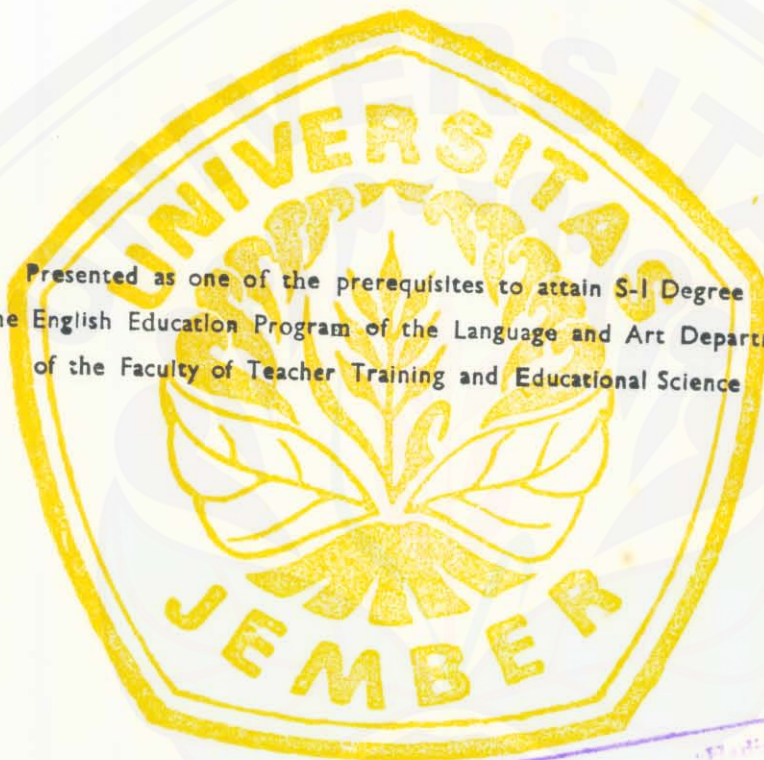


DEVELOPING A MODEL OF ESP READING MATERIALS
USING CONTENT-BASED APPROACH FOR THE SECOND YEAR STUDENTS
AT THE VOCATIONAL SCHOOL OF AGRICULTURE
SUKORAMBI-JEMBER IN THE ACADEMIC YEAR 2000-2001

THESIS

Presented as one of the prerequisites to attain S-I Degree
at the English Education Program of the Language and Art Department,
of the Faculty of Teacher Training and Educational Science



By

Handoyo Duij Widodo

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FACULTY OF TEACHER TRAINING AND EDUCATIONAL SCIENCE
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2001

MOTTO

No Checking Without Data

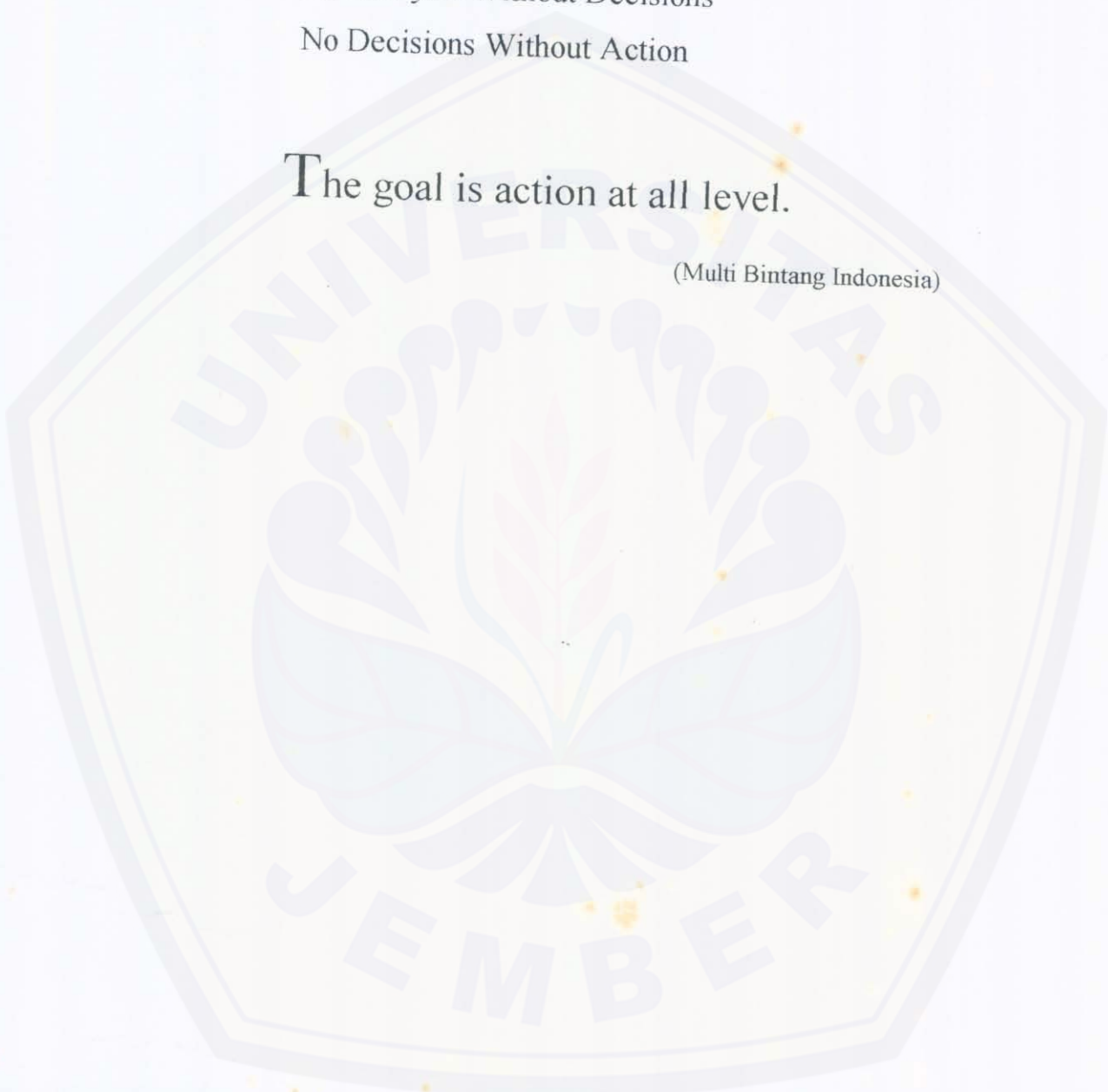
No Data Without Analysis

No Analysis Without Decisions'

No Decisions Without Action

The goal is action at all level.

(Multi Bintang Indonesia)



This thesis is dedicated to:

1. My beloved father who always gives me great affection, motivation, and assistance;
2. My beloved mother who always provides me invaluable affection, motivation, and assistance;
3. My beloved religion teachers and several subject teachers who always give me incredible affection, motivation, and assistance; and
4. My beloved almamater.

APPROVAL

This thesis is approved and examined by the examination committee of the Faculty of Teacher Training and Educational Science, Jember University

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Presented as one of the prerequisites to attain S-1 Degree
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The Writer

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Handoyo Puji Widodo, 1997. Developing A Model of ESP Reading Materials Using Content-Based Approach for the Second Year Students at the Vocational School of Agriculture Sukorambi-Jember in the Academic Year 2000/2001.

Thesis, English Education Program, Language and Art Department, Faculty of Teacher Training and Educational Science, Jember University

Consultants : 1. Dra. Wiwiek Eko Bindarti, M. Pd.
2. Drs. I Putu Sukmaantara, M. Ed.

Nowadays, there is a mainstream that English should be taught based upon students' specialist interest. For instance, students with vocational skills will learn vocational English in which English reflects their vocational activities. Therefore, the research on 'Developing a Model of ESP Reading Materials Using Content-Based Approach for the Second Year Students at the Vocational School of Agriculture Sukorambi-Jember in the Academic Year 2000/2001' was conducted. This research problem was 'How was the model of the ESP reading materials for vocational students of agriculture developed?'. This research was intended to develop a suitable model of ESP reading materials for vocational students of agriculture. The developmental design was employed in which the respondents of the research were 89 students of the Vocational School of Agriculture from the four majors, Farm Machinery, Agronomy, Technology of Agricultural Products, and Animal Husbandry using the purposive-quota-random sampling. The research data were gained using questionnaire and interview. The kinds of data were the students' interest and students' needs analysis as well as the English teachers' response to the ESP reading materials. The data were analyzed by the descriptive-qualitative method. The findings of the research found out that the vocational students showed a positive interest in the ESP reading materials and a positive attitude towards those materials; that the English teachers showed a positive attitude towards the ESP reading materials; and that the ESP reading materials found rewarding for the vocational students of agriculture. To sum up, the ESP reading materials using content-based approach is badly needed for students with specialist areas, such as Farm Machinery, Agronomy, Technology of Agricultural Products, and Animal Husbandry. Therefore, it is advisable for the English teachers to design such materials in order to fulfill students' needs in which the materials comprise vocational students' contents.

Key Terms : 1. The Model of ESP reading materials
2. Content-based approach

I. INTRODUCTION

1.1 Research Background

English has an important role, especially, in the scientific world. One of its roles serves as a tool for delivering all information dealing with knowledge. Broadly speaking, in all educational institutions, English is one of the major foreign languages as a main subject that has to be taught to students. Expectedly, they do not have trouble in learning that language. Nowadays, there is a mainstream that English should be taught based on learners' needs, especially those who are interested in specialized science disciplines. For instance, some vocational students would like to learn English regarding their realms as follows: economics, medicine, law, politics, secretary, engineering, tourism, travel, agriculture, and so forth.

In Indonesia, for instance, according to the 1996 English Course Guideline for Vocational Schools of Agriculture, English is required for vocational students of agriculture to master in order to keep abreast of scientific and technological advancements related to agriculture. Besides, in this English Course Guideline, one of the English skills emphasized is reading. In this skill, the emphasis is on enhancing vocational students' ability to grasp all information relating to their agricultural fields, such as Farm Machinery, Agronomy, Technology of Agricultural Products, and Animal Husbandry (Depdikbud, 1996). In other words, giving English texts dealing with those fields will assist the vocational students of agriculture to enrich their vocational English especially in the reading skill.

Based on the preliminary study which is undertaken at the Vocational School of Agriculture Sukorambi-Jember, this study reveals that this institution demands its students to improve their English proficiency, such as comprehending English texts based on their content subjects, such as Farm Machinery, Agronomy, Technology of Agricultural Products, and Animal Husbandry in which the vocational students of agriculture can combine this English skill with other English skills. In such a way, they can apply their English proficiency actively and communicatively. For that reason, the institutional side obliges the vocational students of agriculture to apply

their English proficiency when they do vocational practices in fields, work places or workshops. For instance, while they do vocational practices, they should communicate with their friends or teachers in English.

Furthermore, another feature of this study reveals that the vocational students of agriculture are lack of, particularly, comprehending some information written in English relating to their content subject (agriculture). Thus, the vocational students of agriculture need to be able to get over this problem. This is because they often find some instructions or information written in English when they do their vocational practices in fields or workshops and even in agricultural industries or companies. Unfortunately, most of them have difficulties following the instructions.

In terms of materials used, there seems to be a need to develop the English materials, particularly, in reading for the vocational students at the Vocational School of Agriculture Sukorambi-Jember. Ideally, themes/topics presented in those materials comprise majors offered by this institution as follows: Farm Machinery, Agronomy, Technology of Agricultural Products, and Animal Husbandry. Unfortunately, in this case, the English teachers provide general English materials, which are not based on the students' majors offered by this institution. For instance, those who are majoring in animal husbandry should be given the animal husbandry-related materials. Therefore, it is essential for English teachers to design students' content-based materials, especially reading ones as proposed by Brennan and Naerssen (1989: 197) in which English Specific Purposes (ESP) materials should consist of students' content subject and content teachers should be involved in the process of designing the ESP materials.

Moreover, the ESP materials used are still far from the students' content subjects. For instance, all students from the four majors offered by this institution are given the same materials. Therefore, the research on 'Developing a Model of ESP Reading Materials Using Content-Based Approach for the Second-Year Students at the Vocational School of Agriculture Sukorambi-Jember in the academic year 2000/2001 was conducted.

1.2 Research Problem

Based upon the research background above, this research problem was 'How was the model of the ESP reading materials for vocational students of agriculture developed?'

1.3 Research Objective

Based on the research problem above, this research was intended to develop a suitable model of ESP reading materials for vocational students of agriculture.

1.4 Research Significances

The findings of this research would be expected to provide contributions to English teachers, vocational students of agriculture, institutions of vocational education, and other researchers.

a. For English Teachers

The findings of this research could be used as an input and motivation in order to develop English materials, especially, ESP reading ones for the vocational students of agriculture continuously based on students' content subjects and needs.

b. For Vocational Students of Agriculture

The findings of this research would enrich students' content subject-related materials, to the vocational students of agriculture. In such a way, the vocational students of agriculture could easily learn and improve their vocational English ability, especially in the reading skill.

c. For Institutions of Vocational Education

The findings of this research would be an alternative in designing better English course guidelines for Vocational Schools of Agriculture, especially for the Vocational School of Agriculture Sukorambi-Jember.

d. For Other Researchers

The research findings would be a model for conducting further researches, particularly, on ESP reading materials development with different ESP subjects and teaching settings.

1.5 Operational Definition

To avoid misunderstanding between the researcher and the readers, it is crucial to define the following key terms clearly:

- a. The model of ESP reading materials is one that focuses on agricultural reading materials with the following format: schemata, texts, comprehension check, vocabulary practice, language practice, and communicative tasks (in the form of simple dialogs).
- b. Content-based approach is one used to develop the agricultural reading materials based on students' content subjects (Farm Machinery, Agronomy, Technology of Agricultural Products, and Animal Husbandry) by involving English teachers (referring to the language) and vocational teachers from those majors (referring to the themes/topics).

II. REVIEW OF RELATED LITERATURE

Materials are one of the features affecting an accomplishment of learning outcomes. The development of instructional materials should be taken into account to succeed in carrying out English teaching-learning process. In this research, a discussion on the development of the model of the ESP reading materials related to ESP teaching is substantiated by several relevant points. Therefore, this chapter presents these relevant points. They are reasons of reading, reading comprehension skill, an overview of English for Specific Purposes (ESP), developing the model of the ESP reading materials, content-based approach, and motivation, interest and needs of students.

2.1 Reasons of Reading

For many students, of the four English language skills, reading is a crucial skill, particularly, in English as a foreign language. Certainly, for most English learners, reading is a primary reason for learning that language (Carrell et al., 1995). Davies and Whitney (1979) state that there are three chief reasons for reading as follows: (1) reading for information that focuses on certain topics, such as people, places, directions, and notices; (2) reading for meaning that emphasizes functions, such as comprehending instructions, messages, and facts; and (3) reading for pleasure that focuses on texts, such as magazines, novels, and picture stories. Broadly speaking, the purposes of reading can be grouped into: (1) getting general information from a text, (2) getting specific information from the text, and (3) reading for pleasure or interest (William, 1986).

In ESP contexts, the aim of reading is to grasp some information in English specific texts. For instance, ESP learners, vocational students of agriculture, do reading for information in order to grasp English texts dealing with their content subject (agriculture).

2.2 Reading Comprehension Skill

One of the most important skills in learning English is reading in addition to listening, speaking, and writing. Reading skills can be practiced from low levels of language instruction up to the most complicated ones. Basically, Grellet (1996) points out that the core aim of reading is to grasp a written text, which means to extract desired information from that text as efficiently as possible. For example, we apply different reading ways when we carefully read an article of special interest in scientific journals.

