

## Motivation and attitudes towards english language learning tertiary education: a contrastive approach to undergraduate response to english as a core subject in the engineering and humanities degrees

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### Resumen

Motivation continues to play a major role in the area of EFL/ESL learning due to the fact that students' attitudes towards learning a foreign language often result to be the predictors of further success or failure. The present research paper aims at comparing the motivation patterns towards learning the English language shown by EFL Engineering students from the Technical University of Madrid, on the one hand, and Modern Languages Humanities students of the Complutense University of Madrid, on the other.

Strong interest towards learning foreign languages has always been a characteristic feature of the Humanities students. But over the last years, also, facts reveal that there has been a considerable increase of interest towards foreign languages among the students of technical careers. Not in vain, the English language course (English for Professional and Academic Purposes) has recently become a core subject for every Engineering specialty areas at the Technical University, with students

having to pass a placement test proving a very good command of the English language prior registration.

This contrastive study intends to measure and analyze both Engineering and Humanities students' degree of motivation in terms of the three motivational constructs established in the works by Gardner (1985) and Cooper and Fishman (1977): (i) instrumental motivation, (ii) integrative motivation and (iii) personal motivation. Aspects other like learners' attitudes towards the use of English in the social and educational contexts or the culture of the English speaking countries have been also considered.

In the light of the findings and conclusions to be reached in this work, some pedagogical implications will be also discussed in a final section of the paper.

**Palabras clave:** Motivation, Engineering, Humanities, English Language Learning/Teaching Process.

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## Introducción

Research in the field of Engineering studies shows that English language is an essential tool for any engineer who wants to carry out his professional practice in the international arena (Venkatraman: 2007), (Pritchard: 2004), (Joseba: 2005). The importance of English makes this language acquisition process especially attractive for Engineering students, motivation being a decisive factor that influences success in foreign language learning / teaching (Ellis: 1994). In the case of students of Modern Languages in the School Humanities, this motivation is commonly given for granted.

Many studies point motivation to be a key factor in foreign language acquisition (Ellis: 1994), (Spolsky: 1989), (Gardner: 2006). According to Gardner, "students with higher levels of motivation will do better than students with lower levels" (2006: 241). These students are also more likely to be engaged in relevant activities, to expand efforts and to show desire to achieve their goals. Gardner and Lambert (1972) classify motivation into two types: instrumental motivation and integrative motivation. The instrumental

motivation is based on the students' desire to learn the language for some utilitarian goal, such as "to pass an examination, to use it in one's job, holidays, to watch O. V. television, or as an educational requirement" (Wilkins, 1972: 184). Meanwhile, the integrative motivation comes given by students' interest towards language itself, its culture and the desire to communicate with the target language group. That is to say, "to know more of the culture and the values of the foreign language group, to contact with the speakers of the languages, or to live in the country concerned" (Wilkins, 1972: 184).

Besides instrumental and motivational orientations, Cooper and Fisherman (1977) introduce a third type of motivation called "developmental or personal motivation" (1977: 243). This motivation is closely related with activities resulting in personal gratification such as reading books or watching movies. Though Gardner and Lambert's studies strongly suggest that integratively motivated students are more successful in terms of language acquisition, later research reveals that "a language may be learned for any / any group of practical reasons" (Spolsky: 1989). Thus, some recent studies claim for abandonment of the adjectives "integrative" and "instrumental" in approaching motivation. Instead, they propose to "look at the learner as a human and social being who has a multi-faceted self and who fares into another linguistic community through network ties" (Abdesslem: 2002).

Learners' attitude is another important factor in language acquisition. In fact, learners' motivation and learners' attitude towards learning a foreign language are strongly interrelated. According to Gardner and Lambert (1972), the students' motivation to learn is determined by their attitudes towards the target language group as well as towards the learning task itself. What is more, attitudes are considered to be an essential component of motivation in language learning. As Gardner states, motivation "refers to the combination of effort plus desire to achieve the goal of learning the language plus favorable attitudes toward learning that language" (1985: 10).

