

- *ESP Needs Analysis of Master II Agronomy Students at Chadli Bendjedid University-El Tarf*

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Abstract:

This study investigates the English for Specific Purposes (ESP) needs of Master II Agronomy students at Chadli Bendjedid University-El Tarf. The study aims to identify students' academic language needs, preferred language skills, and perceptions regarding ESP instruction. A questionnaire consisting of thirteen questions was administered to 48 Master II students from the Department of Agronomy. The findings revealed that students consider English highly important for reading scientific agricultural articles, understanding technical terminology, writing research projects, and participating in academic communication. Reading and writing were identified as the most important skills, whereas listening and speaking were also viewed as essential for oral presentations and classroom interaction. The study further demonstrated that students need more authentic agricultural materials and vocabulary-focused instruction. Therefore, the research recommends designing learner-centered ESP courses that integrate scientific reading tasks, academic writing activities, oral presentations, and multimedia resources related to agricultural sciences.

Keywords: ESP, Agronomy Students, Needs Analysis, Academic English, Language Skills, Agricultural Vocabulary

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1.

Introduction

English has become the dominant language of scientific communication and academic research. In higher education, university students increasingly need English to access scientific articles, participate in international conferences, and communicate with researchers worldwide. In Algeria, ESP courses have become an essential part of university education, especially in scientific and technical disciplines.

Agronomy students particularly require English because they frequently encounter scientific articles, laboratory manuals, and technical agricultural terminology written in English. However, many ESP courses remain too general and fail to address learners' specific academic needs. Consequently, needs analysis has become a fundamental stage in ESP course design. Hutchinson and Waters stated that "ESP is an approach to language teaching in which all decisions as to content and method are based on the learner's reason for learning" (1987, p.19). This definition emphasizes the importance of adapting ESP courses to learners' actual academic and professional needs. This study aims to investigate the ESP needs of Master II Agronomy students at Chadli Bendjedid University-El Tarf.

. Literature review

1.1.1 Overview of ESP

English for Specific Purposes (ESP) emerged as a significant branch of English language teaching during the second half of the twentieth century due to the growing importance of English in science, technology, business, and international communication. The rapid development of scientific research and globalization created a strong demand for specialized English instruction adapted to learners' academic and professional fields. As a result, ESP became increasingly important in higher education institutions worldwide. According to Hutchinson and Waters, the emergence of ESP was closely related to "the demands of a brave new world" where English became necessary for professional and academic communication (1987, p.6). Similarly, Strevens explained that ESP developed because of "the international role of English in technology and commerce" (1988, p.1).

Unlike General English, ESP focuses on teaching language that is directly related to learners' academic disciplines or occupational needs. Dudley-Evans and St John explained that ESP is "designed to meet specific needs of the learner" (1998, p.4). This means that ESP courses are not based on general language instruction only, but rather on learners' real communicative situations and academic requirements. Hutchinson and Waters further argued that "ESP is an approach to language learning which is based on learner need" (1987, p.19). In the same context, Robinson described ESP courses as "normally goal-directed" because learners study English with specific objectives connected to their academic or professional contexts (1991, p.2).

ESP has become particularly important in scientific and technical disciplines where students need English to access specialized knowledge and communicate effectively within their fields. In agricultural studies, for example, students are frequently exposed to scientific articles, laboratory manuals, technical reports, and online resources written in English. Therefore, English proficiency has become essential for academic success and professional development. Hyland emphasized that English enables learners to “participate in particular academic and professional communities” (2006, p.13). Likewise, Basturkmen stated that ESP instruction helps learners “function effectively in the target situation” (2010, p.8).

According to Robinson, ESP courses are “goal-directed” because learners study English with clear objectives connected to their studies or future careers (1991, p.3). Consequently, ESP instruction aims to prepare learners for realistic academic and occupational situations by integrating authentic materials and specialized vocabulary. Dudley-Evans and St John also stressed that ESP teaching should “make use of the underlying methodology and activities of the discipline it serves” (1998, p.5). Therefore, authentic materials and discipline-related tasks play a central role in helping learners develop effective communication skills in their specialized fields.

1.1.2 Needs Analysis in ESP

Several scholars have attempted to define ESP from different perspectives. Hutchinson and Waters provided one of the most influential definitions by stating that “ESP is an approach to language teaching in which all decisions as to content and method are based on the learner’s reason for learning” (1987, p.19). This definition emphasizes that learners’ needs constitute the foundation of ESP course design.

Similarly, Strevens defined ESP as a type of English teaching that is designed to satisfy learners’ specific professional or academic purposes. He explained that ESP instruction should focus on “particular disciplines, occupations and activities” (1988, p.1). In other words, the language taught in ESP courses must correspond to learners’ real-life academic or professional contexts.

