Need Analysis of E-Modules Development for Introduction to Linguistic in the Department of Indonesian Language and Literature Unimed

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Abstract. The purpose of this research is to find out how students perceive the teaching materials for the Introduction to Linguistics and compare the perceptions of students and lecturers towards the digital teaching materials that are being prepared. This survey research used 132 samples from 2 Study Programs in the Department of Indonesian Language and Literature, Faculty of Language and Arts, Unimed, they are: (1) Indonesian Language and Literature Education Study Program and (2) Indonesian Literature Study Program. This research is an expos facto type in which the researchers collect the data directly from respondents through the instruments of the data collection. The data were obtained through interviews, questionnaires and observations. The data analysis technique was carried out in descriptive. The research results found that the problems level of Introduction to Linguistics learning implementation was moderate (m= 3.58) and the need level for Introduction to Linguistics modules was high (m= 4.39). This research implies that the students must be prepared with basic linguistic skills which are subsequent linguistics lessons (in this case phonology, morphology, syntax, discourse and semantics).

Keywords: needs analysis, e-module, Introduction to Language Science

1 Introduction

This research is a preliminary study of series research activities for developing e-modules for the Introduction to Language (PIB) for semester 1 students at the Department of Indonesian Language and Literature, Universitas Negeri Medan. The purpose of this research is to identify the problems in implementing PIB learning. A study to produce quality teaching materials is necessary to overcome various problems faced by the teachers when giving the lessons. The problem that is always faced is the students' low initial knowledge about the basic concepts of language/linguistics. This happens because the students do not have practical learning resources in understanding the basics of linguistics. Practical teaching materials are very necessary, considering that the new students in the Indonesian Language and Literature Department do not come from the linguistics specialization when they were in high school. Therefore, it is hoped

that the existence of practical teaching materials will be able to improve the learning quality in class for early level students.

The use of qualified modules has shown their effectiveness in learning ([1]; [2]). Using modules can make the students more interested in learning and increase the independent learning activities [3]. As a result, the use of the module can significantly increase their self-efficacy, motivation and learning outcomes [4], knowledge [5], learning independence [6], and critical thinking and self-efficacy [7]. This actively shows that a modular approach can be applied in PIB lessons. Ardiantio and Tanghal [8] stated that the students' development depends on the availability of instructional resources. Modules that utilize multimedia learning technology are able to provide them with fast feedback, also help them understand the topics, and facilitate the learning process. Since the quality of teaching materials is important, apart from the research mentioned above, there are several researches in higher education that focuses on developing the quality of teaching materials. Some of these studies, such as: [9], [10], [11], [12], and [13] suggest that the development of teaching materials designed by lecturers can improve the quality of student learning. Therefore, this research will further identify the need for developing PIB e-modules and identify the problems in implementing the learning.

PIB is a mandatory college subject that must be taken by the students in the Indonesian Language and Literature Department at universities throughout Indonesia, especially at Unimed. This college lesson is given to the first semester students. In some universities, this college lesson is given different names, such as linguistics, general linguistics, introduction to general linguistics, and other labels, but it is still in the same competency group. The achievement of this subject is to understand linguistics as a renewable science that is always developing and innovating in line with times and studying linguistics as one of the main competencies of Indonesian language education graduates.

The linguistics is a main subject for understanding language learning and literature learning. In the very general science of linguistics, several main categories of learning are divided to understand linguistics easily as a language science. The scope of materials taught in this subject is: 1) The essence and scope of linguistic studies, 2) Language as an object of linguistic study, 3) History of the linguistics development, 4) The relationship between linguistics and other sciences, 5) Basic concepts of Phonology, 6) Basic concepts of morphology, 7) Basic concepts of syntax, 8) Basic concepts of semantics, 9) Basic concepts of discourse analysis, 10) Basic concepts of pragmatics, 11) Basic concepts of sociolinguistics, 12) Basic concepts of psycholinguistics, 13) Basic concepts of ethnolinguistics, and 14) linguistics Implementation in Indonesian language learning (especially for the Indonesian Language and Literature Education Study Program).

