

Need analysis-based lesson plan for English instruction in the faculty of science

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| ARTICLE INFO | ABSTRACT | | |
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| Keywords: need analysis, lesson plan | <i>English is one of the required subjects in Universitas Mulawarman, and its inclusion in the curriculum of each faculty is different. In natural science faculties, for example Agricultural Faculty, Medical and Health Sciences Faculty, and Science and Engineering Faculty, English is included in the even semester. As a general required subject, its learning objective is however still debatable: Is it to introduce English to the students? Is it to drill students with the English skills? Or is it to help students write an academic writing in English? The various objectives of the English learning in those faculties bring about confusion for the lecturers in designing the lesson plan. This paper is aimed at finding out the students' need of English as their required subject so that the learning process is well-guided. There are two classes of the three faculties that will be involved in this research. Each class consists of about 40 students, and the researcher will take 50% of the total number of the students from each class. They are supposed to fill in the questionnaire containing some questions about the learning materials and the class activities they need. Their answers to the questions will be used as the guideline for the English lecturers in designing the lesson plan so that it meets the students' need.</i> | | |
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1. Introduction

English, as stated by Crystal (2003) is a global language spoken by more than 1.500 million people all around the world. Through the history, English has been the most successful language and the most potential language to develop in the future among other international languages. Used as lingua franca in some countries, English plays an important role in international communication. Besides, in the academic field, English also has the role of the medium language. Books, articles, journals, and many other knowledge sources are written in English. Students are supposed to master at least passive English to comprehend the English literature. In Indonesia, English is a foreign language taught in schools and colleges as part of the curriculum. This paper is going to specifically discuss English teaching-learning process in natural science faculties of Universitas Mulawarman, particularly in agricultural faculty which includes English as a required subject taken by the first academic year students.

Through the teaching-learning process, there has been a question leading the research to conduct mini research of the learning objective of English in agricultural faculty of Unsoed.

Before conducting this mini research, the researcher did a research entitled *An Analysis of the Students' Need of English Learning in Faculty of Social and Political Sciences*. The research was to answer three questions: a) how do the students view English as an academic activity, b) how do they view the role of English in their future, and c) how do they view English to play role in their social and personal lives. Therefore, the researcher is interested in conducting a mini research on another aspect. As a general required subject, its learning objective is however still debatable; whether it is to introduce English to the students, to drill students with the English skills, or to help students write an academic writing in English. The research was conducted based on the need analysis and the researcher delivered some questionnaires containing some questions about the students' need of English.

The result of the research will be used as a guideline to help the lecturers in designing the lesson plan. According to Milkova (2013), a lesson plan is the lecturer's road map of what students need to learn and how it will be done effectively during the class time. A successful lesson plan should consist of at least the following components:

Objectives for student learning

1. Teaching/learning activities
2. Strategies to check student understanding

Specifying the lesson objectives will help the lecturer determine what kinds of activities to do in the class. The activities have to be student-centered because in a language class, students are supposed to use the allocated learning time to maximize their ability in using language. This learning model will help students do self-motivation and encourage them to get involved actively in the class.

2. Research Methodology

This mini research was conducted to find out the agricultural faculty students' need of English as one of the general required subjects they have to take in the even semester particularly in semester 2. To meet students' need, the English teaching-learning process should be a purposed-based teaching• learning process or what so called English for Specific Purposes (ESP). According to Adam-Smith (1986), the need analysis is carried out to answer at least two of the following questions: 1). What the subject teacher thinks the learner needs to know, 2). What the institution thinks the learner needs to know, 3). What the English language teacher thinks the learner needs to know, 4). What the learners think they need to know, 5). What the learners want to know (wants), and 6). What is compatible with specific local features of the environment (means).

