



Conducting Needs Analysis for an English for Specific Purpose Course for Agricultural Sciences

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Abstract

Conducting a needs analysis is the very first step in designing English for Specific Purpose (ESP) course as well as maintaining the quality of the course to fulfill the learners' needs. This research intends to highlight the procedures significant in conducting a needs analysis (NA) for designing English for specific purpose course for the ESL learners of B.S. (Hons.) agriculture sciences at University of Agriculture, Faisalabad, (UAF) Pakistan. Data for need analysis were collected through a questionnaire, document analysis and test techniques. It was observed that the ESL learners of graduate level at University of Agriculture Faisalabad were taught general English courses which were not sufficient to fulfill their communicative needs. Therefore, there is a need of an ESP Agriculture science course. Suggestions have also been recommended to design ESP Agriculture Sciences course for these ESL learners.

Keywords: English for specific purposes; ESL learners' needs; ESP course; need analysis

1. Introduction

English is an international language which can unlock the horizons of success as Talbot asserts that English language is one of the major languages used for communication for trade and commerce. It has got the status of international language because of its use on internet as well as the access of global knowledge on any subject (2009). English is compulsory to conduct the academic and professional affairs in almost all countries of the world. Almost all the subjects have their translations available in English. Computing, trade, tourism, industry, foreign affairs, Agriculture, Electronics and various businesses are run with the use of English language. Its importance is an undeniable reality. It is a major language not only in the ex-British colonies but also in many European and American countries.

Pakistan's economy revolves around Agriculture as almost 70% of its population is working in the Agri-related businesses. It provides bread and butter to the majority of its population. Agriculture also provides raw material for the industry. Pakistan's progress mainly depends on the progress of Agriculture sector. It is owing to the importance of Agriculture that there are many institutions and universities in Pakistan to deliver the knowledge of Agriculture. These educational and research institutes are working very hard to invent new technologies to improve the production of the crops and provide better and healthy food to the public. English is used as the medium of instruction in these educational institutions. Similarly, English is the language of research in Agriculture field that is why most of the research articles, theses and books are available in English.

There is a strict observation on the admission system in these universities and only the students with good grades are admitted to the Agriculture universities and colleges. Because no English for specific purpose course is available to the students of Agricultural sciences, they have to face troubles in reading and presentation skills in particular and all the four skills in general. Though the students with good grades are given admission to the Agriculture colleges and universities, they face problems in understanding and using the technical terminologies and jargon of Agriculture Sciences.

ESP is a new field of knowledge which means that English language learners should be taught according to the needs of their profession and academia. An ESP Agricultural sciences course for the ESL learners will fulfill their communicative needs. For designing such a course, needs analysis is the very first step where the students are analysed for what is the age of the language learners, what kind of text do they need to excel in their field of knowledge, which skills are necessary to be taught, which medium should be adopted, which AV aids should be used, and how many courses of English should be taught etc.

1.1 Hypothesis

The students of agriculture sciences need an ESP agriculture course to fulfill their communicative needs. Need analysis will determine the wants and requirements of Agriculture students which are necessary for designing an appropriate ESP Agriculture Sciences course for the ESL learners at the University of Agriculture Faisalabad.

1.2 Purpose of Study

Purpose of this research is to conduct a needs analysis for an ESP course for Agriculture Sciences.

2 Literature Review

2.1 Position of English in Pakistani Context

English is a global language. It is used to perform different businesses in the world. It is used as the language of research and innovation in every sphere of knowledge. People, in most of the countries of the world, speak and understand English. Sub-continent (India and Pakistan) has seen the British Raj for almost a century. English was introduced in subcontinent during the British Raj. The government officials, from England, used English language for communication with the local people and it became very significant for the people of subcontinent to acquire English language. The influence of English language has not decreased rather increased even after the departure of the British. Pakistan's official language is English. English is a compulsory subject till graduation level. English is the key to success in academics and professional fields because it is the medium of teaching the science subjects in particular and all the subjects in general that is why it is the need of the hour to learn and have proficiency in the use of English language.

2.2 Syllabus

Breen defines syllabus in terms of a plan that is to be achieved through teaching and the learning of students (1984) whereas Richards sees syllabus as a set of instructions that inform the students about the aims of teaching, contents to be achieved to attain a specific kind of academic or technical skill (2001). Syllabus is a document that states the rules and regulations to be followed by the teachers and students to teach or learn a particular course. The most important component of syllabus is the course outline or course specifications that are compulsory for a teacher to teach to the learners in a given time frame.

2.2.1 Types of syllabus

Different types of syllabus are mentioned below:

2.2.1.1 Structural syllabus

Grammar based or structural syllabus is a syllabus that is based on teaching items of grammar in such a way that the level of difficulty goes higher from the start to the end. In this syllabus, the structures and systems of grammar are taught hence this syllabus is called structural syllabus. Hou states that to design a structural syllabus, the syllabus designers should not move away from the rules and regulations of the grammar (1981).

2.2.1.2 Functional syllabus

Here, an analysis of the learners' needs regarding who they are, where they have to use the language, which actions they have to perform with the use of language is made that is why functional syllabus is based on teaching the items of language to the students according to the functions they perform.

2.2.1.3 Skill-based syllabus

This type of syllabus focuses on making an analysis of the skills most required by the learner.

2.2.1.4 Situational syllabus

All the language learners use language in a particular context outside the classroom. It is the situational syllabus which makes them ready for such situations and contexts. In this syllabus, the materials and texts are prepared as per the communicative demands and needs of the learners in real-world outside the classroom.