Dudley-Evans and St John further argued that ESP is characterized by its focus on specific disciplines and learner-centered methodologies. According to them, ESP “makes use of the underlying methodology and activities of the discipline it serves” (1998, p.5). This indicates that ESP instruction should incorporate authentic tasks, materials, and communicative situations related to learners’ fields of study.

In agricultural education, ESP courses aim to help students acquire the linguistic and communicative skills necessary for understanding scientific texts, writing reports, conducting research, and participating in academic discussions related to agronomy and agricultural sciences.

1.1.3. ESP Teaching and Learning Processes

ESP teaching and learning processes differ from traditional language teaching because they prioritize learners' communicative needs and academic objectives. In ESP contexts, language instruction is closely connected to the learners' disciplines and future professional activities.

According to Strevens, effective ESP teaching involves “motivating learners to learn, providing relevant input, and fostering language use in realistic contexts” (1988, p.44). Therefore, ESP instruction should create meaningful learning situations that encourage learners to use English actively and purposefully.

Learner motivation represents a fundamental aspect of ESP learning. Since ESP learners usually understand the importance of English for their studies and careers, they tend to show higher levels of motivation compared to learners in General English classes. Basturkmen noted that ESP learners often recognize “the practical value of English in their future professions” (2010, p.12). This practical orientation contributes to increasing students' engagement and participation.

Authentic materials also play a crucial role in ESP instruction. Scientific articles, laboratory reports, technical manuals, videos, and presentations help students become familiar with the language used in their academic disciplines. Hyland emphasized that academic English instruction should enable learners to “participate effectively in academic discourse communities” (2006, p.9). Consequently, ESP teaching should expose learners to realistic communicative tasks and discipline-specific vocabulary.

Moreover, ESP teaching requires balancing the four language skills: reading, writing, listening, and speaking. Reading scientific texts, writing reports, listening to lectures, and participating in oral discussions are all necessary for students in scientific disciplines such as agronomy.

1.1.4. Stages in the ESP teaching process

Dudley-Evans and St John (1998) maintain that the major stages in ESP include needs analysis, course and syllabus design, materials selection and production, teaching and learning, as well as evaluation. According to these scholars, ESP course development is not based on isolated procedures, but rather on interconnected stages that continuously influence one another. They explain that these stages “are not separated, linearly-related activities, rather, they represent phases which overlap and are interdependent” (1998, p.121). This means that the effectiveness of ESP instruction depends on the interaction between learners' needs, course objectives, teaching materials, and evaluation procedures.

Similarly, Mumby (1978) argues that the success of ESP courses depends largely on identifying learners' communicative requirements before designing the syllabus. In this respect, needs analysis represents the foundation upon which ESP programs

are established. The syllabus and teaching materials should therefore be designed according to the learners' academic and professional situations.

Moreover, Miliani (1994) emphasizes that the ESP teaching process involves several essential stages that should be carefully analyzed before designing the course. These stages contribute to developing an effective and learner-centered ESP program. According to Miliani, the ESP teaching process includes four important phases:

1. **Situation** **Analysis:**
This stage focuses on identifying learners' profiles, language proficiency, academic requirements, attitudes, and institutional expectations. It also involves examining the available teaching materials and classroom conditions.
2. **Setting** **Aims** **and** **Objectives:**
After identifying learners' needs, teachers establish the general aims and learning objectives of the ESP course. This stage determines the skills and competencies students are expected to achieve by the end of instruction.
3. **Generating** **Syllabus** **Content:**
At this stage, the syllabus content is organized and sequenced according to learners' needs and academic contexts. Benyelles (2009) explains that syllabus development should occur "through the sequencing of materials whose layout and presentation should form a continuum" (p.34). Consequently, ESP materials should progress gradually from simple to more complex tasks while maintaining coherence and relevance to learners' fields of study.
4. **Assessment** **and** **Evaluation:**
This stage involves collecting information about learners' performance and evaluating the effectiveness of the ESP course. Assessment enables teachers to identify learners' progress and modify the syllabus when necessary in order to improve the teaching process.

These stages demonstrate that needs identification and analysis constitute the cornerstone of ESP teaching. In other words, ESP instruction should always correspond to learners' academic requirements, expectations, and professional objectives. Therefore, the results of needs analysis guide syllabus designers in selecting appropriate teaching materials, classroom activities, teaching methods, and evaluation techniques that satisfy learners' actual needs.

1.1.5. Needs identification and analysis (NIA)

Needs Identification and Analysis (NIA) is considered one of the most important components of ESP research and course design. The concept of needs analysis

refers to the process of collecting and analyzing information concerning learners' language requirements in specific academic or professional contexts.

Hutchinson and Waters classified learners' needs into three categories: "necessities, lacks, and wants" (1987, p.55). Necessities refer to the language competencies learners need in target situations. Lacks represent the gap between learners' current language proficiency and the required level, whereas wants correspond to learners' personal expectations and preferences.