## **AIMS OF THE STUDY**

This study is intended to find similarities and differences concerning both Industrial Engineering and Modern Languages Humanities students' degree of motivation and attitudes towards learning the English language. The objective is two-fold:

(i) To determine which of the three types—instrumental, integrative and personal—could be the primary source of Industrial Engineering and Modern Languages students' motivation towards learning the English language. Similarities and differences.

(ii) To determine the type of attitude that these two groups of students have towards learning the English language. Similarities and differences.

## **METHOD**

The study has been conducted to identify Engineering and Modern Languages students' motivational and attitudinal orientations in learning the English language. Data has been obtained through one single questionnaire designed to assess both groups of students' reasons for learning English, their beliefs about the value of learning English and their capacity for learning this foreign language. Results have first been analyzed quantitatively to be later on presented and discussed in the Results section of the present study. The conclusions and the pedagogical implications derived from the discussion of results can be found in the final section of the paper.

## **PARTICIPANTS**

Participants were 72 Engineering students from the fifth year belonging to the Higher Technical School of the Industrial Engineering Technical University of Madrid (UPM), and 68 Modern Languages students from the fourth year belonging to the School of Humanities of the UCM. English was a core subject in both cases. The average age of the respondents was about 23 years old.

## INSTRUMENTS

A questionnaire organized into 5 main sections was designed to collect the data related to the students' motivation and attitudes. The first section was aimed to collect students' personal data, including age, sex, nationality, and languages spoken by the participants. The second part was expected to collect quantitative data regarding the students' motivation towards English language learning. There were 12 questions scored on a five-point Likert Scale (from 1 = Very much to 5 = Not at all). The items of the questionnaire were based on Gardner's (1985) Attitude/Motivation Test Battery, on the one hand, and Cooper and Fishman's (1977) Personal Motivational Construct, on the other. The main intention was to include instrumental motivation factors (items 1, 4, 8, 11, 12) as much as integrative motivation factors (items 2, 6, 10) and personal motivation factors (items 3,5,7,9). The third section of the questionnaire was designed to elicit information regarding the students' attitudes towards the English language. In this case, students were given 9 statements and they were requested to choose one out of the five alternatives given, where 1 stood for "completely agree" and 5 for "completely disagree". The fourth section was aimed at analyzing the elements of integrative motivation that are related to the students' interests in different aspects of the English culture such as music, movies, science or traditions. Finally, the fifth section included items to measure the students' general degree of satisfaction with the English course, including class development, classroom environment and technical facilities, or academic material. The six items included in this part were to be scored from *extremely satisfied* to *not satisfied at all*.

## RESULTS

This section is divided into two main sub-sections: (i) the students' motivation to learn English, (ii) their interest towards the English culture and (iii) their attitudes toward the English language.

### **(i) Motivation to learn English**

Students were asked a series of questions related to different types of motivation. They were requested to write down the most important reasons in enhancing their learning of the English language. Tables 1 (UPM) and 1.1 (UCM) below show the

students' answers to the first block of questions. All the data are presented in percentages (1 is assigned for "Very much", 2 for "A lot", 3 for "Some", 4 for "A little" and, 5 for "not at all".) From the three motivational constructs—instrumental motivation, integrative motivation and personal motivation that have been the focus of the present study—it can be said that instrumental motivation received the highest results. As shown in Table 1, the UPM students highly favored learning English for the specific purpose of their professional future: 98, 6% (*very much & a lot*) of the respondents indicated that they needed English for their professional career, 90, 3% affirmed that the knowledge of English would help them to get a better paid job, and an 80,5 % stated that a perfect command of English made them more competitive. The other major instrumental factor was learning English as a university requirement (87, 4% of positive answers). Meanwhile, table 1.1 shows very similar results for the Humanities students with respect to the instrumental motivation (96,4% ,78,5%, and 85,7% respectively).