Relating to comprehension, it is an ability to understand texts. In other words, it deals with what readers get with the texts they read. Kustaryo (1988) cites that comprehension embraces three levels, literal, inferential, and critical. First, the literal comprehension is reading the lines. This stands for the ideas and facts, which are directly stated in the text. As a matter of fact, literal ideas and facts are usually succinctly stated that readers can return to the text and underline desirable information. Examples of the literal reading are comprehending words and sentence meanings, finding out specific information and main ideas, seeking for supporting details of paragraphs, etc. Thus, in this respect, the readers seek for explicit information in the text that they read.

Next, inferential reading is reading between the lines. It relates to getting implied meanings from the text. Broadly speaking, the inferential reading texts comprise ambiguous and anaphoric words or sentences. In this level, readers are required to comprehend a text more comprehensively. Last, critical reading is reading beyond the lines. In this level, the readers are demanded to have critical and creative mind in looking for statements that they read, such as questioning, comparing, and evaluating.

Of the three levels of comprehension, this research focuses on the literal comprehension. This is because the model of the ESP reading materials is designed for second year vocational students of agriculture. Their primary aim of reading is to grasp text contents related to their content subjects, Farm Machinery, Agronomy,

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Technology of Agricultural Products, and Animal Husbandry. Expectedly, they could enrich their vocational English command especially in reading skill.

Coming to reading techniques, they play a crucial role in grasping reading materials. They can facilitate readers who wish to read efficiently. Skimming, scanning, predicting and guessing are examples of the reading techniques. First, while readers do skimming, they go through reading texts swiftly in order to get the gist of them, to know they are organized, or to get ideas of writers' intentions. In other words, in this regard the readers read the reading materials to get general ideas (Grellet, 1996). On the contrary, when the readers do scanning, they only try to locate specific information and often do not follow the linearity of the passage wholly. In this case, the readers simply let their eyes wander over the text until they find what they are looking for. To sum up, scanning is a reading technique, which aims to search out specific information and nothing else (Parry & Bartram, 1989).

Next, predicting is a basic technique to all reading techniques. This can be used by providing lexical item clues. Moreover, this technique can be used to make predictions about contents of reading texts from headlines or titles. Last, guessing is one of the reading techniques, which is geared to find out meanings without a dictionary. To do this, the readers endeavor to understand words, sentences, or whole contents in the text from the contexts (Parry & Bartram, 1989).

In ESP reading contexts, the four reading techniques above can facilitate students, such as those who are interested in agriculture, in grasping texts dealing with their content subjects. In such a way, the students truly obtain their aims at reading the texts, which they engage in.

In terms of reading strategies, broadly speaking English teachers apply the following three stages: pre-reading, whilst-reading, and post-reading. This is because English teaching-learning process employs a communicative approach. Relating to the pre-reading, students are required to call their prior knowledge relevant to a text that will be discussed (William, 1986). Rivas (1999) adds that pre-reading strategy focuses on the relevance of readers' prior knowledge for grasping the text given. In fact, there are two main functions of pre-reading activities as follows: seeking students' involvement, interest and motivation as well as providing

language preparation. This strategy can be carried out by asking leading questions, predicting text contents, guessing word meanings, showing pictures or real objects, etc. Regarding ESP reading teaching contexts, this stage attempts to stimulate students' prior knowledge. For instance, for ESP learners of agriculture, teachers can ask some questions associated with learners' content subjects. In such a way, the learners are motivated to learn to comprehend a text more deeply.

Second, whilst-reading is a main activity in teaching reading. This is because in this stage, the students are required to understand the text given widely concerning writers' aims, text structures and contents (William, 1986). This strategy can be employed in scanning, skimming, vocabulary and language practice, and doing some tasks related to the text given. In this stage, Rivas (1999) mentions that teachers can combine a reading skill with other skills, such as listening, speaking, and writing. Furthermore, the teachers can exploit the reading text by providing exercises and tasks, such as asking questions both surface and deep ones related to the text, making sentences based on vocabularies in the text, asking main ideas of paragraphs in the text, and asking specific information in the text regarding students' content subjects. This is because the text read by students interacts with their prior knowledge dealing with their content subjects (William, 1986). In ESP reading teaching contexts, this stage is a determinant to encourage the students to comprehend the text concerning their content subject. For example, ESP students of agriculture would be keen on comprehending agricultural texts.

Last, post-reading stage assists to consolidate or reflects what readers have read; in the meantime, this stage endeavors to connect the text with the students' experience, knowledge, and opinion (William, 1986). In this regard, some activities can be undertaken by summarizing text contents, giving opinions, rearranging jumbled sentences, completing tables, etc. In ESP reading teaching contexts, this stage is a last one that encourages students to communicate their ideas pertaining to their content-subject texts.

Of the three reading strategies, it is advisable for ESP teachers to go through them in teaching reading. The reason of this is that, based on the preliminary study at the Vocational School of Agriculture Sukorambi-Jember, the English teachers do not apply those strategies. Therefore, by applying those strategies, the teachers can apply a communicative approach as recommended in the 1996 English Course Guideline for Vocational Schools of Agriculture. Moreover, these strategies can facilitate students to comprehend reading materials easily and comprehensively.

Therefore, in this research in terms of the ESP reading materials for the vocational students of agriculture, the levels of comprehension in those materials will be taken into account based on the vocational students' content subjects from each of the majors offered by the Vocational School of Agriculture Sukorambi-Jember. Besides, the reading techniques such as skimming, scanning, predicting, and guessing are exercised in the materials in which students are able to apply such reading techniques. Last, the materials designed allow the English teachers to apply the reading strategies, such as pre-reading, whilst-reading, and post-reading.

2.3 An Overview of English for Specific Purposes (ESP)

English for Specific Purposes (ESP) is a fashionable activity around the globe today. It stands for that this realm is always changing from time to time. The ESP realm is an effort to involve education, training, and practice and is an attempt to employ three main realms of knowledge, such as language, pedagogy, and students' specialist areas of interest (Robinson, 1991). Therefore, it is not surprising that ESP has become popular in English Language Teaching (ELT), especially in the teaching of English as a Second Language (TESL) and in the teaching of English as a Foreign Language (TEFL) (Nababan, 1994). For example, in Srin Lanka, ESP has been at tertiary level in two areas, universities and technical colleges. Thus, ESP is not a new phenomenon in this country (Dharmapriya in Chamberlain & Baumgardner, 1988). Furthermore, Robinson (1991) cites that ESP has become crucial pedagogy in Britain and North America. For instance in Britain, this country emphasizes to take the lead in terms of syllabus and course design; while, in North America such as The USA and Canada, they focus on leading the way in matters of classroom-based

practice and research. To sum up, ESP has become a striking phenomenal course involving many countries throughout the world including in Indonesia.

Terminologically, ESP has often been contrary to English for General Purposes (EGP) and it has brought about many realms as follows: English for Academic Purposes (EAP), English for Science and Technology (EST), English for Business Purposes (EBP), English for Medical Purposes (EMP), English for Secretary, English for Agriculture, and so forth. Certainly, this specification of English is designed to achieve various learners' goals. Thus, ESP courses stem from an analysis of learners' needs (McDonough, 1998).

Furthermore, ESP is not a typical sort of language or methodology nor does it comprise a typical type of teaching materials. However, it is an approach to language learning, which is in the light of learners' needs (Robinson, 1991). This is related to Hutchinson & Waters' notion (1994) which states that ESP is a course based upon a needs analysis. Exactly, this analysis is aimed at specifying as closely as possible what students have to do through a medium of English. In other words, ESP is an approach to language learning in which all decisions on contents and methods are based on the learners' reasons for learning English (Hutchinson & Waters, 1994). In doing so, ESP should normally refer to programs designed for groups of learners who are homogenous regarding specific learning objectives communicatively (Blackie, 1979).

Recently, many ESP teachers around the globe have been required to teach vocational or occupational English in which English students are adults with a common professional interest in learning English. Therefore, an English for Specific Purposes (ESP) approach is considered to be most motivating and effective. This is because ESP can facilitate students in using that language for practical purposes (Gueye, 1990). To make it widely practical, the common factor in all ESP programs is that those programs are designed for adults who have job or career-related reasons for learning English so that ESP classes allow to lead students to apply English based on their vocational or occupational areas (Schleppegrell, 1991). In doing so, Johns and Dudley-Evans (1991) propose that ESP need a thorough research and design of

teaching materials and activities for a certain group of learners with a specific learning scope.

Based on the notion above, Schleppegrell (1991) adds that there are two basic important factors of ESP course design. They are learners and their specialist area-based activities. For that reason, ESP courses are developed through a needs analysis that identifies what the students need to do in English, the contexts in which they will do it, and in what their current level of English is. Thus, ESP teachers are called on to select activities in their teaching materials in order to move from texts to tasks based on students' specialist areas.

2.4 Developing a Model of ESP Reading Materials

The word 'materials' here is pertinent to instructional materials whether in the form of printed or other media for conveying instructional stimuli and contents which assist teachers implement instructional activities (Gagne & Griggs, 1978). Johnson (1995) cites that recent shifts towards more student-centered curricula require that a selection of instructional materials be based on students' specific language-related needs and goals. Thus, the materials should be designed to implement the instructional activities. This is because one of the elements of curriculum is material. While, the curriculum is used as a guideline for conducting teaching-learning process in formal educational institutions, such as Vocational Schools of Agriculture.

In teaching any subject, teaching materials play a very crucial role. In this respect, ESP should be suitable with the specific body of learners. In other words, the materials for ESP, in this regard, are determined by two main facets. The following are the specific areas in which the language will be utilized and the types of learners who will be learning the language (Nababan, 1994).

Materials writing is one of the most typical facets of ESP in practice. One of the reasons for this is that teachers or institutions would like to furnish teaching materials, which will meet particularly learners who learn specific subject areas (Hutchinson & Waters, 1994). To make materials as relevant as possible, analyzing learners' needs should be carried out. In other words, ESP has been strongly focused

on making the materials, which are relevant to target needs, such as students' necessity, lacks, and wants. To obtain specially written materials, ESP teachers should employ a students' needs analysis (Philips & Shettleworth in Swales, 1985).

In regard with the development of a model of ESP reading materials, there are several criteria of ESP reading material selections as follows:

First, Day (1994) points out that readability stands for a combination of structural and lexical difficulties. Pertaining to the structural difficulty, it refers to several items, such as new grammatical forms, sentence lengths and complexities. It can be presumed that the longer sentences are the harder they will be. Concerning with the lexical difficulty, it is advisable that while teachers teach reading, they can employ some texts, which cover both familiar vocabularies and new ones. Providing the new vocabularies is intended to enrich students' vocabulary mastery.

Furthermore, it is crucial to take into account that an acceptable proportion of the new vocabularies, partly, relies upon reading aims. In other words, both the structural and lexical items should be reckoned because they are essential for comprehension (Rivas, 1999). In ESP contexts, to determine the readability of reading materials, *Flesch Readability Formula* is used.

$$\text{Flesch RES} = 206.835 - 0.846 \text{ WL} - 1.015 \text{ SL}$$

In which,

RES : Reading Ease Score

WL : Word Length

SL : Sentence Length

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After the readability is counted, the gradation of that score can be explained as follows:

Reading Ease Score	Description
90 – 100	Very Easy
80 – 89	Easy
70 – 79	Fairly easy
60 – 69	Standard
50 – 59	Fairly difficult
40 – 49	Difficult
30 – 39	Very difficult

(Source: Zakaluk, B.L. and Samuels, S.J., 1988)

In such a way, this can allow English teachers will know whether the materials that they made are intelligible for their students.

Second, exploitability can be defined as a facilitation of learning. Besides, it is a main facet of selecting reading materials. One way to determine the exploitability of the reading materials is to do exercises and activities in reading materials (Nuttall, 1989). In such a way, learners can be familiar with the text that they read. Further, Day (1994) exemplifies that if one of the reading objectives is to get students to look for writer's point of view, teachers should consider whether the reading text can allow the students to do this. Thus, in ESP contexts, the exploitability indicates an implication that the reading texts can be utilized in developing reading skills and strategies that the students require and finally they can easily grasp the texts related to their content subject.

Third, the criterion of text selections is appeal. In this respect, reading texts should be fascinating. The interesting materials are vital because they can maintain students' motivation and involvement, and even they can boost the students' motivation. Therefore, such materials are a significant factor in a development of reading speed and fluency (Williams, 1986). In ESP contexts, to boost ESP learners to be keen on reading materials, it is advisable to incorporate all information in those materials relating to students' major realm or subject matter such as agriculture. In doing so, themes/topics should be selected according to learners' interest and

background knowledge because such themes/topics can be used to motivate students' specialist interest (Dubin and Olshtain, 1992).

Fourth, in selecting reading materials, authenticity should be thought over. The authenticity means a feature of a text in a particular context that is originally written. The authenticity rests on an interaction between readers and a text. Thus, it can be associated with learners' interest or content subjects (Robinson, 1991; Rivas, 1999). To sum up, the authentic materials are ones that students are interested in language, which is based on what they know and engage in. In instructional practices, such materials are thought to arouse students' motivation to learn language that they involve (Rivers, 1987; Ahellal, 1990; and Peacock, 1997). This is because the materials stem from the ultimate students' goal in learning that language (Morton, 1999). Therefore, in ESP contexts, those materials are ones that ESP learners are concerned with their major content subject, such as agriculture. For that reason, the authentic materials should be simplified so that the ESP learners can cope with them (Crandall and Tucker, 1990).

Last, the criterion of text selections is suitability. In this case, the materials should be congruent with relevant students' content subjects in which they engage in (Robinson, 1991). Hence, themes or topics presented in the materials are in students' realm. This is because the students' content-related themes or topics can retain the students' interest and motivation. Besides, such themes or topics during pre-reading activities can be applied as a means of facilitating to grasp reading materials and to build prior knowledge or schemata (Rivas, 1999). Thus, in ESP contexts, suitability should be considered in selecting reading materials, which are appropriate for ESP learners' content areas in order to meet their needs to learn English.

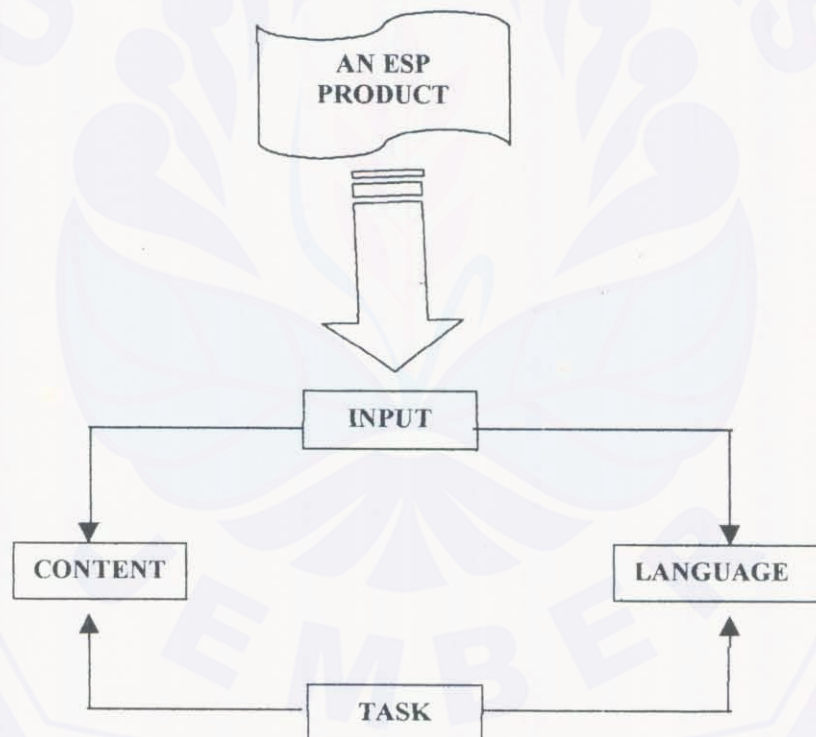
Hutchinson & Waters (1994) propose the model of ESP reading materials in which this model embraces the following four elements: input, content focus, language focus, and tasks. First, the input may furnish a number of things. It is in the form of texts in which these texts can be stimulus materials for activities, new language items, correct models of language use, topics for communication, chances for learners to employ their information processing skills, and chances for learners to employ their existing knowledge both of the language and the subject matter.

