too many instructions, rather more time for creativity, b) too slow and rambling explanation of a concerned concept, c) unstructured in time to begin and end the learning activity, and d) too much concern on the learners’ problems, which are out of the core or main topic or lesson. From the observation result, the teacher’s intervention was excessive. They tend not to provide more space for the students to explore their creativity. They got stuck in exercises given in the classroom. They also did not have any learning activity done outside of the classroom.

From the observation and interview results, it was gathered that there are five BIPA students on academic year 2013/2014. Tni (Ukraine) once joined BIPA scholarship program for 1 year at National University, so that the Indonesian language ability was already medium level (henceforth Madya). Such condition got the student more absent in class. When in class, the teacher gives her different materials from other students who have zero background in Indonesian language. The teacher seemed overwhelmed in terms of providing equal attention to each of them because they were assigned in the same class. Furthermore, there
are seven BIPA students on academic year 2014/2015, and they did not ever learn Indonesian language before (zero background capability). Meanwhile, there are seven BIPA students on academic year 2015/2016. Six of them never learnt Indonesian language before. However, the remaining one, Aml (Egypt), already learnt Indonesian language in Malang through a scholarship program. Such circumstance urged the teacher to provide different materials to the other six ones.

Third, a curriculum according to Richard [7] is all students’ activities under the school’s concern. It includes the teachers. They help the students in learning process and triggering their motivation. They must fulfill the standard competencies that have been determined. From the questionnaire, interview, and observation results, there are 8 BIPA IPB teachers under BIPA IPB program. One of them is a special-education teacher, while the other seven are civil-servants.

3.1.2. Syllabus and teaching materials for BIPA IPB

Language syllabus has many types. Ur [8] categorizes language education syllabus into 10 types. Richards [7] also categorized it into 10 types. In line with the two previous perspectives, Brown [9] categorized it into 7 types, While, Nation and Macalister [10] only asserted one type of syllabus, that is negotiated syllabus.

From the observation and interview results with the coordinator of BIPA IPB along with the teachers, BIPA IPB has got a syllabus. However, the syllabus has not been arranged based on the needs analysis yet. Rather, it was arranged based on the blueprint from Dikti (for BIPA KNB). Besides, it was not arranged based on the proficiency level. The syllabus is for A1 students, while those at Madya and advanced levels, there has not been any syllabus yet. There is a mixed or integrated syllabus, which combines the aspects of themes, functions, structures, and situations or contexts. Although BIPA IPB has arranged the syllabus, in reality, the learning process sometimes is not in line with the syllabus. The reason is in the progress of learning process there must be BIPA students’ needs informed to the teachers.

Rossi and Breidle (1996) cited in Sanjaya [11] that learning media is a set of tools and materials that can be employed to achieve the learning objective(s) including: radio, television, newspaper, magazine, and book or textbook. Uno [6] asserted that learning media is any tool used to convey message or information from the teacher or instructor to the learners. Moreover, learning media can be classified into two major strands: hardware and software. The former includes all tools that can deliver messages. The examples are radio, television, and projector. The latter includes all programs or applications that contain messages. The examples are information contained in a book or textbook or other printed media. From the observation result, hardwares like radio and television are not available. Other hardwares like projectors in the general basic subject (henceforth MKDU) classrooms are not available. Meanwhile, at postgraduate building of IPB, there is projector, yet along the observation and interview results with the teachers and students, in fact, it is not employed.

Brown [5] expressed that there are four contexts in a foreign language learning, one of which is (the fourth context) textbooks. Textbooks are a kind of learning materials used in an educational curriculum. From the interview and observation results, the teachers’ team outside IPB uses their own teaching materials. They are not in the form of textbook yet; but in the form of handouts (copied materials). These teaching materials are given to the students based on the theme. Furthermore, the observation result regarding the implementation of BIPA on academic year 2015/2016, the IPB teachers use some textbooks, but the textbooks are not in large quantity, available, and they only copy specific parts of the textbooks and hand to the students.

From the questionnaire, it was indicated that the students of BIPA IPB on academic year 2013/2014 and 2014/2015 have been given textbooks by the teachers of BIPA IPB. From 8 students, all of them said “yes” to the question, “Do the teachers use textbooks in the learning process for A2 level?” It is in line with the teachers’ response in which from 4 teachers on academic year 2013/2014 and 2014/2015, all of them answered “yes” to the question, “Do you use textbooks in the learning process for A2 level?”.

