

Part II. What are the English language skills which are necessary for students of Agriculture?

1. Writing summaries and abstracts of their thesis.
2. Taking notes from lectures.
3. Taking notes from references in the library.
4. Writing reports in laboratories.
5. Writing examination papers.
6. Speaking in seminars.
7. Asking questions orally.
8. Talking to colleagues about topics in Agriculture.
9. Listening for gist (scanning).
10. Listening for details (skimming).
11. Listening to films and radio programmes.
12. Listening to lectures from non-Arabs.
13. Reading references in English in search of information.
14. Reading journals and periodicals.
15. Using English dictionaries and Encyclopedias.
16. Reading aloud.
17. Translation from Arabic into English.
18. Translation from English into Arabic.
19. Using catalogues in a library.
20. Any other skill.

- Skehan, P.** (1980), "Team Teaching and the Role of the ESP Teacher." In 109-Study Modes and Academic Development of overseas Students. The British Council.
- Swales, J.** (1971) Writing Scientific English London: Nelson.

Appendix

A questionnaire distributed to 30 postgraduate Students of Agriculture.

Part I: Motivation

1. Do you think that the students of Agriculture are motivated to learn English?
 - a. highly motivated.
 - b. somewhat motivated.
 - c. not motivated at all.
2. What motivates the students of Agriculture to learn English?
 - a. job requirements.
 - b. improvement of Exam grades.
 - c. Travel abroad.
 - d. Widening of knowledge and interest in the subject.
3. Can you easily become an acceptable professional with English?
 - a. Yes
 - b. No

4. Variation of activities and exercises make the lesson interesting and enjoyable.
5. The size of the group should be small to give chance for practice.
6. The ranked importance of English language skills should be the guide when designing a syllabus.
7. Reading and writing may receive priority over speech. Reading comprehension is of prime importance for students of agriculture.
8. The exercises should take into account the nature of abilities which must be developed to meet the linguistic needs of students of agriculture.

References

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- Karunakaran, k.** (1988) "Issues and Problem in Translation with Reference to Tamil for science " In Translation as a synthesis. New Delhi, Bahri.
- Mackay, R. and Mountford, A** (1979) "Reading for Information," In Reading in a Second Language. U. S. A: New Burry House Publishers.

7.7 Checking facts and ideas

In this exercise students have to say whether a statement is false or true according to a reading passage. They have also to know why a particular statement is false or true.

7.8 Rephrasing and equivalence

In this exercise the same idea is expressed in different ways, e. g., "an invisible substance" can be rephrased as: substance which cannot be seen; a "fertile offspring" is synonymous with the phrase "able to produce a living young.

8. Conclusions:

1. The English language course should be based on learning needs analysis of the students of agriculture. This analysis can be carried out as a register analysis of agricultural texts to characterize the language used in agriculture. A questionnaire or review can be used to gather information about students needs. The teacher, therefore, has to familiarize his students with the structural and discoursal features of English used in agricultural texts.
2. The material can be designed to motivate students of agriculture and increase their interest in learning English. They have a desire to read original texts in their field of specialization.
3. Students of agriculture need an integrated skills approach because successful language learning demands proficiency in all the skills and it is unrealistic to separate language skills.

language. We have, therefore, to understand how sentences are combined in discourse to produce meaning. The course should develop a knowledge of how sentences are used in the performance of communicative acts. Students, therefore, can be given some suggestion on how to translate effectively. They should be introduced to the main morphological, lexical, syntactic problems between English and Arabic from time to time and whenever these problems arise.

Acts like description, reporting, instruction and results which are performed by agrarians are to be translated. Students need the translation of terms used in agriculture, sentences, general meaning and relations between statements, formal similarity and semantic equivalence.

7.6. Contextual reference and avoiding repetition.

It is necessary for students of agriculture when they read books and references to know what words like "this", "that", "it", "they" and "them" refer to. This is necessary for the understanding of how statements are related to each other through demonstratives and pronouns.

students have to review their notes and reconstruct them into well-connected sentences. Note-taking should be practised in the classroom. A passage is given and students are asked to make notes on all the important points in the passage. Finally, they have to reconstruct their notes.