2.2.1.5 Task based syllabus

This syllabus deals with the tasks the language learners have to perform. It emphasizes on the practice of language items which fulfill their tasks. This type of learner-tasks is considered most important in this syllabus.

2.2.2 ESP- Definitions and Historical Background

ESP (English for specific purpose) is a new field of knowledge and teaching that was introduced to ELT in 1962. ESP is concerned with teaching and learning of English in such a way that the actual communicative needs of the language learners are fulfilled instead of the language itself as compared to its teaching and

learning. General English means different elements of English language to be used in general setting. ESP focuses on developing communicative competence in specialized setting (specific subjects of knowledge or specific professions). Coleman asserts that the objective-based language learning and teaching is the theme of ESP (1989).

The word ‘specific purpose’ stands for teaching English as per the specific needs of a learner. There are a number of similarities and differences between ESP and general English in methodology and theory as Hutchinson and Waters claim that there is no difference in the theory of teaching English for specific purpose but there exists a vast gap in the practice of both (1987) General English is generally taught to the language learners from primary level whereas ESP is taught to the adult learners either in a university setting or in a professional context. Most of the ESP teachers design and teach appropriate courses for learners from various professions. Making an analysis of the needs of the language learners is the basic step to designing an ESP course and this process of coming to know to the learners’ needs is called ‘needs analysis or target situation analysis (TSA)’ as put forward by Hutchinson and Waters (1987, p. 12).

2.2.2.1 Types of ESP

There are two types of ESP as described below:

2.2.2.1.1 English for Occupational Purpose (EOP)

English for occupational purpose means teaching English for specific purpose in professional context for example English for air hostesses, English for pilots, English for police officers English for hotel staff members, English for Medical practitioners, English for Agriculture Sciences etc.

2.2.2.1.2 English for Academic Purpose (EAP)

According to Dudley-Evans and John, the objective of the EAP learners is to improve their English language proficiency in the context of their academics (1998). English for academic purpose (EAP) means to learn English for the study of different branches of knowledge e.g. Economics, Literature, Business, Mathematics and Social Studies etc. EAP is further divided into different branches like English for Finance and Economics (EFE), English for Science and Technology (EST), English for Legal Purposes (ELP), English for Medical Purposes (EMP). According to Carter, there are three types of ESP: (1) English as a restricted language; (2) English for academic and occupational purposes; and (3) English with specific topics (1983).

2.3 Needs Analysis as the Most Significant Step Course Designing

West, as quoted in Rahnuma, describes that needs analysis (NA) is a system of making an analysis of the students’ wants and needs related with language (2009) whereas Robinson (1991) states that NA is a significant step for designing an ESP course. Designing a course is the process that includes making an analysis of the learners’ needs and then creating such a teaching-learning experience as leads the learners to a particular state of knowledge. Need analysis is the very first step to design a course where learner needs like WHAT, WHY, WHEN, HOW, WHERE and WHO to teach are addressed. Other factors related to teaching as time, age group, level of learner and classroom facilities should also be kept in view for designing a course. These basic questions which are kept in mind for making a need analysis are:

1. What is the purpose of students learning the course?
2. Who are the instructors?
3. Where to teach? What are the potentials in this place?
4. When to teach this course? In how much time does to teacher have to cover the course?
5. What methodology will be employed to achieve the learning goals?

3. Research Design and Methodology

3.1 Steps

Need analysis for this research has been carried out in three steps. In first step, need analysis was conducted through a close-ended questionnaire. After that, at the second step, a semi-structured pre-test was conducted. At last, currently taught English course of B.Sc. (Hons.) Agriculture Sciences was also analysed to check whether it fulfilled the communicative needs of the students of agriculture sciences or not.

3.2 Type of Research

Qualitative and quantitative methods have been used for data analysis.

3.3 Tools of Research

The tools of research for this study are questionnaire, pre-test and documents.

3.4 Population of the study

ESL learners of graduation level at the University of Agriculture, Faisalabad, Pakistan are the population of study.

3.5 Sample

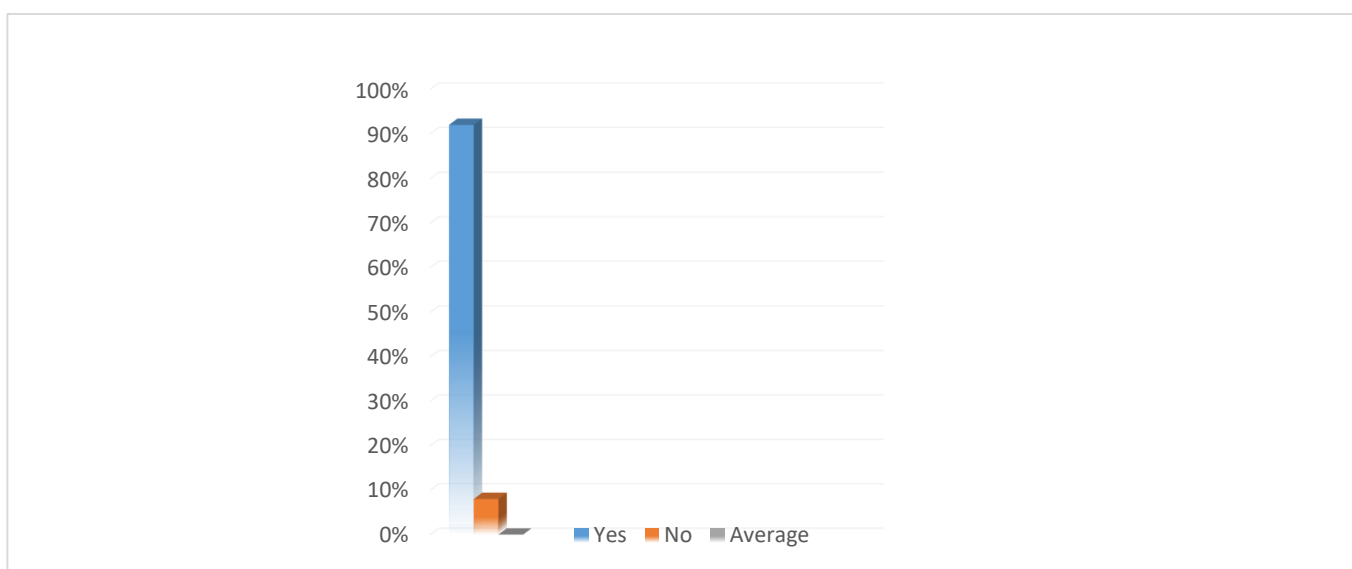
100 randomly selected ESL learners at the University of Agriculture, Faisalabad (UAF) are the sample of this research. 20 ESL learners out of the 100 sample of study were randomly selected for Pre-test.