Brindley argued that needs analysis should consider both objective and subjective dimensions because learners' attitudes and motivations influence the learning process (1989, p.67). Objective needs concern actual language requirements, while subjective needs involve learners' perceptions, interests, and preferences.

Dudley-Evans and St John also distinguished between different types of analysis, including Target Situation Analysis (TSA), Present Situation Analysis (PSA), and Learning Situation Analysis (LSA). TSA focuses on identifying the language skills learners require in future academic or professional contexts. PSA evaluates learners' existing proficiency levels, whereas LSA examines learners' preferred learning styles and classroom expectations.

In the context of agricultural studies, needs analysis helps identify the specific language skills and vocabulary Agronomy students require for reading scientific literature, writing reports, understanding lectures, and participating in academic discussions. Therefore, conducting a comprehensive needs analysis contributes significantly to designing effective ESP courses adapted to students' academic realities.

1.1.6 ESP in Agricultural Studies

Students in agricultural sciences frequently depend on English-language materials such as scientific journals, research reports, and online databases. Basturkmen pointed out that ESP learners are usually highly motivated because they recognize "the practical value of English in their future professions" (2010, p.12). Agronomy students require specialized vocabulary related to crops, irrigation, soil science, environmental studies, and agricultural technology. Consequently, ESP instruction should integrate authentic agricultural materials and communicative tasks connected to scientific contexts. Hyland emphasized that English for Academic Purposes enables students to "participate effectively in academic discourse communities" (2006, p.9). Therefore, Agronomy students need opportunities to practice reading, writing, listening, and speaking skills in realistic academic situations.

1.1.7 Language Skills in ESP

Reading is often considered the most important skill in ESP because learners need to access scientific knowledge and understand academic articles. Writing is equally important for preparing reports, assignments, and research projects.

Listening and speaking skills contribute to oral communication and classroom interaction. Strevens explained that ESP instruction should integrate “practice and use” in realistic contexts (1988, p.44). Similarly, Anthony argued that ESP courses should “reflect learners’ professional realities” (2018, p.5). Therefore, balanced ESP programs should develop all four language skills while focusing on learners’ specific academic requirements.

1.2. Purpose of the study

This study aims to investigate the English for Specific Purposes (ESP) needs of Master II Agronomy students at Chadli Bendjedid University. More specifically, the research seeks to identify students’ preferred language skills, academic language requirements, and perceptions regarding ESP instruction.

The study also attempts to determine the types of materials and classroom activities students consider useful for improving their English proficiency in agricultural studies. Furthermore, the research aims to provide recommendations that may contribute to improving ESP course design and teaching practices in the Department of Agronomy.

To achieve these objectives, the following research questions were formulated:

Q1: What are the ESP needs of Master II Agronomy students?

Q2: Which language skills are considered the most important by Agronomy students?

Q3: What types of learning materials and classroom activities do students prefer in ESP courses?

2. METHOD AND MATERIALS

2.1. Participants

The participants of this study consisted of 48 Master II students from the Department of Agronomy at Chadli Bendjedid University. The participants were selected because they regularly use English in academic contexts related to agricultural sciences and research activities. The students represented different specializations within agronomy and had varying levels of English proficiency. However, all participants had previously studied English during their university education.

2.2. Data collection instrument

To collect the necessary data, the researcher used a questionnaire composed of thirteen questions. The questionnaire included close-ended and multiple-choice questions designed to gather information about students’ language needs, preferred skills, attitudes toward ESP courses, and learning preferences.

The questionnaire mainly focused on reading, writing, listening, and speaking skills, in addition to students' perceptions regarding the importance of English in agricultural studies. It also investigated the types of materials students considered useful for improving their English proficiency.

2.3. Research design

This study adopted a descriptive quantitative research design. Quantitative data were collected through the questionnaire and analyzed using percentages, graphs, and pie charts in order to provide a clear representation of students' responses.

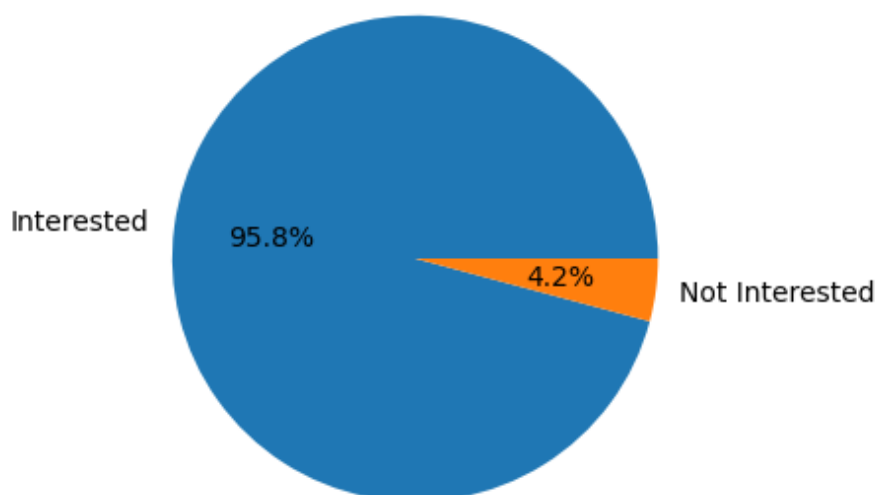
The descriptive approach was considered appropriate because it enabled the researcher to identify students' ESP needs and describe their perceptions regarding English language learning in agricultural studies.

