

Needs Analysis:

A learning model for CTL-based academic writing

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Abstract—This research is aimed at describing the result of needs analysis in the development process of contextual-based academic writing learning model which is linked with students' characteristics. As a research and development, this study uses qualitative and quantitative approaches using a survey method in identifying students need which comprises the need, drawback, and want. In this research, needs analysis is concerned with steps which must have gone through by the students in the writing process including pre-writing, writing, and post-writing processes. It uses a questionnaire administered to 71 students (3rd semester) of Indonesian Language and Art Study Program Faculty of Teacher Training and Education Universitas Batanghari Jambi. The result shows, in the drawback aspect, that students often experience some problems that can be seen from their mean scores of three processes of writing (3.83) categorized as high. From the aspect of needs, it is found that some competencies must be mastered by the students. It can be seen from that three processes of writing in which the score is 4.28 with the very high category. From the aspect of want, it is found that the students need some information regarding with writing process. It can be seen from their mean scores 4.17 which falls into the high category. Based on these findings, it can be concluded that students need all of the information on aspect of necessities, lack, or want contained in the questionnaire. Moreover, these findings will be used in designing contextual-based academic writing learning model.

Keywords—needs analysis; academic writing; learning model; contextual-based learning; writing activity

I. INTRODUCTION

Writing is one of the language abilities that must be mastered by students. Al Mubarak states that "Writing appears to be one of the most important, yet challenging, academic skills for university students to learn" [1].

Academic writing is one of the requirements for the students in order to finish their education. Rofii, Murtadho, & Rahmat stated that "University is required to make a scientific work, either produced by the lecturers or the students [2]. This scientific work is developed through academic writing activities". In addition, Gaith stated that academic writing is a type of formal writing which is served to readers in academic world based on scientific knowledge with scientific idea and argument [3]. Gillet limited the definition of academic writing as a kind of writing for particular audiences, purposes, and

distinctive structure [4]. A writer is demanded to have abilities related to something that he/she wants to write and how to deliver it in a form of good writing [5].

Students are required to produce good academic writing. However, they still face many problems in producing it. Those problems can be found in their essay paper or thesis. Akhadiah stated that there are many students who face difficulties in using written language [6]. The problems consist of the structure of written language, such as diction, sentence arrangement, paragraph and writing development, and structure.

Based on the result of observation and interview with 3rd-semester students of Faculty Teacher Training and Education Universitas Batanghari Jambi, some problems have identified. *Firstly*, lesson plan as a guide in writing academic writing is made without a particular approach. *Secondly*, academic writing class is run with a teacher-center method. *Thirdly*, instead of focusing on student's skill in writing, the course is more likely to master the whole materials in one semester. *Fourthly*, the limitation of course timing affects students in comprehending every lesson that they learn. *The fifthly*, learning source used in the class is limited. *Finally*, the examples of texts students used in learning are not contextual-based. These reasons might cause students to lack academic writing activity.

Based on the above statements, students' needs analysis is required to do. Rofii and Franscy stated that analysis of learners aimed to investigate the characteristics of students who are the subject of research [7]. The needs analysis is a basic step as an effort to develop academic writing learning model based on students' characters and need. In the model being developed, there are seven main components of (CTL) approach. Johnson stated that CTL is a holistic system [8]. It consists of interrelated parts that, when interwoven, produce an effect that exceeds what any single part could achieve. Each of these distinct elements of the CTL system contributes to helping students make sense of schoolwork. Taken together, they form a system that makes it possible for students to see meaning in, and retain academic material.

Brown stated that needs analysis is one of the important steps in developing a learning model [9]. Meanwhile, Joyce, Weil, & Calhoun stated that learning model is the process of building education and stimulating ecosystem in which the

students learn to interact with each component [10]. According to Richard & Renandya, needs analysis is a priority and demand which should be done in order to adjust it with users' need [11]. Besides, needs analysis is a priority and demand that should be done in order to know what one has known and what one wants to learn so that the model being developed is relevant and useful for the user [12]. In line with the statements above Graves stated that essentially, need assessment is a systematic and ongoing process of gathering information about student, needs, and preference, interpreting the information and then making course decisions based on the interpretation in order to meet the needs [13].

