

An exploration of the ESP expectations and motivational orientations in Algerian science faculties: A case study

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Abstract: The present study aimed to explore ESP course expectations and motivational orientations in the Department of Electrical Engineering at Laghouat University. Two instruments were used to collect data: a survey questionnaire for the students and semi-structured interviews for the English language instructors. Fifty-six (56) students responded to the questionnaire and two English language teachers were interviewed. The study revealed the existence of a deep mismatch in expectations between the students and their English language instructors, due mainly to the English language instructors' lack of awareness of and expertise in ESP teaching methodology and course design. This situation has resulted in a dramatic demotivation and absenteeism on the part of the students.

Key words: Algerian Science Faculties, Attitudes, English for Science and Technology, Expectations, Mismatch in Expectations, Motivational Orientations,

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1. Introduction

English has become an international language in many fields of human communication, among which the fields of scientific and technological research and production. However, this language does not enjoy the same status in all the countries of the world, and significant differences are observed in the way English is being used and taught in academic and research settings. In fact, according to Dudley-Evans and St John (1998), there are four ELT situations in EFL academic settings: 1) situations where English is a mother tongue; 2) situations where English is a second language and medium of instruction; 3) situations where English is a medium of instruction of some subject courses only; 4) situations where all the subjects are in the national language. These differences have resulted in inequalities in the access to the world scientific knowledge with scientists of the English-speaking countries and countries where English is used as a medium of instruction (i.e. a second language) taking more advantage of it than those where English is only a foreign language (Pennycook 1994, Flowerdew, Li & Miller 1998).

As far as Algeria is concerned, university teaching is conducted either in classical Arabic or in French, the first foreign language in Algeria (Miliani 2003, Lakhdar-Barka 2003, Lakehal 2008, Slougui 2009). English, which is the second foreign language, is used as an auxiliary language and is studied only for likely future postgraduate studies or professional careers (Slougui, 2009). Many difficulties are observed in situations similar to the Algerian context (Dudley-Evans and St John's 1998, Peacock 1998/ 1999, Davies 2003), among which: students' low levels of proficiency in English; students' lack of motivation; mismatch in expectations between teachers and learners; absence of clear or immediate need for English language use. Consequently, in order

to enhance the teaching and learning of English in EFL academic contexts, EAP/ ESP practitioners have been recommended to determine the motivations, attitudes and exact EAP needs of the students and to identify the possible gaps and mismatches in beliefs and expectations in order to provide justifiable pedagogical practices (Dudley-Evans and St John, 1998). In addition, the teachers are also required to acknowledge and respect students' attitudes, beliefs, and expectations and help them overcome any harmful perceptions and blocks (Mantle-Bromley 1995, Peacock 1998).

Therefore, the aim of the present study has been to explore the expectations and motivational orientations of the students of the Electrical Engineering Department (EED, henceforth) and of their English language instructors about the ESP course.

3. Methodology

3.1. Design and setting: The present research is an exploratory case study, which took place in the department of Electrical Engineering at Laghouat University, Algeria.

3.2. Population and sampling: The target population involved all the EED¹ students and their English language teachers: 169 students and 04 ESP teachers. The students were distributed into three-year levels: 93 third year Licence (L3) students; 47 first year master (M1) students; 29 second year master (M2) students. There were 04 ESP teachers in the EED: 01 English language graduate and 03 Science and Technology graduates. The science and

¹ For a detailed list of abbreviations, refer to appendix 1 on page 20

technology graduates were assistant professors and PhD candidates in the same department. The sample was chosen randomly according to students' availability and willingness to participate.

3.3. Data collection: two data collection instruments were used in this research: a survey questionnaire for the students and a semi-structured interview for the English Language instructors. Fifty-six (56) students were able to respond to our questionnaires: 34 Licence Students (henceforth LS) and 22 Master Students (henceforth, MS). Only two (02) language teachers accepted to be interviewed, and both of them were assistant lecturers, content teachers and PhD candidates.

4. Analysis of the results

4.1. Analysis of the questionnaire responses

4.1.1. Motivational orientations to learn English in the EED

As shown in table 1 below, most of the surveyed students “*like studying English*.” However, a significant difference in the degree of intensity could be noticed. In fact, most of the respondents liked “*very much*” to study English because it was useful for both of their academic and professional careers. However, the same rate of students “*moderately*” liked studying English to discover the Anglo-Saxon culture. Thus, the intensity of the instrumental motivation was more significant than that of the integrative motivation.