Table1: UPM students' results on their motivation for learning English.

Reasons for learning English	1	2	3	4	5
Instrumental motivation reasons					
Because I need it for my studies	70,8	16,6	11,1	0	1,4
Because I need it for my professional career	84,7	13,9	0	0	1,4
Because it makes me more competitive person	58,3	22,2	12,5	5,5	1,4
Because it helps me to get a well-paid job	65,3	25	8,3	1,4	0
Integrative motivation					
Because it makes easier to contact with English speaking people	41,7	40,3	12,5	5,5	0
Because it allows me to participate in cultural activities	33,3	27,8	26,4	9,7	2,8
Because I need it to travel abroad	73,6	9,7	11,1	5,5	0
Personal motivation					
Because I would like to live in an English speaking country	27,8	27,8	25	11,1	8,3
Because I like learning new things	22,2	44,4	25	5,5	2,8
Because I like learning foreign languages	34,7	26,4	25	8,3	5,5
Because learning is a rewarding process	20,8	44,4	18,05	9,7	6,9

Table 1.1: UCM students' results on their motivation for learning English.

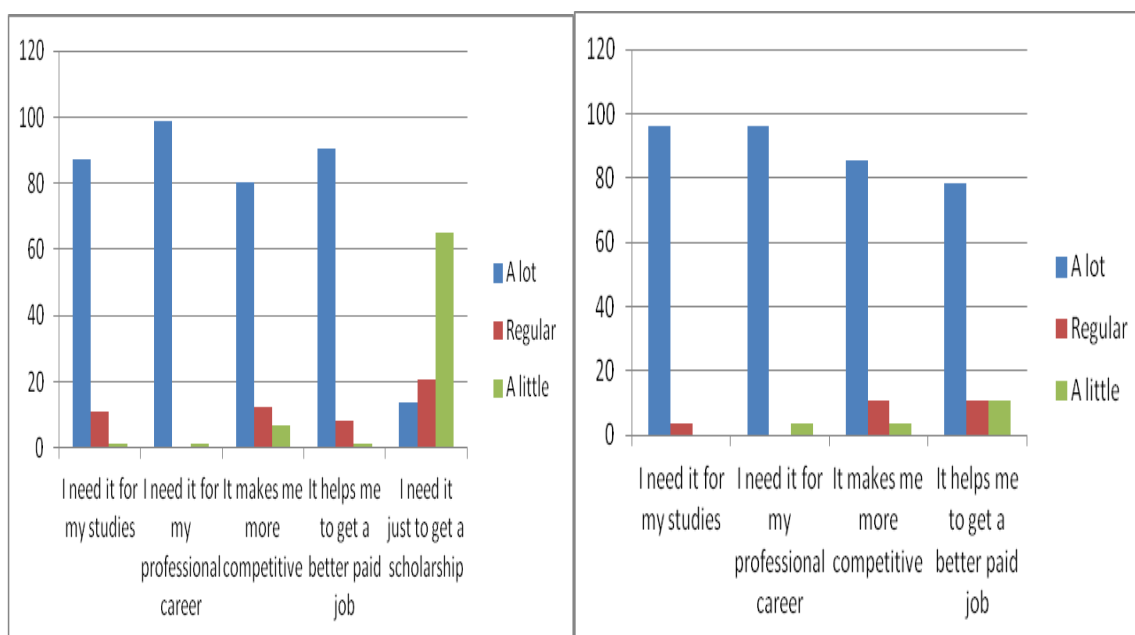
Reasons for learning English	1	2	3	4	5
<b>Instrumental motivation reasons</b>					
Because I need it for my studies	75	21,4	3,6	0	0
Because I need it for my professional career	75	21,4	0	3,6	0
Because it makes me more competitive person	67,8	17,9	10,7	3,6	0
Because it helps me to get a well-paid job	67,8	10,7	10,7	10,7	0
<b>Integrative motivation</b>					
Because it makes easier to contact with English speaking people	64,3	28,6	7,1	0	0
Because it allows me to participate in cultural activities	53,6	28,6	10,7	7,1	0
Because I need it to travel abroad	71,4	21,4	7,1	0	0
<b>Personal motivation</b>					
Because I would like to live in an English speaking country	46,5	14,3	32,1	3,6	3,6
Because I like learning new things	22,2	44,4	25	5,5	2,8
Because I like learning foreign languages	67,8	14,3	7,1	10,7	0
Because learning is a rewarding process	53,6	32,1	7,1	0	7,1