4 Results and Discussion

4.1 Results of the Questionnaire

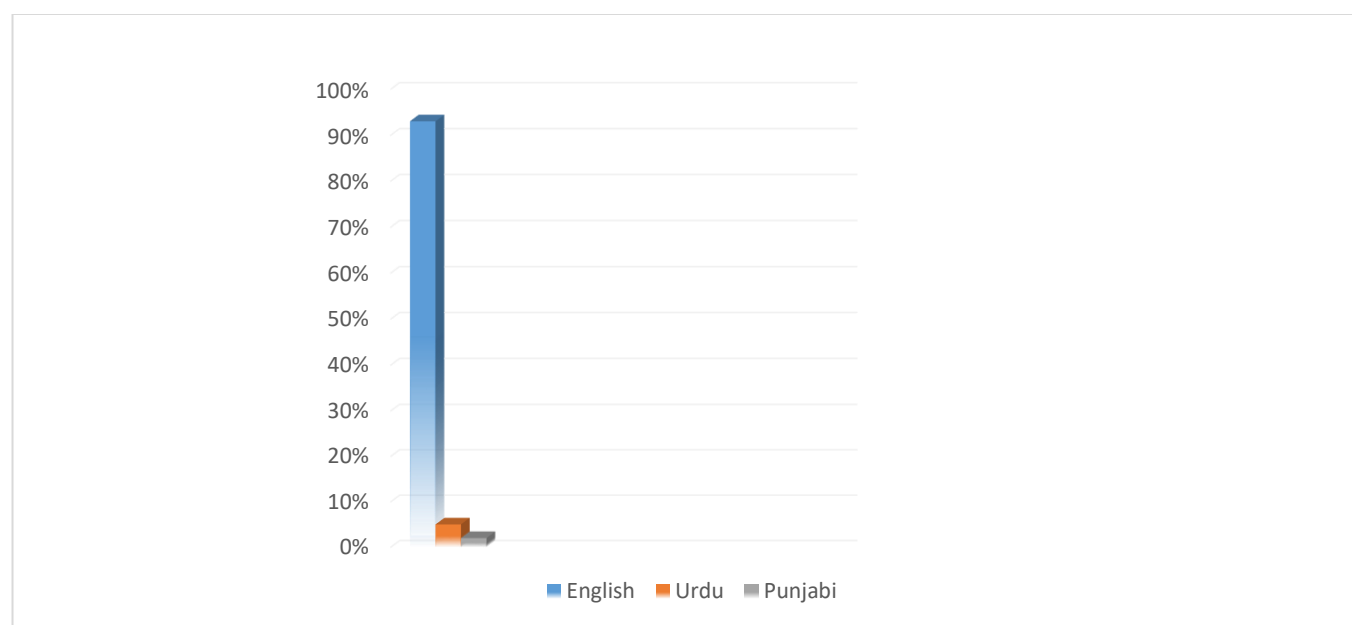
The first question was about the importance of English language. 92% students said that English language was important for communication in the field of Agriculture Sciences while only 8% students refuted it (see Graph 1).

Graph 1: Importance of English for the Students of B.S (Hons.) Agriculture Sciences