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Second, content focus is incorporated since language is not an end in itself, but a means of conveying information. Therefore, non-linguistic contents should be exploited to create meaningful communication in a classroom.

Third, language focus enables students to use language. In such a way, the students have a chance to take the language to pieces, study how it works, and practice putting it back together. Last, tasks allow students to gain an ultimate aim of language learning such as language use. For that reason, materials are necessarily designed to lead towards communicative tasks in which the learners can employ contents of materials and language knowledge in these materials that they built up through units. The four elements of ESP reading materials design model can be arranged as follows:

**Figure 2.1 ESP Reading Materials Design Model
(Hutchinson & Waters, 1994)**



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Adapting from the Hutchinson and Waters' ESP reading materials design model above, in this research, the model of ESP reading materials dealing with the materials format includes schemata, input, comprehension check, vocabulary practice, language practice, and communicative tasks. First, schemata are given in order to dig out students' prior knowledge. For instance, vocational students of agriculture are required to express their prior knowledge in order to know text contents that they will read. This should be undertaken to encourage students to be interested in reading the text given as proposed by Carrell et al. (1995).

Second, input is given in the form of texts. This is intended to provide students all information presented in the texts. This activity is done if the students have been required to stimulate their prior knowledge, what they have already known about the topics involved in the texts. Third, comprehension check is aimed at determining whether the students understand the text comprehensively, which they have read. This point will assist the students to extract all information presented in the text.

Fourth, vocabulary practice is intended to provide students some familiar and new vocabularies about agriculture so that they have a good command of agricultural vocabularies. Moore et al. (1991) say that vocabulary knowledge plays a key role in reading comprehension. In turn, students can easily comprehend their content-related text, such as agriculture. Fifth, language practice is provided in order to furnish both familiar and new structural forms. In such a way, they can comprehend text contents because in grasping texts, the students should know some sentence patterns presented in the text. This notion is supported by Rivas (1999) who maintains that structural patterns can facilitate students' comprehension about texts.

Last, giving communicative tasks or exercises is intended to exploit text contents. Such tasks or exercises may come from comprehension check, vocabulary practice, and language practice. These tasks or exercises should encourage students to apply and combine them with other English skills, particularly, such as speaking in the form of simple dialogs. Consequently, a communicative approach can be obtained. Most essentially, the students can truly exploit the reading texts because these can enrich students' English proficiency based on the content subject chosen.

2.5 Content-Based Approach

Content-based language instruction is an integrated approach to language instruction, which considers topics, texts, and tasks from content subjects. In general, such instruction is used for students with job-related activities (Crandell and Tucker, 1990). In other words, the content-based approach tries to relate fully not only to language but also to a content (Krahnke, 1987). This is because its core aim is to teach language to convey some contents or information which students learn. Thus, the content-based approach teaching is related to all information, which embraces students' major content subject matters. Moreover, Brinton et al. (1989) suggest the use of texts relevant to students' contents. The content-based approach often combines language with learners' content subjects. Teaching using content-based approach can be defined as an integration of particular learners' content subjects with language teaching purposes. In other words, it is concerned with an up-to-date teaching of major content subjects and language skills relevant to learners' specialist areas. Furthermore, Sorani and Tamponi (1991) mention that the content-based approach instruction is interesting for students who focus on their subject matter. In such a way, language instructional activities will be effective (Graffield-Vile, 1996).

Taking into account the notions above, ESP must involve content-subject matters, which ESP learners have to study and work with through English. For instance, learners who are majoring in medical science should be given materials related to medical science and nothing else. Besides, learners who are majoring in agriculture should be given materials related to agriculture and nothing else. In other words, the materials should cover specialist language and contents in which they, more importantly, reflect activities which students engage in. In doing this, Brennan and Naerssen (1989) offer that it is exceptionally essential for ESP teachers to be able to establish and maintain a contact with content teachers. In practice, the ESP teachers may often have to establish such a contact informally in order to gain important information on attitudes and perceptions of the content teachers concerning roles of English in their area.

In respect with the development of a model of ESP reading materials, such an approach can facilitate ESP teachers and content teachers to cooperate with each other in designing suitable ESP materials based on students' content areas. In doing so, according to Hutchinson and Waters (1994), the ESP teachers are required to take into account three things. Among of them are positive attitudes towards ESP contents, a knowledge of principles of a major content subject, and an awareness of how much the language is utilized in conveying the content subject. In other words, the content-based approach leads ESP teachers not only to be language teachers, but also to be keen on content subjects, in which their students engage in, to facilitate them to present their ESP teaching. Finally, the ESP teachers will focus heavily on selecting reading materials regarding students' content subjects by seeking for students' needs (Hutchinson & Waters, 1994).

2.6 Motivation, Interest, and Needs of Students

Corresponding to motivation, many educators employ the word 'motivation' to clarify it as something that can arouse and initiate behavior (Burden and Byrd: 1999). Motivation can be defined as an inner drive or a motive to do activities. In outline, there are two sorts of motivation, intrinsic and extrinsic. The former refers to the internal desire to be competent and to do something. The latter deals with something that is influenced by external rewards or high achievement. In other words, the intrinsic motivation comes from the inside of learners; while, the extrinsic motivation refers for the outside of the learners (Santrock, 1991).

In teaching-learning process, the motivation is a determinant in succeeding in learning outcomes (Corsini, 1994). For instance, if students have a strong motivation, they will be encouraged to learn their subjects, and vice versa. In general, motivation comes from learners' environment such as teachers, their friends, parents, and social environments. More particularly, in ESP teaching- learning contexts, specialist-area students will tend to learn ESP because they are motivated to learn it. Indeed, goals or objectives accompany motivation. For example, vocational students of agriculture who learn ESP will tend to be able to master English relating to their content subject, agriculture.

In terms of interest, it deals with willingness to do activities without any force. Interest can be expressed through statements showing that students prefer to do one thing to another thing (Slameto, 1995). For instance, students who are keen on a certain subject tend to have a strong interest in that subject.

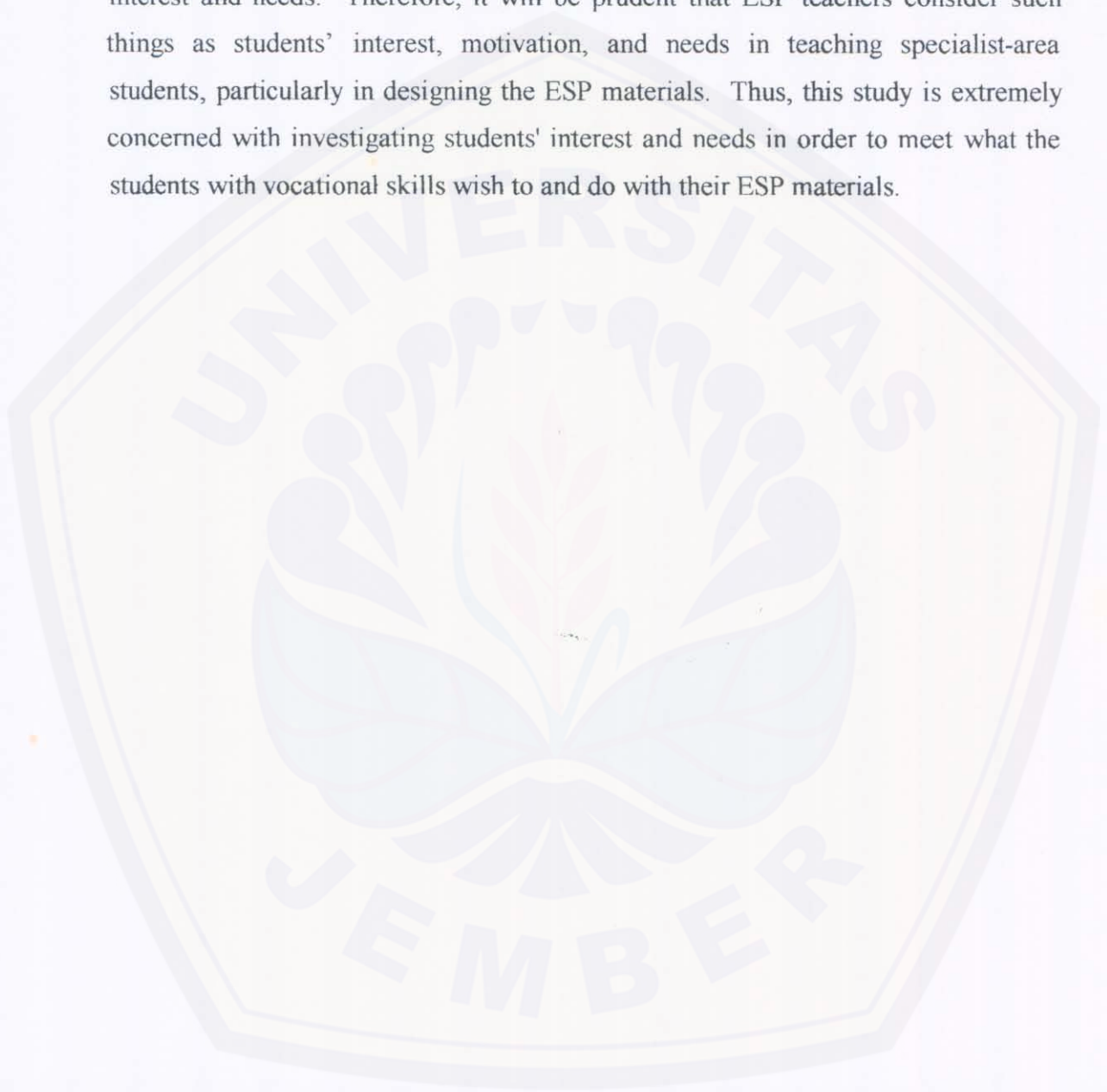
In teaching-learning process, interest is one of the dimensions of motivation. This is urgent for students and teachers. More importantly, the students should be interested in learning the subject, which they engage in. More specifically, in ESP reading contexts, students will be keen on learning ESP dealing with their content subject, such as agriculture. This is because the interest can affect the students to be keener on learning ESP pertaining to their needs.

Regarding with needs, these deal with what students wish to. Schleppegrell (1991) cites that ESP courses are refined by a needs analysis, which identifies what students need to learn English and how learners will use English in their technical fields. This is because the learner's needs analysis is intended to search for contents of the ESP courses that will be given to learners in terms of fulfilling their needs (Harvey, 1984). Moreover, Johns and Dudley-Evans (1991) point out that the ESP courses comprise English language learning, which is designed to meet typical needs of learners and this is related to particular realm contents. In such a way, ESP can be compatible with the learners. Therefore, it is advisable for ESP teachers to undertaken learners' needs by identifying their wants and purposes as comprehensive elements especially in materials design. For instance, students who intend to learn ESP tend to have needs to master such a course. It is widely known that instructional designs should refer to students' needs. Thus, ESP materials should reflect the students' needs. Therefore, a needs analysis is necessarily conducted. This is because this needs analysis serves three main purposes. First, the need analysis provides a means of gaining a wider input into contents, designs, and goals of instructional activities in which students lead to. Second, it can be used in developing, particularly, instructional goals and contents. Last, it furnishes data for reviewing and evaluating existing programs, such as instructional ones (Nunan, 1992). By doing such an analysis, attitudes towards learning language, in this case English, are affected by modes of students' disciplines. Finally, ESP course contents

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are concerned with students' specialist areas in which they engage in and can serve as stimuli in that course (Harvey, 1984).

In conclusion, motivation, interest, and needs of students are crucial factors, which affect students' goals in learning subject matters, in particular English. In ESP contexts, for instance, students will be motivated to learn English based upon their interest and needs. Therefore, it will be prudent that ESP teachers consider such things as students' interest, motivation, and needs in teaching specialist-area students, particularly in designing the ESP materials. Thus, this study is extremely concerned with investigating students' interest and needs in order to meet what the students with vocational skills wish to and do with their ESP materials.



III. RESEARCH METHOD

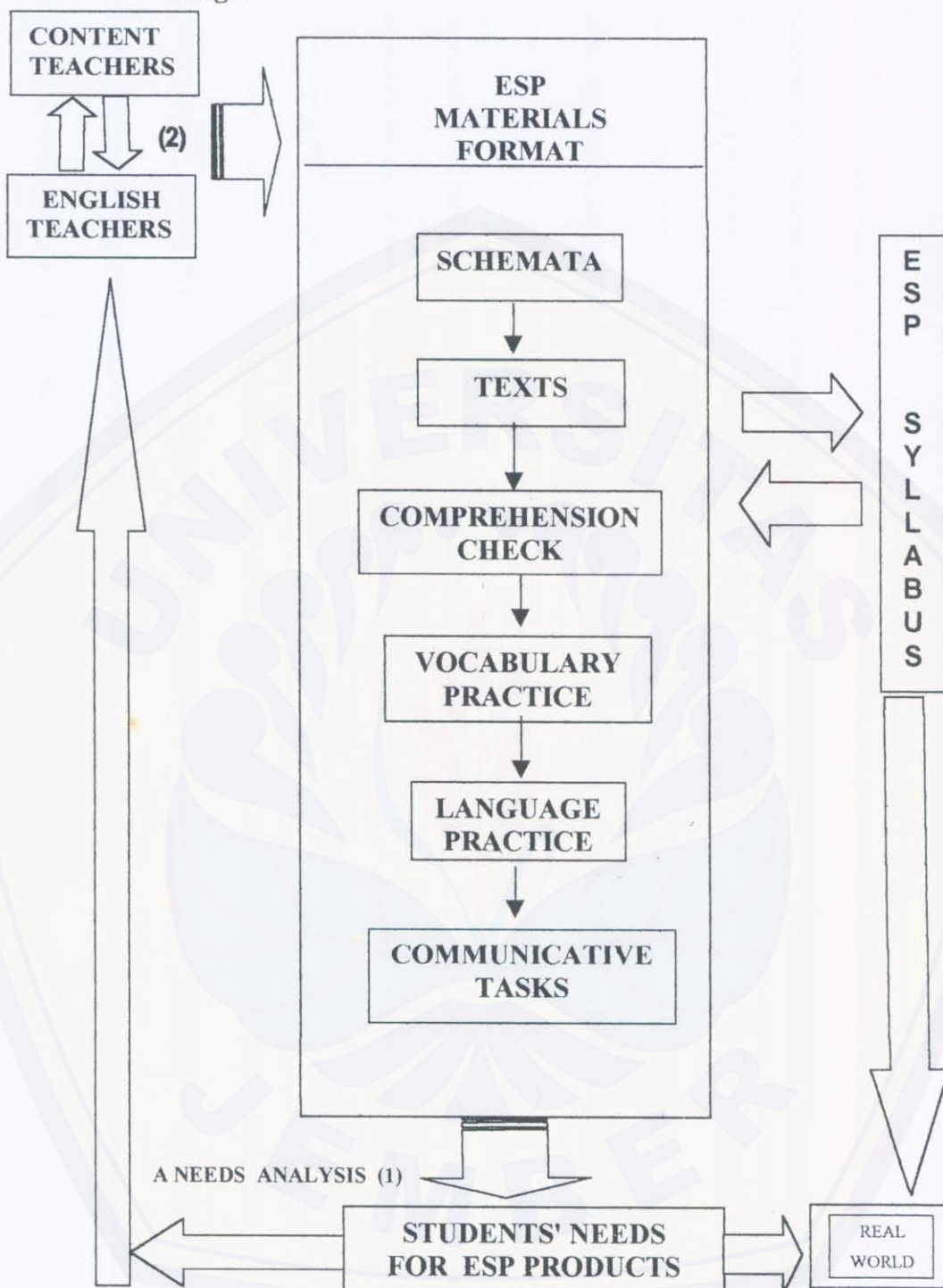
3.1 Research Design

This research design was the developmental research because it dealt with research and development. With respect to research, this investigated students' interest and needs of the ESP reading materials as well as English teachers' response to the ESP reading materials. The procedures of the model of ESP reading materials development design were undertaken as follows:

1. Before designing the ESP reading materials, the researcher in collaboration with English teachers conducted the analysis of students' needs through questionnaire and interview. This analysis was intended to know what the students wish to in learning English. In the meantime, the interest inquiry was conducted in order to know whether the students were interested in the ESP reading materials that they engaged in.
2. After conducting both inquiries, the researcher and English teachers designed those materials, which the students wished to by involving vocational teachers from Farm Machinery, Agronomy, Technology of Agricultural Products, and Animal Husbandry. In this cooperation, the roles of the content teachers here were to select topics/themes, which the students engage in and to be facilitators in providing vocational materials written in English and some agricultural terms. While, the researcher and English teachers had roles in constructing and simplifying the vocational materials written in English based on the students' content subjects. In brief, the procedures of the model of the ESP reading materials development design could be arranged in the following figure:

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Figure 3.1 The Procedures of the Model of ESP Reading Materials Development Design



(Adapted From: Brennan and Naerssen, 1989; Hutchinson and Waters, 1994)

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3.2 Area Determination Method

In determining the research area, the purposive method was applied. This research was conducted at the Vocational School of Agriculture Sukorambi-Jember with the following considerations: first, this school enabled the researcher to conduct the research because this school has majors, such as Farm Machinery, Agronomy, Technology of Agricultural Products, and Animal Husbandry, which became this research emphasis. Moreover, the researcher was a student of this school and one of the English instructors at this school. Second, this school becomes a model of Vocational School of Agriculture throughout Indonesia. Besides improving vocational skills, this school has been trying to improve its quality by activating English course as a complimentary skill. Next, this school begins obliging its students to use English dealing with their content subjects, such as Farm Machinery, Agronomy, Technology of Agricultural Products, and Animal Husbandry. Last, this institution applied students' subject content-based English competency test once a year.

3.3 Research Respondent Determination Method

In order to gain data from the respondents, in this research, the purposive-quota-random sampling method was used. The following steps of choosing research respondents were carried out as follows:

- a. Choosing the second-year vocational students at the Vocational School of Agriculture Sukorambi-Jember from the four majors, Farm Machinery, Agronomy, Technology of Agricultural Products, and Animal Husbandry. This is because they have focused on their content subjects. Thus, they have sufficient background knowledge on those subjects (purposive sampling).
- b. The total number of the second-year Vocational Students of Agriculture Sukorambi-Jember is 296. To determine the number of the samples in this research, the sampling method was applied by taking 30% of the population from the four majors, Farm Machinery, which consists of 63 students; Agronomy, 114 students; Technology of Agricultural Products, 47 students; and Animal Husbandry, 72 students. After that, each of the number of samples was

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multiplied from the four majors with 30%. The calculation could be explained as follows:

- For Farm Machinery : $63 \times 30\% = 18,9 = 19$ students;
- For Agronomy : $114 \times 30\% = 34,2 = 34$ students;
- For Technology of Agricultural Products : $47 \times 30\% = 14,1 = 14$ students and;
- For Animal Husbandry : $72 \times 30\% = 21,6 = 22$ students (quota sampling).

Therefore, the research samples were 89 students. In choosing the samples of the population from the four majors, the random sampling was employed.

3.4 Data Collection Method

In this research, open/close-ended questionnaire and semi-structured interview methods were employed because they could provide deeper information on respondents' response for the questionnaire and teachers' response for the interview (Robson, 1995: 231). Pertaining to open/close-ended questionnaire, this was used to investigate students' interests and needs in the ESP reading materials, especially dealing with agriculture. Besides, the crosscheck of the students' response to the questionnaire was conducted by the group interview. The group interview was conducted twice from each of the four majors. Related to semi-structured interview, this was applied to investigate the English teachers' response to the development of the ESP reading materials using content-based approach related to the four majors offered by the Vocational School of Agriculture Sukorambi-Jember.

3.5 Data Analysis Method

In analyzing the data gained, the non-statistical method was applied. The main data, in this research, came from the questionnaire and interview. Therefore, the descriptive qualitative method was employed in the data analysis.

This chapter discusses the findings of the research on Developing the Model of ESP Reading Materials Using Content-Based approach for the Second Year Students at the Vocational School of Agriculture Sukorambi-Jember in the Academic Year 2000/2001 and the discussion on such findings by referring back to the review of related literature on Chapter II.

4.1 Findings and Analysis

The research which was conducted on 13-22 March 2001 at the Vocational School of Agriculture Sukorambi-Jember has revealed some findings dealing with students' interest and needs analysis of the ESP reading materials, the agricultural ones, as well as teachers' response to the ESP reading materials development design, and the ESP reading materials development.

First, in terms of students' interest in the ESP reading materials, this research found out that of the 89 respondents from four majors offered by the Vocational School of Agriculture Sukorambi-Jember 35% (31) of the respondents had a strong interest in such materials. Around 52% (46) of the respondents had an interest in those materials. Based on the findings, in general respondents were positively interested in such materials. This was because they had some purposes in learning such materials. Those purposes were that they wished to grasp information related to their field; that learning vocational English was an asset for getting a job; that there were many vocational terms in English; and that there was vocational information written in English. Fundamentally, the respondents' interest brings about two core aims of learning English. They are vocational skill-related enhancement and job prospective. First, the vocational skill-related enhancement means an effort to improve vocational skills using English as medium. This is an obligatory facet for vocational students because they will be prepared for entering the work world in which this world requires double skills, vocational and English. Therefore, it is

inevitable that English has a great influence, in particular, on such a vocational skill. This is because all advanced vocational science and technology, in particular, stem from overseas developed countries, such as Australia, Japan, Taiwan, New Zealand, and so on in which those materials are written in English. By having both vocational and English skills, they are expected to be qualified semi-professional manpower. Moreover, such manpower can meet work market demands in perspective. To sum up, interest here is necessarily established for students to succeed in learning English, especially Vocational English. In an attempt to this, the ESP materials based upon students' vocational related interest are required to design.

On the other hand, 13% (12) of the respondents from the four majors, Agronomy, Farm Machinery, Technology of Agricultural Products, and Animal Husbandry answered the questionnaire inconsistently. For example, while one of the respondents answered the questions 'Do you agree if English materials are taken from your simplified vocational materials?'. The respondent answered 'agree'. Whereas, when the respondent answered the question 'Do you agree if topics/themes are in the English materials based on your vocational skill?', the respondent answered 'disagree'. Such a phenomenon was regarded as being inconsistent. This was because both questions were closely related to each other. This was known after the group interview was undertaken. This might occur because they did not know some questions in the questionnaire, such as number 1, 2, 7, 8, and 9 in the students' needs analysis part. Besides, this might happen because the questionnaire was not tried out previously.

Second, dealing with the students' needs analysis on the ESP reading materials, it was found that 87% (77) of the respondents showed a positive attitude towards the ESP reading materials. The analysis revealed the following item:

- a. Around 27% (24) of the respondents from the four majors, Agronomy, Farm Machinery, Technology of Agricultural Products, and Animal Husbandry, strongly agreed on the ESP reading materials taken from the simplified vocational texts and that 60% (53) of the respondents agreed on those materials. In general, they positively agreed on such materials. The reason of this was that they could learn both English and contents of materials. In such a way, this could

facilitate them in learning English especially Vocational English, Agriculture. The ESP materials particularly the reading ones, which were taken from the simplified vocational materials are indispensable because such materials are regarded to enable students to relate those materials to the students' vocational activities. Consequently, those materials might fulfil students' needs.

- b. It was proven that 36% (32) of the respondents strongly agreed on the vocational teachers' involvement in making the ESP materials and that 51% (45) of the respondents agreed on the notion. They had two main reasons for this. First, the vocational teachers knew vocational facets, in this respect, the contents of the materials well. Second, the vocational teachers were accustomed to giving some vocational terms of agriculture in English while they were teaching vocational materials. The vocational teachers' involvement in making the ESP materials, especially the reading ones could make such materials get closer to the real world, in this case, the students' vocational activities. Thus, the vocational teachers provide an access to the English teachers how to make those materials relevant to students' vocational realms, particularly, in selecting topics/themes. In such a way, learning especially Vocational English would certainly be meaningful for the students.
- c. It was found that 50% (44) of the respondents stated that their purpose of reading the ESP materials was to get vocational information or any vocational manuals in English. Around 19% (17) of the respondents found that their purpose of reading the ESP materials was to learn Vocational English. There were 16% (44) of the respondents who mentioned that their reading the ESP materials was intended to be accustomed to reading such materials. Last, 2% (2) of the respondents stated that their aim of reading those materials was because of their hobby. Generally, every student has a different aim of learning English. However, in general, for vocational subject-related students have similar purposes in which their purposes focus on their job (vocational) activities.
- d. In terms of the ESP reading materials format consisting of schemata, texts, comprehension check, vocabulary practice, language practice, and communicative tasks, it revealed that 32% (29) of the respondents strongly

agreed on such a format and that 54% (54) of the respondents agreed on that format. The proposed format attempts to bridge the students' background knowledge with the existing text. In such a way, all elements in the format enable them to exploit the contents of the materials.

- e. Regarding the core element of the proposed ESP reading materials format, it was found out that around 27% (24) of the respondents focused heavily on vocabulary. The reason of this was that by having many vocabularies in this case technical or vocational ones, it would be easy for them to comprehend the text that they were reading. Around 16% (14) of the respondents tended to focus on language practice. This was because language practice could train them to know some patterns of sentences in the text and finally it would be easy to grasp the content of the text. A figure of 22% (20) of the respondents provided a strong emphasis on comprehension check. The reason of this was that this enabled to know text contents deeply. Last, around 21% (19) of the respondents preferred communicative tasks. This was because the contents of the materials should be expressed communicatively. In such a way, the respondents could apply what they learnt. Actually, all elements in the proposed format had equal importance although they had a different emphasis. Most essentially, those elements provided some input to students so that they could communicate the contents of materials actively.
- f. It was proven that 48% (43) of the respondents stated that English was strongly important in supporting their content subjects/vocational skills. Around 38% (34) of the respondents stated that English was important in their vocational realms. Broadly speaking, they found that English played a crucial role in improving their content subjects. This was because some vocational handbooks are written in English. It is inevitable that English has a crucial role in enhancing vocational skills for students. Hopefully, the students are required to take into account English as a medium of getting, especially vocational knowledge or skill.
- g. It was shown that 45% (40) of the respondents strongly agreed on the ESP materials development design based on their content subject and that 42% (37) of the respondents agreed on such a materials development design. Generally, those

respondents mentioned that this design could facilitate them to learn Vocational English. By mastering this, they would easily get a job. The ESP reading materials development design based upon the students' content subjects is one of the sorts of the materials development design in ESP realms. Such a design endeavors to match students' content subjects and materials.

- h. It was revealed that 26% (23) of the respondents strongly agreed and that 61% (54) of the respondents agreed on the topics/themes of the ESP reading materials based on their vocational subject matters that were frequently practiced. This could motivate the respondents to learn such materials. The students' vocational subject-related themes and topics are rewarding. This is because such topics can motivate students to learn English. In addition, the students have prior knowledge of the topics/themes. Therefore, such topics/themes enable them to learn English especially vocational one.
- i. It was found that 15% (13) of the respondents strongly agreed and that 72% (64) of the respondents agreed if any vocational information written in English is in workshops or practice fields so that they were given exposure with vocational information written in English. In such a way, they were accustomed to reading such information. Besides, they had background knowledge on vocational skills. On the contrary, they were lack of some technical terms of agriculture. The frequent exposure of the ESP reading materials assists students to grasp such materials. It seems to be appropriate for English teachers to utilize workshops or fields as a medium of putting vocational information written in English in which the students engage in.
- j. It was proven that 49% (39) of the respondents strongly agreed and that 43% (38) of the respondents agreed on the existence of Informal Vocational English Course at their school. This denotes that the students expect a medium of learning English. Besides, this will support them to enrich their Vocational English. Thus, it requires an institutional policy to establish such a course.

To sum up, the positive students' attitude towards the ESP materials will enable English teachers to design such materials, which are based upon their vocational subjects. Hopefully, those materials can meet their needs in learning English. In doing so, it requires the ESP materials development design using the content-based approach in which such a development design involves vocational teachers in terms of the content accurateness of the materials.

Third, in terms of the findings of the teachers' response to the ESP reading materials development design, two English teachers were interviewed separately. Based on the findings of both interviews, the English teachers showed a positive attitude towards the ESP reading materials development design using content-based approach. They provided comments on the following points, such as first the ESP reading materials, which were taken from vocational texts based upon students' majors, Farm Machinery, Agronomy, Technology of Agricultural Products, and Animal Husbandry. They agreed on those materials. The reasons of this were that those materials could relate students' knowledge on vocational facets and such materials could be used as an input for students to learn vocational English. Second, the English teachers agreed on the elements presented in the ESP reading materials, such as schemata, text, comprehension check, vocabulary practice, language practice, and communicative tasks. Of those elements, they suggested that communicative tasks be more heavily emphasized because students needed to apply such tasks. Third, the English teachers agreed on the vocational teachers' involvement in designing the materials. This was because they had much knowledge on vocational aspects. In such a way, the topics/themes presented in the materials were truly appropriate for students from the four majors, Farm Machinery, Agronomy, Technology of Agricultural Products, and Animal Husbandry. In other words, such cooperation was rewarding for the English teachers. Last, the English teachers agreed on the ESP materials development design using students' majors. Such a design could match English with students' specialist interest.

This attitude was an initial step for the ESP teachers to be interested in students' specialist realms. In such a way, this enabled them to design those materials, which were rewarding for students. Therefore, such a development design should be carried out continuously so that the materials were truly compatible with students' needs in the future because vocational students would be prepared for semi-professional manpower.

Last, in terms of the ESP reading materials development, based upon the students' needs analysis, the ESP reading materials were designed in which each of the majors had different texts. The materials consisted of schemata, text, comprehension check, vocabulary practice, language practice, and communicative tasks. The contents of the materials were taken from the authentic vocational materials written in English that were simplified from the four majors. The topics chosen were as follows: *Tillage Equipment* for Farm Machinery, *Vegetative Plant Propagation* for Agronomy, *Culling* for Animal Husbandry, and *Food Preservation* for Technology of Agricultural Products. Those materials were consulted with the vocational teachers from the four majors who possess a good command of English. This was undertaken in the interest of the content accurateness in each of the passages. In designing those materials, readability, exploitability, appeal, authenticity, and suitability were taken into account. In terms of the readability, each of the ESP reading materials from the four majors; Farm Machinery , 67.8; Agronomy, 53.1; Technology of Agricultural Products, 59.1; and Animal Husbandry, 73.7. Thus, the average readability of those materials was 63, which were counted using *Flesch Reading Ease Score* (FRES). It means that the texts in the model of the ESP reading materials are intelligible for students statistically. In other words, those materials are not too difficult nor too easy. Second, in respect with the exploitability, all elements such as schemata, texts, comprehension check, vocabulary practice, language practice, and communicative tasks were incorporated in the texts of the model of the ESP reading materials. Next, in the interest of appeal, some topics in the texts were related to students' vocational content subjects, such as Farm Machinery, Agronomy, Technology of Agricultural Products, and Animal Husbandry. Unfortunately, those materials were not tried out because of the non-

technical matter. The non-technical matter was that all students from the four majors are focusing on the vocational practices in workshops or fields until the end of semester. Thus, these materials were not evaluated.

