

Development of English in Analyzer Module in Increasing the English Language Ability for Health Analysis Students

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Abstract:One important thing to highlight in improving the quality of education in health tertiary institutions is the facilities and infrastructure in the form of learning modules, especially those concerning the English language practice specifically for health analysts. The author considers that the module is a very important tool in the smoothness of a learning process because the learning process module is expected to run more directed and the learning objectives can be achieved. This study aims to develop English in Analyzer module in improving English language skills for valid health analyst students. This type of research used is research and development or Research and Development (R&D), which is research that produces certain products. The development model used in this study is the 4 D model, namely Define, design, develop, disseminate. The research instrument used in the form of a questionnaire consisting of sheets of the validity of English learning outcomes tests. This English in Analyzer module is validated by 3 validators consisting of 1 Lecturer with an English Doctor's Degree, 1 English Lecturer at the STIKes Perintis Padang and 1 Health Analyst Lecturer at the STIKes Perintis Padang. The results of the lecturer practicality and student practicality sheets showed the average kappa moment (k) scores were 0.87, 0.71, respectively. Both of these scores if interpreted in the kappa moment category then the validity and practicality category of this module is High. Modules that have been developed are practically used for learning English for Health Analyst Students.

Keywords: Module, English in Analyzer, English Language Ability

I. PREFACE

STIKes Perintis Padang as one of the health tertiary institutions by having one of the health analyst studies programs has put English courses as a skill that must be mastered by its students. The pattern of education in the STIKes Perintis Padang especially in the Health Analyst Study Program, always emphasizes the importance of mastering English as an international language that must be mastered by students. So that in the future it is expected that graduates of the STIKes Perintis Padang will be able to become professional laboratory personnel who are capable of global competitiveness. One important thing to highlight in improving the quality of education in health tertiary

institutions is the facilities and infrastructure in the form of learning modules, especially those concerning the English language practice specifically for health analysts. The author considers that the module is a very important tool in the smoothness of a learning process because the learning process module is expected to run more directed and the learning objectives can be achieved.

For this reason researchers intend to conduct research on the Development of the English for Analyzer Module in the Improvement of English Language Ability in Health Analyst Students at STIKes Perintis Padang. The author feels the need to conduct this research because so far the English learning materials in the Health Analyst Study Program at STIKes Perintis Padang are taught in the form of general English or General English, so that the scope of content does not touch the essence of the world of health analysts. While what is needed is learning English which specifically addresses the world of Analyst itself. So that both the subject matter and contents of the module discuss about health analysts. Then the second reason is that the material taught in general English only focuses on grammar (grammar oriented). So students cannot develop other language skills such as speaking, reading or listening.

Expected Product Specifications Products that have been produced must be in accordance with what is needed by the user. Based on the analysis of the needs that the authors get in the pre-research, the developed English for Analyzer module is expected to: 1) be an English learning program in accordance with the health analyst English curriculum, 2) contain exercises and language competency tests namely speaking, listening, reading and writing, 3) contains a presentation in the form of a guide to the use of modules to facilitate students / users learning independently. The objectives to be achieved from this research are based on the formulation of the problem that has been formulated, namely: 1) developing an English in Analyzer learning module for Health Analyst students at the STIKes Perintis Padang level to study independently in order to overcome the constraints of limited time to face-to-face with the lecturer. 2) Reveal the

practicality and effectiveness of the English in Analyzer learning module for students of Health Analyst level 1 of STIKes Perintis Padang.

Mulyasa (2005: 49) states that, what is meant by educational facilities is equipment and equipment that are directly used and support the educational process, especially teaching and learning processes, such as buildings, classrooms, tables and chairs, as well as learning tools and media. What is meant by educational infrastructure is facilities that indirectly support the course of the process of education or teaching, such as the yard, garden, school park, road to school, but if used directly for teaching and learning, such as school parks for teaching biology, school yard as well as a sports field, these components are educational facilities.