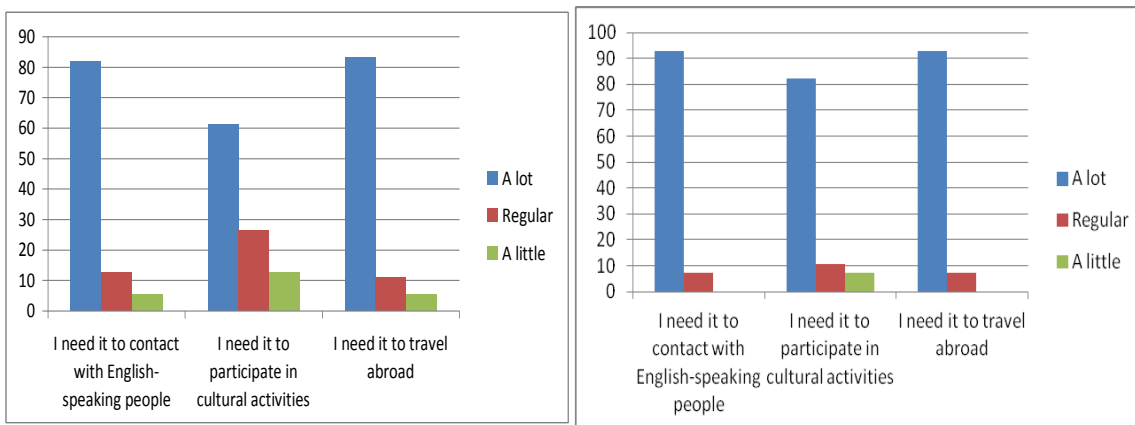
Together with the instrumental reasons, integrative motives come as the second source of motivation. 82% of the UPM participants indicated their need to communicate in English with people all over the world, 83% pointed out the importance of English while travelling abroad, and 61% underlined their interest in participating in English language cultural activities. The UCM respondents, in comparison, got considerably higher scores in integrative motivation questions (92%, 82,2%, 92,8% respectively), coming very close to the results shown for the instrumental motivation set of questions (96,4% , 96,4%, 85,7%, 78,5%).

The information is summarized in Graphs 1 and 2 below, with UPM data on the left and UCM data on the right.

Graph 1. Students' instrumental motivation.