Table 1: English motivational orientations in the EED

Items		Level	Not At All		Moderately		Very Much	
			AF ²	RF ³	AF	RF	AF	RF
1- I like studying English because	It enables me to discover/ practise the Anglo-Saxon culture.	M	4	18,18	17	77,27	1	4,55
		L	4	11,11	24	66,67	8	22,22
	It is useful for my academic career	M	0	0,00	8	36,36	14	63,64
		L	2	5,56	6	16,67	28	77,78
	It is useful for my professional career	M	0	0,00	5	22,73	17	77,27
		L	1	2,78	16	44,44	19	52,78

4.1.2. Expectations about the EST course

The analysis of students' responses on item 2 (see table 2 below) revealed that most MS respondents were in favour of an ESP course while the majority of LS respondents were not. The results for the other items (3,4,5,6,7,8) showed that Master students and Licence students had converging expectations about the English language course:

- Most of MS and LS believed that science students needed to study General English.
- The majority of MS and LS respondents believed that EST skills were transferable to other forms of ESP work and expected the EST instructors to play the traditional role of knowledge providers.
- In addition, 63, 64% of MS respondents and 50% of LS respondents expected the EST materials provided to science students to be completely scientific (item 7).

² AF: Absolute Frequency

³ RF : Relative Frequency

- Authenticity (item 8), on the other hand, was paradoxically refuted by 72, 73% of MS respondents and 80, 56% of LS respondents, who agreed that '*students should be provided with simplified scientific texts*'.

Table 2: Students' beliefs about the EST course

Items	Level	Disagree		Undecided		agree	
		AF	RF	AF	RF	AF	RF
2- English for Specific purposes (ESP) is the needed course for science students.	M	7	31,82	4	18,18	11	50,00
	L	18	50,00	8	22,22	10	27,78
3- Science students do not need general English.	M	12	54,55	0	0,00	10	45,45
	L	17	47,2	6	16,67	13	36,11
4- Electrical engineering students can use English for Science and Technology (EST) skills to practise other forms of ESP.	M	8	36,3	4	18,18	10	45,45
	L	14	38,8	4	11,11	18	50,00
5- The teacher's role is to provide knowledge and students should listen passively and answer the questions.	M	6	27,2	2	9,09	14	63,64
	L	17	47,2	0	00	17	52,78
6- Students should be asked about their needs when designing an EST course.	M	4	18,18	3	13,64	15	68,18
	L	5	13,89	5	13,89	26	72,22
7- EST course materials should be science-based.	M	6	27,2	2	9,09	14	63,64
	L	7	19,44	11	30,56	18	50,00
8- Students should be provided with simplified scientific texts.	M	3	13,64	3	13,64	16	72,73
	L	6	16,67	1	2,78	29	80,56

Concerning the EST skills (see table 3 below), most of the respondents believed that the listening skill was "*very much*" needed by EED students with 63, 64% and 47, 22% respectively for MS and LS respondents. On the other hand, most of the respondents believed that the remaining skills were needed

“*only moderately*”. That is to say, the students expected the course to give much importance for the listening skill, and to make a balance in the teaching of speaking, reading, writing, grammar, and lexis.

Table 3: Students’ beliefs about EST skills

Items		Level	Not At All		Moderately		Very Much	
			AF	RF	AF	RF	AF	RF
9- The skills needed by EED students are:	<i>Listening</i>	M	0	0,00	8	36,36	14	63,64
		L	10	27,78	9	25,00	17	47,22
	<i>Speaking</i>	M	1	4,55	14	63,64	7	31,82
		L	12	33,33	17	47,22	7	19,44
	<i>Reading</i>	M	1	4,55	14	63,64	7	31,82
		L	7	19,44	18	50,00	11	30,56
	<i>Writing</i>	M	3	13,64	11	50,00	8	36,36
		L	10	27,78	20	55,56	6	16,67
	<i>Grammar</i>	M	2	9,09	14	63,64	6	27,27
		L	13	36,11	16	44,44	7	19,44
	<i>Lexis</i>	M	1	4,55	16	72,73	5	22,73
		L	12	33,33	19	52,78	5	13,89