According to Antony Richard and Roger, 1986: 15 Approach is the level of theories, the method is the plan of language teaching which is consistent with the theories, and the techniques carry out a method. Or in other terms approach is axiomatic, method is procedural and technique is implementation. Here it is clearly illustrated how a lecturer uses the approach to students as well as the method used in delivering teaching material. Now the writer will focus more on the presentation by describing while taking several theories that can support the author's argument. In theory the learning method requires supporting equipment such as modules that are expected to be able to proceed according to the learning process.

There are at least two independent learning principles to be able to carry out independent learning, namely: 1) the use of learning programs that contain instructions for self-study by students with minimal teacher assistance, and 2) involving students in planning and implementing activities. One of the aids for self-study is a program that is packaged in the English in Analyzer module. Although independent learning is individual, but in its implementation social learning can occur that is collaborating with other students to discuss the problems contained in the module.

The self-learning system learning module does indeed require its students to be able to carry out learning activities independently. The learning process will be more effective and efficient if assisted with teaching materials. Modules are printed teaching materials that are designed to be studied independently. Modules are a way of organizing subject matter that takes into account the function of education.

The purpose of the module is so that participants can master the competencies taught in the training or learning activities as well as possible. For lecturers, the module is also a reference in presenting and delivering material during lectures or learning activities.

The function of the module is as a learning material used in student learning activities. With modules students can study more directed and systematic. Students are expected to master the competition demanded by the learning activities that they participate in. The module is also expected to provide learning instructions for participants while attending lectures. Modules can be developed in various ways including through adaptation, compilation, and self-writing. Module Components According to Dasna et al. (2006) the module consists of three parts, namely: the introduction, the content, and the end. The introduction consists of a cover (front page), preface, table of contents, list of tables, list of pictures, guidance for readers, and introduction (a glimpse of the subject matter). The contents section consists of the division of subject matter, each of which consists of several components, namely: subtitles, basic competencies, indicators of learning outcomes, introduction to entering material (factual sequence towards conceptual description), student worksheets, description of material, and questions a matter of application. The final section contains a summary, evaluation, feedback, bibliography, and answer key.

English is one of the important foreign languages that must be mastered by the Indonesian Nation because English has a very strategic position, which is not only as a communication tool but also as a language of communication between nations. In addition, English is also the first foreign language that is considered important for the purpose of accessing information, absorption and development of science, technology, and cultural arts.

In relation to foreign languages, the term target language is the language that is being studied and wants to be mastered. The form of the target language can be in the form of a mother tongue (first language (B1), second language (B2), and foreign language (BA). Understanding the second language is not the same as a foreign language.), then learn a second language (Indonesian).

Language skills are essentially skills, not just knowledge. There are four kinds of language skills: listening, speaking, reading, reading and writing. For each of these skills a language component is needed in the form of knowledge about vocabulary, grammar, pronunciation (for spoken language), and spelling system (for written language).

II. RESEARCH METHODS

This research uses the Reasearch and Development (R&D) approach or in other words this research will focus on research on analyzing the needs of health analyst students in an effort to improve their ability to master English and also in this study the author will also focus on efforts to develop a learning module as a tool that can help health analyst students master English.

The development procedures undertaken in this study are the Define, Design, Develop and Disseminate stages, but the dissemination procedure refers to the development model of the 4-D learning tools described. The subjects for the learning module trials in this study were students of Health Analyst at STIKes Perintis Padang who took English courses. The type of data in this study is secondary data and primary data. Secondary data is in the form of data on the number of health analyst students of STIKes Perintis Padang, who take English courses, whereas for primary data that is obtained from expert opinion on the module products to be developed.

Data collection techniques are used in order to obtain information about need assessment and management in solving problems using interview, observation and questionnaire techniques. Analysis techniques determine the practicality, and effectiveness of a learning module analyzed based on data analysis techniques from each instrument used. The practicality analysis technique of the learning module is based on questionnaire data given to lecturers and students. This study uses a closed questionnaire Likers scale model that is composed of positive categories in the form of a continuum consisting of five scales, namely: Strongly Agree (SS), Agree (S), Neutral (N), Disagree (TS), and Strongly Disagree (STS) . The effectiveness of the learning module analysis technique tested was based on student learning outcomes tests and observation sheets, to describe students' understanding of the concepts contained in the learning module.

