

English as the Language of Scientific Research in Algeria

Dr. Nadia Ghounane

Department of English Language, Literature and Arts, Saida University, Algeria

Abstract

English has spread as a lingua franca not only in communication but also as the language of scientific research. It has taken the lion's share in published books, journals and has become the language of exact sciences. However, most of the research in Algerian universities is conducted in French since it is the first language used in scientific domains, although Arabic is the national language of the country. Hence, French is acquired not only for the community's linguistic practices but also for scientific research. This fact presents many research problems for researchers, especially in exact sciences like medicine, chemistry, ecology, psychology and other fields because they have a poor language background in English. Experts in English language teaching strive to train teachers and prepare programs to teach specific English for these domains. In this vein, this paper aims to provide a guideline for teachers to teach specific English vocabulary for each field of work instead of general English. To this end, a group of 200 learners from medicine were chosen to test their English vocabulary. 100 participants were studying general English and others were trained through the ESP program. The findings have shown that learners, who have learned specific English, have acquired some language proficiency and a good linguistic background in English.

Keywords: Algerian Universities, ESP, French Language, General English, Medical Terms, Scientific Research

Bio Data

Nadia Ghounane is an Assistant Professor of English Language and Literature at Saida University, Algeria. Her current research interests are mainly oriented towards CALL, MALL, e-learning, academic writing and improving English pronunciation through introducing new approaches.

1. Introduction

It is agreed that multilingualism or bilingualism has become an important linguistic phenomenon in many countries around the world, especially with the great effects of globalization. Besides, acquiring one or two foreign languages has become a necessity in the last few decades. Hence, the foremost focus of education has revolved around how to teach and learn a foreign language for multilingual communities where a second language is mostly used as a medium of scientific research. In the Algerian context, teaching/learning English has become a prevailing necessity, although French is employed as the language of research, especially for scientific branches like medicine, chemistry, mathematics and pharmacology...etc. The focus of education experts has revolved around how to teach scientific branches English effectively within a short period through specific programming called English for Specific Purposes (ESP).

Algerian educational system employs Modern Standard Arabic as the language of teaching/learning process at university except for scientific branches like medicine, biology and engineering where French is used as a medium of research, while English is taught as a compulsory subject.

As an Arabic speaking country, Algeria attempts to find out solutions to teach English as a third language, especially after failing to introduce it through teaching General English during the 1970s. With the spread of globalization and the increasing changes in global economic and social markets, experts in the field feel the need for educational reforms or academic interventions which take place during 2000. Consequently, many research works have been conducted throughout Algerian universities to improve English language teaching and learning. However, scientific branches have taken the lion's share in this improvement, although scientific and commercial sciences have not been given considerable attention by experts concerning how to teach and learn specific English according to their domains of research.

This research paper aims to look at the status of teaching English for Specific Purposes for scientific branches. Another central concern of the paper is to identify the students' academic needs. This implies taking into account these needs to create a teaching atmosphere that permits teachers to build an authentic syllabus or course design that suits the learners' needs to learn specific English for medical purposes. Stated differently, this research work attempts to identify some academic obstacles facing teachers in teaching specific English for medical purposes, hoping that it may help in improving the teaching situation of ESP in the Algerian educational system in general. Following this introduction, this research paper will proceed to the review of the related literature about teaching English for specific purposes for scientific branches mainly medicine, to shed light on the status of English teaching and learning in the Algerian educational system, to present the research methodology and provide results and recommendations.

2. Literature Review

English has become the language of science, technology, and international communication in almost all countries, especially with the growth of business and occupational mobility. Hence, any access to scientific research works needs a linguistic background or knowledge of the English language (Kennedy, 1983).