It can also be noticed from the results of item 10 (figure 4) that most of the MS respondents and a relative majority of LS respondents believed EED students needed “*very much*” to read scientific texts. However, when the columns of “*moderately*” and “*very much*” are combined, the absolute majority of the students are found to believe that reading scientific texts was needed. In contrast, a relative majority (45,45%) of MS respondents and most of LS respondents (61,11%) believed that the task ‘*chat with foreign science students*’ was “*not needed at all*” by EED students while a non-negligible rate (40, 91%) of MS respondents thought it was “*moderately*” needed. However,

except for the task '*participate in collaborative groups*', which 52, 78% of LS respondents believed it was *not needed at all*, all the other tasks were considered to be *moderately* needed by the majority of the respondents.

Table 4: Students' beliefs about EST tasks

Items		Lev	Not At All		Moderately		Very Much	
		El	AF	RF	AF	RF	AF	RF
10- Electrical Engineering students need English to:	read scientific texts	M	0	0,00	4	18,18	18	81,82
		L	8	22,22	8	22,22	20	55,56
	write scientific/ academic reports	M	1	4,55	16	72,73	5	22,73
		L	11	30,56	22	61,11	3	8,33
	write scientific (expository) papers	M	1	4,55	16	72,73	5	22,73
		L	16	44,44	17	47,22	3	8,33
	participate in collaborative groups	M	3	13,64	14	63,64	5	22,73
		L	19	52,78	11	30,56	6	16,67
	participate in scientific web forums	M	1	4,55	19	86,36	2	9,09
		L	12	33,33	20	55,56	4	11,11
	listen to online & TV science lectures	M	0	0,00	18	81,82	4	18,18
		L	14	38,89	15	41,67	7	19,44
	watch scientific video conferences	M	2	9,09	14	63,64	6	27,27
		L	13	36,11	14	38,89	9	25,00
	chat with foreign science students	M	10	45,45	9	40,91	3	13,64
		L	22	61,11	9	25,00	5	13,89

4.2. Analysis of the interview data

The analysis of the interview data resulted in the emergence of four main content categories: *motivational orientations, expectations about the ESP methodology, expectations about ESP course contents (skills and tasks), and the difficulties in teaching the ESP course.*

4.2.1. Motivational orientations

The analysis of the interview responses (see the extracts below) revealed that ESP teachers limited themselves to the teaching of EAP. This was justified by the fact that the English language course had to be purely technical and academic in orientation as recommended in the official canvas of Master studies. On the other hand, the ESP teachers were found to teach English in order to practise it with their students.

Teacher 1: “Here we prepare students for a “Master of research”, so we have to teach them how to read scientific articles and other scientific texts in English... English is an important language for Doctorate Students who want to publish research articles in international journals”

Teacher 2: “Algerian citizen don’t need to master English because, in Algeria French and Arabic are the most used in real-life”

Teacher 01: “I teach English because first I like it and because I want to keep on practising it”

4.2.2. ESP course contents

As shown in the extracts below, the interviewed teachers believed that Technical English was the main form practised in science departments and that the students had to be trained on scientific terminology, grammar forms, skills and tasks which they needed in their studies. The results revealed that the real use of the English language by the students came only in Master 2 level when the students are required to read some research articles in English in order to prepare their Master theses.

Teacher 02: “In electrical engineering, we focus our efforts on technical English.... I mean, learn (teach) to students how to read,

understand, analyse texts and how to write a scientific report, article or dissertation”

Teacher 01: *“In this department we are interested in scientific language ... For example, we teach students technical words, essential grammatical rules, how to read scientific texts and how to write a ...scientific report. In the secondary school they teach everything”*

Teacher 01: *To give you a practical example, our students are required to read a number of research articles in order to prepare their Master theses. These are articles, which are often provided by the tutors, are all written in English.*

4.2. 3. The methodology of ESP course design

The interviewed teachers affirmed that the choice of the methodology of language teaching and course design was made on the basis of their learning beliefs and their personal experiences as language users and former language learners. In fact, as shown in the following extracts, these English language instructors were found to use foreign ready-made ESP course books from which they selected a number of units, instead of conducting systematic needs analyses.