III. RESULTS AND DISCUSSION

The English in Analyzer module aims to improve the learning outcomes and motivation of students of STIKes Perintis Padang. Practicum modules are developed according to the material in the English course. The development of this module is carried out with the 4D research and development model, in which the development stages are: a) Defining stage, in the form of an initial analysis of the needs of the module to be developed. (b) Design Phase, in the form of a practicum module design in English courses c) Development Phase in the form of a material validation test and module format, practicality test, and effectiveness of the English in Analyzer module, and (d) Dissemination Phase (Disseminate) in the form of the distribution phase of modules that have been developed.

This English in Analyzer module has gone through a practical and effective trial phase. Practicality testing is done by asking opinions from lecturers and students through a questionnaire. From the practicality test, it was found that the English in Analyzer module was practical to be used as a learning medium. Practicality Test Data this stage aims to determine the practicality of the questionnaire sheets that will be given to lecturers. Before giving the questionnaire, Validation was carried out by two STIKes lecturer validators namely Mr. Musrial, M.Pd. and Mrs. Chairani, S.ST., M. Biomed. Obtained the module practicality results of 0.87, the module is categorized as High / Practical the results of the validation of the student response questionnaire sheet showed that the aspect of practicality questionnaire instructions with a value of 0.74 was said to be "High and Practical" based on the opinions of students.

Analysis of the effectiveness of the use of the English in Analyzer module is obtained based on student learning outcomes before and after using the English in Analyzer module. Correlated t test is used to see the comparison of the average value of students before the use of the English in Analyzer module with the use of the English in Analyzer module in English learning I. This is in accordance with the opinion of Sugiyono (2008) which states that "To prove the significance of differences in work systems old and new need to be tested statistically with correlated t-tests. If the value of t arithmetic has a value smaller than the t table or the value of t arithmetic is in the area of acceptance H_a , it can be concluded that there are significant differences in learning outcomes after using the English in Analyzer module in learning. The table value can be seen in the t distribution table with a significance level of 5%. Based on the theory, to see the difference in learning outcomes of students in using a product such as teaching materials or learning media, a minimum test must be carried out at least 4 times in real learning conditions and supplemented with pretest and posttest. Due to time constraints and conditions in testing and data retrieval, the effectiveness of the presenter can only display the results of student posttests. Based on the effectiveness formula to find the t test, the effectiveness of the presenter's learning media cannot be determined yet.