3. RESULTS

3.1. Question 1: Are you interested in taking an ESP course related to Agronomy?

46 students (95.8%) expressed strong interest in ESP courses, while only 2 students (4.2%) were not interested.

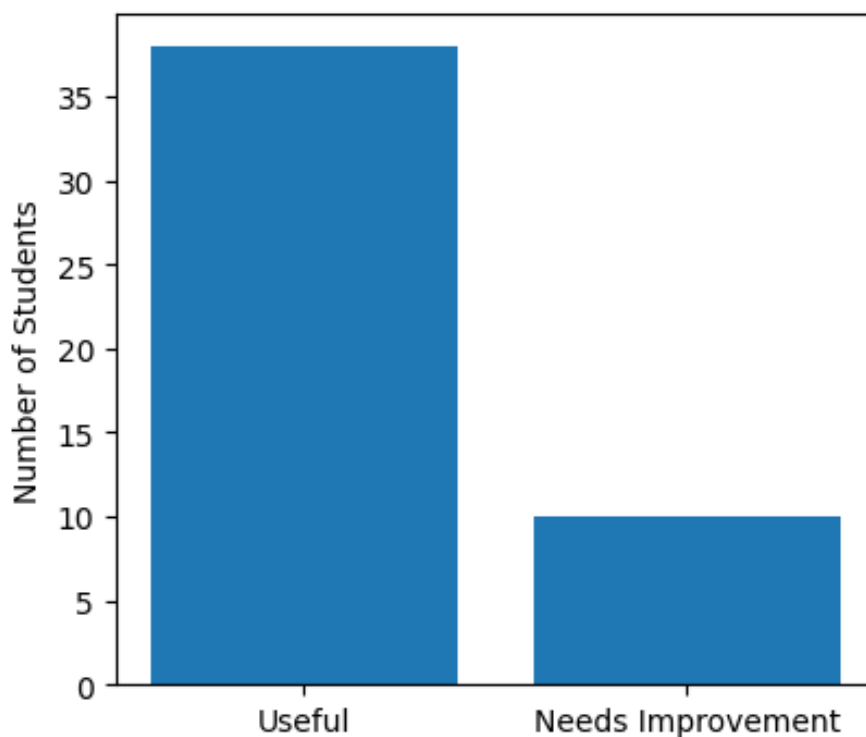
Figure 1 Students' Interest in ESP Courses Related to Agronomy



3.2. Question 2: How do you evaluate your current English course?

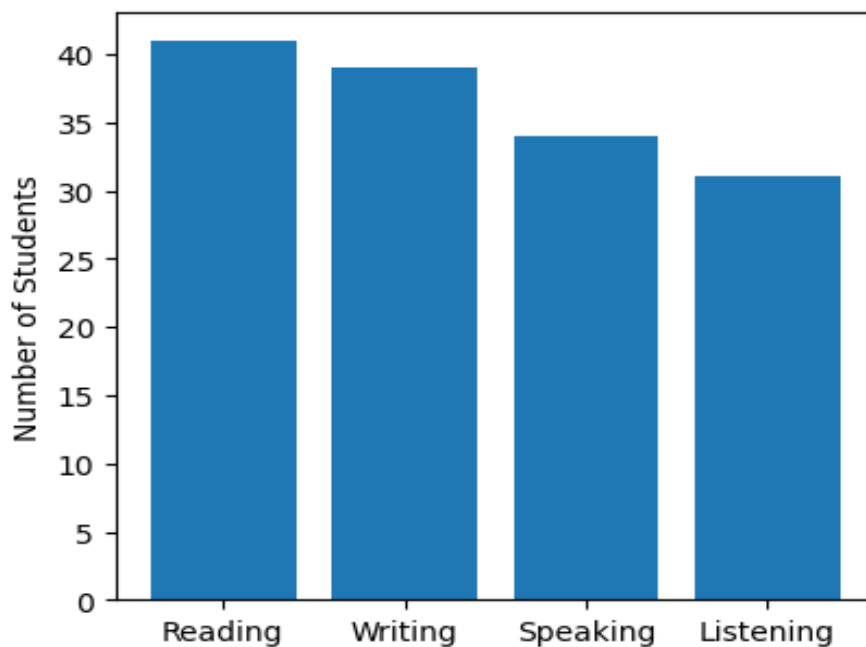
38 students (79.2%) considered the course useful, whereas 10 students (20.8%) believed that the course needs more specialized agricultural content.