Such result is strengthened by the interview and observation results. Based on those results, the organizer of BIPA IPB asserted that they provide textbooks for the students. According to the BIPA coordinator, the team of BIPA IPB has arranged teaching materials entitled “Pijar: Pengenalan Awal Bahasa dan Budaya Indonesia.” However, those teaching materials were not always used by the teachers. From the interview results with one of the teachers on academic year 2015/2016 (Rn), it was due to the limitation of the textbook, particularly on the availability of adequate exercises for the students. Such circumstance got the teacher use other resources for both A1 and A2 levels. One of which is handouts arranged based on the needs, namely “Lentera Indonesia 1”. This is also by the results of the study Jannah et al. [12] that in teaching, teachers should be independent in searching for teaching materials.
3.2. Findings from needs analysis of BIPA materials

The concepts used in the needs analysis of learners and teachers are the integrated concepts of Nation and Macalister [10], Brown [9] and Richard [7]. The uses of the concept in the study are as follows.

a. The purpose of making needs analysis is to find the field of language skills knowledge required by students of BIPA IPB or its themes, in this case is the language in the field of agricultural sciences.

b. Knowing the needs of ‘people’, in this case are BIPA IPB teachers, The use of needs analysis results is the development for writing textbooks (textbooks that contain tasks for learners and teacher manuals).

c. The targets of population in needs analysis are the teachers, the coordinators, and students of BIPA IPB on academic year 2013/2014 and 2014/2015.

d. The implementation of needs analysis is the development for writing textbooks.

e. The procedure of conducting needs analysis will be done after conducting preliminary research on the problems faced by students, teachers, and the coordinators of BIPA IPB by giving the questionnaire.

f. After data obtained through preliminary research, the material developers designed the needs analysis which are as follow: a) surveying of literature; b) developing a lattice of questions and developing a list of questions for learners and teachers, c) validating the questionnaires (in the form of instruments) by BIPA and curricula experts; d) improving the questionnaire; e) selecting the teachers and learners as a subject; f) developing data collection times; g) following up the questionnaires and interviews with selected participants; h) tabulating the answers; i) analyzing the answers; and j) writing the reports.

g. The material developers use the information obtained from the questionnaire of needs analysis to compile the syllabus and the first draft of teaching materials.

Therefore, the needs of the students and teachers of BIPA IPB are as shown in Table 1.

Table 1. Students’ and Teachers’ Needs Analysis on the Teaching Materials

<table>
<thead>
<tr>
<th>No</th>
<th>Dimension</th>
<th>Indicator</th>
<th>Lecturer Average Categories</th>
<th>Students Average Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Theme</td>
<td>Theme</td>
<td>4.4 High</td>
<td>3.6 High</td>
</tr>
<tr>
<td>2</td>
<td>Learning</td>
<td>Speaking</td>
<td>4.5 Very high</td>
<td>3.6 High</td>
</tr>
<tr>
<td></td>
<td>Materials</td>
<td>Reading</td>
<td>4.5 Very high</td>
<td>3.7 High</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Writing</td>
<td>4.6 Very high</td>
<td>3.2 Moderate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Grammar</td>
<td>4.5 Very high</td>
<td>3.7 High</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lexical</td>
<td>3.9 High</td>
<td>3.6 High</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Culture</td>
<td>4.6 Very high</td>
<td>3.2 Moderate</td>
</tr>
<tr>
<td>3</td>
<td>Tasks</td>
<td>Language task</td>
<td>4.5 Very high</td>
<td>3.5 High</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Grammar task</td>
<td>4.5 Very high</td>
<td>4.0 High</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cultural task</td>
<td>4.5 Very high</td>
<td>3.5 High</td>
</tr>
<tr>
<td>4</td>
<td>Methodology</td>
<td>Teaching method</td>
<td>4.1 High</td>
<td>3.7 High</td>
</tr>
<tr>
<td>5</td>
<td>Learning materials</td>
<td>Textbook</td>
<td>5.0 Very high</td>
<td>3.7 High</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Text and task book</td>
<td>5.0 Very high</td>
<td>4.0 High</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Teachers' manual book</td>
<td>5.0 Very high</td>
<td>3.7 High</td>
</tr>
<tr>
<td>6</td>
<td>Evaluation</td>
<td>Language Evaluation</td>
<td>5.0 Very high</td>
<td>3.7 High</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Grammar Evaluation</td>
<td>4.6 Very high</td>
<td>3.2 Moderate</td>
</tr>
</tbody>
</table>

Needs analysis of themes

The teachers’ need on agriculture theme is above 4 in average. It means that the teachers’ need to agriculture theme is close to 5 (strongly needed). In contrast, the average of students’ need on the agriculture theme is above 3. That is, the needs of students on agricultural themes close to scale 4 (required). There are some themes that are high in average and some are low on average. The highest average of need on agricultural theme for both the teachers and students is the theme of “Agricultural Concept”, which the averaged for teachers 4.5 and the average of the students is 3.86.