In this case, the researcher focused on question numbers 3 and 4; to know what the English language teacher thinks the learner needs to know and to know what the learners think they need to know. Those two questions are related to the lesson objective in teaching English in

that faculty. To answer these questions, the researcher delivered close-ended questionnaires containing some questions related to their needs for English, so the lecturer can adjust the teaching materials as well as the suitable classroom activities. The participants were the students of the agricultural faculty of Universitas Mulawarman who took English in the second semester. In that faculty, there are five parallel classes consisting of 40-50 students each class, and the questionnaires were delivered randomly to sixty students; 10-15 students were recruited from each class.

3. Findings

Learning objectives of English in the Agricultural Faculty

The first question is about the learning objective of English in the Agricultural Faculty. There are three options for this question: a) to introduce English as a foreign language, b) to master English skills such as reading, speaking, writing, and listening, c) to help students understand English text as well as write academic articles in English. The result shows us that 29 students want to be able to understand English texts and write academic articles in English. It is related to a requirement in which students are to write their thesis abstract in English, so they expect that through English they will be able to practice writing in English. On the other hand, 24 students want to master English skills such as listening, reading, speaking, and writing so that they can apply their English outside the class. Four students choose the first option; understanding English as a foreign language. -

The first option emphasizes merely on an introduction to English as a foreign language. Students are introduced to English language in general situation. It means students focus on English grammar as an introduction to the upper level of English. However, at Universitas Mulawarman English is taught in one semester, so the objective should be specific, considering the limited time of the learning process.

The description above shows us that the learning objective of English in the research site required by the students is that through English they are able to master both passive and active English for academic purposes. The lecturer has to take it into consideration the students' need of both active and passive English to design the lesson plan. However, some obstacles are likely to occur during the learning process, for example number of the students that is relatively high for a language class. Another obstacle that may occur is that the students taking the course are from non-English fields. To maximize the teaching-learning process, the lecturer has to design the lesson plan covering materials and activities that are suitable to be implemented in accordance to meet the students' need.

The answer to the first question shows that there are two major learning areas the students want to achieve: mastering English skills and understanding and writing academic texts. Reading, listening, and speaking skills may be integrated with the academic text given in each meeting, while for listening skill, it seems quite difficult to be conducted due to the equipment to use. Generally, in General English classes, the management does not provide equipment to support listening activities. Besides, the number of the students (40-50 students each class) also becomes another factor that makes listening activity unlikely to do.

4. Discussion

English learning activities

The second question is about the learning activities that are suitable for the learning objective. The researcher provides the respondents with three options: a) focusing on English language structure, b) English skills, i.e., speaking, writing, listening, and reading, c) group discussion on certain themes. For that question, 37 students choose the second option: speaking, writing, reading, and listening activities, and 14 students choose discussion on certain themes as the main activity during the class time, while six students want to focus on general English language; in this case, they want to study English language structure that focuses on micro skill focusing on English grammar. The result shows that the students want to master those four English skills to apply in understanding academic texts related to their major. To prepare the activities for the students, the lecturer has to manage the time well in order that the overall activities run well as planned. Within 100 minutes each meeting, the lecturer needs to wisely plan and organize the activities to be done. For those four skills, it seems quite hard to cover all of them, so the lecturer has to wisely choose which skill to come first.

As an illustration, to start the class, the lecturer introduces the topic of the discussion, and then gives them explanation on what activities they need to do; the students may be given time to brainstorm themselves before discussing. After that, the lecturer gives the students some time to read the text after putting them in groups or pairs. Working in groups or pairs enables students to work independently yet cooperatively with other students for they are not supposed to be dependent only on the lecturer. By letting students work in groups or pairs, the lecturer helps them to engage them in the topic so the next activities will be relatively easy to do. Engaging the students in the topic will lead them to be critical and active in other activities like speaking, writing, and even listening for information delivered by their friends or lecturer.