Figure 2 Students' Evaluation of the Current English Course

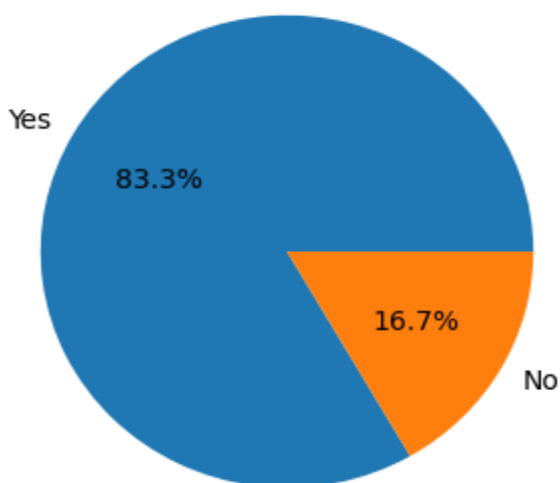


3.3. Question 3: Which language skill is the most important for your studies?

Reading was selected by 41 students (85.4%), writing by 39 students (81.2%), speaking by 34 students (70.8%), and listening by 31 students (64.6%).

Figure 3 The Most Important Language Skills for Agronomy Students**3.4 Question 4: Do you read agricultural materials written in English?**

40 students (83.3%) stated that they read English agricultural materials, whereas 8 students (16.7%) do not.

Figure 4 Students' Use of English Agricultural Materials

3.5. Question 5: What type of materials do you find useful?

Scientific articles were preferred by 20 students (41.7%), online resources by 16 students (33.3%), and academic books by 12 students (25%).

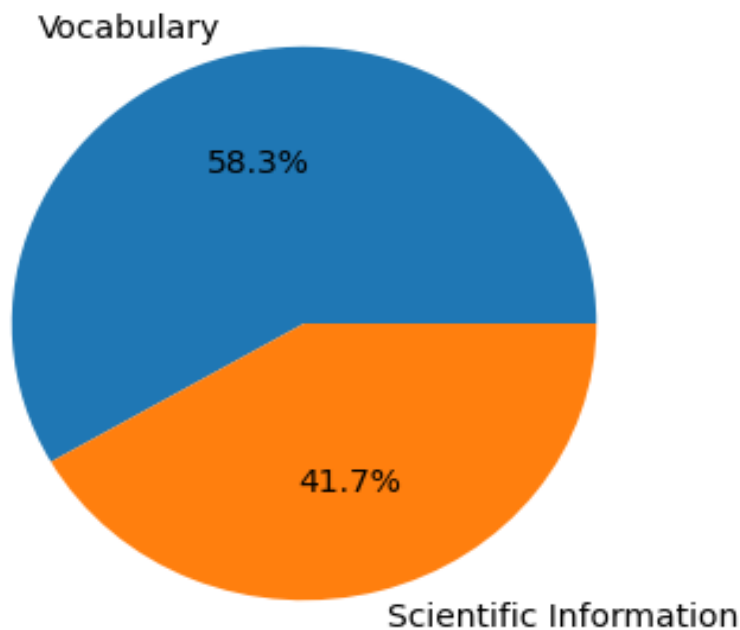
Figure 5 Students' Preferred English Learning Materials



3.6. Question 6: Why is reading important for your studies?

Most students indicated that reading helps them understand technical agricultural vocabulary and scientific information.

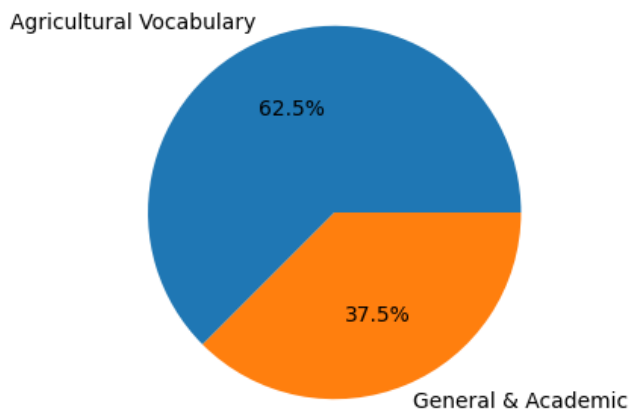
Figure 6 Reasons for the Importance of Reading in Agricultural Studies



3.7.Question 7: What type of vocabulary do you want to learn?