Teacher 02: *“I use my experience as a researcher and as a former student to decide on the content. The texts and exercises are taken from foreign course books”*

Teacher 01: *We generally use either “Oxford English for Electrical Engineering” or “Cambridge English for Electrical Engineering”. These books were made by very specialized people in the English speaking countries, so no other work could be better than these, not Algerian that of researchers at least!*

4.2.4. Difficulties in teaching the ESP course

The respondents raised a number of difficulties that prevented them from doing their jobs appropriately, and mentioned among others absenteeism, lack of motivation, unfavourable environmental and material conditions, etc. They asserted that only few students were interested in the EST course and attributed the decrease in students' interest to the study overload, the low coefficients attributed to the language course, and to students' low levels of proficiency.

Teacher 01: *Yes, there are some difficulties. Many students do not attend the lectures. When they come they cannot follow since they were absent in the preceding lectures.*

Teacher 01: *This lack of motivation is due mainly to the fact that students do not use the English language since they study in French.*

Teacher 02: *Yes, we encounter many difficulties in teaching English. For example, there is not much time allocated to the English Course. Hence, the desired goals can't be achieved in the end of the academic year; there is not good material, if there is any, to teach English with modern methods; the average number of student groups is very high comparing with other countries; the majority of students do not have prerequisites to follow the English course, and so on.*

5. Discussion

The first point dealt with in this paper concerned the motivational orientations of the ESP teachers and EED students. In fact, the results showed that the students and the teachers perceived English as a means of academic and professional success. Therefore, the motivation of all the teachers and most of the students in the EED is highly instrumental. According to Wilkins (1972, p. 184), "*More specifically, a learner is instrumentally motivated when he/she wants to learn a language to pass an examination, to use it in one's job,*

to use it in holiday in the country, as a change from watching television, because the educational system requires it". These results cohere perfectly with previous Algerian research findings, which have concluded that instrumentality was the dominant orientation of English language learning in Algeria (Cheriguen 2008, Lakhdar-Barka 2003). The results are also similar to those of other EFL countries in which the factor of employability has played a fundamental role in students' motivation (see Ibrayeva and Fuller, 2014). On the other hand, the two teachers were found to totally reject the idea of studying English for cultural reasons while most of the students accepted it. According to Gardner (1985), learning a language for the sake of practising its corresponding culture implies having an integrative orientation to learn it (1985, p. 203). The integrative orientation, in students, can be explained by the open-mindedness toward foreign languages and cultures of the new generation of students.

The results about EST expectations revealed the existence of a deep gap between the students and the teachers. In addition, students' expectations were found to be more realistic than those of the teachers. Although the teachers were aware of the students' low levels of proficiency, they designed purely technical courses and expected the students to be successful. The teachers also expected the course to be purely academic and research oriented, with much focus on specialised lexis and un-simplified technical texts. In contrast, the students expected the course to be less technical. Licence students were more interested in General English courses, simplified texts, and some technical materials. Similarly, Master students expected the course to be of medium technicality, believed in skills transfer, and favoured a common-core ESP course with some specific materials and EGP practice. In order to summarise and to explain the expectations of both of the teachers and students

in the EED, I have elaborated the following illustrative model (see figure 01 below), which can also be considered as a mini-framework of English language needs in the EED.

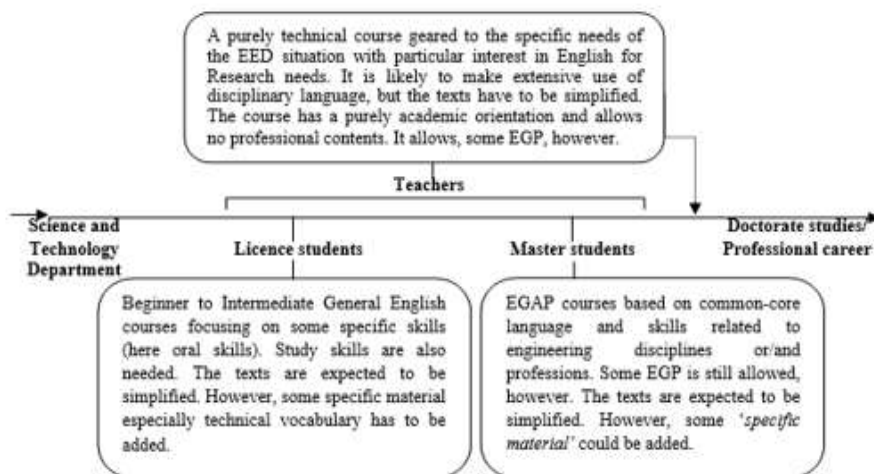


Figure 01: ESP expectations in the EED

As shown in the figure above, teachers' expectations correspond to doctoral students' needs rather than to those of Master and Licence students. On the other hand, students' expectations are more realistic and express their true immediate and delayed needs.