Like many world countries, Algeria strives to adopt English as a third language in research after French. Accordingly, teaching English has extended to be taught even for business, economic, medical, and biological branches. At the first stance, these branches were taught general English. This fact fails since learners did not acquire a linguistic knowledge of the language. In this vein, ESP courses were introduced to the new curriculum depending on the learners' needs to study English related to their domains of research. Teachers of General English are asked to teach ESP courses. It seems difficult for them since they used to teach literature or rules of language structure and then suddenly they are obliged to teach texts that they do not know (Hutchinson & Waters, 1987). Thereby, ESP courses are provided in all Algerian universities, so that to keep pace with scientific development. The most important ones are English for Science and Technology 'EST', English for Business and Economics 'EBE' and English for Social Sciences 'ESS'. However, these courses are taught by part-time job teachers who are either working in the English department or middle or secondary schools. English is taught for scientific branches like medicine for the sake of acquiring linguistic knowledge that enables learners to understand scientific texts in books and published research papers that are mostly written in English.

2.1.ESP in Algerian Educational Context

Improving ESP courses has gained much scholarly attention and has taken the lion-share among teachers and experts during the last decades since the status of ESP teaching is very critic when it comes to the teachers' training and syllabus design. Although Algeria struggles to integrate ESP for all branches, there are still some of them lacking the introduction of English including law and administrative sciences.

Talking about the introduction of ESP to English teaching in the Algerian context, experts in language teaching see that they should provide a branch for teaching ESP so that teachers can have more opportunity to be trained in the domain instead of General English teachers who cannot design and adjust their courses depending on the learners' needs. It is the task of ESP teachers to push the wheel of developing new courses and applying different strategies to realize better outcomes and professionalization in teaching ESP in comparison to General English teachers. An ESP teacher is not concerned with developing the four linguistic skills as in general English, but to test the needs of his learners and the context of use. According to Brown (2001), an ESP learner needs to develop the following points including fluency, strategies, being able to produce chunks of languages, understanding elliptical forms, phonology clarity, and use of other cohesive devices.

It is also of paramount importance to mention that ESP experts have taken the limelight in training teachers who can improve teaching ESP for scientific branches; however, the number of those teachers is few. Consequently, learners find themselves between the hands of part-time teachers who lack knowledge in ESP teaching. They tend to introduce lectures taken from General English or they prepare a syllabus thinking that it suits their students' needs. Accordingly, this may decrease the students' motivation or they may even leave the lecture.

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To this end, this study tries to consider the following research questions:

1. Why do medical students need English in their learning?
2. What kind of pedagogical materials would be appropriate to teach them English for Medical Purposes?
3. Are General English teachers qualified enough to teach English for medical purposes?

3. Methods

In this study, about 200 students were chosen from the first, second, and third years. They are aged between 20 and 35 years. All the participants belong to the medical department and they are studying English as a compulsory module. All the students have already studied English as a foreign language in middle and secondary schools.

To have a clear idea about the status of English in the Medicine department from the teachers' side, a semi-structured interview was conducted with 10 English teachers teaching in this department, four of them were teaching General English, whereas six informants were introducing ESP courses.

The questionnaire, which was distributed to students, had two rubrics. The first rubric of the questionnaire had dealt with the motives that push students to learn English. The second rubric was about the courses being taught in the department for the three levels and the difficulties encountered by learners while undertaking courses in both ESP and General English.

3.1.Data Analysis and Results Discussion

3.1.1. Questionnaire

After the questionnaire had been collected, about 150 participants out of 200 gave back the answers, especially from the third year. The following table gives an idea about the questionnaire and participants:

Table 1. *Students' participation in the questionnaire*

Students	Number	Number of the Questionnaire Returned
First year	60	40
Second year	70	45
Third-year	70	65
Total	200	150

Data from the questionnaire have been gathered during the second semester of 2019/2020. The researcher has taken four essential questions for analysis in this research paper:

First Question: Is English important in the Medical field?