Several problems that occurred are the competence of new students in understanding rules is low as well as in understanding the definitions and terms in linguistics. Based on the data from the Department of Indonesian Language and Literature at Unimed, the low initial of students' abilities are is due to the fact that new students do not have a specialization in languages when they were still in high school. Therefore linguistics is a new lesson for them. To overcome this, the teachers must innovate in facilitating the students during the teaching and learning process. The teachers need to prepare practical teaching materials and provide a comprehensive information. Practical teaching materials are very necessary, considering that the new students in the Indonesian Language and Literature Department do not come from the linguistics specialization when they were in high school. Therefore, it is hoped that the existence of

practical teaching materials will be able to improve the learning quality in class for the early level students.

To produce good teaching materials for linguistics/PIB lessons, this research takes into account the findings of previous research which produced teaching materials for language learning, they are: [14] entitled "Developing Teaching Material Based on Multiple Intelligences to Improve the Critical Thinking Ability". This research produces multiple intelligences based on textbook that can improve the students' critical thinking skills which include the aspects of multiple intelligences; they are logical-mathematical, visual-spatial, linguistic-verbal, interpersonal and intrapersonal. Furthermore, Ramdhani and Hidayat [15] in their research aimed to determine the strategies for developing Android-based teaching materials for text-based Indonesian language learning as an implementation of the independent curriculum in junior high schools. The research results showed that several learning media used, such as text, audio, graphics, images and videos improved the quality of Indonesian language learning and increased the students' learning independence. Along with this, vein [16] conducted a research to overcome one of the causes of the low quality of listening lessons in universities, that is there was no listening learning software. According to this research, the learning source that is considered capable to overcome this problem is an Android-based learning application. Then a research entitled "Development of Android-based Augmented Reality Media on Vocabulary Mastery and Pronunciation in English Subjects of Junior High School Students" [17] used an augmented reality technology in language learning. The researchers developed an Android-based Augmented Reality media which is the latest technology-based media with 3-dimensional elements, video, text and sound in English language subjects in junior high schools.

2 Method

A survey approach is used in this research to describe the answers from the respondents. A survey research is designed to assess: (1) the problems of the implementing PIB course learning, and (2) the need for modules [18]. Each survey components is explained below. The online questionnaire used by the researchers has been validated by evaluation experts. This questionnaire uses a Likert scale consisting of strongly agree (5), agree (4), quite agree (3), disagree (2), disagree (1). The researchers distributed questionnaires by using Google Form to 132 students who had taken PIB lessons from the Indonesian Language and Literature Education study program and Indonesian Literature Study Program, Medan State University.

Next, the survey components in the questions are: 1) the problem of PIB implementation. In this section, the researcher formulated the research problems which are the main problems in implementing the PIB, including competency, content, teaching and assessment, and 2) the need for modules. This research uses 4 stages; they are preparation, implementation, data analysis, and interpretation. These stages are carried out systematically and structured. The selection of this stage is used to identify the problems in implementing the PIB learning and the need for PIB modules. The procedures for this research are:
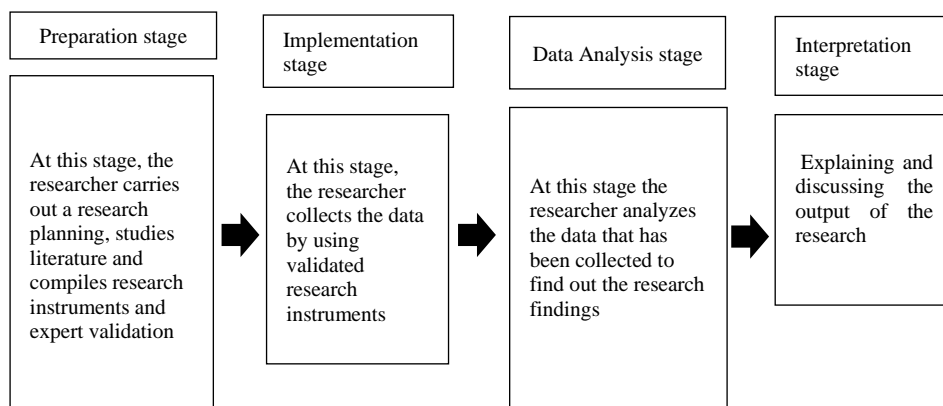
Fig. 1. Research procedure of module needs analysis

Furthermore, the problem items of PIB lessons implementation and the need for modules are categorized into five categories; they are high, medium and low as shown in table 2 below:

Table 1. Interpretation of mean scores

No	Mean Score	Category
1	1.00 – 2.33	Low
2	2.34 – 3.67	Moderate
3	3.68 – 5.00	High

3 Results and Discussion

3.1 The Problems of PIB Learning Implementation

The analysis of PIB learning has been presented in table 2. Overall, the problems level in implementing PIB learning is moderate (m= 3.58). Even though it is at a moderate level, there are several question items that show high mean score values, they are item number 2 (m=3.68), item number 3 (m=3.71), and item number 10 (m=3.70). This proves that the possibility of the problems in implementing PIB learning will have serious impacts if they are not resolved early.

Table 2. Problems in implementing PIB learning

No	Indicator	N	Mean	SD	Category
1	The students have difficulty in identifying the root of linguistic problems to develop their competence	132	3.52	0.624	Medium
2	The students have difficulty in solving the language learning problems due to limited skills	132	3.68	0.745	High
3	The students have difficulty in mastering the linguistic materials	132	3.71	0.861	High

No	Indicator	N	Mean	SD	Category
4	The students have difficulty in creating preventive solutions to the arising problems	132	3.52	0.704	Medium
5	The students get low marks in linguistics/PIB lessons	132	3.51	0.682	Medium
6	The required competencies by the students from PIB courses are not yet clear	132	3.60	0.750	Medium
7	The teachers are lack of experience in PIB lessons	132	3.52	0.671	Medium
8	The teachers have difficulty in explaining the PIB learning topics	132	3.51	0.715	Medium
9	The students need illustrations related to solving the problems of linguistic lessons	132	3.52	0.659	Medium
10	The students need PIB course modules that support the learning	132	3.70	0.863	High
	Average		3,58		Medium

The research results also prove that the assessment in item number 5 (m=3.51) and teaching in item number 8 (m=3.51) are the question items that have the lowest mean value. This shows that the teaching carried out by the teachers is related to the scores obtained by the students. Additionally, there are also items that have the same mean value (m=3.52), they are item number 4 and item number 9 which related to the PIB learning content. This proves that the students need illustrations in PIB learning.

3.2 Needs for Modules

Table 3 below shows the need level of PIB modules for students. The need level for the PIB module is high (m=4.39). The research results show that the module has the latest learning topics which have high needs (m=4.51) and it is followed by a module containing reinforcement at the end of the chapter (m=4.42). Furthermore, the module must also have concrete illustrations and clear problem solving (m=4.41). On the other hand, the module also contains systematic and easy to understand the concepts (m=4.34) and contains clear and measurable competencies (m=4.29). Therefore, each analyzed component must be found in each section of the PIB module

Table 3. Requirements for modules

No	Indicator	N	Mean	SD	Category
1	The module contains clear and measurable competencies	132	4.29	0.787	High
2	The module contains concepts that are systematic and easy to understand	132	4.34	0.740	High
3	Module has the latest learning topics	132	4.51	0.767	High
4	The module has concrete illustrations	132	4.41	0.751	High
5	The module has clear problem solving	132	4.41	0.771	High
6	The module contains reinforcement at the end of the chapter	132	4.42	0.772	High
	Average		4.39		High

This research analyzes the need for PIB teaching materials in universities. The results show that the problems level in implementing PIB learning is moderate. Even though it is at a moderate level, there are several question items that show high mean score. This proves that the possibility of the problems in implementing PIB learning will have serious impacts if it is not resolved early. Therefore, the impact of this research allows qualified e-modules to be developed to facilitate more effectively in students' learning. The modules are arranged systematically which include developed content, methods and evaluation tools [19].

Furthermore, the results prove that there is a high need for PIB modules in universities. This is in line with a research [20] which states that learning materials have not empowered the students' generic knowledge abilities even though there has been previous research which tried to contribute but has not shown a significant contribution. Thus, it can be said that module development has become an alternative solution to each problem in learning.

4 Conclusion

The needs analysis reveals that the problem of implementing the PIB learning is in the moderate category. However, there are several items that indicate a high level of problem. Furthermore, there is a high need for PIB modules in universities related to the need for PIB modules. This research implies that the students must be prepared with adequate basic linguistic skills to make the students ready for subsequent linguistics lessons (phonology, morphology, syntax, discourse and semantics).

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