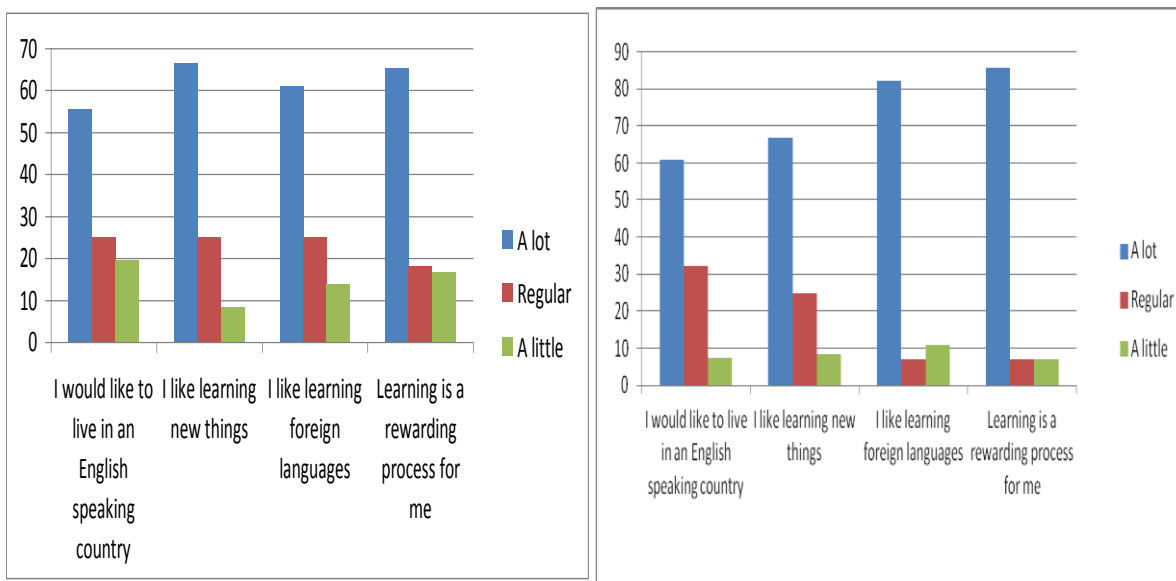


Graph 2. Students' integrative motivation.



For the personal type of motivation, results in Graph 3 indicate that this had the lowest impact on the UPM students. Still, the results obtained can be considered rather positive: 55, 6% of students would like to live in an English-speaking country, 66, 6% would like to learn new things and 61,1% would enjoy learning foreign languages while learning a foreign language was considered to be a rewarding process for other 65, 2%. Meanwhile, the UCM students reported especially strong interest in learning foreign languages (82, 1%), that is considered by the vast majority of the participants (85, 7%) as a rewarding process.

Graph 3. Students' personal motivation.



**(ii) Interest towards the English culture**

Tables 2 and 2.2 below present the information regarding both the UPM and the UCM students' interest towards different aspects of the English culture: customs and traditions, religion, moral, art, literature, music, movies, economy and science.

Table 2: UPM students' results on their interest towards different aspect of the English culture.

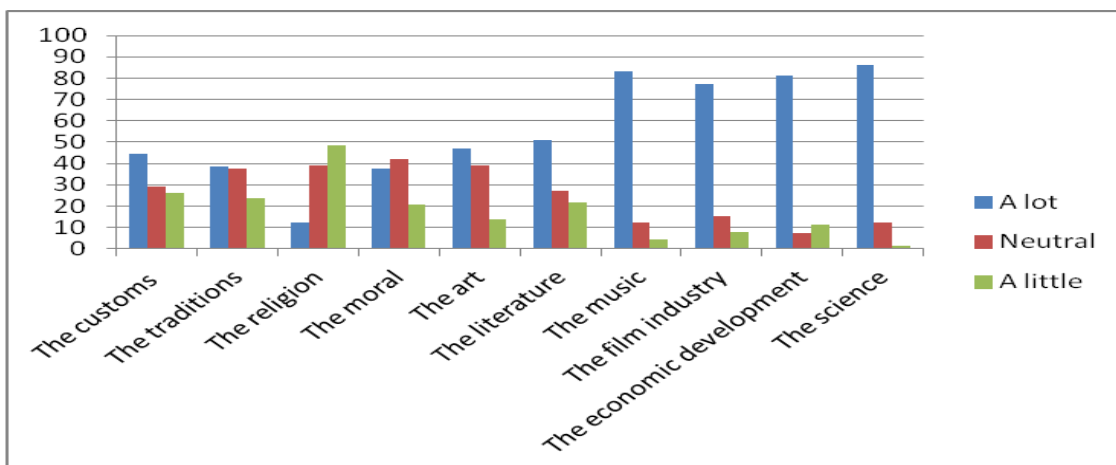
Items	Very much	A lot	Neutral	A little	Not at all
The customs	11,1	33,5	29,1	11,1	15,2
The traditions	8,3	30,5	37,7	15,2	8,3
The religion	4,2	8,3	38,9	25	23,6
The moral	13,9	23,6	41,8	15,2	5,5
The art	13,9	33,3	39	8,3	5,5
The literature	11,3	39,5	27,4	17,6	4,2
The music	41,6	41,8	12,4	1,4	2,8
The film industry	37,1	40,1	15,2	3,8	3,8
The economic development	31,1	50,1	7,5	4,8	6,5
The science	38,8	47,3	12,5	1,4	0

