

Developing ESP Material for University Agriculture Students in Indonesia

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ABSTRACT

In today's increasingly advanced, interconnected, and open world, job seekers face competition not only on a regional or national level but also internationally. English proficiency is a highly valuable asset for university graduates because English is the international language used by all parties worldwide. Graduates from the Faculty of Agriculture in Indonesia are no exception. They face the demand for English skills, especially those that are directly applicable to their chosen field of study, to be competitive in the job market. English for Specific Purposes (ESP) is the answer to this problem. ESP can greatly assist agriculture students in mastering vocabulary, topics, articles, and other contexts specific to their field. This need will be further explored in detail through a needs analysis to understand the extent of students' needs regarding the four language skills: reading, writing, listening, and speaking. The results of this needs analysis will be combined with the existing curriculum in the Faculty of Agriculture as a source of topics and articles to be included in the materials. This will then be reviewed by experts using the Likert scale to ensure the quality of the agricultural ESP learning materials.

Keywords: *ESP, English Education, Agriculture English*

INTRODUCTION

In the modern world of today, with the Internet blurring the vast distances between places and countries around the world, the need and demand for English language skill due to its status as the unifying language (al-Dabbagh, 2005) to connect people all over the world becomes very apparent. Mastery of English as the mark of industrialization and globalization plays a very important role in influencing employment, including in Indonesia (Rido, 2020). Most job opportunities and vacancies post English skill as one of their requirements. This is not limited to just English-major students and instead applies to almost all majors and science discipline, hurling English forward as the most important skill to be owned by a university graduate to become and stay competitive in today's job market (Clement, 2018).

English is not a native language in Indonesia, therefore most students approach English in the form of English as a foreign language (ESL). Naturally, Indonesian students face hurdles in studying English from incompatible grammatical structure with Indonesian language, pronunciation, to vocabulary. The lack of vocabulary is especially apparent and visible due to specific and concentrated nature of tertiary education, involving topics, terms, and vocabulary that cannot be provided by general English lessons. Meanwhile, the interconnected world nowadays highly encourages students to open their worldview and access information from all over the world to enrich their knowledge in their specific subject. Having language as a barrier to further knowledge is no longer an acceptable excuse. Students should not be constricted to local material and

information in their own native language because they need a wider knowledge in their field to compete in the globalized world.

To further enhance the English skill of tertiary level graduates, General English should be complemented with English for specific purposes (ESP) specific to their field. English for specific purposes has been a distinguishable entity as a branch in the field of English Language Teaching (ELT) since the 1960s (Rahman, 2015) (Hyland, 2007). ESP was established for practical reason, the need for English-language-proficient technicians, engineers, and professionals (Coffey, 1984) who followed the rapid expansion of technology and science after the second world war. ESP has gone a long way since its inception, ESP has been in the forefront of both theory and practice of applied English linguistics with its pragmatism in approaching language teaching. This pragmatism involves corporate communications, openness to interdisciplinary influences on its research method, theory, and practice, and being a practitioners' movement with focus on solving and providing professionals with usable set of skills that are directly applicable in their work (Johns, 2012).

In ESP, English is not taught as a separate entity from the learners' subject and specialty, but as a tool that can directly assist the learners in their chosen subject. ESP focuses on topics, vocabulary, and skills in a specific subject that can provide learners with all-encompassing 4 language skills; reading, listening, writing, and speaking, specifically tailored to help learners tackle their chosen subject. Needs analysis is inseparable from any ESP learning material research and development, it is needed to measure the importance of aspects needed.