Concerning ESP course design, which is the third issue raised in this paper, the EST instructors were found to approach it in rather a personal way as they proceeded through a random selection of teaching units from ready-made commercial ESP course-books. This way of designing language courses does not apply to any scientific framework described in the literature. It ignores totally the main stages of course design and the principles of learner-centred teaching, which are based on the study of learners' needs (Hutchinson and Waters 1987, Dudley-Evans and St John 1998). The use of this approach

reveals the lack of awareness, on the part of the teachers, of the main principles of ESP course design and needs analysis. This lack of awareness was also shared with the administration, which assigned the task of teaching English to three content teachers, instead of appointing qualified English language graduates. Part of responsibility also lies with the governmental policy, as there is almost no opportunity to appoint true ESP teachers because of the lack of ESP postgraduates on the one hand and of budgetary items on the other hand. In fact, problems of this kind have been reported in many research works in different parts of the world (Bracaj 2014, Zoumana 2007, Dudley-Evans 2001).

As far as language skills are concerned, oral communication was found to have come back to the ground. This revival of interest might reflect the awareness of both teachers and students of the new challenges that are facing the students and scientists in their academic activities, like the use of the English language in international conferences, seminars and laboratory activities. Furthermore, and similarly to the results found in other countries (see Yang and Chen, 2007) , the advent of the multi-media, like the internet and other ICTs, seem to have also influenced the new generation of Algerian academicians because of the proliferation of online oral courses and conferences that necessitate, actually, a good understanding and mastery of the English language. However, a noticeable lack of interest in online chat was identified, which reveals students and teachers' fear of direct oral interaction due mainly to their low levels of proficiency in English. More to the point, the lack of interest in online chat can be attributed to the lack of awareness of a number of teachers and students in the increasing importance of the social networks/media in EFL/ESL learning.

Finally, the mismatch in expectations between the students and their ESP teachers was found to constitute one of the major causes of absenteeism, de-motivation and loss of interest on the part of the students. The teaching beliefs and practices of the two ESP teachers are simply teacher-centred and their teaching strategy is based on the target language needs of postgraduate students, and by extent, their own needs. This has been considered by Huckin (2003) as a prescriptivism that usually results in the de-motivation of students. EAP courses are supposed to reflect the real needs of the learners in relation to their levels of proficiency and to their academic and/or professional language needs (Huckin 2003, Dudley-Evans and St John 1998).

6. Conclusion

The present study has attempted to explore the motivational orientations and ESP expectations in the EED department at Laghouat University. The results of this research have shown that there is a serious mismatch in ESP course expectations between EED students and their language instructors, which has led to a dramatic de-motivation and absenteeism on the part of the students. In addition, the research has revealed a lack of awareness and know how on the part of the instructors about English language teaching in general and ESP course and materials design in particular. However, a revival of interest in the oral skills has been observed with both students and teachers, which demonstrates their awareness of the new challenges that have emerged in the academic world. Against all expectations, the study has shown a lack of interest in online chat, which can be attributed to the fear of direct oral interaction, due mainly to their low levels of proficiency in English.

Consequently, it is necessary that future research works be conducted in the EED department in order to design an EST curriculum for the whole university course. Moreover, an urgent strategy for the improvement of

English language teaching needs to be established in non-English departments. This could involve, among others: launching a massive training of highly qualified ESP teachers (Master and PhD in ESP) in all the Algerian universities; enabling the university faculties to recruit true English language teachers in non-English departments; and providing ESP teacher training for the EFL teachers working in non-English departments.

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Appendix 01: the main abbreviations used in this paper

Abbreviation	Meaning
EED	Electrical Engineering Department
M	Master (level)
L	Licence (level), equivalent to Bachelor in UK and
L3	USA
M1	Third year Licence (level)
M2	First year Master (level)
LS	Second year Master (level)
MS	Licence Students
AF	Master Students
RF	Absolute Frequencies (numbers)
EFL	Relative Frequencies (percentages)
EST	English as a Foreign Language
ESP	English for Science and Technology
EAP	English for specific purposes
	English for academic purposes