7.5. Translation Exercises

Postgraduate students of agriculture need English to translate from English into Arabic or vice versa. They are often asked by their subjects teachers and supervisors to translate articles from English into Arabic for presentation in seminars and discussion on topics of their specialization. They are introduced to the linguistic features preferred by the English and Arabic language systems. Translation is, therefore, used as a teaching device. Students need to understand the meanings of agricultural terms like gametes, zygote and vesicles. They need to translate from references related to their agricultural subject matter. These students have the desire to know the meaning of every single word in Arabic. However, they are unable to guess the meaning from the context. Translation should be carried out with reference to grammatical deep structure and pragmatic equivalence. K. Karunakaran (1988) states that the information on science when translated should be capable of expressing the concepts completely and unambiguously in the target

Linking devices “are useful in more complex scientific and technical writing, and play an important role in the organization of scientific discussion in written English.” (Swales: 1971: 125). They connect ideas, processes and actions in a logical way and show how previous statements are related to the following ones. Students are asked to connect statements of contrast, results, cause and effect, similarity, addition and exemplification.

7.3. Completing a passage by referring to a diagram

One of the characteristics of English used in agriculture diagrams. They save time and give information at a glance. Students are asked to complete a passage by referring to a diagram. The purpose of this exercise is to make the learner recognize how the language and subject matter are interrelated. A simple diagram is drawn and the students have to provide a verbal or written description. Transfer of information from a non-verbal to a verbal medium is intended to help students learning with their area of study.

7.4. Note-taking from books

Since students of agriculture need to read references in English in their specialization. They should be able to take notes from books and journals. They should practise how to write key words, phrases and sentences to aid their memory, select relevant details, reorganize topics and main ideas. This is related to recall. Then,

students attention to how written discourse develops, how language and agricultural subject matter are interrelated in acts of communication. Students should use brief, exact and accurate style. Ideas should be logically ordered. Statements should be impersonal, formal, unambiguous, factual and objective.

It is clear from the statistical analysis that the most important skills needed by students of agriculture are writing and reading English language exercises should be designed to develop these two skills without neglecting listening and speaking. Following are some of the suggested exercises that can be given to students of agriculture.

7.1. Reading Comprehension

Reading comprehension passages from the field of agriculture should aim at:

1. The mastery of specialized vocabulary.
2. The structure of sentences that constitute the thought unit.
3. Following thought development.
4. The ability to concentrate on the reading task (Mackay and Mountfold: 1979: 113)

7.2 Connecting Facts and Ideas

Students should be taught how to combine sentences to form a connected discourse through the correct use of discourse makers. Such markers indicate the communicative function of a sentences.

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12. Listening to lectures from non-Arabs.	5	50	18	60
13. Reading references in English in search of information.	10	100	28	93
14. Reading journals and periodicals.	10	100	30	100
15. Using English dictionaries and Encyclopedias.	2	20	20	67
16. Reading aloud.	1	10	16	63
17. Translation from Arabic into English.	8	80	26	87
18. Translation from English into Arabic.	8	80	28	93
19. Using catalogues in a library.	7	7-	22	73
20. Any other skills. (correspondence).	2	20	-	-

7. Exercises:

The work, as we have already stated, is not intended as a course design but it is, we hope, useful for course designers, teachers and students. The exercises should be designed to draw students attention to the process by which a piece of language is interpreted as a discourse like pronouns reference, relations between statements, rephrasing, completing a passage by referring to a diagram and reordering jumbled sentences. These exercises reinforce the gradual transfer from receptive awareness to productive ability. The purpose is to enable the students to make explicit acts like definitions and illustrations. These exercises draw

It is clear from table 2 that reading and writing skills are more frequently needed by postgraduate students of agriculture than speaking and listening. The English language material should, therefore, give priority to writing and reading skills over speaking and listening taking into consideration that language is an integrated unit.(Please see table 2 below).