In ESP needs and awareness of these needs is more important than in general English. In general English, needs cannot really be distinguished because the language being learned is simply a general

tool used to communicate, but in ESP needs can be determined by using needs analysis. Awareness about the target situation and the best way to overcome these needs help lecturers and students study English in targeted manner, by focusing on the much needed aspects of the English language while spending less time on the less important ones. The distinguishment between the important and less important factors to study in ESP is what can be gained with needs analysis. This study intends for the needs analysis to determine how the 4 main language skills; reading, listening, writing, and speaking, stack in importance according to students in tackling their course material in Agriculture faculty in Indonesia. For the content including articles, topics, vocabulary, and slangs, this research will focus more on the establish curriculum of the program study. This ensures the students to receive the most suitable content relatable to their subject whilst learning English. The target needs in needs analysis are the knowledge and abilities that learners need to be able to perform appropriately in the target situation. The analysis of target needs is divided into three parts: necessities, lacks and wants.

Although not unique to ESP, the needs is a defining element in its practices and the main source of its interdisciplinarity. The means to define specific skills, texts, linguistic forms and communication practices that a specific group of learners needs to achieve a higher degree of efficiency and performance in their specialty or professional line is at the center of ESP. Needs analysis is the marker of pragmatic approach of ESP in professional, academic and professional line of work. It is a key link between perception and practice and helps ESP keep its feet on the ground by reducing excess academic theory and practical application (Hyland, 2007).

REVIEW OF RELATED LITERATURE

Content-based Instruction (CBI) is an important approach to language education designed to teach second-language learners content and language. It is intended to make learners independent so that they can continue learning even outside the classroom. Content-based Instruction is a powerful innovation in language education in a wide range of educational environments. The CBI has strong empirical support, and many well-documented programs have been successful, providing additional support for this approach (Grabe and Stoller, 1985).

CBI is based on two basic principles: CBI didasarkan pada prinsip bahwa "People learn a second language more successfully by using it as an indicator rather than as a goal". and "The CBI better reflects the needs of the learners to learn a second language" (Richards & Theodore S. Rogers, 1986). CBI advocates for an integrated skills approach to language teaching involving the teaching of multiple skills simultaneously, just as in the real world where interactions involve multiple skills out of the four language skills simultaneously. (Bula Villalobos, 2014) CBI and ESP have symbiotic nature, CBI syllabus plays a role in ESP course design. CBI can serve as an equally efficient organizing principle for ESP courses. Ultimately, CBI is a one of the many valid choice to be used as the organizing principle of an ESP course.

In the field of ESP, materials evaluation is defined as a method to assess whether the materials meet the learners' requirements or not. State evaluation is essentially a matching process between the requirements and potential solutions (Hutchinson & Waters, 1987). It means that considerations should be made when evaluating English learning materials based on the students needs. (Hutchinson & Waters, 1987). It means that considerations

should be made when evaluating English learning materials based on the students needs. Three distinct stages exist for the preparation of materials, which are:

- a. The identification of pertinent contextual information pertaining to the students, the instructor, the course curriculum, and the institution.
- b. Analysis on the features of the textbook, followed by an overall rating of the text.
- c. The actual evaluation of the textbook's acceptability, encompassing both the rating and weighting of specific evaluative criteria.

The initial steps towards initiating a materials evaluation entail defining the criteria. This study uses criteria as follows: The appropriateness of the materials' content; The appropriateness of the language used in the materials; The Appropriateness of the Methodology; and The appropriateness of the layout of the materials (Dian, 2015).

Learning material for ESP will be different for every discipline/program study because they require different set of skills from their English practitioners, mainly derived from both the curriculum and specific needs of the students. The ideal learning materials for students of the faculty of Agriculture should meet all their target needs. The ESP approach used in this research will narrow down the context of the language teaching based on the target situation of the students.

In order to gather the necessary data regarding the students' requirements, a questionnaire will be distributed to the students of the faculty of Agriculture, Batanghari University. An analysis of needs was then conducted to determine the suitable ratio of the 4 language skills; reading, listening, writing, and speaking to be incorporated into the resultant learning material in the form of an ESP Book. Based

on the results of the needs analysis, the syllabus was created. This syllabus was used as a basis for the development of the materials. According to the contents of the materials, CBI will be used in the materials development process. The rationale behind employing the CBI approach in this study is rooted in the principles of CBI, which assert that English serves as a means of communication to acquire knowledge about the subject areas of the students. Through CBI, the materials will focus on the content of the English for Agriculture by providing sufficient tasks, texts and vocabulary related to English for Agriculture in accordance to the ratio of needs for reading, listening, writing, and speaking obtained from needs analysis.