The existence of textual themes given to students and teachers has also been done by Salam [13]. He carried 14 topics while in this study there are ten themes. Both lecturers and students provide a value that is not much different, namely 4.48 (students) and 4.54 (teachers).

Needs analysis of learning materials

The average need of listening material according to the students is above 3, while the teachers’ need is above 4. The listening material instructions via audio have the highest average for teachers, i.e. 5 (strongly needed). In contrast, for the student, the need is the lowest among the other material. The average of student need for this material is 3 (neutral). Nevertheless, the listening material is still given. The reason is that the teachers as part of the user need the listening material and students are neutral.
It can be seen that the average of the need of speaking skill material for teachers to be taught is 4.5, while for students is 3.6. The highest average of the teachers’ need for speaking materials is “tell the feeling, the self background, the environment, and matter relating to the need for social interaction” and “short conversations (discussions) related to simple and routine tasks”, is 4.75. On the other hand, the highest average of students’ need for speaking material is “information exchange (conversation) about agriculture” and “tells the feeling, the background, the environment, and matter relating to the health needs”, is 3.89. Therefore, the material about the feeling will be developed.

The need for reading materials between teachers and students is different. The average of the need for reading skill by the teachers to teach is 4.5; while by the students is 3.7. The highest average the teachers’ need for the reading material is in the form of text about agriculture (4.75) and the story about agriculture (4.75). On the contrary, the highest average of students’ need for reading materials is the short messages (4), agricultural procedure texts (3.86), and brief text on agriculture (3.86). The teachers’ need average for writing material is above 4, while the students is above 3. The overall teachers’ need average of reading skills material to be taught is 4.6, while for students 3.2. The highest average of students’ need for linguistic material is to write the SPO (K) spatial sentence with 4.14 and the morphophonemic additive which meets the initial letter k, p, t, and s, i.e. 4 (required). On the contrary, the highest average of the teachers’ need for linguistic material is a sentence with the predicate of the word, di-, and the meaning of the word, which is an average of 5 (strongly needed). The average need of cultural material for students is above 3, while the teachers’ need is above 4. For teachers, the highest need of cultural material is the material about the values of decency, which is an average of 4.75. For students, the highest needs of cultural material are 1) material about the values of decency and 2) material about the habits of the people of Indonesia, which is an average of 3.29.

Needs of tasks
The need for four linguistic skills for teachers is the same (listening, speaking, reading, and writing), which is an average of 4.5. In contrast, for students, the highest need for language skills is writing, which is an average of 3.86. After that, for the students, the task demand which is also high is the reading task (3.71). The average of teachers’ need of the language task is the same (4.5), namely structural and vocabulary task. In contrast, for students, the average vocabulary task is higher than the structural task, i.e. 4.14 (vocabulary) and 3.86 (structure). The average need of teachers to the task of culture is the same as the linguistic duty, i.e. 4.5. In contrast, for students, the average task of work is higher than the duties of the values of decency and habits of Indonesian society.

Needs of methodology
The average of teachers’ need for discussion method is 4.5, while the average students’ need for this method is 3.71. The average students’ need for discussion methods is similar to the game method. All of the teachers’ as respondents said that they really need A2 level textbooks for agricultural purposes, whether they contain tasks or do not contain the tasks, i.e. 5 (strongly agree). Conversely, the students as respondent more agree that the textbook contains the tasks rather than only the textbook, which is an average of 4 (agree).

Needs for evaluation
All teachers strongly agree (on average 5) on the evaluation of four language skills. In contrast, the average need of the students as respondent was higher in the writing evaluation (3.86) and the lowest average is the listening evaluation (3.57). The average lecturer is higher on the lexical evaluation than the grammatical / structure, i.e. 4.75: 4.5. In contrast, the average student respondent is the same, both lexical and grammatical / structural evaluations (3.71).

The average student who needs an evaluation in the field of culture is the lowest average of the previous 15 statements; it is under 3.5 or even 3, i.e. cultural evaluation in the form of copyrighted works. On the contrary, the average needs of the teachers as respondents are equal to the previous 15 statements which are above 4.