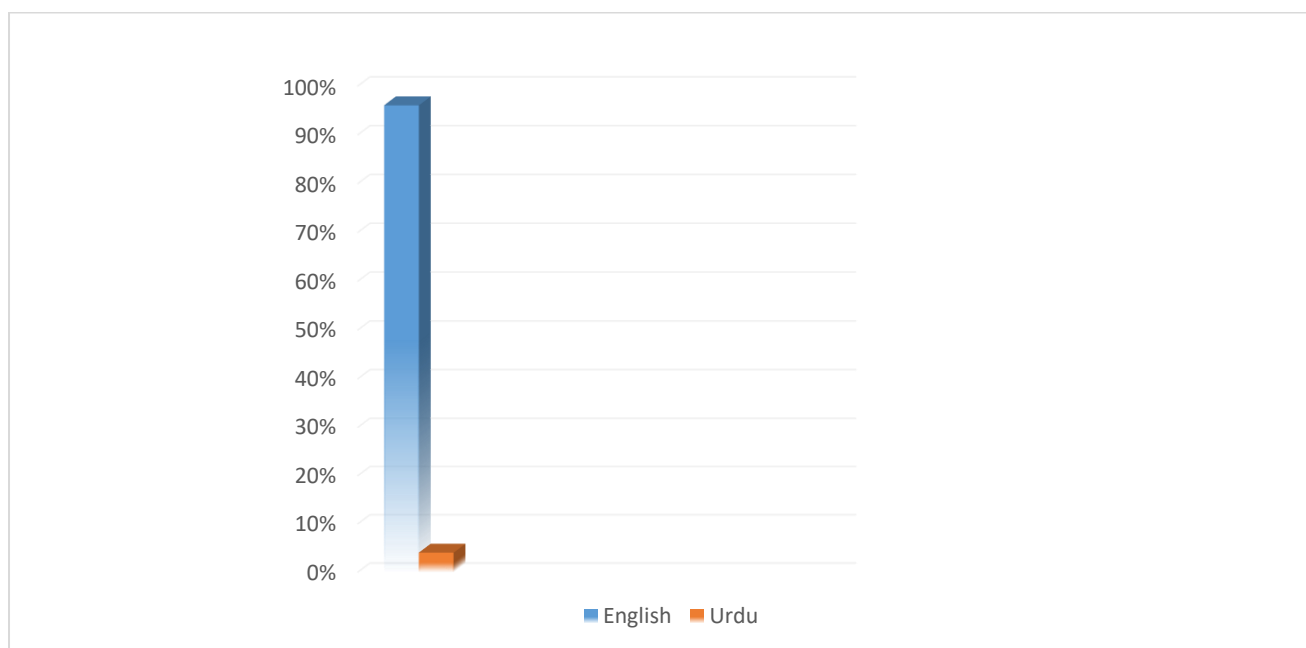
Question No 2 was about the medium of instructions in agriculture sciences. 93% students said that English was the language of instructions while only 5% student said that it was Urdu and 3% less than this said that they were taught in Punjabi language (see Graph 2).

Graph 2: Medium of Instruction used to Teach English Teaching Agriculture Sciences



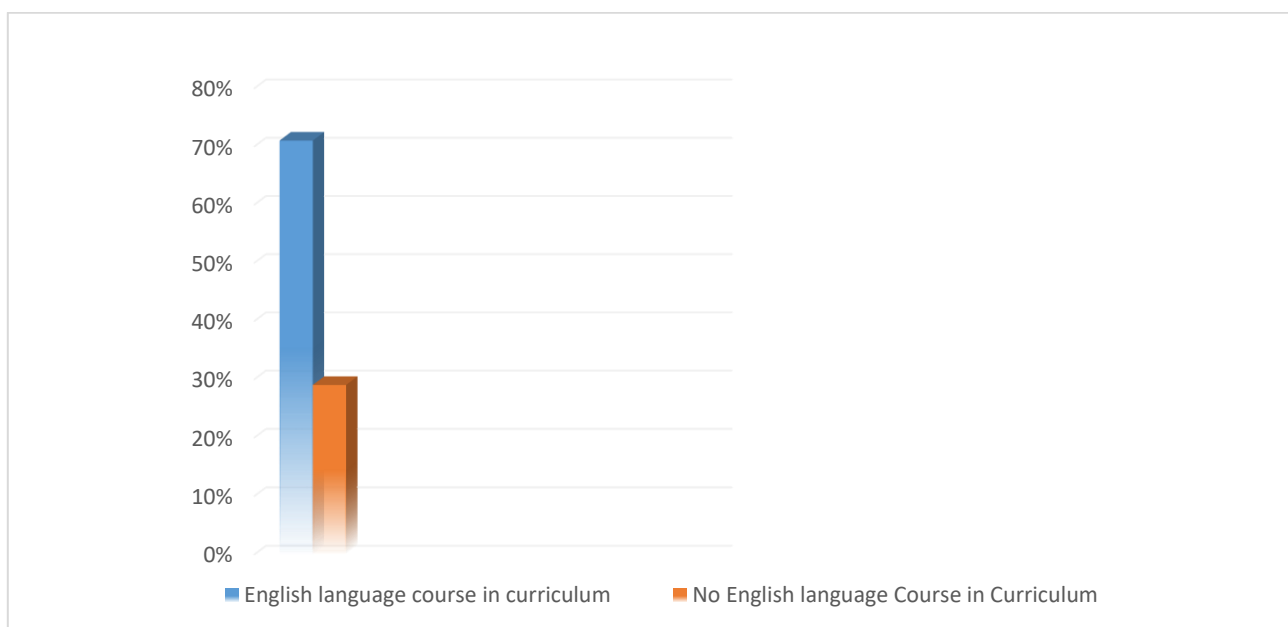
Next question was about the language used in textbooks and other reading materials. 96% students said that their materials used for teaching and learning were in English language while 4% students said that it was Urdu (see Graph 3).

Graph 3: Availability of Textbooks and Reading Materials for ESL Learners of Agriculture Sciences