METHODOLOGY

The objective of this research is to develop suitable model of English learning materials for students of the faculty of Agriculture, Batanghari University. Therefore, this research is classified as Research and Development since the result is a finished product that can be used appropriately in an educational program (Gall, M. D., Borg, W. R., & Gall, 2002).

The research was conducted in Batanghari University, which is located on Jl. Slamet Riyadi No.1, Sungai Putri, Danau Sipin, Kota Jambi, Jambi 36122, from April to September of 2024. The implementation of needs analysis and use of final product will be conducted on students of the faculty of Agriculture.

The subjects of this research were the students of the faculty of Agriculture. The subject consists of 30 students picked randomly from various classes and years to give a balanced perspective of the needs of English in the program study. Surveys were conducted to collect the opinions of students regarding the 4 skills of English, reading, listening, writing, speaking plus vocabulary to be processed in needs analysis. This research also analyzes the

curriculum and transcripts of some Agriculture Bachelor Degree program in Indonesia to determine the most suitable topic to be included in the ESP book through the mode analysis. The research methodology employed in this study is based on the system approach model proposed in (Gall, M. D., Borg, W. R., & Gall, 2002). However, the system will be adjusted to conform to the requirements of the research.

In this study, the data were collected using questionnaires. The students will be asked several questions that will then be converted into the element of necessities lacks, and wants specific to their program study. The answer to the questions will also be converted into the portion of the 4 language skills; reading, listening, writing, and speaking, and vocabulary, tailored to help them tackle the requirements of their program study. The content and articles included will be derived from the curriculum of Agriculture implemented in some Indonesian Universities including Batanghari University. After the first step of the material is done, questionnaires will be given to experts determine the suitability of the designed materials. The questionnaires for expert judgments utilized a Likert Scale to gather the data. The scoring of Likert was conducted according to the five-point Likert score criteria for questionnaire.

Five-point Likert score criteria for questionnaire (Nithideechaiwarachok et al., 2022)

Scale	Criterion	Range (\bar{x})
1	Very low	1.00 – 1.80
2	Low	1.81 – 2.60
3	Moderate	2.61 – 3.40
4	High	3.41 – 4.20
5	Very high	4.21 – 5.00

The data analysis of the questionnaire will be conducted by focusing on the frequencies and percentages. Answers with the highest percentages of appearance will be considered representing the students' needs. The percentage is calculating by dividing the frequency by the total of the respondents and then the results is multiplied by 100%.

FINDINGS AND DISCUSSION

The curriculum analysis was conducted by analyzing the agriculture transcripts and curriculums of several Indonesian universities. These transcripts and curriculums were analyzed to find the main points of convergence and divergence in the agriculture educational approaches across different institutions.

In University of Padjajaran, the Faculty of Agriculture at Universitas Padjadjaran focuses on enhancing the sustainable productivity of the agriculture sector through innovative practices that garner international recognition (Padjajaran, 2024). Meanwhile, the agriculture curriculum at Universitas Lampung's Agrotechnology Department encompasses a broad range of topics designed to provide students with a comprehensive understanding of agricultural sciences (Lampung, 2024). Key areas of study include agricultural biology, which covers essential biological principles, and basic physics, focusing on its applications in agriculture. This department also have specialized courses in plant and soil sciences, aimed to equip students with both theoretical knowledge and practical skills necessary for addressing modern agricultural challenges.