30 students (62.5%) preferred specialized agricultural vocabulary, while 18 students (37.5%) preferred both general and academic vocabulary.

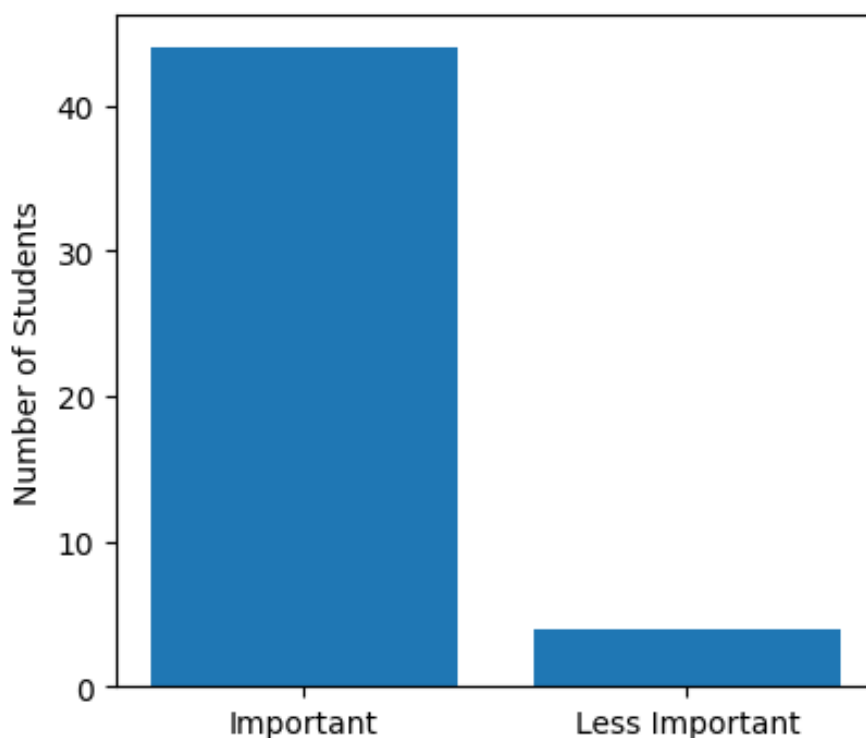
Figure 7 Students' Preferred Types of Vocabulary Learning



3.8. Question 8: Is speaking important for your academic studies?

44 students (91.7%) considered speaking important for oral presentations and classroom interaction.

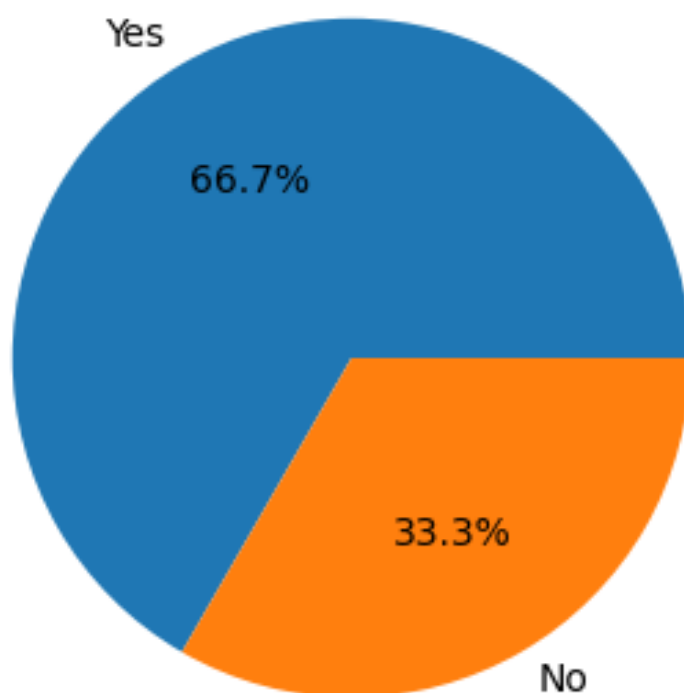
Figure 8 Importance of Speaking Skills in Academic Studies



3.9. Question 9: Do you write in English?

32 students (66.7%) stated that they write in English during classroom activities and assignments.