1. Yes
2. No
3. No answer

Table 2. *Importance of English in the medical field*

Importance of English	First Year	Second Year	Third Year	Total	Expressed in %
Yes	15	26	57	98	65.33%
No	07	18	06	31	20.66%
No answer	18	01	02	21	14%
Total	40	45	65	150	

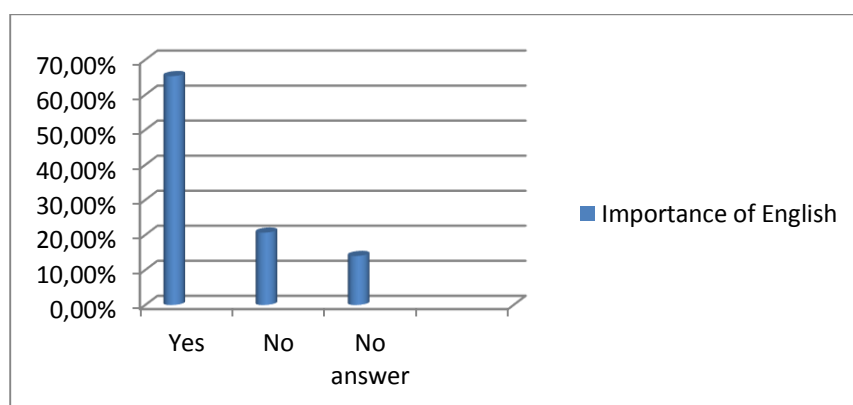


Figure 1. Importance of English in the medical field

Table and figure one show that 65.33% of the participants believe in the importance of English in their studies. They stated that as they will be future doctors, they need ESP to conduct research, experiments, publishing research papers, and books. They also need English to interact with foreigners, especially during training, international conferences, and seminars. On

the other side, 20.66% of the informants declared that they do not need English since they are studying in French which is employed both in theory and practice, while 14% of them did not answer the question.

Second Question: What are the major difficulties you are facing in studying English?

Table 3. Difficulties facing medicine students in learning English

Difficulties	First Year	Second Year	Third Year	Total	Expressed in %
1	01	10	02	13	8.66%
2	06	20	50	76	50.66%
3	33	15	13	61	40.66%
Total	40	45	65	150	

Half of the students under investigation displayed positive attitudes towards the second choice, i.e. about 50.66% of all students from the three levels were with the idea that they need a designed syllabus for English for medical purposes, while 40.66% of them share the view that they need to develop their linguistic skills in English since its use is not limited for academic purposes. In contrast, about 8.66% of the informants were with the idea that there is a lack of motivation in classrooms since the number of learners is more than 50 and teachers have sometimes to gather two or three groups depending on their program. This can be better understood from the following figure:

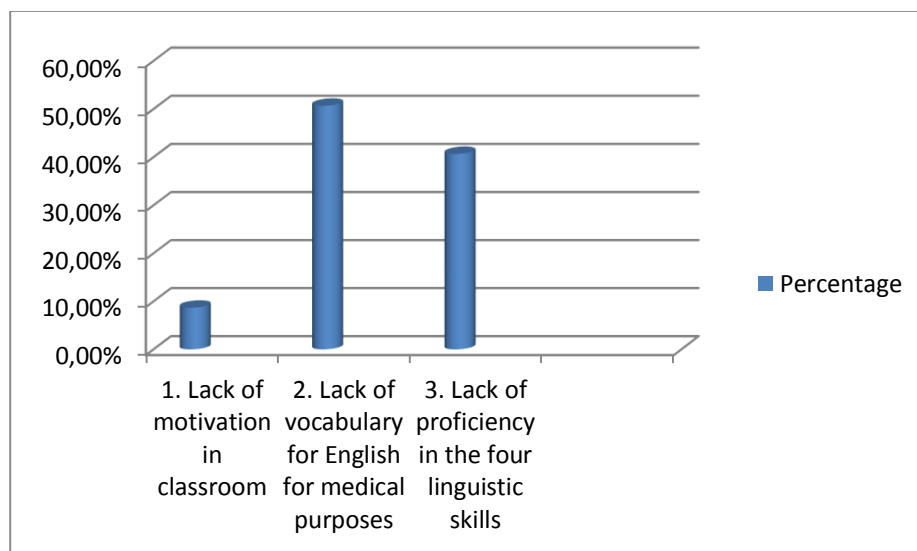


Figure 2. Difficulties facing medicine students in learning English

Third Question: What is your level of proficiency in the English language?