Suparman stated that in the context of the development of learning design, a need is a gap between the current situation compared to what it should be [14]. In other words, every situation that is less from normal should indicate a need. Brown stated "Needs analysis (also called need assessment) refers to the activities involved in gathering information that will serve as the basis for developing a curriculum that will meet the learning needs of a particular group of student" [15].

Before starting to develop the learning model, need analysis is really necessary to do so that the model being developed is in line with the students and teachers' need. This is in line with what Graves said that needs analysis will help learners to take an image of their own learning, to identify their needs in order to control their learning and to create a dialog between students to students and teachers to students [13]. Macalister argued that needs analysis is done to find out what the students have known and what they need [16]. This opinion can be analyzed that needs analysis is an attempt to find out how far learners know about what they learn and the learning that will be followed and what they need.

Furthermore, Nation and Macalister explained that there are three types of needs that must be considered in carrying out needs analysis in research development [12]. Those are: (1) necessities refer to what skills or competencies that must be mastered by students, (2) lack refers to what problems or difficulties that students face in learning, and (3) want refers to what students need to learn in the teaching materials that are being developed. Referring to the opinion of Nation and Macalister, the analysis of the needs of contextual-based academic writing learning models includes three types of needs: (1) necessity, what competencies that must be mastered by students, (2) lack, difficulties faced by students in learning academic writing lecture material, and (3) want, it consists of information needs to be learned by students in the academic writing learning model that must be developed.

II. METHODOLOGY

This research is aimed at describing students' need which is concerned with academic writing learning model being developed. As research and development, it uses qualitative and quantitative approaches.

Product development is carried out according to the steps of research and development called the R & D cycle [17]. This research involved third-semester students of Indonesian Language Education and Art Study Program, Faculty of Teacher Training and Education at Batanghari University Jambi. There are 71 students participated in giving their opinions on what they need in learning academic writing. Purposive sampling technique was used to determine respondents. Data were collected through survey techniques with instruments in the form of questionnaires. The questionnaire was used to determine student opinions related to the needs of the learning model developed. Data obtained from questionnaires were analyzed and then summarized in a table. In addition, semi-structured interviews are applied to obtain and strengthen information about the learning model the students need. Yundayani, Emzir, & Rafli stated that the interviews were applied to find the problem more openly by asking for opinions and ideas from respondents [18]. Data are analyzed using a qualitative and quantitative methods. Meanwhile, questionnaires are counted and analyzed by using statistic descriptive. Qualitative data analysis is an interpretive process, researcher reflects on their personal viewpoints and how they shape their interpretations of the data [19].

III. FINDINGS AND DISCUSSION

Yunita et al. argued that needs analysis is an initial step conducted before developing a learning model and it aims at finding out the current condition of learning in a particular learning context [19]. Based on the analysis, there are some things that are related with necessities, lack and want in students learning. Through that three things, one appropriate learning model is arranged based on the characteristics of students.

This needs analysis is done by distributing questionnaires to the students to gather information about academic writing learning and also to express students' problems and needs of the model suits their needs. The following are the description of student needs analysis in academic writing learning.

A. *Students Problem in Writing Activity (Lack)*

The first component in needs analysis is lack or problems faced by the students in writing activity. The problem is related to the syntax of writing. There are three stages of writing examined: pre-writing, writing, and post-writing activities.

TABLE I. THE RESULTS OF CALCULATION OF QUESTIONNAIRE FOR STUDENTS' (LACK) IN ACADEMIC WRITING ACTIVITY

Learning Activity	Total of Questions	Score min	Score max	Total of Category			Mean Score	Category
				Average	High	Very High		
Pre-writing	10	3.0	3.93	1 (10%)	9 (90%)	0	3.80 (90%)	H
Writing	60	3.77	4.21	0	59 (98,3%)	1 (1,67%)	3.93 (100%)	H
Post-writing	10	3.71	4.21	0	9 (90%)	1 (10%)	3.95 (100%)	H
The mean score of (lack) aspect							3.89	T

Based on the data in table 1, it can be seen that student problems in pre-writing activities are very complex. This can be seen in the number of questions answered by the students in the high category (H). Of the 10 questions related to problems in prewriting activities, 9 (90%) questions are in the high category (H) and 1 (10%) question is in the moderate category (A). This shows that students face many problems in prewriting activities as indicated by the overall score of 3.80 (90%) in the high category (H). It means that the students experience problems in pre-writing activities fall into high category intensity (H).