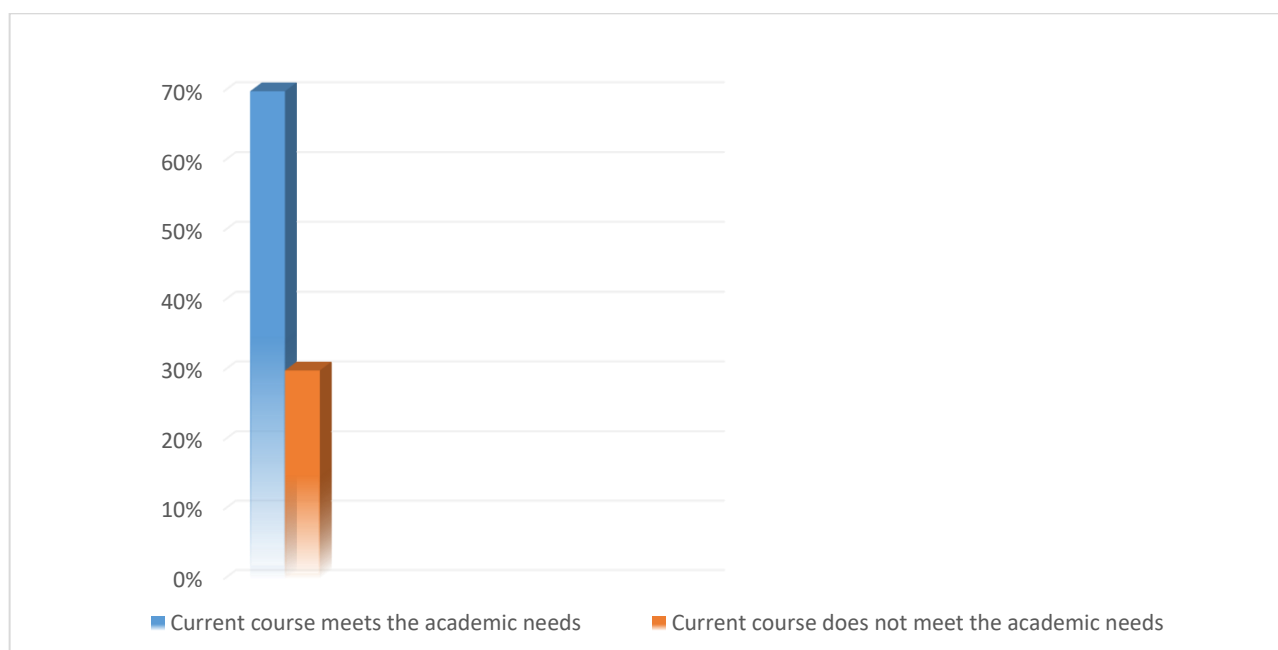
The 4th Question dealt with the curriculum of English. 71% students agreed that their English language course was the part of their curriculum whereas about 40% lesser than this number did not agree with the statement (see Graph 4).

Graph 4: Existence of English Language Course in the Curriculum of Agriculture Sciences



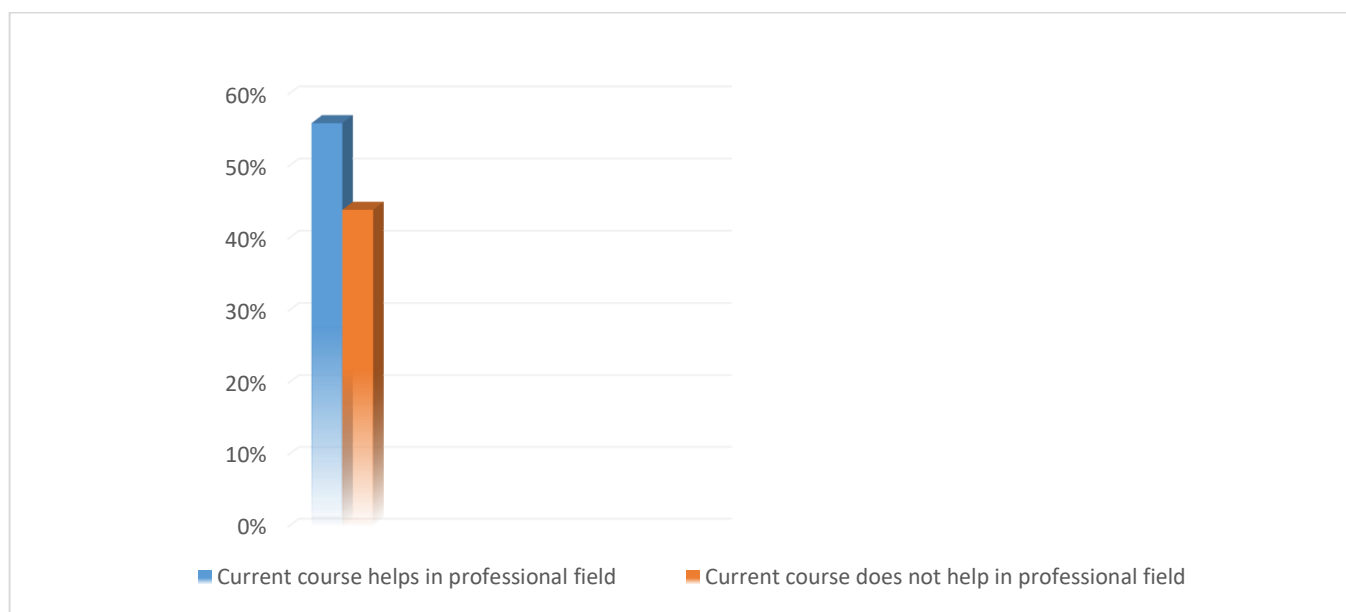
Question No. 5 was about the fulfillment of communicative needs of the field of agriculture sciences by the currently taught general English course. 70% students responded that the present general English course did not meet the communicative needs of the students of Agriculture Sciences as compared to only 30% students who expressed satisfaction with the current general English course (see Graph 5).