3.2 Discussion

This part discusses the students' interest in the ESP reading materials, the students' needs analysis, the English teachers' response to the ESP reading materials and the ESP reading materials development.

A. The Students' Interest in the ESP Reading Materials

Based on the students' needs analysis above, it is proven that 87% (77) of the respondents showed a positive interest in the ESP reading materials. This interest is accompanied by the following reasons. First, they wish to have such materials in order to grasp information related to their field. It is true that those materials might motivate students to learn such materials because all ESP students are motivated instrumentally towards learning that language (Harvey, 1984). In doing so, a content-based approach is badly needed to match students' content subjects with English (Sorani and Tamponi, 1992). For instance, those who are majoring in Agronomy should be given Agronomy-related materials so that they can cope with such materials. Second, they often find vocational information and manuals and many terms in English while they do vocational practices in fields or workshops, especially for students of Farm Machinery who should know some instructions before operating tractors or any agricultural equipment. In an attempt to this, ESP teachers are demanded to provide vocational-related materials to students. This occurs because English students with vocational interests require such materials (Schlepppegrell, 1991). Last, the students regard the ESP reading materials as an asset for getting a job when they graduate from the Vocational School of Agriculture Sukorambi-Jember. This is because such students are motivated to have job-related activities (Harvey, 1984). To sum up, the respondents are keen on the ESP reading materials taken from their vocational materials written in English. This is an onset of learning language based upon their specialist subjects because interest is one of the

main features in a learning process (Corsini, 1994). Therefore, the ESP approach can be a facility of bringing students into practical purposes (Gueye, 1990).

B. The Students' Needs Analysis

ESP courses are improved by a needs analysis of learners. This is because this analysis is geared to fulfil students' needs in learning English with a particular realm (Johns and Dudley-Evans, 1991).

In terms of the investigated students' needs analysis, it is revealed that 87% of the respondents show a positive attitude towards the ESP reading materials. This can be explained as follows:

The first is the ESP reading materials taken from the simplified vocational texts. Those texts can make students easy to comprehend those texts. Finally, they can cope with the texts. In doing so, the ESP reading materials should be designed to make such materials relevant to students' vocational own specialist workplace or study situation (Robinson, 1991). In an effort to make the ESP reading materials intelligible for students, they need to be simplified.

The second is the vocational teachers' involvement. The respondents' reasons for agreeing on this are that the vocational teachers have much knowledge on vocational skills, hopefully, they will propose some topics/themes for the ESP reading materials relevant to the students from the four majors. Thus, the themes/topics should be selected based upon learners' interest or background knowledge because such themes or topics can stimulate students' interest (Dubin and Olshtain, 1992). Second, the vocational teachers often provide some vocational terms in English while teaching vocational materials and doing vocational practices in workshops or fields. Thus, the role of the vocational teachers here is indispensable because the English teachers are lack of vocational background knowledge. To surmount this, involving the vocational teachers will be useful and good cooperation between them and the English teachers. Finally, such cooperation will bring about the ESP materials that consist of relevant content and language to students' specialist realms (Brennan and Naerssen, 1989).

The third is the respondents' purposes of reading the ESP materials. There are three main aims of reading such materials. First, they would like to get some vocational information or manuals. Such a purpose belongs to reading for meaning that emphasizes functions in seeking for vocational information. In this respect, the ESP reading materials should be truly comprised of students' content subjects, such as Agronomy, Farm machinery, Technology of Agricultural Products, and Animal Husbandry. Last, the vocational teachers often give students some vocational terms, such as *understock*, *rootstock*, and *grafting* for Agronomy; *rotary*, *plow*, and *file* for Farm Machinery; *salting*, *drying*, and *quality control* for Technology of Agricultural Products; and *breeding*, *fattening*, and *dehorning* for Animal Husbandry. Thus, based upon the respondents' purposes, it is indispensable for the content teachers to design the students' content subject-related ESP materials from the four majors by involving the vocational teachers.

The fourth is the ESP reading materials format, this embraces schemata, text, comprehension check, vocabulary practice, language practice, and communicative tasks. First, schemata here are intended to dig out students' prior knowledge. This prior knowledge refers to vocational knowledge that the students possess. This can be in the form of text content-related pictures and some leading questions because this can bridge the students' background knowledge with a text (Carrell et al., 1995). Second, texts are geared to provide students input. From this input, the students may have new language and lexical items, correct models of language use, topics for communication, and most importantly chances to apply information both language itself and content subjects, vocational skills (Hutchinson and Waters, 1994). Third, vocabulary practice is aimed at furnishing some technical vocabularies, such as *propagation*, *layers*, *pickling*, *chisel*, etc. In such a way, the students can cope with such lexical items. Fourth, language practice is meant to provide students the way to arrange or know some patterns of sentences in the text. Last, communicative tasks are given so that the students can employ some information in the text communicatively in the form of some simple dialogs.

The fifth is the core element of the proposed ESP reading materials. As a matter of fact, all elements such as comprehension check, vocabulary practice, language practice, and communicative check in the text are mutually supportive. Thus, those elements importantly enable students to absorb the contents of the materials. This is because the students are instrumentally motivated to read such materials (Harvey, 1984).

The sixth is the importance of English in students' vocational skill, the respondents state that English has a crucial facet in improving their vocational skill because most vocational information or manuals are written in English and that there are many agricultural terms in English. This denotes that English serves as a means of getting or absorbing vocational knowledge for students. In such a way, they have a good command of technical English and vocational knowledge. Finally, this will bring about a two-edge skill, English and Vocational.

The seventh is the ESP reading materials development design based upon students' content subject. This design endeavors to meet students' content subjects with English, which the students engage in. In an effort to this, topics, texts, and tasks should reflect the students' content subject-related activities (Crandall and Tucker, 1990)

Next is the topics/themes of the ESP reading materials based upon students' vocational materials. By incorporating such topics/themes in the ESP reading materials, those can be used to motivate students' interest in learning such materials. This is because one of the criteria of ESP reading materials should be fascinating (Robinson, 1991; Hutchinson and Waters, 1994).

The ninth is vocational information in workshops/fields. The frequent exposure of the ESP information is necessarily carried out by the ESP teachers so that the students can cope with such information. Therefore, the workshops or fields are an appropriate students' English learning atmosphere for encouraging students to be familiar with vocational information written in English.

Last is the existence of informal ESP courses. Such courses are intended to serve as a vehicle or means of facilitating students in learning technical or vocational English. Thus, the informal ESP course status is essentially required. However, this is an arduous task. Therefore, creating a conducive atmosphere is badly needed. In regard with ESP learners' characteristics, an adult-oriented learning atmosphere will be a most suitable one (Schleppegrell, 1991).

To sum up, based on the students' needs analysis above, it can be concluded that the vocational students need English as a medium of learning both language itself and vocational subjects, in this regard agriculture.

C. The English Teachers' response to the ESP reading materials

Based upon the English teachers' response inquiry on the ESP reading materials, it denotes that they have a positive attitude towards those materials. This is very supportive for designing those materials by involving the vocational teachers from the four majors, such as Farm Machinery, Agronomy, Technology of Agricultural Products, and Animal Husbandry. This is relevant to Hutchinson and Water's notion that ESP teachers do not require to learn specialist subjects of knowledge, however, they need three main matters as follows: a positive attitude towards the ESP contents, a knowledge of the fundamental principles of subject areas, and an awareness of how much they probably already know. In other words, the ESP teachers should be keen on both English and students' specialist subject matters. It is inevitable that the ESP teachers must know something about the subject matter of the ESP materials. Therefore, the ESP teachers not only teach language, but also they are involving in designing, setting up, and administering the ESP course (Robinson, 1991).

In terms of getting over the ESP teachers' lack of having vocational knowledge terms, it is badly needed for the ESP teachers to involve the vocational teachers in designing or developing those materials in which the role of the vocational teachers is to select relevant topics/themes for students' specialist subjects.

Therefore, it is indispensable for the ESP teachers to conduct a needs analysis of students because the materials are one of the ESP characteristics. In other words,

it is unavoidable that the ESP teachers design those materials as relevantly as possible.

D. The ESP Reading Materials

Materials are one of the typical characteristics of ESP because they serve as instructional stimuli and contents which assist teachers implement instructional activities. There is a mainstream that a selection of instructional materials should be based upon students' specific language-related needs and goals (Johnson, 1995). Therefore, the ESP materials should focus heavily on learners who learn specific subject areas (Hutchinson & Waters, 1994). In doing so, ESP teachers should employ a students' needs analysis (Philips & Shettleworth in Swales, 1985).

Based upon the notions above, in designing the ESP materials particularly reading one, it is very crucial to design ESP materials from students' specialist areas. This is undertaken to match English with those areas. In doing so, content teachers are preferably involved in designing such materials. More importantly, before designing them, students' needs analysis is considerably carried out. Therefore, to meet students' needs, some facets such as readability, exploitability, appeal, authenticity, and suitability are necessarily taken into account. First, the readability here deals with a combination of both lexical and grammatical items (Day, 1994). In this research, the readability is measured by using Flesch-Readability-Ease Formula. The following results of the proposed materials readability are that, first, the material readability for Farm Machinery is 67.8. It means that the readability of the Farm Machinery material is not easy nor difficult. Second, the readability of material for Agronomy is 53.1. This stands for that this material is fairly difficult. Third, the readability of material for Technology of Agricultural Products is 59.1. It means that this material is fairly difficult. Last, the readability of material for Animal Husbandry is 73.7. It stands for this material is easy. In general, those materials are intelligent for students. Therefore, assessing the readability of ESP reading materials is very crucial so that those materials have an appropriate difficulty level. Second, the exploitability can be clarified as a facility of learning. One way to determine this, the materials consist of some elements such as schemata, texts, comprehension

check, vocabulary practice, language practice, and communicative tasks. The proposed ESP reading materials embrace those elements in which some exercises are provided in those materials. Third, appeal stands for that the materials should be fascinating. In doing so, it is required to incorporate all information dealing with students' vocational areas because such materials can boost students' interest in learning them. Therefore, in terms of appeal, every major has its own text, which is based upon students' majors from Farm Machinery, Agronomy, Technology of Agricultural Products, and Animal Husbandry. Fourth, authenticity is concerned with some exercises in the texts, which are related to students' own specialist workplace or study situation (Robinson, 1991). In other words, the authentic materials come from students' vocational materials. Such an effort endeavors to attract students' interest with specialist realms (Schleppegrell, 1991). Therefore, in terms of the readability, it is required for ESP teachers to simplify the vocational materials in English by involving the vocational teachers. Last, in regard with the suitability, some vocational-related topics/themes are crucially selected so that they are suitable with students' vocational areas. Therefore, topics or themes such as *Tillage Equipment* for Farm Machinery, *Vegetative Plant Propagation* for Agronomy, *Culling* for Animal Husbandry, and *Food Preservation* for Technology of Agricultural Products are chosen in the interest of the materials suitability.

To sum up, the ESP materials are one of the crucial facets in the ESP course because this aspect includes students' success in learning particularly Vocational English, job-related one. Besides, such materials should fulfil students' needs in terms of their lack, want, and necessity (Hutchinson and Waters, 1994).

Broadly speaking, the research findings create some implications. First, these provide materials products, which are based upon students' specialist interest from the four majors, Farm Machinery, Agronomy, Technology of Agricultural Products, and Animal Husbandry. Second, these enable some ESP teachers in general to design ESP materials using content-based approach by involving content teachers.

However, the findings have a weakness, particularly in the development process of the proposed ESP reading materials. This weakness is that those proposed materials are not tried out because of the technical matter. Such a technical matter is that all second year students of agriculture focus on vocational practices in the fields. Thus, those materials have not experienced an evaluation process. Therefore, it needs a further research to implement and evaluate those materials.



V. CONCLUSION AND SUGGESTION

5.1 Conclusion

Based upon the findings, analysis, and discussion on Chapter IV, some core points can be drawn as follows:

- a. Based on the students' interest inquiry, the vocational students show a positive interest in the ESP reading materials. This is accompanied by the practical (vocational) purposes, such as grasping vocational information, serving as an asset for getting a job, and the availability of many vocational terms and information in English in a students' vocational atmosphere.
- b. Based upon the students' needs analysis inquiry, the vocational students show a positive attitude towards the ESP reading materials. This is because they would like to build up or enrich their vocational English.
- c. Based upon the inquiry of the English teachers' response to the ESP reading materials, the English teachers show a positive attitude towards those proposed materials.
- d. In terms of the ESP reading materials, those are regarded as being rewarding for students because they consist of the students' vocational areas, such as Agronomy, Farm Machinery, Technology of Agricultural Products, and Animal Husbandry.

Therefore, the ESP reading materials using content-based approach are badly needed to design materials in which students have a specialist interest and the vocational teachers should be involved in making such materials.

5.2 Suggestion

a. For English Teachers

It is indispensable for English teachers who teach students with a specialist area to design ESP materials based on students' majors in which those materials are developed based on the development of the students' vocational areas.

b. For Vocational Institutional Sides

It is desirable for vocational institutional sides to provide a conducive atmosphere to design the ESP materials, which are relevant to students' vocational activities.

c. For Students of Vocational School of Agriculture

They should try to learn Vocational English and remain to learn General English continuously.

d. For Other Researchers

It is crucial for other ESP researchers to conduct further researches on any ESP areas in which these researches can be developed widespread based on students' area subjects.

BIBLIOGRAPHY

Digital Repository Universitas Jember

- Ahellal, M. 1990. 'Using Authentic Materials in the Classroom: Theoretical Assumptions and Practical Considerations'. *English Teaching Forum* 28: 37-39.
- Blackie, D.J.J.S. 1979. 'Towards a Definition of ESP'. *ELT Journal* 33/4: 262-266.
- Brennan, M. and M. Naerssen. 1989. 'Language and Content in ESP'. *ELT Journal* 4/33: 196-205.
- Brinton, D.M.; M.A. Snow.; and M.B. Wesche 1989. *Content-Based Second Language Instruction*. Boston: Heinle and Heinle Publishers.
- Burden, P.R. and D. M. Byrd. 1999. *Method for Effective Teaching*. Boston: Allyn and Bacon.
- Carrell, P.L.; J. Devine.; and D.E. Eskey. 1995. *Interactive Approaches to Second Language Reading*. Cambridge: Cambridge University Press.
- Chamberlain, D. and R.J. Baumgardner (eds.). 1988. *ESP in the Classroom: Practice and Evaluation*. Oxford: Modern English Publications and The British Council.
- Corsini, J.R. (ed.). 1994. *Encyclopedia of Psychology*. New York: John Willey and Sons, Inc.
- Crandell, J. and G.R. Tucker. 1990. *Content-Based Language Instruction in Second and Foreign Languages*. Singapore: SEAMEO-RELC.
- Davies, E. and N. Whitney. 1979. *Reasons for Reading*. London: Heinemann Educational Books, Ltd.
- Day, R. 1994. 'Selecting a Passage for the EFL Reading Class'. *English Teaching Forum* 32: 20-24.
- DEPDIKBUD. 1996. *Garis-garis Besar Program Pengajaran*. Jakarta: DEPDIKBUD.
- Dubin, F. and E. Olshtain. 1992. *Course Design: Developing Programs and Materials for Language Learning*. Cambridge: Cambridge University Press.
- Gagne, R.M. and L.J. Briggs. 1978. *Principles of Instructional Design*. New York: Holt, Rinehart, and Winston.
- Graffield-Vile, N. 1996. 'Content-Based Second Language Instruction at the Tertiary Level'. *ELT Journal* 50/2: 108-114.