Data in Table 1 also reflect the complexity of student problems in writing activities. This can be seen from the number of questions answered by students in the high category (H). Of the 60 questions related to problems in writing activities, 59 (98,3%) questions fall into high category (H) and 1 (1,675) question was in the very high category (VH). This shows that the problems faced by students in writing activities are very complex as indicated by the overall score of 3.93 (100%) which falls into high category (H). In other words, students experience high-intensity problems in writing activities (H).

Moreover, the data also explains the complexity of the problems experienced by the students in post-writing activities. This can be seen in the number of questions that are in the high category (H). Of the 10 questions related to the

problems in post-writing activities, 9 (90%) questions fall into high category (H) and 1(10%) question falls into very high category (VH). This shows that students experience many problems in post-writing activities as indicated by the overall average score of 3.95 (100%) which falls into high category (H). It means the students experience problems in high-intensity writing activities (H).

The results of the analysis show that in the lack aspects, students often experience various problems in writing activities. This can be seen from the average score obtained in the three stages of writing activities. The score is 3.83 (96,67%) which falls into high category (H). In other words, students experience problems high intensity in writing activities (H). The result is similar to study conducted by Yunita et al., Yundyani et al., Poerwanti et al. stated that the components are necessary when their scores are at interval 70% – 100% [18-20].

B. Competency that should be Mastered by the Students in Academic Writing (Necessities)

The second component in analysis learning model is necessities. Necessities in this research refer to the skills or competences regarding with things that should be mastered by the students in learning writing activity. There are three main components in writing. They are pre-writing, writing, and post-writing.

TABLE II. THE RESULT CALCULATION OF COMPETENCE QUESTIONNAIRE WHICH MUST BE MASTERED BY THE STUDENTS (NECESSITIES) IN ACADEMIC WRITING ACTIVITY

Learning Activity	Total of Questions	Score min	Score max	Total of Category			Mean Score	Category
				Average	High	Very High		
Pre-writing	10	4.24	4.37	0	0	10 (100%)	4.27 (100%)	(VH)
Writing	60	3.85	4.56	1 (1,67%)	24 (40%)	35 (58,3%)	4.33 (98,33%)	(VH)
Post-writing	10	4.19	4.33	0	1 (10%)	9 (90%)	4.26 (100%)	(VH)
The Mean of Aspect of Competence which must be mastered (necessities)							4.28 (99,4%)	(VH)

Table 2 above describes that there are so many pre-writing activities that that must be mastered by the students. It can be seen from the total of statements which fall into very high category (VH). From those 10 (100%) questions in pre-writing, it can be found that every statement falls into the very high category. (VH). This shows that the competencies explained in the table is necessary for students' pre-writing activity. It is shown from the mean score 4.27 (100%) which falls into very high category (VH).

Based on Table 2 above, it can be seen that the students need to master some competencies in writing activity. That is supported by the statement in the high category (H) and very high category (VH). From 60 questions that were given to the

students, it can be seen that 35 (58,3%) questions fall into the very high category, 24 questions fall into very high category (H) and 1 (1,67% fall into average category (A). The highest mean score is 4.56 in very high category (ST) and the lowest mean score is 3.85 in high category (H). This shows that the competencies that are explained in the questionnaire in writing activity are necessary. It is shown from the mean score of whole writing activities which is 4.33 (98,33%) and fall into a very high category (VH).

Moreover, Table 2 also explains that there are many competencies that should be mastered by the students in post-writing activity. It can be seen from the total of statements which fall into very high category (VH) and high category

(H). In line with student's competencies in post-writing, it can be seen that there are 9 (90%) questions that fall into very high category (VH) and 1 (10%) question that falls into high category (H). The highest mean score is 4,30 which falls into very high category (VH) and the lowest mean score is 4,0 which falls into high category (H). this means that those competencies in post-writing being explained in the table above is necessary for the students. It is reflected in the whole mean score of the students. The score is 4.26 (100%) which falls into very high category (VH).