Table 2.2: UCM students' results on their interest towards different aspect of the English culture.

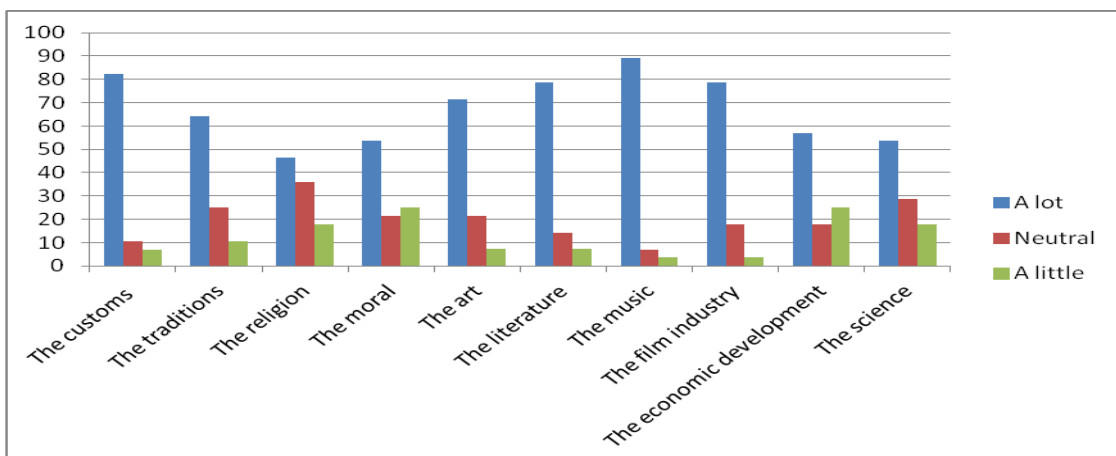
Items	Very much	A lot	Neutral	A little	Not at all
The customs	42,8	39,3	10,7	0	7,1
The traditions	32,1	32,1	25	7,1	3,6
The religion	0	46,3	35,8	14,3	3,6
The moral	10,7	42,8	21,4	21,4	3,6
The art	46,2	25	21,4	3,6	3,6
The literature	64,3	14,3	14,3	3,6	3,6
The music	64,3	25	7,1	0	3,6
The film industry	53,6	25	17,9	0	3,6
The economic development	28,6	28,6	17,9	17,9	7,1
The science	25	28,6	28,6	7,1	10,7

Regarding the UPM students, results reveal that the highest score of positive answers is shared by topics such as music (83, 4%), movies (77, 2%), economy (81, 2%) and science (86, 1%). The lowest interest was shown towards topics related to religion (12, 5%) and moral (37, 5%). In the case of the UCM students, the most popular topics resulted to be music (89,3%), customs (82,15), literature(78,6%), movies (78,6%), and arts (71,2%); the last positions being occupied by religion (46, 3), moral (53,5%), science (53,6%), and economy (57,2%). Thus, the Engineering students give clear preference to scientific and economic issues while Humanities students are more interested in literature and arts. Both groups coincide in their interest towards music and cinema.

Graph 4. UPM Students' interest towards different aspects of English culture.



Graph 4.4 UCM Students' interest towards different aspects of English culture.