- Grellet, F. 1996. *Developing Reading Skills*. Cambridge: Cambridge University Press. **Digital Repository Universitas Jember**
- Gueye, M. 1990. 'One Step beyond ESP: English for Development Purposes (EDP)'. *English Teaching Forum* 28: 31-34.
- Harvey, A. 'Designing ESP Course: A Case Study'. *English Teaching Forum* 12: 24-27.
- Hutchinson, T. & A. Waters. 1994. *English for Specific Purposes: A Learning-Centered Approach*. Cambridge: Cambridge University Press.
- Johns, A.M. and T. Dudley-Evans. 1991. 'English for Specific Purposes: International in Scope, Specific in Purpose'. *TESOL Quarterly* 25: 297-309.
- Johnson, E.K. 1995. *Understanding Communication in Second Language Classrooms*. Cambridge: Cambridge University Press.
- Krahnke, K. 1987. *Approaches to Syllabus Design for Foreign Language Teaching*. New Jersey: Prentice-Hall, Inc.
- Kustaryo, S. 1988. *Reading Techniques for College Students*. Jakarta: Depdikbud.
- McDonough, J. 1998. 'Survey Review: Recent Materials for the Teaching of ESP'. *ELT Journal* 52/2: 156-165.
- Moore, D.W.; J.E Readance; and R.J. Rickelman. 1991. *Pre-Reading Activities for Content-Area Reading and Learning*. Delaware: International Reading Association, Inc.
- Morton, R. 1999. 'Abstracts as Authentic Material for EAP Classes'. *ELT Journal* 53, 177-182.
- Nababan, P.W.J. 1994. *ESP Materials Preparation in a Foreign Language Situation*. Singapore: SEAMEO-RELC.
- Nunan, D. 1992. *The Learner-Centered Curriculum*. Cambridge: Cambridge University Press.
- Nuttall, C. 1989. *Teaching Reading Skills in a Foreign Language*. London: Heinemann Educational Books, Ltd.
- Parry, A. & M Bartram. 1989. *Reading Skills*. New York: Penguin, Ltd.
- Peacock, M. 1997. 'The Effect of Authentic Materials on the Motivation of EFL Learners'. *ELT Journal* 51/: 144-153.
- Rivas, R.M. 1999. "Reading in Recent ELT Course books". *ELT Journal* 53/1: 12-21.

Rivers, W.M. 1987. *Interactive Language Teaching*. Cambridge: Cambridge

University Press. **Digital Repository Universitas Jember**

Robinson, P.C. 1991. *ESP Today: A Practitioner's Guide*. New York: Prentice Hall.

Robson, C. 1995. *Real World Research: A Resource for Social Scientists and Practitioner-Researchers*. Oxford: Backwell Publishers, Ltd.

Santrock, J.W. 1991. *Psychology: The Science of Mind and Behavior*. Dubuque: WCB Publishers.

Schleppegrell, M.J. 1991. 'English for Specific Purposes: A Program Design Model'. *English Teaching Forum* 29, 19-23.

Slameto. 1995. *Belajar dan Faktor-faktor yang Mempengaruhinya*. Jakarta: Rineka Cipta.

Sorani, D. & A.R. Tamponi. 1991. 'A Cognitive Approach to Content-Based Instruction'. *English Teaching Forum* 29: 24-27.

Swales, J (ed.). 1985. *Episodes in ESP*. Oxford: Pergamon Press, Ltd.

William, E. 1986. *Reading in the Language Classroom*. London: Mcmillan.

Williams, R. 1986. 'Top Ten Principles for Teaching Reading'. *ELT Journal* 40/: 42-45.

Zakaluk, B. L. and S.J. Samuels. 1988. *Readability: Its Past, Present, and Future*. New York: International Reading Association.

RESEARCH SCHEDULE IMPLEMENTATION

No.	Activity Items	Month/Week										
		2001										
		March				April				May		
		1	2	3	4	1	2	3	4	1	2	3
1.	Preparing for Research Instruments: - Questionnaire - Interview Guide for the English Teachers		—									
2.	Collecting Data: - Questionnaire - Interview Guide for the English Teachers			—	—							
3.	Analyzing Data: - Questionnaire - Interview Guide for the English Teachers				—	—						
4.	Making ESP Materials						—	—				
5.	Writing a Research Report								—	—		
6.	Revising the Research Report										—	

RESEARCH INSTRUMENTS

A. Questionnaire

I. Students' Interest

1. Are you interested in the English reading materials based upon your vocational knowledge/skill?
A. strongly interested B. interested C. uninterested D. strongly uninterested
2. Are you willing to try to comprehend texts in the ESP reading materials consisting of vocational content-related topics/themes?
A. strongly willing B. willing C. unwilling D. strongly unwilling
3. While reading English texts, especially ESP ones, you find difficulties in vocabularies. Thus, you will ...
A. Ask these problems to friends
B. Open any vocational English dictionary
C. Ask these problems to English teachers
D. Ask these problems to vocational teacher who have a good command of English
E.
4. While doing vocational practices, you find information/instructions written in English. Are you willing to comprehend the contents of this information or these instructions?
A. strongly willing B. willing C. unwilling D. strongly unwilling
5. To broaden your vocational skill, you will ...
A. Take a vocational English course.
B. Do consultation with English teachers.
C. Do consultation with vocational teachers.
D.

II Students' Needs Analysis

1. Do you agree if the ESP reading materials are taken from simplified vocational materials?
A. strongly agree B. agree C. disagree D. strongly disagree
2. Do you agree while making the ESP materials involves vocational teachers in selecting topics/themes?
A. strongly agree B. agree C. disagree D. strongly disagree
3. What is your purpose of reading the ESP reading materials?
A. Because of hobby
B. Getting a good grade in English
C. To comprehend vocational information/instructions in English
D.
4. Do you agree if the ESP reading materials format comprises schemata, texts, comprehension check, vocabulary practice, language practice and communicative tasks?
A. strongly agree B. agree C. disagree D. strongly disagree
5. Of the following elements of the materials: comprehension check, vocabulary practice, language practice and communicative tasks, which is most important?
Reason :
6. How important does English support your vocational skill/knowledge?
A. strongly important B. important C. unimportant D. strongly unimportant
7. Do you agree if the ESP reading materials are developed based upon students' vocational contents?
A. strongly agree B. agree C. disagree D. strongly disagree
8. Do you agree if the chosen topics/themes are based upon students' vocational contents?
A. strongly agree B. agree C. disagree D. strongly disagree
9. Do you agree if vocational information written in English is presented in workshops or fields?
A. strongly agree B. agree C. disagree D. strongly disagree
10. Do you agree if an institutional side establishes informal vocational English course?
A. strongly agree B. agree C. disagree D. strongly disagree

B. Interview Guide for the English Teachers

No	Items	Interviewer	Interviewee
1.	Sources of Materials	Researcher	English Teachers
2.	Materials Format		
3.	Procedure of Making Materials		
4.	Materials Development		



The Records of Questionnaire Findings

Respondents : Students of Farm Machinery, Agronomy, Technology of Agricultural Products, and Animal Husbandry
Research Date : 13 – 19 March 2001
The Number of respondents : 89

A. Students' Interest

Majors	Strongly Interested (%)	Interested (%)
Farm Machinery	8	7
Agronomy	10	25
Tech. Of Agri Products	7	6
Animal Husbandry	10	14

B. Students' Needs Analysis

1. The ESP reading materials from the simplified Vocational texts

Majors	Strongly agree (%)	Agree (%)
Farm Machinery	4	10
Agronomy	8	27
Tech. Of Agri Products	4	9
Animal Husbandry	11	13

2. The Content or vocational teachers' involvement in making the ESP materials

Majors	Strongly agree (%)	Agree (%)
Farm Machinery	8	7
Agronomy	13	21
Tech. Of Agri Products	4	9
Animal Husbandry	11	14

3. The purposes of reading Vocational English texts

Majors	Purposes (%)		
	1	2	3
Farm Machinery	8	7	-
Agronomy	24	9	2
Tech. of Agri Products	4	9	-
Animal Husbandry	14	10	-

1 : to get vocational information or guidelines

2 : to learn vocational English

3 : because of hobby

4. The ESP reading materials format

Majors	Strongly agree (%)	Agree (%)
Farm Machinery	2	12
Agronomy	12	22
Tech. Of Agri Products	4	8
Animal Husbandry	13	11

5. The emphasized elements of the ESP reading materials Format

Majors	Vocabulary (%)	Language Practice (%)	Comprehension Check (%)	Communicative Tasks (%)
Farm Machinery	4	2	6	2
Agronomy	11	7	10	7
Tech. Of Agri Products	0	2	2	8
Animal Husbandry	11	4	4	4

6. The English importance in supporting students' vocational subjects

Majors	Strongly Important (%)	Important (%)
Farm Machinery	9	6
Agronomy	15	19
Tech. Of Agri Products	7	6
Animal Husbandry	17	8

7. The ESP reading materials development based upon students' content subjects

Majors	Strongly agree (%)	Agree (%)
Farm Machinery	4	11
Agronomy	13	21
Tech. Of Agri Products	4	8
Animal Husbandry	12	12

8. The topics/themes of the ESP reading materials based on students' Vocational skill

Majors	Strongly agree (%)	Agree (%)
Farm Machinery	4	10
Agronomy	10	25
Tech. Of Agri Products	6	7
Animal Husbandry	6	19

9. The Vocational information in English in workshops/fields

Majors	Strongly agree (%)	Agree (%)
Farm Machinery	2	10
Agronomy	6	29
Tech. of Agri Products	1	11
Animal Husbandry	6	19

10. The facility of Informal Vocational English Course at students' school

Majors	Strongly agree (%)	Agree (%)
Farm Machinery	8	7
Agronomy	13	21
Tech. of Agri Products	6	7
Animal Husbandry	17	8

Transcript: The English Teachers' Interview

A. The First Interview

1. What is your opinion about the ESP reading materials taken from vocational texts based upon students' content subjects?

I think such materials are very suitable. This is because those can relate students' knowledge on vocational aspects. Moreover, those can be used as input for students to learn Vocational English easily and they need to master English based upon their majors.

2. What do you think of the proposed materials format?

This covers all elements, such as schemata, text, comprehension check, vocabulary practice, language practice, and communicative tasks. To my mind, communicative tasks should be more focused than other elements because students need more to practice communicating English in their fields.

3. What is your opinion about involving vocational teachers in making the ESP reading materials?

It will be rewarding cooperation because the content teachers know vocational skills well. In such a way, they will present themes/topics that are relevant to students' content subjects.

4. What do you think of the ESP reading materials development design using students' content subjects?

It is very appropriate. This will match students' vocational skills and English skill integrally. This is because they have sufficient knowledge on the vocational skills; unfortunately, they are lack of Vocational English. Finally, they will be semi professional qualified-ready to-job-entrance manpower.

B. The Second Interview

1. What is your opinion about the ESP reading materials taken from vocational texts based upon students' content subjects?

I think they are supportive. Such materials are suitable with students' content subjects. Students should have been given to such materials, however, we English teachers could not cover those materials because we are lack of vocational knowledge.

2. What do you think of the proposed materials format?

This covers all elements, such as schemata, text, comprehension check, vocabulary practice, language practice, and communicative tasks. To my mind, communicative tasks, which show process activities such as how to make fruit preserved, should be more focused than other elements.

3. What is your opinion about involving vocational teachers in making the ESP reading materials?

It will be great because the content teachers give some students' major-related topics/themes and vocational terms. In fact, we need such cooperation in order to overcome our lack of constructing materials taken from students' vocational materials.

4. What do you think of the ESP reading materials development design using students' content subjects?

It is very appropriate. This will match students' vocational skills and English skill integrally. This is because they have sufficient knowledge on the vocational skills. While, they are lack of Vocational English. Finally, they will be expected to be semi professional qualified-ready to-job-entrance manpower.

**A MODEL OF ESP READING MATERIALS
FOR VOCATIONAL STUDENTS OF AGRICULTURE**



Majors:

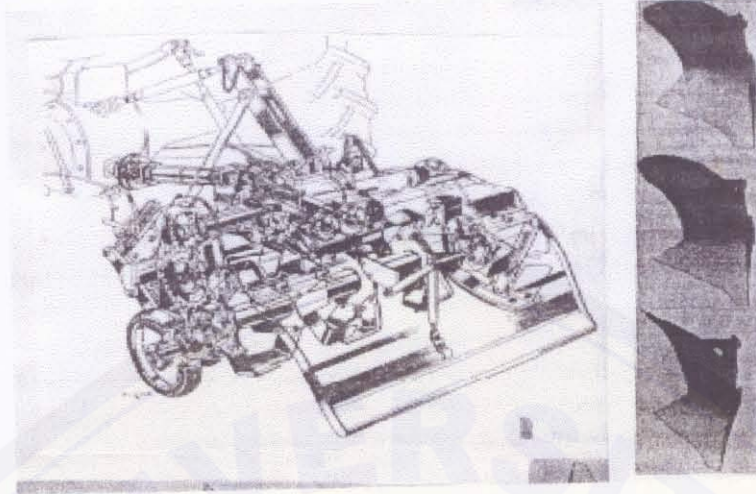
1. Farm Machinery
2. Agronomy
3. Technology of Agricultural Products
4. Animal Husbandry

Composed By:

HANDOYO PUJI WIDODO

**DEPARTMENT OF NATIONAL EDUCATION
ENGLISH EDUCATION DEPARTMENT
FACULTY OF TEACHER TRAINING AND EDUCATIONAL SCIENCE
JEMBER UNIVERSITY**

2001



I. Answer the following questions.

1. What do farmers do before planting rice or other crops?
2. What do farmers use to make their rice fields loose?
3. Why do farmers use mechanic tools?
4. How many times do farmers usually do tillage work?

II. Read the following text carefully.

TILLAGE EQUIPMENT

Tillage is one effort to prepare soils for planting and keeping the soils *loose* and free from weeds during *crop* production. Besides, this is one of the requirements in the crop production. To do this work, many crop farmers need some tools. In tillage, there are two kinds of equipment, primary and secondary. The kinds of primary equipment generally used by farmers are *moldboard, disk, rotary, and chisel* plows. On the other hand, the kinds of secondary equipment generally used by crop raisers are *harrows, rollers, and pulverisers*. Both kinds of the tillage equipment have different functions in the tillage.

The kinds of the primary tillage tools, generally used by many crop farmers, are moldboard, disk, rotary, and chisel plows. They have their own functions in the tillage. First, moldboard plows are used to break up several types of soils, such as *clay, loam, and loamy clay*. Besides, these are well suited for turning and covering crop *residues*. Second, disk plows are used to break up sticky and heavy soils and

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do deep plowing. Third, rotary plows are used to *crush* rocky and solid soils. Last, chisel plows are used to *loosen* soils, break up hard *layers* of soils and do surface tillage.

The kinds of the secondary tillage tools, generally used by many *crop raisers*, are harrows, rollers, and pulverisers. First, harrows are used to *level* the ground or make *beds*. Besides, they can be used to crush *clods*, *stir* soils, prevent soils from weeds and destroy them. Second, rollers are used to break up clods and loosen the soils. They also can be used to turn roots into the soils. Last, pulverisers, actually, have the same function as the rollers. However, the pulverisers can be used to *flatten* soils as soon as planting work can be done.

Thus, both the primary and secondary tillage tools are essential for finishing tillage work. This work should be done by crop farmers to make their plowing work easier and faster. Therefore, nowadays, these tillage tools are generally used by many crop farmers although the cost is expensive. This is because they expect optimal *yields* from crop production.