Graph 5: Fulfillments of Communicative Needs by the Current English Course



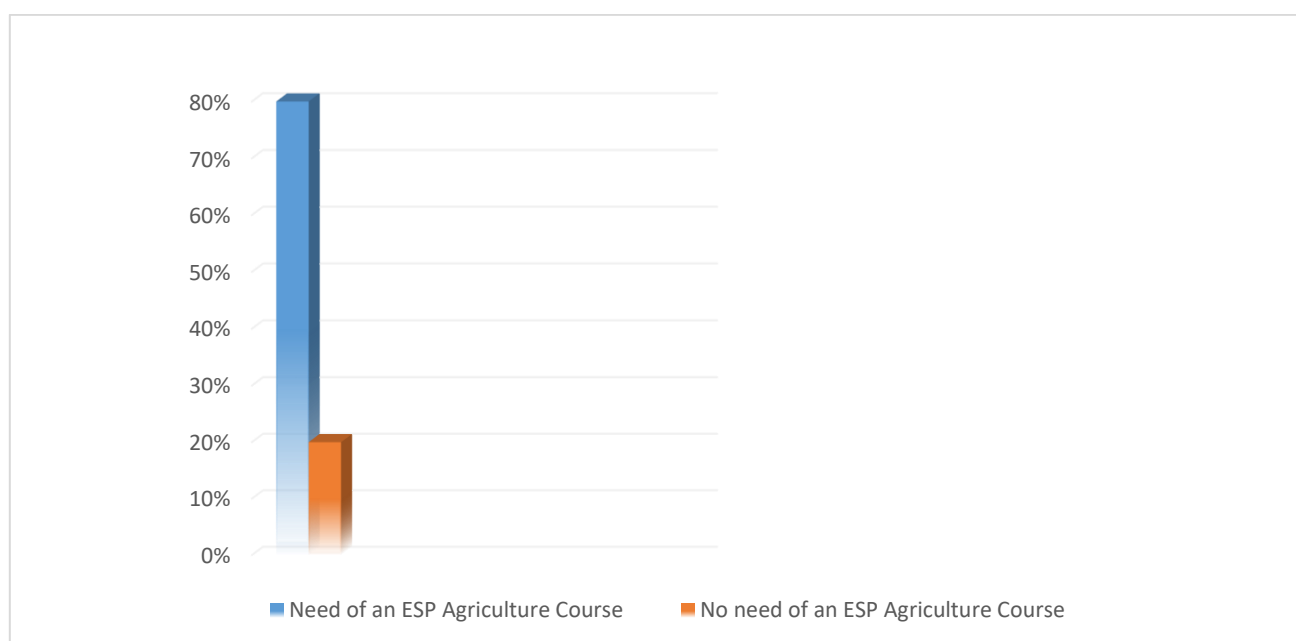
Next question was related with the usefulness of general English course in the fulfillment of professional communicative needs. 56% respondents responded that the current general English course did not fulfill the needs in professional life whereas 12% lesser than that expressed that the current general English prepared them for communication in professional field (see Graph 6).

Graph 6: Fulfillment of Professional Communicative Needs by the Current English Course



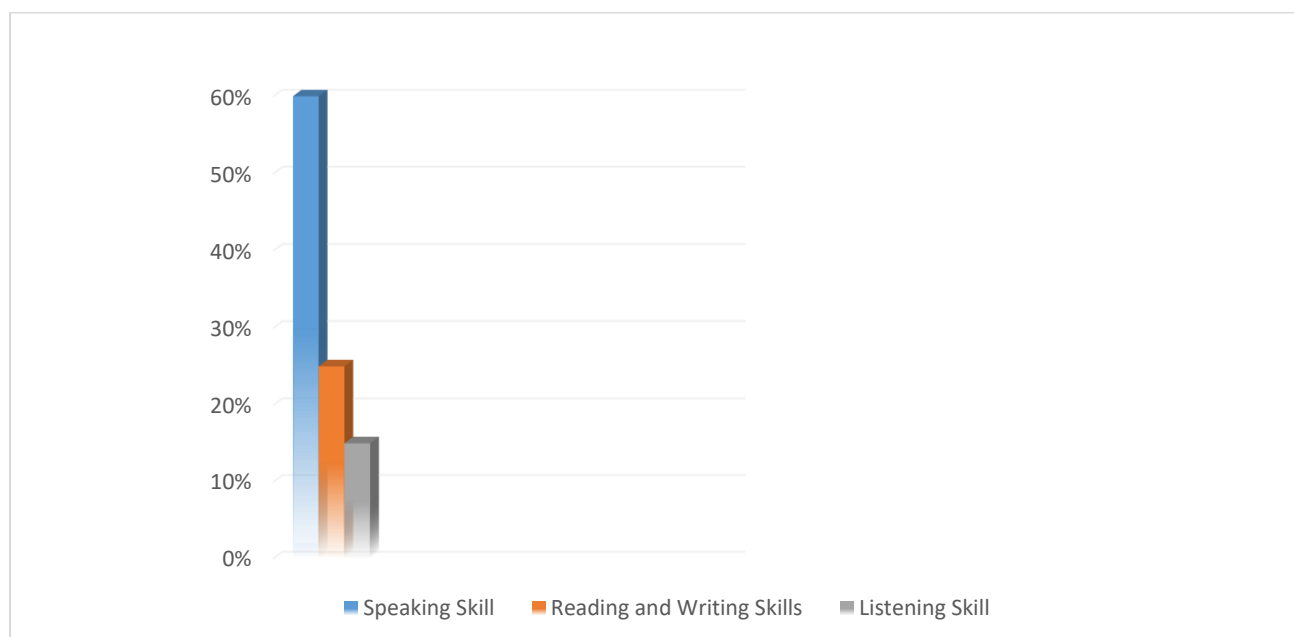
Question No. 7 asked the significance of English for specific purpose course for the undergraduates of Agriculture Sciences. 80% subjects showed the need of an ESP Agriculture Sciences course for themselves while only 20% subjects were satisfied with the current course and did not need any ESP course (see Graph 7).