**(iii) Attitudes towards the English Language**

The analysis of the data concerning attitudes is based on the students' responses to nine statements, for which they were required to tick one out of five options: i) totally agree, ii) agree, iii) neutral, iv) disagree, and v) totally disagree. The results of the questionnaire in percentages are presented in the following tables (Table 3 for UPM students' responses and Table 3.3 for UCM students' responses).

Table 3: UPM students' results on their attitudes towards learning English.

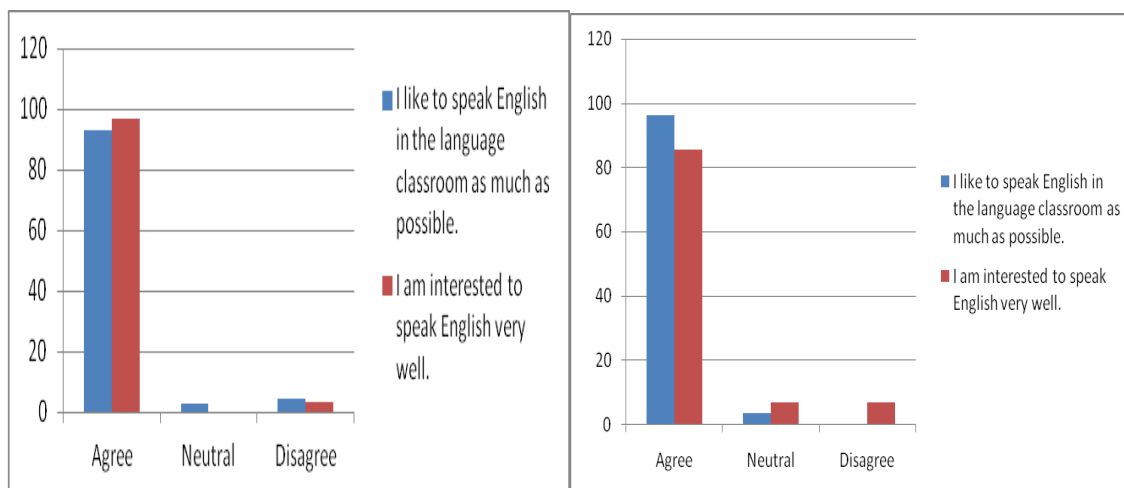
Questionnaire items	Totally agree	Agree	Neutral	Disagree	Totally disagree
I like to speak English in the language classroom as much as possible.	83,6	9,4	2,8	1,4	2,8
I believe in luck or intelligence as far as I don't put too much effort to learn English.	11,1	19,4	27,8	27,8	13,9
If I didn't have a chance to study English at the University, I would try to follow practicing the language somehow.	59,7	20,8	12,5	5,5	1,4
If I were on holiday at an English speaking country, I would try to speak Spanish if possible.	6,9	2,8	6,9	16,6	66,7
When I hear an English song on the radio or watch a movie, I try to understand what it says.	45,8	18	25	9,7	1,4
In fact, I am more interested in learning the other foreign language (not English).	9,7	13,9	16,6	16,6	43
In fact, I prefer our English teacher to explain things in Spanish.	8,3	0	4,2	9,7	77,8
When I finish my studies at the University, I will not continue with English classes.	6,5	6,5	5,5	19	62,5
I am interested to speak English very well.	86,9	9,7	0	1,4	2,8

Table 3.3: UCM students' results on their attitudes towards learning English.

Questionnaire items	Totally agree	Agree	Neutral	Disagree	Totally disagree
I like to speak English in the language classroom as much as possible.	85,7	7,1	0	3,6	3,6
I believe in luck or intelligence as far as I don't put too much effort to learn English.	21,4	28,6	21,4	25	3,6
If I didn't have a chance to study English at the University, I would try to follow practicing the language somehow.	67,8	21,4	3,6	0	7,1
If I were on holiday at an English speaking country, I would try to speak Spanish if possible.	10,7	3,6	7,1	10,7	67,8
When I hear an English song on the radio or watch a movie, I try to understand what it says.	53,6	17,9	10,7	14,3	3,6
In fact, I am more interested in learning the other foreign language (not English).	14,3	0	21,4	14,3	50
In fact, I prefer our English teacher to explain things in Spanish.	7,1	3,6	7,1	0	82,1
When I finish my studies at the University, I will not continue with English classes.	17,9	0	7,1	0	75
I am interested to speak English very well.	85,7	0	7,1	0	7,1