Table 2

The English language skills which are necessary for Ph. D. and Ms.c. students of Agriculture

<i>Skills</i>	<i>Ph.D.</i>		<i>Ms.c.</i>	
	<i>No</i>	<i>%</i>	<i>No</i>	<i>%</i>
1. Writing summaries and abstracts.	9	90	28	93
2. Taking notes from lectures.	8	80	20	67
3. Taking notes from references.	8	80	26	87
4. Writing reports in laboratories	2	20	14	47
5. Writing examination papers.	-	-	-	-
6. Speaking in seminars.	4	40	10	33
7. Asking questions orally.	1	10	10	33
8. Talking to colleagues about topics in agriculture.	5	50	14	47
9. Listening for gist (scanning).	3	30	22	73
10. Listening for details (skimming).	2	20	16	63
11. Listening to films and radio programmes.	6	60	16	63

periodicals in the area of agriculture. (80%) of the Ph. D. students and (87%) of the Ms.c. students need English for taking notes from references. Besides, both Ph. D. (90%) and Ms.c. (93%) students have to write summaries and abstracts of their theses and research papers in English. Ph. D. students (80%) and Ms.c. students (87%) need English to translate into Arabic. They are asked by their teachers and supervisors to translate from papers for presentation in seminars and discussions held in Arabic. They have also to translate from Arabic into English. They both need English to use catalogues in the library. The table also shows that postgraduate students need English to listen to films and radio programmes.

Oral skills like speaking in seminars and asking questions orally or talking to colleagues about topics in the field of agriculture are, to a less degree, needed because the need to speak English has decreased after the process of Arabicization in which all teaching instructions should be carried out in Arabic. Generally, Ms.c. students need more (73%) practice in listening for gist than Ph. D. students (30%). Ms.c. students (67%) need to use dictionaries and encyclopedias more than Ph. D. students (20%) because Ph.D. students are more familiar with and competent in the agricultural subject matter written in English and are more familiar with the agricultural terms.

Table 1
Students' Motivation to Learn English

<i>Questions and Responses</i>	<i>Ph.D.</i>		<i>Ms.c.</i>	
	<i>No</i>	<i>%</i>	<i>No</i>	<i>%</i>
1. Do you think that postgraduate students of agriculture are motivated to learn English?				
a. highly motivated	10	100	20	67
b. somewhat motivated			10	33
c. not motivated				
2. What motivates you to learn English?				
a. job requirements	5	50	6	20
b. improvement of examination grades.	-	-	2	7
c. Travel abroad.	4	40	2	7
d. Widening knowledge and interest in the subject of specialization.	10	100	30	100
3. Can you easily become an acceptable professional without English?				
a. Yes			6	20
b. No	10	100	22	73

Table 2 shows that all (100%) Ph. D. students and (93%) of the Ms.c. students need English to read reference books in the field of their specialization. They all need English to read journals and

objective, dynamic verbs, adverbs of manner and degree, and sentence patterns frequently used in English for agriculture. The concepts most frequently used can also be identified. These and other characteristics form the register of English for agriculture that the teacher should be familiar with though this analysis is on the surface level. So, we have to analyze the language on the discourse level and the needs of the students in the target language. In the present study, we have used needs analysis to determine the type of English language material that should be taught to postgraduate students of agriculture.

6. Results

It is clear from table 1 below that Ph. D. students of agriculture are more highly motivated to learn English than Ms.c. students. However, there is an agreement between Ph. D. and Ms.c. students that they need English to widen their knowledge and interests in the subject of their specialization. Both students cannot easily become acceptable professionals without English. Ph. D. students are motivated to learn English for job requirements and to travel abroad.

writer for a real audience and designed to convey a real message". (Skehan, 1980: 32). Unmodified texts are selected from agricultural area without alteration. When students from different departments of the college join the course either a common core agricultural subject matter is given or different passages of interest to the whole heterogeneous group are suggested. The terms taught should develop the ability to read references and make language more relevant. Authenticity, therefore, means "the development of personal learning strategies to approach the particular task of interpretation and further application of texts to real life situation." (Escorcia: 1985: 232).