Graph 7: ESP Agriculture Science Course is the Need of the Hour to Fulfill the Communicative Needs of the Students of Agriculture Sciences



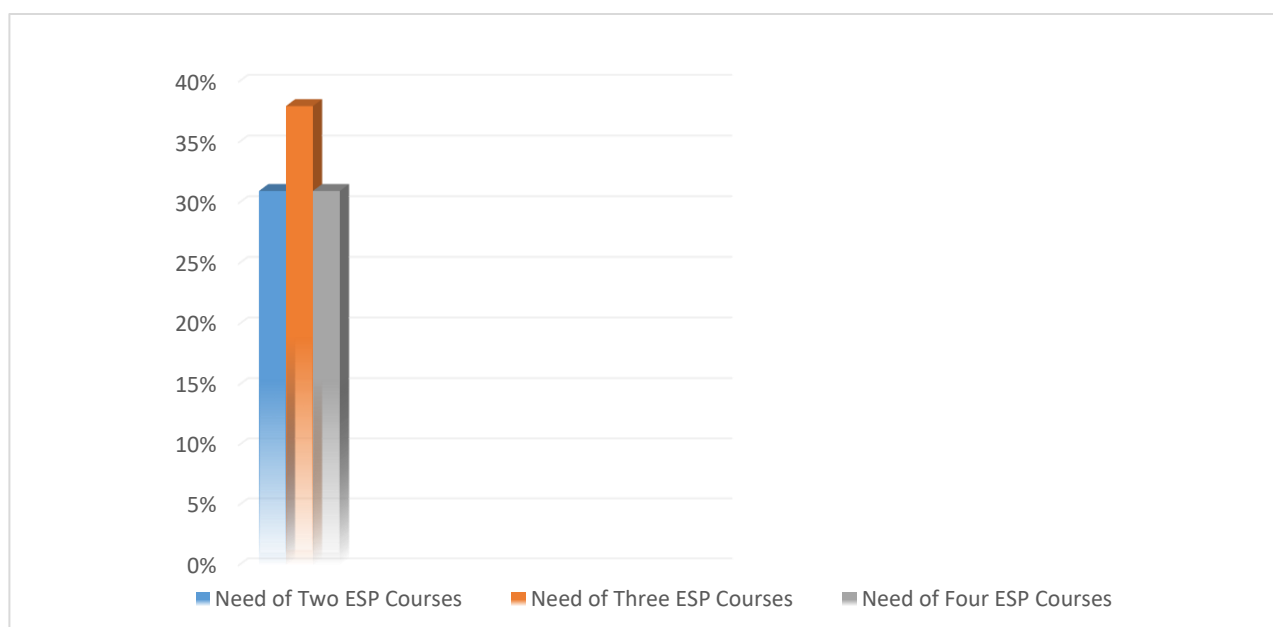
Next question was related to the most important English language skills to be made a part of English for specific purpose course. 60% students said that teaching speaking skill should be given more attention than listening, writing and reading. 25% students wanted that more focus should be given on teaching reading skill whereas 15% students were in favour of teaching listening skill (see Graph 8).

Graph 8: Most Important Language Skills for the Students of Agriculture Sciences



The last question was about the students’ opinion for the number of English courses that should be included in ESP agriculture sciences. 38% respondents favoured 3 courses of English while 31% students expressed the opinion that they should be taught 4 courses of English whereas another 31% students said that two courses of English should be included in the degree program (see Graph 9).

Graph 9: Number of English Courses Required to Fulfill the Communicative Needs of the Students of Agriculture Sciences



4.2 Results of Pre-test Evaluation

A pre-test evaluation was also conducted to assess the subjects’ proficiency in English. 20 students were randomly students for evaluation. The pre-test was evaluated according to the standards defined by British Council, Pakistan.

4.2.1 Evaluation of Reading Skill

3 reading passages on agriculture sciences (Moles Happy as Homes Go Underground, A remarkable Beetle and Migratory Beekeeping adapted from Jakeman and McDowell (1996) were used to evaluate the reading skill. Reading skill scores in the Pre-test are given in Table 1.

Table 1: Pre-test Scores

No. of Students	Attained Band Score
1	4.5
2	6
3	5.5
4	3.5
5	2.5
6	3
7	6
8	6.5
9	5.5
10	3.5
11	5
12	4
13	4.5
14	4.5
15	5.5
16	3
17	5
18	4.5
19	3
20	4.5
Total	90

Sample mean = $\bar{x} = (\sum x_i) / n$

$\bar{x} = \sum x/n$

$\bar{x} = 90/20$

$\bar{x} = 4.5$

4.2.2 Evaluation of Listening Skill

Practice test 2, book 2 of Jakeman and McDowell (1996) was used for the evaluation of listening skill. The listening test consisted of the topics from food supplements, environmental studies, commercially grown banana plants. Pre-test scores of the students’ listening skill are given in Table 2.

Table 2: Pre-test Scores

No. of Students	Attained Band Score
1	5
2	4.5
3	4
4	4.5
5	5
6	4
7	5.5
8	5.5
9	5
10	4.5
11	5
12	4.5
13	4.5
14	5.5
15	4.5
16	5.5
17	6
18	4
19	6.5
20	6.5
	100

Sample mean = $\bar{x} = (\sum x_i) / n$

$\bar{x} = \sum x/n$

$\bar{x} = 100/20$

$\bar{x} = 5$

4.2.3 Evaluation of Writing Skill

Writing skill was evaluated with: (a) a report on the problems in the maintenance of parks how to solve the problems; (b) a letter against sub-standard urea. Pre-test scores of the students' writing skill are given in Table 3.