The result of the analysis shows that necessity aspect must be mastered by the students. It can be seen from the mean score necessities aspect which is gained from those three processes of writing. The score is 4.28 (99,4%) falls into the very high category (VH). It means that students need to learn

competencies are required to be learned by the students with a high level of needs. It means that the students need to require some high intensity of competencies in writing activity (VH). The similar results also found by Yunita et al., Yundyani et al., Poerwanti et al. [18-20]. The study they conducted revealed when the need component scores are at interval 70% – 100%, then it is considered to be necessary.

C. Students' Want in Writing Activity

The third aspect in needs analysis in this research is students' want. Want refers to the material or information that students need to learn in the model being developed. To get a picture of students' need, a questionnaire is used. That questionnaire is linked with students' want in academic writing learning steps, they are a pre-writing step, writing step, post-writing. The result of the questionnaire is described in the table below:

TABLE III. THE RESULT OF CALCULATION OF STUDENTS' WANT IN ACADEMIC WRITING ACTIVITY

Learning Activity	Total of Questions	Score min	Score max	Total of Category			Mean Score	Category
				Average	High	Very High		
Pre-writing	10	4.13	4.35	0	1 (10%)	9 (90%)	4.24 (100%)	VH
Writing	60	4.02	4.42	0	37 (61,67%)	23 (38,3%)	4.17 (100%)	H
Post-writing	10	4.0	4.24	0	8 (80%)	2 (20%)	4.12 (100%)	H
The Mean score of the aspect of (want)							4.17 (100%)	H

Table 3 shows that most of the questions given to students get an average score above 4.0 which fall into high (H) and very high (VH) categories. Of the 10 questions given to students, 9 (90%) questions were in the very high category (VH) and 1 (1%) question was in the high category (H). The highest average score is 4.35, while the lowest average score is 4.13. Thus, it can be seen that the needs aspect of students in pre-writing activities is quite a lot. It can be seen from the attitude of students on the level of the importance of the information provided, which divided into important and very important categories. In addition, the overall average obtained is related to the needs and expectations of students in pre-writing activities. The score is 4.24 (100%) which falls into the very high category. This shows that students need all the information presented in the questionnaire that is shared.

Based on Table 3, it can also be seen that the questions given to students at the stage of writing get an average score above 4.0 which falls into high (H) and very high (VH) category. Of the 60 questions given to students, 23 (38,3%) questions were in the very high category (VH) and 37 (61,67%) questions were in the high category (H). The highest average score is 4.39 which falls into a very high category while the lowest average score is 4.02 which falls into the high category. Thus, it can be seen that the needs of students in writing activities are very large. It can be seen from the attitude of students on the level of importance of the information provided, which fall into important and very important categories. In addition, the overall average obtained is related to the needs and expectations of students in writing activities are 4.17 (100%) which fall into a high category. This shows that students need all the information on writing activities which are presented in the table.

Table 3 shows the average score of student needs at the post-writing stage. Based on the table above, it can be seen that the needs of students at the post writing stage are quite

large. This can be seen from 10 items of questions given to students in the high (H) and very high (VH) categories. Of the 10 items in question, two of them (20%) are in the very high category (VH), and the remaining 8 (80%) are in the high category (H). The highest average score of 4.24 is in the very high category and the lowest average score of 4 is in the high category. Based on the table it can be concluded that students need all the information asked on the table. This is evidenced by the results of calculating the overall average score of 4.12 (100%) which falls into the high category (VH). Or in other words, the level of importance of the information for students is in the high category.

The results of the analysis show that in the aspect of students' want, they need a variety of information in writing activities. This can be seen from the average score on the aspect of want obtained from the three steps of writing activities is 4.17 (100%) which falls into the high category. In other words, students need a high level of need for getting information in writing activities (H). This is aligned with study reports by Yunita et al. [19], Yundayani et al. [18], Poerwanti et al. [20] suggesting that the needs are required when the scores of the component are in the interval of 70% – 100%.

IV. CONCLUSION

The result and discussion suggest that the need analysis of lack and want is in high category and the necessity is in very high category. The average scores of pre-writing, writing, and post-writing of the three aspect are 3.83, 4.17, and 4.28 respectively. It means that students face some difficulties, need some competencies to master, and require information in writing activity. These results imply that the students need all information either on lack, want or necessity. Therefore, those needs are considered as the basics for designing a model that

accommodates all students' needs, that is contextual-based academic writing learning in the form of a module.

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