1. Good
2. Acceptable
3. Bad

Table 4. *Students' level of proficiency in the English language*

Level of Proficiency	First Year	Second Year	Third Year	Total	Expressed in %
Good	10	06	17	33	22%
Acceptable	25	17	31	73	48.66%
Bad	05	22	17	44	29.33%
Total	40	45	65	150	

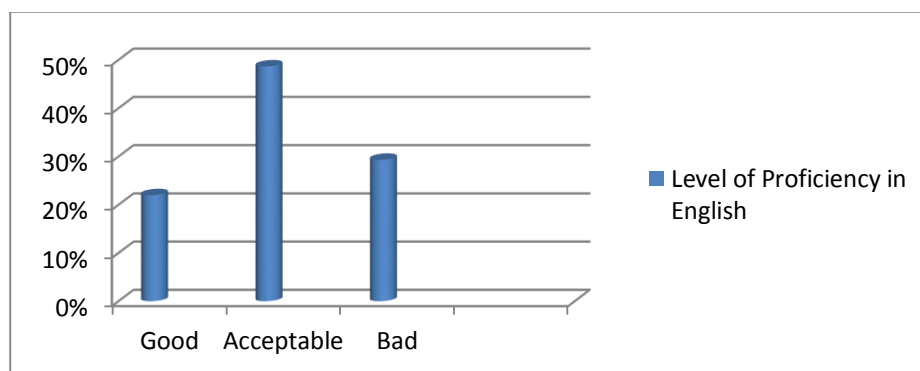


Figure 3. *Students' level of proficiency in the English language*

Table and figure three reveal that the students of the three levels informed that their language proficiency is acceptable since they had a linguistic background of English during secondary school (pronunciation and grammar). They also maintained that they need special training to improve their knowledge in their field at one hand and develop their linguistic skills, while about 29.33% declared that they have a bad background in English. They stated that the major reasons are: English is not a necessary module, motivation, overcrowded classes, and the lack of academic tools.

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Fourth Question: what do you prefer to study ESP or general English?

1. ESP training in the medical field.
2. Just ESP.
3. General English.

Table 5. *Students' choice of ESP or general English in the medical field*

Students' Choice	First Year	Second Year	Third Year	Total	Expressed in %
ESP training in medical field	08	11	56	75	50%
Just ESP	15	26	07	48	32%
General English	17	08	02	27	18%
Total	40	45	65	150	