(Adapted from: *Farm Machinery and Equipment* by Smith and Wilkes)

◆ Words to remember

• prepare	= mempersiapkan	harrow	= garu
• loose	= remah	moldboard	= singkal
• plows	= bajak	turn	= membalik
• equipment	= peralatan	stir	= mencampur
• break up	= menghancurkan	flatten	= meratakan

III. Answer the following questions based the text above.

1. What is tillage?
2. Why do farmers need tillage tools?
3. How many kinds of tillage equipment are there? Mention.
4. Mention three examples of those kinds of the tillage equipment.
5. Why do farmers use rotary plows?
6. What is the main idea of the second paragraph?
7. Why do farmers use harrows?
8. What is the main idea of the last paragraph?
9. What does 'they' refer to? (Paragraph 3, line 3)
10. What does 'they' refer to? (paragraph 4, line 4)

IV. Find out the meaning of the following words.

Examples:

- moldboard = bajak singkal
- disk = bajak piring

- | | |
|-------------------------|-----------------------|
| 1. tillage (n) = | 5. layers (n) = |
| 2. chisels (n) = | 6. crush (v) = |
| 3. residues (n) = | 7. stir (v) = |
| 4. cover (v) = | 8. clods (n) = |

V. Make simple sentences using the following words.

Examples:

- soils (n) = The farmers harrow soils.
- plow (v) = The farmer plows his land.

- | | |
|---------------|---------------------|
| 1. clods (n) | 5. rollers (n) |
| 2. beds (n) | 6. rotary plows (n) |
| 3. crush (v) | 7. plow (v) |
| 4. yields (n) | 8. Loosen (v) |

VI. Study the following sentences.

1. - Many farmers plow their rice fields with moldboard.
- Rice fields are plowed by many farmers with moldboard.
2. - My father turns the soil with harrow.
- The soil is turned by my father with harrow .
3. - Vocational students should plow the land before planting rice.
- The land should be plowed before planting rice.
4. - There is a disk plow in the tractor workshop.
- There are chisel plows in the tractor workshop.



VII. Study the following dialog.

Firman : Hello, Hamid, what are you going to do?

Hamid : I am going to the tractor workshop.

Firman : What for?

Hamid : I want to plow the rice field.

Firman : What equipment will you use?

Hamid : Rotary plows

Firman : Will you do this work alone?

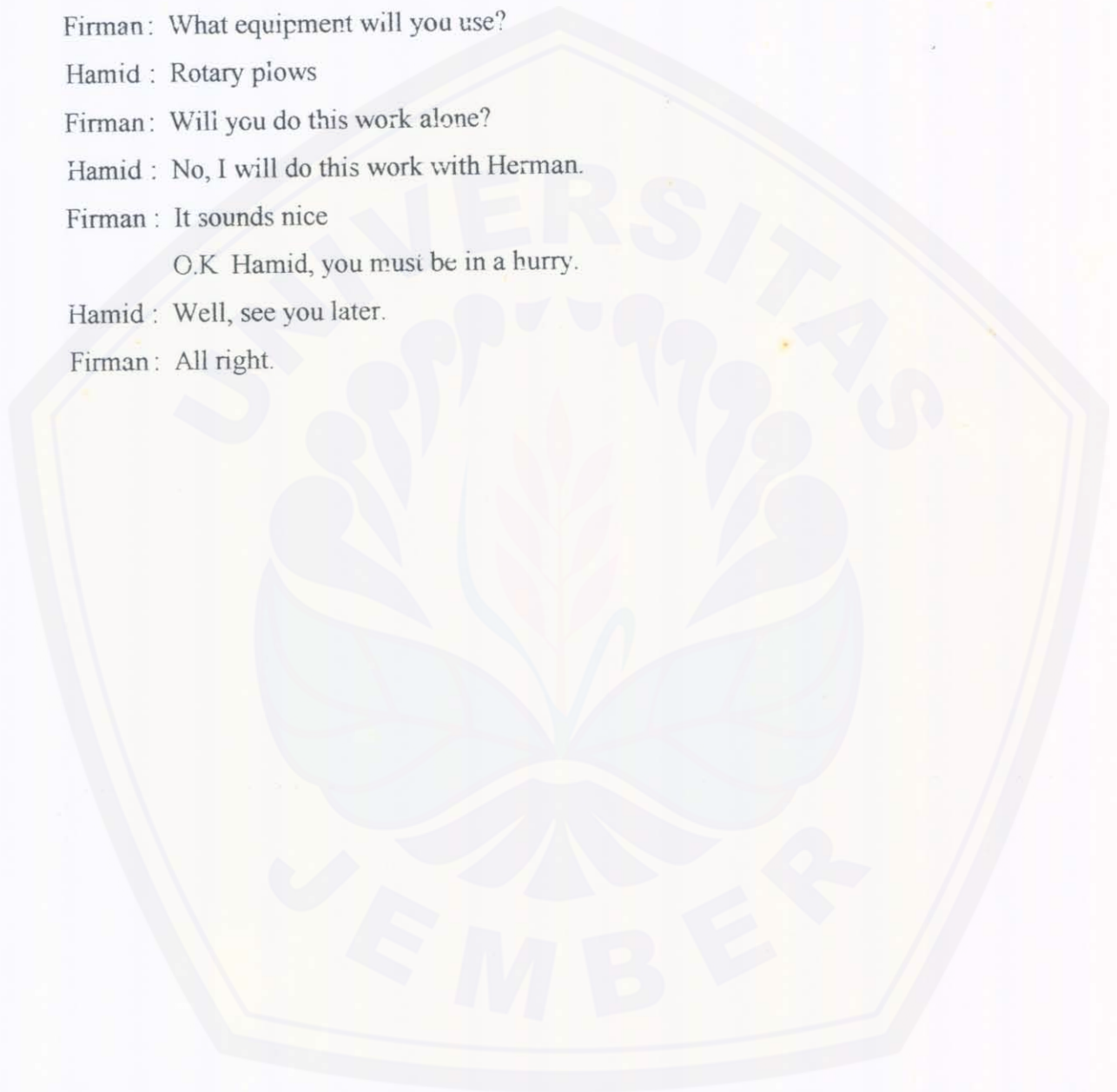
Hamid : No, I will do this work with Herman.

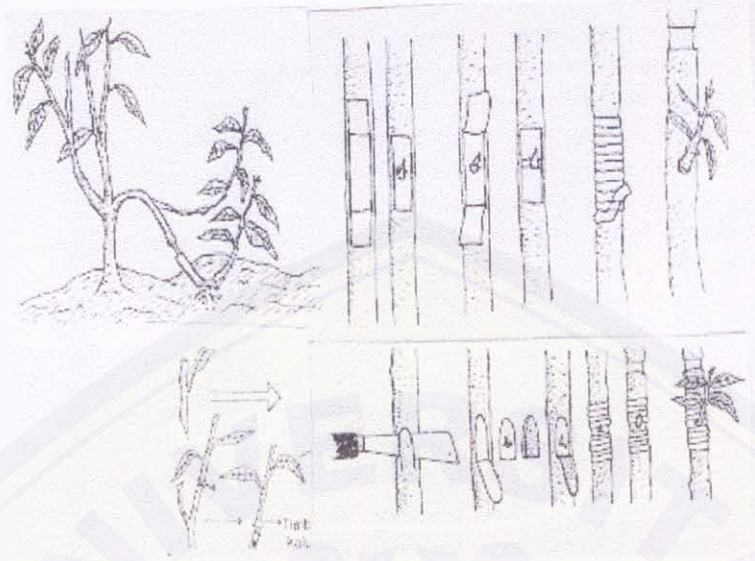
Firman : It sounds nice

O.K Hamid, you must be in a hurry.

Hamid : Well, see you later.

Firman : All right.





I. Answer the following questions.

1. Are you happy if your Durian fruits quickly?
2. Are you happy if your Rambutan remains productive?
3. Are you happy if your Mango does not fruit?
4. What do you do if you want to produce some crops in a great number?

II. Read the following text carefully.

VEGETATIVE PLANT PROPAGATION

Generally, there are two kinds of plant *propagation*, sexual and asexual. Sexual plant propagation is usually done by farmers. Such propagation is used for plants that have productive and liable seeds. For seedless plants, such plant propagation cannot be done. Therefore, many farmers use asexual plant propagation. The asexual plant propagation is one effort to reproduce plants from vegetative parts of plants. The vegetative parts of plants may come from buds, leaves, twigs, stems, shoots, and roots. The asexual plant propagation can also be called 'vegetative plant propagation'. There are several common techniques of the vegetative plant propagation. Among them are *cuttings*, *graftings*, *buddings*, and *layerings*.

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In terms of the vegetative propagation techniques, first, cuttings are an effort to cut *buds*, leaves, *twigs*, stems, *shoots*, and roots into desirable pieces. The position of cuttings should generally be *slant* in order to reduce high respiration. Some examples of plants, which can be cutted, are begonia, sweet potato, bougenville, etc. Second, graftings are techniques for joining a stem piece of one plant to a root system of another plant. In such a way, both parts of plants can unite and grow. Mango, apple, rambutan, avocado, durian, and other *cambial* plants are a few examples of plants that can be grafted. Third, buddings are, actually, particular types of graftings. However, in this technique, farmers or propagators use a single bud from a desired plant. Some plants that can be budded are sweet cherry, apple, mango, and so on. Last, layerings are efforts to get stems to be rooted while they are still *attached to their parent plants*. Some plants produce *layers* naturally, such as tomato, Philodendron, and so on.

Therefore, many crop farmers or propagators apply those vegetative plant propagation techniques because they have some purposes. They are maintaining *clones*, propagating seedless plants, avoiding *juvenile* periods of plants, and *fastening* crop yields. In such a way, the crop farmers or propagators can *maintain* their farm business in crop production.

(Adapted From: *Plant Propagation* by Hartmann and Kester)

◆ Words to remember

• reproduce	= memperbanyak	rooted	= berakar
• twigs	= ranting	juvenile	= masa vegetatif
• layerings	= rundukan	fasten	= mempercepat
• cuttings	= stek	maintain	= mempertahankan
• reduce	= mengurangi	crop	= tanaman

III. Answer the following questions based the text above.

1. What is vegetative plant propagation?
2. Why do farmers use the vegetative plant propagation?
3. How many kinds of the plant propagation do we have? Mention.
4. Mention four techniques of the plant propagation.
5. Mention six plants that can be grafted.
6. What is the difference between budding and grafting?
7. What is the main idea of the second paragraph?
8. Why do propagators use the vegetative plant propagation?
9. What does 'they' refer to? (Paragraph 3, line 3)
10. What does 'their' refer to? (Paragraph 3, line 5)

IV. Find out the meanings of the following words.

Examples:

- cuttings = stek
- layers = bahan tanaman rundukan

- | | | | |
|----------------------|---------|-----------------------|---------|
| 1. propagation (n) | = | 5. layers (n) | = |
| 2. buds (n) | = | 6. attached to (adj.) | = |
| 3. cambial (adj.) | = | 7. shoots (n) | = |
| 4. parent plants (v) | = | 8. graftings (n) | = |

V. Make simple sentences using the following words.

Examples:

- cut (v) = Farmers cut bougainvilles.
- layers (n) = Farmer prepares some layers.

- | | |
|------------------------|---------------------|
| 1. Parent plants (n) | 5. maintain (n) |
| 2. budding (n) | 6. stems (n) |
| 3. propagate (v) | 7. graft (v) |
| 4. juvenile period (n) | 8. crop farmers (n) |

VI. Study the following sentences.

1. - Many propagators propagate their mangoes with grafting.
- Mangoes are propagated by many propagators with grafting.
2. - My father cuts a piece of rose stalk.
- A piece of rose stalk is cut by my father.
3. - Vocational students should propagate some sweet potatoes with cuttings.
- Some potatoes should be propagated with cuttings.
4. - There is a layer in the garden.
- There are layers in the garden.

VII. Study the following dialog.

Son : Good morning, Dad.

Father : Good morning, Son.

Son : Dad, I want to graft mango. Could you tell me the way to graft it?

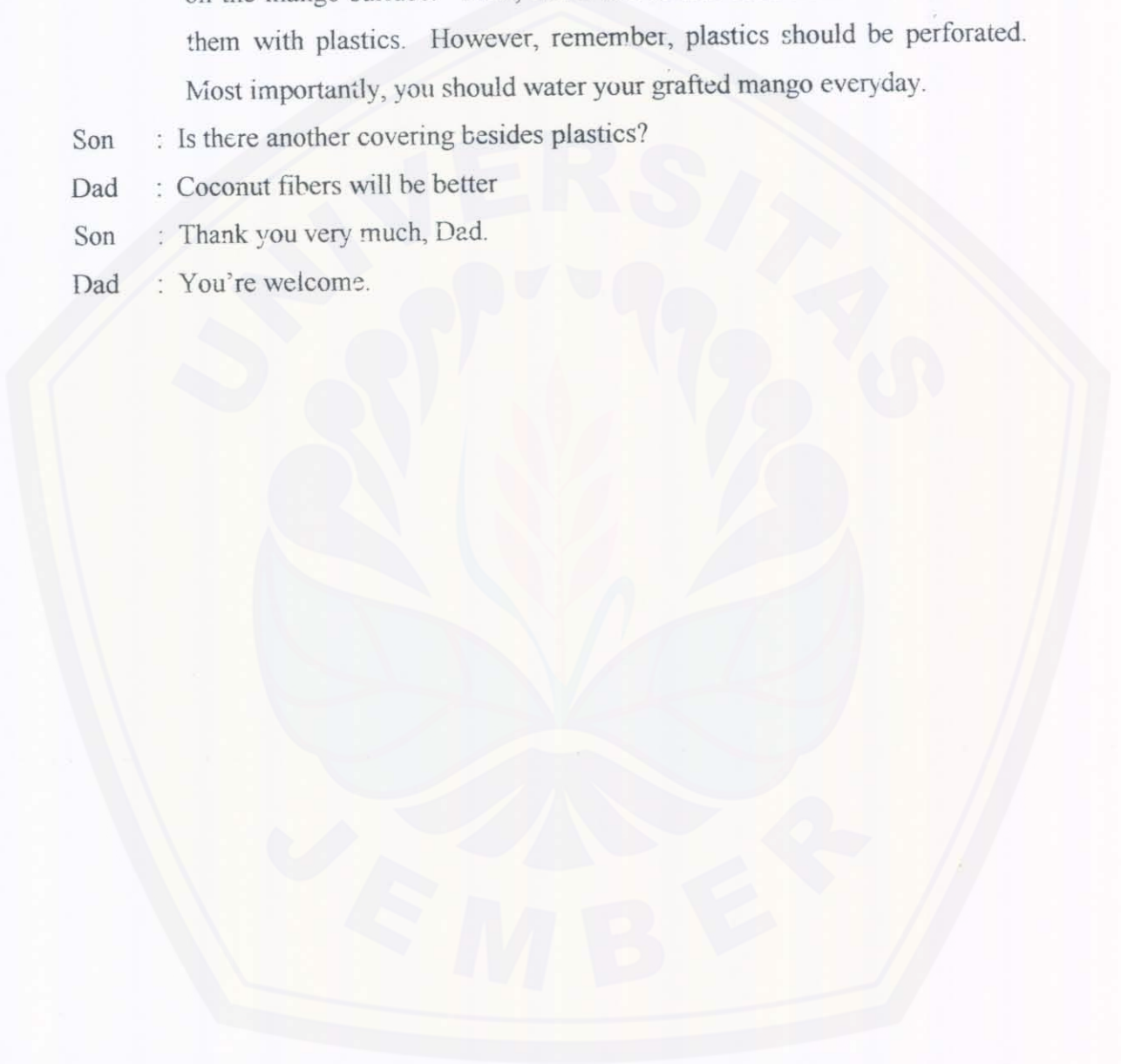
Dad : Sure, first, you peel the bark of mango. Then, eliminate the cambial tissue on the mango surface. Then, cover the peeled bark with soils then cover them with plastics. However, remember, plastics should be perforated. Most importantly, you should water your grafted mango everyday.