By comparing these curricula, the analysis provided insights on the materials considered important by universities and institutions in preparing the next generation of agricultural professionals. These important things are the included in the

Agriculture ESP book as the main topic of each chapter. From these information, 14 topics were chosen to be included as the main topics of each chapter of the agriculture ESP book that is made. These 14 topics are: History of Agriculture, Economics, Agrotechnology, and Sustainable Agricultural Practices. The book is designed for use in university course that spans 16 sessions. This allows the entirety of each chapter to be discussed in one session, ensuring that the book's content aligns with the lesson or training schedule. 2 sessions are allocated for midterm test and final test, therefore having 14 chapters in the book is sufficient. Each chapter of the book is then paired with suitable reading topics tailored to enhance the learning experience in line with agriculture. This is especially important as the needs analysis put an emphasis on reading skill. These topics will be crafted to facilitate comprehensive course questions that engage all four English skills: reading, speaking, writing, and listening, along with vocabulary enhancement.

The needs analysis is obtained by giving a survey to 40 Agriculture students of Batanghari University. The survey contains questions about 4 English skills and vocabulary. The questions ask about importance, confidence, frequency of exposure, sufficiency, and self-assessed competence of each of the skills the students have according to them. The data was then tabulated and statistically analyzed to determine the means of each parameter. The need for each skill is then compared to determine the ratio of educational content to be put inside the ESP book according to estimated meeting duration.

The questionnaire was given to Agriculture students of Batanghari University of Jambi, Indonesia. The questionnaire was in the form of online form with 25 questions with 5 questions for each of the 4 English skills and vocabulary.

The first part of the questionnaire asks about the Listening part of the English skill.

In evaluating the language skill emphasis for agriculture students, a detailed analysis of the mean values for speaking, listening, writing, reading, and vocabulary was conducted to reveal the weighted priorities. By calculating the total mean for each category and determining their respective percentages, which skills that are to be emphasized can be determined. This analysis is important to highlight the critical language areas that require focus but also guides the development of a targeted English for Specific Purposes (ESP) program to enhance agriculture students' academic and professional capabilities in their field.

Based on the analysis of the questionnaire provided, the needs analysis of the ratio of needed language skills, writing, speaking, listening, reading, and vocabulary, reading emerges as the most prioritized skill with a percentage of 20.56%, underscoring its critical role in academic success for agriculture students. Students seem to recognize that this skill is essential for accessing and understanding a wide range of scientific literature, manuals, and regulatory documents, which are pivotal in the field of agriculture. Closely following is vocabulary at 20.47%, highlighting the importance of a robust vocabulary to comprehend specialized agricultural terms and effectively communicate complex ideas for the agriculture students.

Listening skills are also significantly emphasized at 20.43%, reflecting their importance in understanding lectures, multimedia resources, and collaborative discussions. This is even more apparent in the age of the Internet like today, where informational videos of any topics and fields of study are readily accessible, freely, and plenty on the various video websites. This skill enables

students to engage independently with the educational content and professional dialogues they need to improve their skills in their field, in this case, agriculture. Speaking, at 19.39%, showed students recognition to the importance of expression of ideas and findings in academic and professional settings, facilitating effective communication and collaboration with peers and experts. Lastly, writing, at 19.14%, is crucial for documenting research, preparing reports, and crafting academic essays. This skill ensures that students can communicate their insights clearly and professionally.

Overall, the needs analysis highlights a balanced distribution of language skills needed by agriculture students, with a slightly higher emphasis on reading and vocabulary. This suggests a need for a comprehensive ESP program that integrates these skills mostly equally, enabling agriculture students to excel in their studies and professional endeavors by equipping them with the necessary linguistic tools to navigate the complexities of their field.

CONCLUSION

The conclusions that can be taken from this research are as follows: Needs analysis conducted on the agriculture students of Batanghari University for the English for Specific Purposes (ESP) indicates that reading (20.56%) and vocabulary (20.47%) are the top priorities for learners, followed closely by listening (20.43%). Speaking (19.39%) and writing (19.14%), showing ESP curriculum should prioritize reading while ensuring balanced skill development in vocabulary, listening, speaking, and writing. In addition, curriculum analysis of Indonesian universities shows a strong focus on sustainable practices, technological integration, and agroecology. Core courses in soil science, crop production, and agribusiness management provide students with essential theoretical and practical

skills, preparing them for modern agricultural challenges.

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