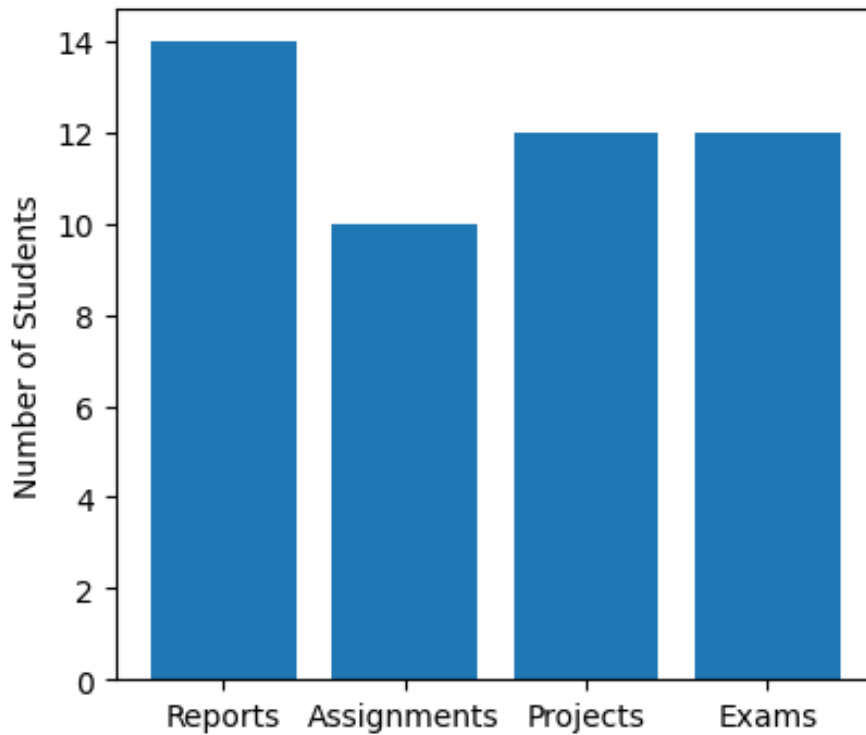
Figure 9 Students' Use of Writing Activities in English



3.10. Question 10: In which situations do you write in English?

Students mainly write laboratory reports, assignments, project summaries, and examination answers.

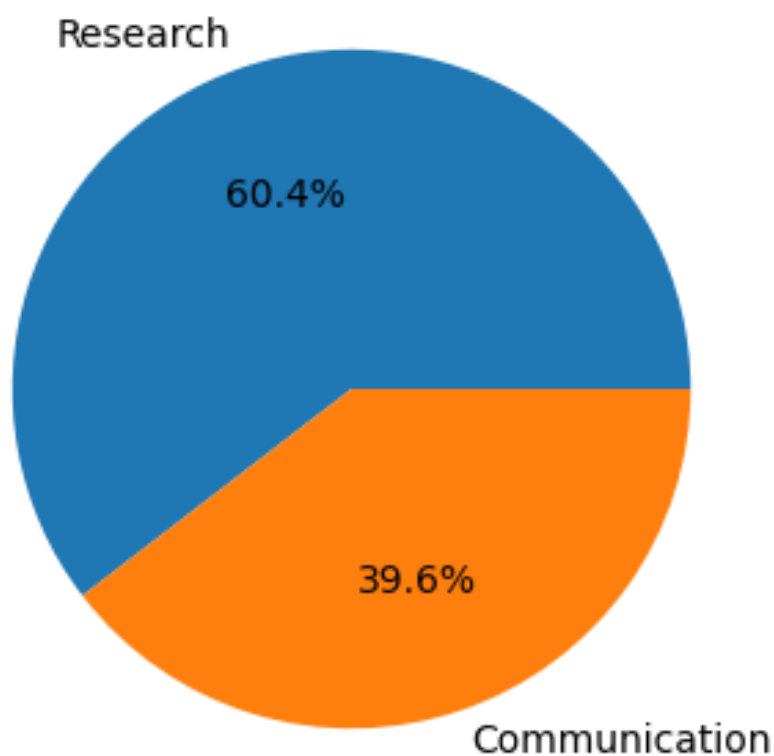
Figure 10 ituations in Which Students Write in English



3.11. Question 11: Why is writing important for your studies?

Most students considered writing essential for research projects and academic communication.

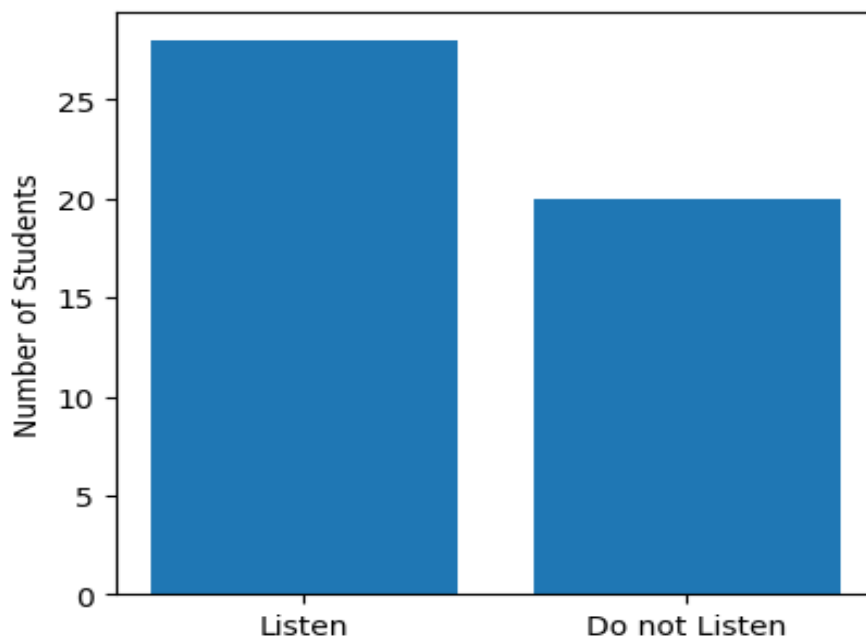
Figure 11 Reasons for the Importance of Writing in Academic Studies