Son : Is there another covering besides plastics?

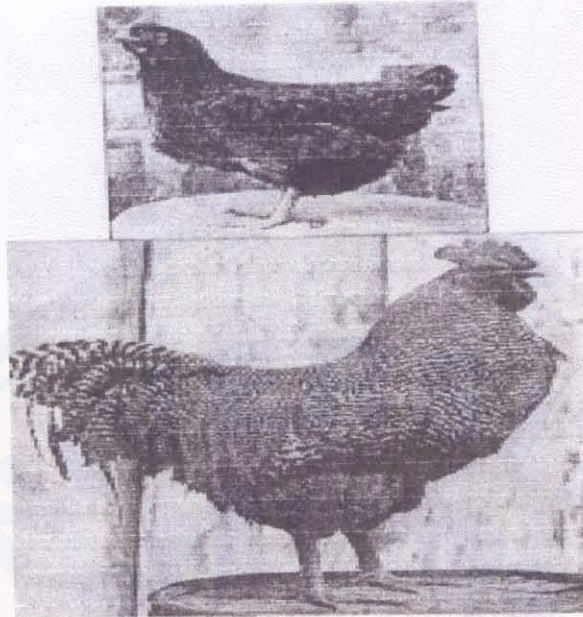
Dad : Coconut fibers will be better

Son : Thank you very much, Dad.

Dad : You're welcome.



A Model of Reading Material
For Animal Husbandry



I. Answer the following questions.

1. Are you happy if your chickens are sick?
2. What do you do if your chickens are infected by disease?
3. What do you do if your infected chickens are not curable?
4. Why do you eliminate your infected chickens?

II. Read the following text carefully.

CULLING

Poultry production is considered as one of the kinds of essential farm business. Poultry include chickens, ducks, geese, and turkeys. In general, many farmers raise these kinds of poultry for meats and eggs. One of the efforts to get good yields in poultry production is *culling*. Culling is one effort to eliminate undesirable birds from the flock. To do this, there are six factors that should be considered.

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First, health refers to healthy hens both their activity and appearance. For example, healthy hens should have large, bright and *alert* eyes. Besides, the healthy hens have normal wings and an erect body. Dealing with activity, they should be busy and active in the flock.

Second, head character deals with a formation of head. For example, the healthy hens should have a broad and deep head. Besides, they have bright *combs*, *earlobes* and *wattles*. The combs, earlobes and wattles are free from *defects*. In addition, the healthy hens have strong *beaks*.

Third, body capacity refers to a proportional body. For instance, the hens should have a broad back. If the hens have such a back, their productivity of meats will be high. Besides, their *keel* is long and straight.

Fourth, secondary sexual characters deal with the appearance of combs, wattles, and earlobes. These characters reflect an egg productivity of hens. For instance, if layers have large combs, earlobes, and wattles, they will *lay* well. They have a high productivity of eggs.

Fifth, *molt* refers to a dropping and growing of feathers. Molting happens from a neck, breast, body, tail, and wings. This takes place *in turns*. Good hens will drop their feathers as soon as their feathers grow. In this case, their feathers should grow fully and well. Last, brooding deals with how well hens *brood* their eggs continuously. In such a way, their egg production will be optimal.

Thus, the sixth factors should be considered by poultry raisers in culling. This is because unhealthy hens will cause low production and a source of possible infection. Finally, they can cause the poultry *raisers* to get a loss. Therefore, such hens should be culled. By knowing some factors of culling, the poultry raisers can increase their poultry production both in eggs and meats.

(Adapted from: *Poultry Enterprises by Dickson and Lewis*)

◆ Words to remember

• consider	= mempertimbangkan	farm business	= usaha tani
• raise	= berternak	erect	= tegak
• combs	= jengger	defects	= noda/bercak
• layers	= ayam petelur	brood	= mengeram
• raiser	= peternak	loss	= rugi

III. Answer the following questions based the text above.

1. What is culling?
2. Why do poultry raisers cull their undesirable birds?
3. How many factors should the poultry raisers consider in culling? Mention four of them.
4. When can hens be said healthy?
5. Mention hens' secondary sexual characters?

6. What is molt?
7. What is the main idea of the last paragraph?
8. How do the poultry farmers increase their poultry production?
9. What does 'they' refer to? (Paragraph 2, line 3)
10. What does 'their' refer to? (paragraph 7, line 5)

IV. Find out the meaning of the following words.

Examples:

- molting = pergantian bulu
- hens = ayam betina

- | | | | |
|----------------|---------|------------------------|---------|
| 1. culling (n) | = | 5. Alert (adj.) | = |
| 2. wattles (n) | = | 6. Beaks (n) | = |
| 3. keel (n) | = | 7. lay (v) | = |
| 4. molt (v) | = | 8. poultry raisers (n) | = |

V. Make simple sentences using the following words.

Examples:

- wattles (n) = My hens have bright wattles.
- eliminate (v) = A poultry raiser eliminates his birds.

- | | |
|-----------------|------------------------|
| 1. poultry (n) | 5. keel (n) |
| 2. cull (v) | 6. lay (v) |
| 3. earlobes (n) | 7. brood (v) |
| 4. beaks (n) | 8. poultry raisers (n) |

VI. Study the following sentences.

1. - Many farmers often raise chickens for eggs and meats.
- Chickens are raised by many farmers for eggs and meats.
2. - A hen breaks her own egg.
- An egg is broken by the hen.
3. - Vocational students should check their birds in the cage.
- Birds should be checked by the vocational students in the cage.
4. - There is a defect on my hens' wattle.
- There are defects on my hens' wattle.

VII. Study the following dialog.

Budi : Hi, Wati, what are you going to do?

Wati : I am going to the hens' cage.

Budi : What for?

Wati : I want to cull my birds

Budi : Are your birds infected by pests or diseases.

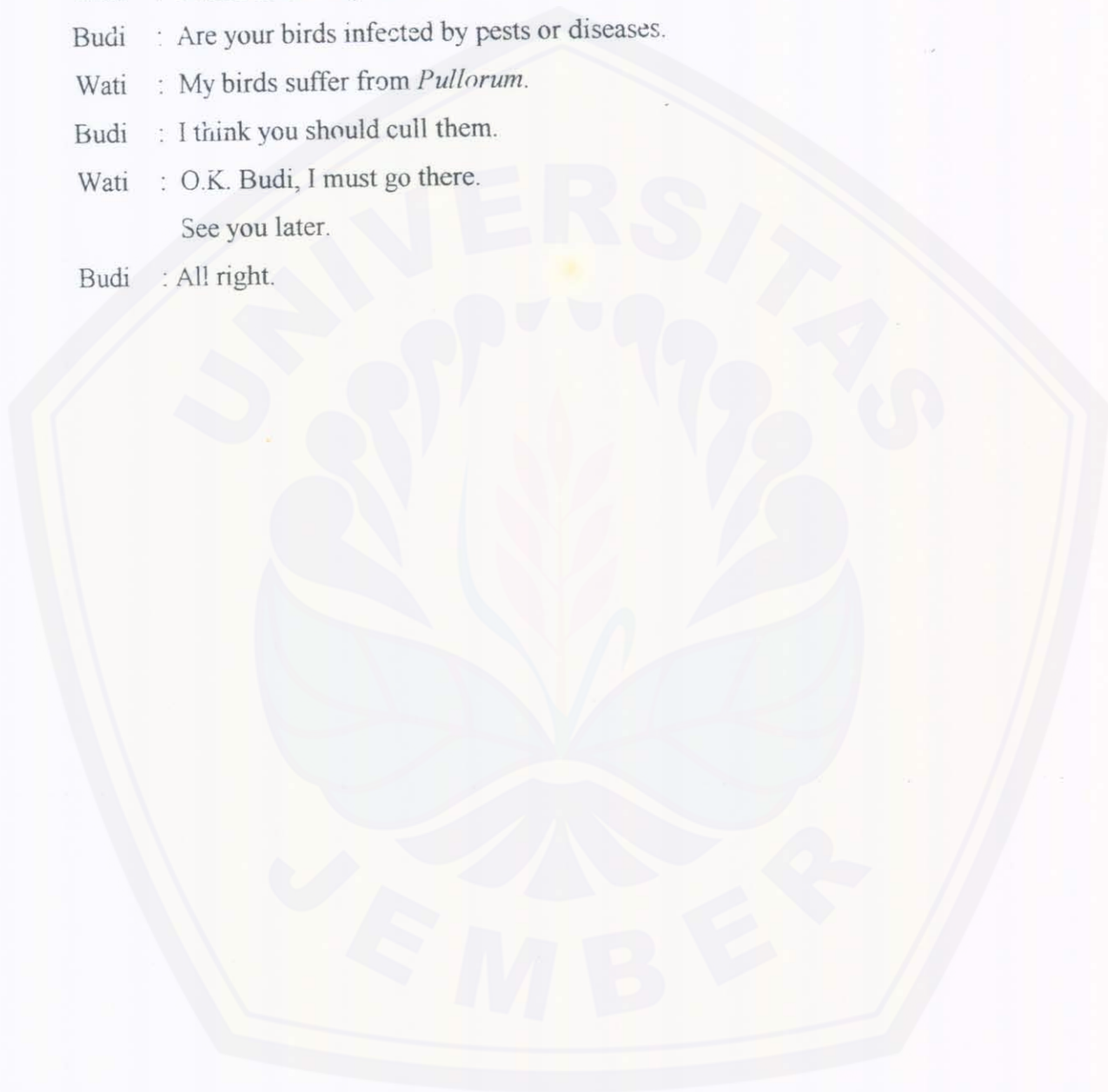
Wati : My birds suffer from *Pullorum*.

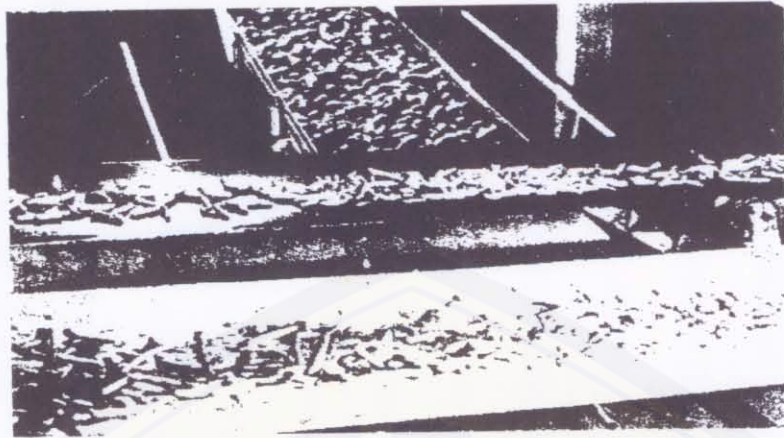
Budi : I think you should cull them.

Wati : O.K. Budi, I must go there.

See you later.

Budi : All right.





I. Answer the following questions.

1. Do you often dry food?
2. Do you often can food?
3. Do you ever salt fish?
4. Do you often freeze vegetables?

II. Read the following text carefully.

Food Preservation

Food preservation is one effort to keep foods from being bad. Besides, this is one of most important factors in food processing. The food preservation is mainly intended for perishable foods. There are several common ways of the food preservation. They are canning, freezing, dehydration and salting, pickling and fermentation.

First, foods are placed inside containers or cans where the air is removed by vacuum. The cans are sealed. Then, the sealed cans are sterilised by steam. The process of food preservation is called canning. Several containers for canned foods are made of glass, plastic, and aluminium. The canned foods are influenced by heat process and methods for preparation. Such preparation includes washing, sorting, blanching, and filling.

Second, foods are frozen by refrigeration. This is called freezing. In this preservation, foods are packed in suitable cans. Then, they are immersed in salt solutions. Last, they are frozen in refrigerators for several periods.

Third, the oldest method of preserving foods is dehydration. In this preservation, the water content of food is removed by heat or other sources of energy. Conventionally, this preservation way is combined with salting for certain food products. In salting, foods are salted and they are dried under the sun. In both methods, the cost of packaging, handling, sorting, and transporting can be reduced.

Last, foods are immersed in edible acid solutions. In general, those acids are in the form of vinegar. This preservation process is called pickling. In other words, pickling is one effort to preserve food with acid solutions. In contrast, fermented foods are produced from sugar with acid bacteria assistance.

There are several aims of preserving foods. First, the food preservation is intended to prevent foods from bacteria spoilage. Besides, this can retard the growth of undesirable bacteria. Third, such preservation is meant to avoid chemical changes, such vitamins, fats, and flavors and loss of nutritive values of foods.

Thus, some foods such as vegetables can be preserved. Some preserved vegetables are asparagus, corn, okra, soybean, green bean, cucumber, etc. The ways of preserving them depend on each of the food products. In such a way, they can be kept fresh and nutritious.

(Adapted from: Commercial Vegetable Processing by Luh B.S. and Woodroff J.G.)

◆ Words to remember

• Perishable	= mudah rusak/busuk	preserve	= mengawetkan
• salting	= penggaraman	solutions	= larutan
• containers	= kaleng	prevent	= melindungi
• freeze	= mendinginkan	spoilage	= pembusukan/kerusakan
• immerse	= menyelup	avoid	= menghindari

III. Answer the following questions based the text above.

1. What is food preservation?
2. For what is the food preservation intended?
3. Mention four common ways of preserving foods.
4. What factors influence canned foods?

5. What is the oldest method of food preservation?
6. Mention some aims of food preservation.
7. What is the main idea of the sixth paragraph?
8. What is the difference between pickling and fermentation?
9. What does 'this' refer to? (Paragraph 1, line 1)
10. What does 'they' refer to? (paragraph 3, line 3)

IV. Find out the meaning of the following words.

Examples:

- packed = dibungkus
- placed = ditaruh

- | | | | |
|---------------------|---------|-------------------------|---------|
| 1. preservation (n) | = | 5. retard (v) | = |
| 2. cans (n) | = | 6. flavors (n) | = |
| 3. sealed (adj.) | = | 7. nutritive values (n) | = |
| 4. edible (adj.) | = | 8. reduce (v) | = |

V. Make simple sentences using the following words.

Examples:

- pickle (v) = My mother pickles cucumber .
- bananas (n) = Some bananas are dehydrated by Oven.

- | | |
|----------------|----------------|
| 1. foods (n) | 5. flavors (n) |
| 2. ferment (v) | 6. seal (v) |
| 3. canning (n) | 7. vinegar (n) |
| 4. pack (v) | 8. freeze (v) |

VI. Study the following sentences.

1. - Students of Technology of Agricultural Products can corns.
 - The corns are canned by students of Technology of Agricultural Products.
2. - My mother pickles cucumber.
 - Cucumber is pickled by my mother.
3. - I will freeze this cabbage.
 - This cabbage will be frozen.
4. - There is a package of dried banana.
 - There are many pieces of pickled cucumber.

VII. Study the following dialog.

Lusi : Hi, Erna.

Erna : Hi, Lusi.

Lusi : I have some fresh cucumbers. What should I do with these cucumbers?

Erna : Weil, I think those cucumbers should be pickled.

Lusi : Can you tell me how to pickle them.

Erna : O.K. First, wash the cucumbers and peel them. Then, cut them into pieces and wash them again. After that, immerse them with vinegar. Last, drain them.

Lusi : I think it is simple. Thanks a lot for your information.

Erna : That's alright.