The vocabulary and sentence structure should resemble that of the textbooks used in agriculture. "The reading texts chosen for use in the English language class must represent the kind of text which the students are required to read for information in the course of their studies." (Mackay and Mountford: 1979: 121). These texts provide motivation to students because the information they contain are relevant to their specialist studies.

The English language materials can also be specified by analyzing the linguistic characteristic of the English used in agriculture such as the use of Greek and Latin elements, the pronunciation of some agricultural terms, the use of compoundings, non-verbal items like pictures, charts, tables and symbols, the use of

references in English and translate from those references to enrich their work. Besides, they have to write summaries and abstracts of their works in English. Those students study Agricultural subject-matter in Arabic but need access to works reported in English used for agricultural purposes.

The needs of the learners are important in materials design. The material should be related to the learners' subject of specialization, i.e. agriculture. The passages are taken from text-books of agriculture. The topics should be on those studied by the students. The material should also be related to the skill required by the learners. The results will reveal the necessary skill needed by students of agriculture and what motivates them to learn English. On the basis of this analysis, as already mentioned, we will be able to specify the most important types of exercises.

5. English language materials

Material that should be chosen for students of agriculture should be interesting, enjoyable, engage the learners thinking ability and provides the opportunities for learners to use their existing knowledge. The reading passages can be classified into modified, unmodified and specially written texts. Passages then should be taken from authentic unmodified texts of agriculture. An authentic text is " a stretch of real language, produced by a real speaker or

2. The Aim of the study

The work is an attempt to specify the type of English language materials needed for postgraduate students of agriculture in the College of Agriculture and Forestry, University of Mosul. The research tries to specify the material needed by those students to determine the type of English language materials. However, the study is not intended as a course design though it tries to present the types of exercises required by the students of agriculture. The study, we hope, is useful for students, English language teachers and course designers.

3. Procedure:

To achieve our aim we have distributed a questionnaire to 30 Ms.c and 10 Ph.D. students of agriculture and Forestry, University of Mosul about their needs for English. On the basis of these needs, it is hoped, we can determine the sort of English language material that should be taught to them. We have also made use of our experience as language teachers for Agricultural English.

4. Needs Analysis

Postgraduate students of agriculture usually conduct their researches and proposals in Arabic but they have to consult

“ One of the reasons for the teaching of English, particularly in developing countries is that it affords a window on the world of economic growth, advanced technology and applied science “ (Harrison: 1979: 56). English for Specific Purposes (ESP) is an essential means to a clearly identifiable goal. The selection of language content should include not only lexical and grammatical items but also communicative capabilities and specify skills to be learnt by students of agriculture. They usually need English for academic purposes. Strevens (1980: 108-9) defines ESP as a pedagogical system that entails the provision of English language instructions in terms of:

- i. the learners' particular needs.
- ii. topics in the area of study.
- iii. Selective language content (not general)
- iv. Particular Language skills.

We have, therefore, to know the learners' reasons for learning English and their aims. English for Agriculture can be found in text-books of agricultural sciences, journals and magazines of agriculture.

English Language Materials for Postgraduate Students of Agriculture

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1. Introduction:

In preparing teaching materials, it is important to have a clear idea about the goals, the skills to be developed in the students and the register of agricultural English. Students have to know that the characteristics of Agricultural English is much different from from General English because it has established phonological, morphological, syntactic and semantic features. It presents the students with a number of special problem. It also presents facts in an objective, direct and unambiguous statements.

English, therefore, is necessary in the domain of science. The course taught to students of agriculture should be purpose oriented to understand the written discourse in particular. Students are required to read references in English in the field of their specialization because English has become the accepted international language of science. The demand has been growing for English courses tailored to specific needs.

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