By conducting an integrated activity, students are able to practice those four skills as well as comprehend the content of the text. However, in the real practical situation, the process does not always run as planned. Some students are likely to be active during the class time, while the others are not. Due to the lecturer's role as the facilitator for the students, the learning process should be a student-centered learning process in which students are the ones who have to explore the lesson with the lecturer's help and guidance. It is lecturer's duty to monitor the class activity and to check the students' understanding about the lesson which is being discussed. In his/her lesson plan, the lecturer must include the evaluation process to know whether or not the students understand the lesson.

Learning topics

The third question focuses on the topics given to the students each meeting. There are two options for this question: a) yes, b) no. To this question, 32 students say that the topics meet their expectation, while 25 students have different opinion. Here, the English lecturer uses a book compiled and written by some English lecturers, published by Unsoed Press consisting of 12 chapters with different topic in each chapter. The book is also used in other natural science faculties, so the topics are related to natural sciences, for example Plants, Living

Things and Non-Living Things, Blood Groups, etc. To some extent, related topics help students understand the language focus because they are familiar with the words and terms used in the discussion.

The topics of class discussions are various each week, yet, some improvements are still needed. The book has been used for about 10 years, so there are some topics that are out of date. At this point, the lecturer needs to give the students up-to-date texts to avoid boredom. Choosing interesting topics in teaching-learning process is important to attract students' attention during the class. The lecturer can bring students to read articles about natural phenomena that happen recently; it is more interesting because students can talk about something they know or even see directly.

Themes that meet the learning objective

The fourth question is about the theme of the discussions that the students need during the course. For this question, the researcher gives the respondents three options: a) themes related to their subject, b) common themes, and c) both themes delivered in turns. Most of the respondents (31 students) choose the third option, eighteen respondents choose the first option, and eight respondents choose the second option. The result shows that although the respondents are from natural sciences, they want various themes to be presented to enrich their knowledge and vocabulary.

The theme should be broader than the topic, for example the theme of the first meeting's discussion is Climate, then the topic is global warming, vegetation migration, etc. The lecturer then leads the students to talk about it and do exercise based on the theme. If the learning objective is to make students able to understand and write academic articles, choosing related themes is helpful. Students will at least have schemata about what is being read because the issues are close to their background knowledge.

However, if the themes are too monotonous, it is likely for students to get bored easily. Therefore, giving them common themes is also suggested to the lecturer to make the teaching-learning process more interesting. Some students prefer to have various themes to discuss in the class because they think that they need to talk about something different. For example, when they practiced writing a description, they prefer to write something unrelated to their study such as people, hobby, music, fashion, and so on.

Home work or assignment

In checking students' achievement in this subject, the lecturer needs to do some evaluation, for example by giving students homework or assignment. In this regard, the researcher delivers the last question about whether or not the lecturer needs to give them homework or assignment and 42 respondents need the lecturer to give them homework or assignment. The homework or assignment is given to check students' understanding of the topics, so it must be in the form of a review taken from other sources that have a relation with the topic discussed. The latter can be used to check if students really get the point of the same topic presented in different sources.

Giving students homework or assignments from other sources will encourage students to read more references and to broaden their knowledge. The lecturer gives students time to discuss and practice their English in class to drill their skills, and then gives them assignment such as article reviewing or journal reading to enrich their knowledge as well as to encourage them to think critically about issues presented in the articles or journals.

5. Conclusion

After doing this mini research, the researcher concludes that the students want the lesson objective of English is to help them understanding English texts and reading as well as writing an academic article in English. However, the students also want to master English skills such as reading, writing, speaking, and listening; therefore, they prefer class activity that enables them to practice active English through a student-centered learning process. Due to the major the students take, the topics and themes presented each meeting must meet their need; the topics and themes are supposed to have relation with their major. Yet, common themes are also likely to be presented in order to enrich students' knowledge. The core of learning is that the learners or students can apply the knowledge they got, and to check whether the students are progressing or not, the lecturer can give them regular homework or assignment. The result of the research is expected to be able to give English lecturers of Universitas Mulawarman, particularly those who teach English in natural science faculties, a consideration in designing the lesson plan to be used in the class.

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