Table 3: Pre-test Scores

No. of Students	Attained Band Score
1	6
2	5
3	6
4	4.5
5	4
6	5.5
7	5
8	6
9	4.5
10	4.5
11	7
12	6.5
13	6
14	5
15	5.5
16	6.5
17	5
18	4.5
19	7
20	6
Total	110

Sample mean = $\bar{x} = (\sum x_i) / n$

$\bar{x} = \sum x/n$

$\bar{x} = 110/20$

$\bar{x} = 5.5$

4.2.4 Evaluation of Speaking Skill

IELTS speaking test pattern was used for the evaluation of speaking skill where there were questions for students from introduction to topic for speech and the complex questions on Agriculture Sciences. Pre-test scores of the students' speaking skill are given in Table 4.

Table 4: Pre-test Scores

No. of Students	Attained Band Score
1	3.5
2	4
3	5
4	2.5
5	4
6	5.5
7	5
8	5
9	5.5
10	6
11	4
12	5
13	6.5
14	4.5
15	6
16	5
17	5
18	6.5
19	5.5
20	6
Total	100

$$\text{Sample mean} = \bar{x} = (\sum x_i) / n$$

$$\bar{x} = \sum x/n$$

$$\bar{x} = 100/20$$

$$\bar{x} = 5$$

Combined Mean of Pre-test Evaluation of Reading, Writing, Listening and Speaking Skills

$$\begin{aligned} \text{Combined Mean} &= n_1 \bar{x}_1 + n_2 \bar{x}_2 + n_3 \bar{x}_3 + n_4 \bar{x}_4 / n_1 + n_2 + n_3 + n_4 \\ &= 20(4.5) + 20(5) + 20(5.5) + 20(5) / 20 + 20 + 20 + 20 \\ &= 5 \end{aligned}$$

4.3 Record Analysis and Interpretation

Record for the present research is the course of general English which is currently taught to the ESL learners at UAF. The Department of Social Sciences and Humanities offers two general English courses i.e. (1) ENGLISH (ENG-101) and (2) ENGLISH (ENG-302). Dr. Naveed Arshad, HoD, Social Sciences and Humanities was quite helpful in providing a copy of the currently taught English course.

4.3.1 The Detailed Description of English Courses

Contents for both courses of General English have been attached in the appendix 1 and Appendix 2.

4.3.2 Interpretation of English Courses

Both of the English courses are taught to the students in 45 lectures. F.Sc (Medical and Non-Medical) is the pre requisite for these courses. Lecture method-programmed learning is used to teach the English courses. Marks distribution is mentioned in Table 5.

Table 5: Marks Distribution of English Courses

Marks %	Sessional Marks (10%)	Mid-term (30%)	Final-term (60%)	Total (100%)
Passing Marks	6%	18%	36%	60%

A Selection of English Prose by Khan and Qureshi (2009) and published by The Caravan Book House, Katchery Road, Lahore, Pakistan is used as a textbook for the current courses. It was observed that these English courses did not improve the communication skill, reading skill and writing skill. Therefore, it is the need of the hour to prepare the undergraduates of agriculture sciences for professional life which is only possible through designing and teaching an ESP Agri-sciences course.

5 Conclusion

Needs analysis (through questionnaire, pre-test and document analysis) serves as an evidence that there is a necessity of an ESP agriculture sciences course. It is also the need of the students of agriculture science that they should not be taught only two courses of English. According to the instructions of Higher Education Commission (HEC), Pakistan, for the students of B.Sc (Hons.) agriculture science there should be at least 3 English courses in their degree program.

The learners of ESP Agriculture Sciences should request the authorities to get an ESP agriculture sciences course. The authorities should understand the importance of an ESP agriculture course and take initiatives to get an ESP agriculture sciences course designed by the ESP practitioners and syllabus designers along with the linguists which will prove a milestone in achieving the academic and professional communicative skills of the ESL learners. Future researchers are invited to design an ESP Agriculture Sciences course for the betterment of ESL learners at the University of Agriculture, Faisalabad, Pakistan in particular and for all the students of agriculture sciences at other universities in general.

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Appendices

Appendix 1

'ENG-101 (ENGLISH) Exercises in reading, writing and comprehension' comprises 3 credit hours. The course contents are mentioned below:

- 1- A Selection of English Prose (Textbook)
 - a) The Marvel of an Insect (Allen Devoe)
 - b) TV Addiction (Marrie Winn)
- 2- Essay Writing
- 3- Report Writing
- 4- Job Application Writing/Official Letter Writing
- 5- Comprehension (Current English Passage)
- 6- Parts of Speech
- 7- Fill in the Blanks with Suitable Prepositions
- 8- Correction of Sentences
- 9- Communication Skills and Seven C' s of effective Communication

Appendix 2

'ENG-302 (ENGLISH) Exercises in Comprehension and Communication Skills' is also a 3 credit hours course. The course contents are mentioned hereunder:

- 1- A Selection of English Prose (Textbook)

- a) The Damned Human Race (Mark Twain)
- b) How to live to be 200 (Stephen Leacock)
- c) On a Common Cold (Osbert Sitwell)
- 2- Essay Writing
- 3- Letter Writing (Official/Private)
- 4- Technical Report Writing
- 5- Translation into English
- 6- Correction of Sentences (Covering all the basic grammar rules)