Figure1. Summary of Student Practicality Results

Mahasiswa	Indikator																									Rata - rata Momen Kappa (k)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	5	5	5	5	4	5	5	4	5	4	5	4	5	4	5	4	5	5	5	5	5	5	4	5	4	5
2	5	5	5	5	4	5	4	5	4	5	4	4	4	4	3	4	5	4	5	5	5	4	4	4	4	5
3	5	5	5	5	4	5	5	5	5	5	5	5	4	5	4	5	4	5	5	5	4	4	4	4	4	4
4	4	4	5	5	4	5	4	5	4	5	4	4	4	4	3	4	5	4	5	5	5	4	4	4	4	5
5	5	4	5	5	5	4	4	5	5	5	5	5	5	4	5	4	5	4	5	5	4	4	4	4	4	4
6	4	4	4	4	5	4	4	5	4	5	4	4	4	4	3	4	5	4	5	5	5	4	4	4	4	5
7	5	4	5	4	4	4	4	4	4	5	4	5	4	4	4	4	4	4	4	4	4	4	4	5	4	4
8	3	4	4	4	5	4	5	5	4	5	4	4	4	4	3	4	5	4	5	4	5	4	5	4	4	5
9	5	4	5	5	4	5	5	5	5	5	5	5	5	5	5	5	4	4	4	5	5	5	5	4	4	
10	4	5	4	4	4	5	5	5	4	5	4	4	4	4	3	4	5	4	5	5	5	4	4	4	5	
11	5	5	4	5	4	5	5	5	5	4	4	4	4	4	4	4	4	4	5	5	5	4	5	4	5	
12	4	5	4	4	4	5	4	5	4	5	4	4	4	4	3	4	5	4	5	5	5	4	4	4	5	
13	5	4	4	5	5	4	4	5	5	4	5	4	5	4	5	4	5	4	4	5	4	5	4	5	5	
14	4	3	4	4	4	4	4	5	4	5	4	4	4	4	5	4	5	4	5	5	5	4	4	4	5	
15	3	5	4	4	5	5	5	5	5	5	5	5	5	4	5	4	5	4	5	5	5	4	4	4	4	
16	5	5	4	4	5	5	5	5	4	5	4	4	4	4	5	4	5	4	5	5	5	4	4	4	5	
17	4	5	5	4	5	4	5	4	4	4	5	4	5	5	3	5	4	4	4	5	4	5	4	5	4	
18	5	4	5	4	5	5	5	5	4	5	4	4	4	4	5	4	5	4	5	4	5	4	5	4	4	
19	5	4	5	5	4	4	5	4	4	4	4	5	4	5	5	5	3	5	4	4	4	4	4	5	5	
20	4	5	4	4	4	5	4	5	4	5	4	4	4	4	5	4	5	5	5	5	5	4	4	4	5	
21	5	5	4	4	4	4	4	5	5	5	5	5	5	4	5	4	5	5	5	5	5	4	4	4	4	
22	5	5	4	4	4	4	5	5	4	5	4	4	4	4	5	4	5	5	5	5	5	4	4	4	5	
23	5	4	5	4	4	5	3	5	5	5	5	5	5	5	5	4	5	5	4	4	4	4	4	4	4	
24	5	5	4	5	5	4	5	5	5	5	5	5	4	5	5	5	5	4	5	4	5	4	5	4	5	
25	4	5	5	5	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	
26	5	5	4	5	4	4	5	5	5	5	5	5	5	4	5	5	5	5	5	5	4	4	4	4	4	
27	4	5	5	5	4	5	4	5	4	5	4	4	4	4	5	5	5	5	5	5	5	5	4	4	5	
28	5	5	5	5	5	5	5	5	5	5	5	4	4	5	5	5	5	4	4	4	4	5	4	4	4	
29	3	5	5	5	5	5	4	5	5	5	5	5	5	5	5	5	5	5	4	4	4	5	5	4	5	
30	5	5	5	5	5	4	3	5	5	5	5	5	5	4	5	5	5	5	5	5	4	5	4	4	4	
31	4	5	5	5	5	4	5	5	4	5	4	4	4	4	3	5	5	5	5	5	5	5	4	4	5	
32	5	5	5	5	4	5	5	4	5	4	5	4	5	4	5	4	5	5	4	5	4	5	4	5	4	
33	4	5	5	5	5	5	5	4	4	4	4	4	4	4	4	5	4	5	5	5	4	5	4	5	4	
34	5	4	5	5	5	5	5	5	5	5	5	5	4	5	5	5	5	5	4	4	4	5	4	5	4	
35	5	5	5	5	5	5	5	5	4	5	4	4	4	5	3	4	5	5	5	5	5	4	4	5	5	
36	5	4	5	5	5	4	3	5	5	5	5	4	4	5	4	5	4	5	4	5	4	5	4	5	4	
37	5	3	4	5	5	4	5	5	5	5	5	4	5	5	4	5	4	5	4	5	4	5	4	5	4	
38	5	5	5	5	5	4	5	5	5	5	5	5	5	5	5	5	5	4	5	4	4	4	4	5	4	
39	4	5	5	4	5	5	5	4	5	4	4	4	5	3	4	5	4	5	5	5	5	4	4	5	5	
40	4	4	5	4	5	4	5	5	5	5	5	5	5	5	4	5	4	5	4	5	4	4	4	5	4	
41	4	5	4	4	4	5	5	5	4	5	4	4	4	4	3	4	5	4	5	5	5	4	4	5	5	
42	5	4	4	5	5	4	5	5	4	5	4	5	4	5	5	5	4	5	5	5	4	5	5	4	5	
Jumlah nilai yang diimari	190	192	193	193	191	189	191	204	187	203	187	188	184	182	184	184	202	188	199	200	190	182	176	183	191	
Jumlah nilai	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	
P0	0,9	0,9	0,9	0,9	0,9	0,9	0,9	1,0	0,9	1,0	0,9	0,9	0,9	0,9	0,9	0,9	1,0	0,9	0,9	1,0	0,9	0,9	0,8	0,9	0,9	
Pe	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,0	0,1	0,0	0,1	0,1	0,1	0,1	0,1	0,1	0,0	0,1	0,1	0,0	0,1	0,1	0,2	0,1	0,1	
Nilai Kappa (k)	0,7	0,7	0,8	0,8	0,7	0,7	0,7	0,9	0,7	0,9	0,7	0,7	0,6	0,6	0,6	0,6	0,9	0,7	0,8	0,9	0,7	0,6	0,5	0,6	0,7	
Kategori Kevalidan	T	T	T	T	T	T	T	ST	T	ST	T	T	T	T	T	T	ST	T	ST	ST	T	T	S	T	T	
Keterangan	k: Momen kapp. P _i : Proporsi yang terealisa; P _e : Proporsi yang tidak terealisa ST: Sangat Tinggi T: Tinggi S: Sedang																									