3.3. Discussion
At IPB, there are no Indonesian syllabus and teaching materials available for agricultural purposes. The syllabus and material available are still general in nature and are not sorted by level. Also, the average of students’ needs related to the learning of BIPA A2 level in IPB is already above 3.5 (with 5 scale). That is, the average above 3.4 shows that the students’ need for learning BIPA A2 level IPB is high. In accordance with the opinion of Swandayani [14] that in the CEFR there are three elements that must be achieved. The three elements are language competence, pragmatic, and sociolinguistic. Thus, in the compiled material there must be language aspects, language skills, and culture.
In contrast, the average of BIPA IPB teachers’ needs is above 4. In fact, there is even an average of teachers’ needs which reach 5. It indicates that the needs of the teachers are high even some are very high. In fact, out of 18 questions, 13 of them have an average of over 4.5. That means that the teachers’ needs are very high. Although the teachers’ needs are very high, in the development of teaching materials, the teachers must prioritize the needs of students. It is in accordance with the results of research conducted by Suyitno [2]. He opined that the managers and the teachers of BIPA in the management of the learning, the students’ self-factors are given serious attention. In this case, the learning of BIPA should focus on the needs of the learners. The existence of vocabulary material through the grammar is an essential component of foreign language learning. This is by Mahmoudi’s findings [15]. It supports the Statement of all these researchers that vocabulary is a necessary component of reading comprehension.

The teaching materials given must be integrative. Thus, in needs analysis, questions about the needs of the four language and structure skills (sentences and vocabulary) are provided. This is in Datondji’s opinion [16] that in the teaching of a foreign language, such as English, for particular purposes, it is necessary to integrate four language and vocabulary skills. So, in learning of language, the students needs four skills. This is in line with the submission of Setiawati [17]. Findings of the need analysis demonstrate that all four of the language skills were necessary for their academic studies and their target career. At present, in Indonesia and the IPB in particular, BIPA teaching materials specifically for agriculture are not yet available. Even though students learn BIPA to be able to continue their master studies at IPB which focus on agriculture.

Teaching materials that must be integrated, not only four language skills and grammar but also culture, are also expressed by Cui [18]. He said: “Through this course, students are supposed to learn eight units of the textbook, including the related cultural background, intensive article reading, grammar, vocabulary, translation, listening and speaking exercises etc.”

So, before teaching or even developing teaching materials, a teacher or developer must perform the needs analysis. Teachers or developers must know the needs of students. This is also by Qamariah [19] research results that teachers or developers should consider students’ needs for teaching materials. Sumarsono, Bagis & Arrafii [20] who the citation Kaewpet said: “That has further claimed that learner needs should be analyzed on an ongoing basis because they are likely to change over time, depending on contextual and human affective variables.” So, before developing BIPA teaching materials specifically for agriculture, needs analysis is needed. Although the needs analysis is carried out to the instructor and students, needs analysis is more emphasized to students as the focus of learning objectives.

4. CONCLUSION

Based on the general description of classroom of BIPA IPB, the existing study space is not conducive, for example there is a distance between teachers and learners. Teachers cannot move freely. The learning is more focused on the lecturer. Thus, the learning process has not paid attention to the difference in participant’s language level. The teachers of BIPA IPB still have S-1 education. In addition, some teachers have never attended special training on teaching BIPA. Thus, the teachers have not met the standards. Syllabus for middle level and advanced level does not exist yet. In addition, the syllabus is arranged in accordance with needs analysis. Thus, the existing syllabus has not met the requirements in the preparation of the syllabus. Teaching materials used are teaching materials prepared by parties outside IPB. Agricultural teaching material also does not exist yet. The prepared teaching materials are books and there is no audio or video. Teaching materials are in the form of hardware: Projectors, TV and radio are not available.

Based on the result of the identification of the need of BIPA teaching materials in accordance with the needs of BIPA teachers and teachers at the primary level (A2 level) in IPB, there is an average difference between BIPA students and BIPA teachers. Thus, with the analysis of needs can be seen that teachers BIPA IPB and BIPA IPB students need teaching materials in agriculture.

Based on the conclusions of the general picture (room, students, and teachers in BIPA IPB) and the conclusion of syllabus condition and teaching materials BIPA IPB; There are two recommendations in this section. First, for the study room, the study room is suggested better organized, which facilitates the interaction between teachers with learners and between learners so that learning is not focused on the teacher. Second, for the syllabus, the syllabus should be broken down by the rank of proficiency (A1, A2 level, B1, B2, C1, C2). In addition, prior to the preparation of the syllabus, a needs analysis should be done first.

Based on the conclusion of the need analysis of BIPA teaching materials in accordance with the needs of students and teachers BIPA advanced level (A2 level) in IPB the required material is the material in the field of agricultural sciences. The result of the requirement analysis that has been prepared can be used as the basis for developing needs analysis in the broader agriculture field such as forestry, fishery, marine, and livestock.
REFERENCES


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