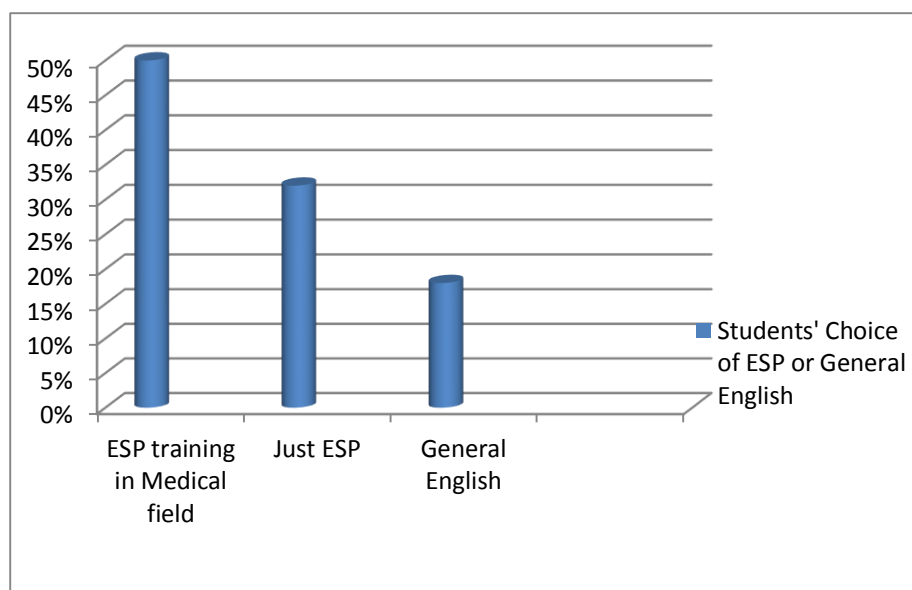


Figure 4. Students' choice of ESP or general English in the medical field

As the above results have already explained, about 50% of the informants were with the view that ESP training in the medical field should be introduced to the department. Most of the third year students agreed on this view because they had been trained in both General English and ESP during their first and second years. In contrast, about 32% of the students stated that they should learn ESP in general and then they can have ESP for medical purposes. The main reason behind this view is that they had a linguistic background in general English. Most of the learners are second-year students. They claimed that they need to be introduced to ESP as a module to know its roles and bases, while the remaining students, who represent 18% and are mainly from the first year, argued that they need a linguistic background in the language itself and then a special training in ESP for medical purposes later on.

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Fifth Question: What is the importance of learning English for medical purposes?

1. To have access to international books in the field.
2. For more research.
3. International conferences.
4. Work opportunities abroad.

Table 6. Importance of learning English for medical purposes

Importance of English for Medical Purposes	First Year	Second Year	Third Year	Total	Expressed in %
To Have an access to international books in the field	28	13	21	62	41.33%
For more research	06	30	36	72	48%

International conferences	01	/	04	05	3.33%
Work opportunities abroad	05	02	04	11	7.33%
Total	40	45	65	150	

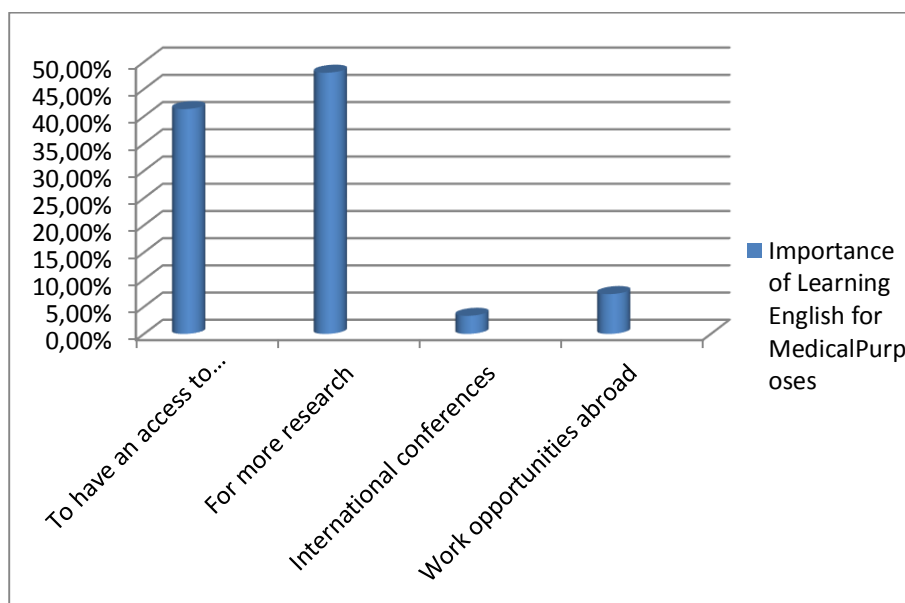


Figure 5. Importance of learning English for medical purposes

Regarding this question, most of the informants shared positive attitudes towards learning English for medical purposes since they know its importance in their field of research, although their opinions vary about its value. About 48% of the participants agreed on the view that they need ESP course in their further research in the field especially third-year students, whereas 41.33% of the informants announced that they need it to have access to books and world research paper since about 90% of the references are available in English. The remaining answers vary between job opportunities abroad and international conferences.