0,71

Figure 2. Summary of Lecturers Practicality Results

Validator	Indikator																									Rata - rata Momen Kappa (k)															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25																
VLD I	5	5	5	5	5	4	5	5	4	5	4	5	4	5	5	5	5	4	5	4	5	4	5	5	4	0,87															
VLD II	4	4	5	5	5	5	5	5	5	5	5	4	5	4	5	4	4	5	4	5	5	5	4	5	4																
Jumlah nilai yang diberi	9	9	10	10	10	9	10	10	9	10	9	9	9	9	10	9	9	9	9	9	10	9	9	10	8																
Jumlah nilai maksimal	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10																
Po	0,9	0,9	1,0	1,0	1,0	0,9	1,0	1,0	0,9	1,0	0,9	0,9	0,9	0,9	1,0	0,9	0,9	0,9	0,9	0,9	1,0	0,9	0,9	1,0	0,8																
Pe	0,1	0,1	0,0	0,0	0,0	0,1	0,0	0,0	0,1	0,0	0,1	0,1	0,1	0,1	0,0	0,1	0,1	0,1	0,1	0,1	0,0	0,1	0,1	0,0	0,2																
Nilai Kappa (k)	0,7	0,7	1	1	1	0,7	1	1	0,7	1	0,7	0,7	0,7	0,7	1	0,7	0,7	0,7	0,7	0,7	1	0,7	0,7	1	0,4																
Kategori Kevalidan	T	S	S	T	ST	T	ST	S	T	ST	S	T	T	T	T	T	S	T	T	T	S			ST	ST																
Rata - rata masing aspek	0,88					T					0,88					ST					0,74						T					0,983333333					T				

Keterangan : k: Momen kappa
 Po: Proporsi yang terealisasi
 Pe: Proporsi yang tidak terealisasi
 ST: Sangat Tinggi
 T: Tinggi
 S: Sedang

IV. CONCLUSION

Based on the results of the module development research that has been done, the conclusion is obtained; 1) has successfully developed an English in Analyzer module that has been tested for practicality and effectiveness. 2) The design and manufacture of the English in Analyzer module has been through the practicality and effectiveness of the results of this test phase states that this module is practical and effective.

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