3.12. Question 12: Do you listen to English materials related to agriculture?

28 students (58.3%) reported listening to English documentaries and online lectures.

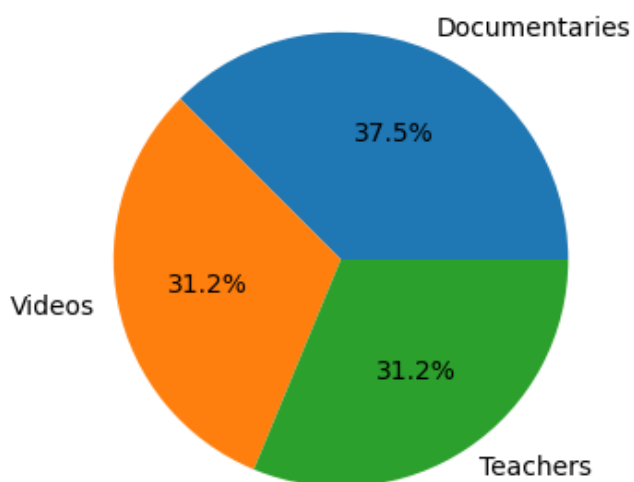
Figure 12 Students' Listening Practices Related to Agricultural English Materials



3.13.Question 13: What type of listening materials do you prefer?

Students preferred documentaries, YouTube educational videos, and teachers' explanations.

Figure 13 Students' Preferred Listening Materials in ESP Courses



4.DISCUSSION

The analysis of the questionnaire revealed that Agronomy students are highly aware of the importance of English in academic and scientific contexts. Most participants emphasized the significance of reading because they frequently rely on scientific agricultural articles and online materials. This finding supports Robinson's claim that ESP learners need English for "clearly defined purposes" (1991, p.3).

The results also demonstrated that writing plays a crucial role in students' academic activities, particularly in research projects and laboratory reports. In addition, students expressed a strong need for specialized agricultural vocabulary and authentic materials related to agronomy. Listening and speaking skills were also viewed as important for oral presentations, discussions, and classroom interaction. Consequently, ESP courses should integrate balanced activities that develop all four language skills.

5. CONCLUSION

This study explored the ESP needs of Master II Agronomy students at Chadli Bendjedid University-El Tarf. The findings confirmed that English is essential for accessing scientific information and succeeding academically in agricultural studies. It plays a key role in enabling students to engage with international research and understand discipline-specific content.

Reading and writing emerged as the most important language skills, as students frequently rely on scientific articles, research papers, and written assignments. Listening and speaking were also considered necessary for effective academic communication, particularly in classroom interaction, presentations, and discussions with peers and teachers.

The study emphasized the importance of learner-centered ESP instruction that integrates authentic materials, specialized vocabulary, and practical communicative activities. It further suggests that ESP courses should be closely aligned with students' academic needs in order to improve both comprehension and production skills in relevant contexts.

Overall, the findings highlight the need for more targeted and context-specific ESP programs that support students' academic performance and prepare them for future research and professional tasks in their field of study.

6.RECOMMENDATIONS

Based on the findings of the present study, the following recommendations are proposed:

- ESP instruction should systematically incorporate discipline-specific agricultural terminology to enhance students' comprehension of specialized texts and academic discourse.
- The use of authentic materials, including scientific articles, research papers, and audiovisual resources, is strongly recommended to expose learners to real-world academic language.
- Greater emphasis should be placed on academic writing skills, particularly in tasks such as summarizing, paraphrasing, and producing discipline-related reports and abstracts.
- Listening and speaking competencies should be developed through structured oral presentations, seminars, and guided discussions supported by appropriate multimedia inputs.
- ESP syllabi should be periodically reviewed and aligned with the academic and professional needs of students in agricultural sciences to ensure relevance and effectiveness.
- Interactive and learner-centered pedagogical approaches should be prioritized to promote active engagement and meaningful language use in the classroom.
- Collaboration between ESP practitioners and subject-matter specialists is recommended to ensure the accuracy and contextual appropriateness of instructional content.

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