3.1.2. Interview

The interview was held with 10 teachers. Six of them are specialized in ESP; while four are trained in General English. ESP teachers have prepared a special program for students of the third year. In contrast, General English teachers are teaching the first and second years. The researcher has taken the most important questions being asked during the interview according to the research questions.

First Question: What is the status of ESP training in the medical department? And do you find it necessary for students to teach them ESP or general English?

The answers to the informants vary since they have different attitudes. About seven participants observed that the status of ESP is still developing not only in the medical department but in all departments because it is a new branch that has been introduced after they recognized the importance of training in ESP rather than in General English. They also informed that learners need both ESP courses and special training in General English to acquire a good knowledge of the language either in communication or written form. On the other hand,

the remaining informants were against this view claiming that how they can teach ESP courses and the learners have a poor linguistic background of the language.

Second Question: Do you need special training in English for medical purposes?

Most of the interviewees were with the idea that they need special training in English for medical purposes to strengthen their knowledge even though some of them have already taken special training in the field of ESP. They informed that their linguistic background of medical terminology is very poor and they faced many difficulties in interpreting medical texts. In their part, teachers of general English claimed that they first need a training program in ESP and then in English for medical purposes.

3.1.3. Classroom Observation

Classroom observation is another tool to collect data. It was conducted throughout a whole semester, to examine both teachers teaching General English and those in ESP teaching situations. The results of classroom observation have shown that there are many problems facing teachers in conducting an ESP course, especially for General English teachers. Consequently, the observation had checked two important parameters mainly on how the course is conducted and the nature of the content provided to the students. The findings of classroom observation can be summarized as follows:

Table 7. Data resulted from classroom observation

Classroom Observation	Results
Teachers	They are part-time job teachers. Six of them teach ESP courses since they are specialized in this field, while the remaining teachers are General English teachers. They are not always present since they teach in the English department or at secondary school.
Students	Their attendance at English courses is not like other modules. Students, who are following ESP programmes, are very motivated than those following General English courses.
Time	Since all teachers have other duties, hours of teaching are made according to their timetable. As a result, either the time does not suit the students or it is reduced to less than one hour and a half.
Teaching materials	The scientific branches lack academic tools to teach ESP courses.

4. Recommendation and Data Interpretation

In this last part of the current research paper, one should inform that the findings of the questionnaire, the interview and classroom observation seem to be of paramount importance, although the selected number of the sample appears insufficient. After a thorough examination, the results have shown some realities about the status of teaching ESP for scientific branches by taking the medical department as a case in point, hoping that these findings may serve as main guidelines to improve ESP teaching and overcome some shortcomings that face both teachers and students and hence preparing a syllabus depending on the learners' needs.

Furthermore, teachers have to consider the students' need and language proficiency before designing any language syllabus or program. According to Hutchinson and Waters (1987), a well-designed syllabus serves as a map road for both teachers and their students. Besides, they have to be eclectic in terms of courses and academic materials according to the learners' needs and motivation since the inclusion of authentic pedagogical tools may motivate them to develop an effective linguistic background and acquire a rich medical terminology. Most importantly, teachers have to teach their students that four linguistic skills should be developed, so that the learners can obtain an adequate ability in interaction and writing. The findings also demonstrated that the allotted time of the course is not enough to enable students to acquire proficiency in the language.

5. Conclusion

It is crucial to note that the findings of this research paper are just some suggestions to open the gateway for more research and fill the gap existing in teaching ESP for scientific branches. Hence, medical students need a special syllabus that develops their receptive skills. They also need to learn medical terminology with specific language structure. The translation is also needed from French to English through specific texts and thus increasing students' interests in learning and using English. Moreover, it is of paramount importance to train students to use authentic language in the classroom to develop their communicative competence. Thereby, teachers should also include communicative approaches in their lessons. It would be also beneficial to recruit permanent teachers first and then they should be well trained, qualified and prepared in the ESP field to push the wheel of innovation even further to achieve good academic results.

6. References

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