The findings in table 3 show that the majority of the students (96, 6%) have a great interest towards getting an excellent command of the English language. In addition, they express the desire to speak English as much as possible in the language classroom (93%), as well as to opt for the teacher’s explanations in English. Table 3.3, presenting the UCM students’ responses, shows rather similar results (85,7% and 92,8% respectively).

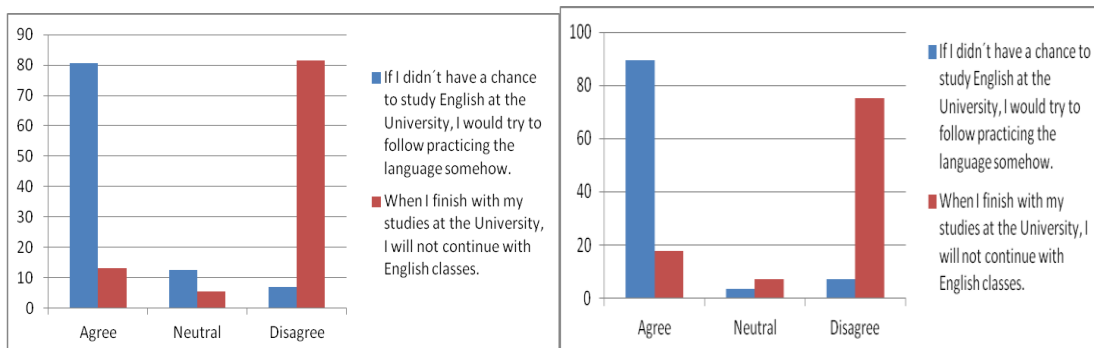
Graph 5. Students’ attitude towards practicing English in the classroom (UPM, left; UCM, right).



Moreover, most of the UPM students indicate their interest to continue learning English after graduation (81, 5 %), meanwhile 80, 5 % of the UPM respondents affirm that they would practice the language even if that was not a part of the university curriculum. Quite surprisingly, in case of the UCM students, 89, 2% of the respondents assert their interest in studying English though 75% would rather not continue learning English after university.

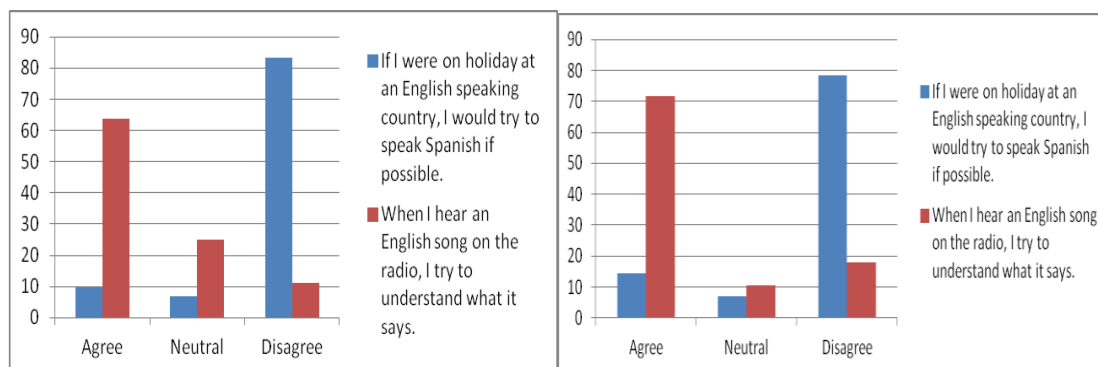


Graph 6. Students' interest to continue learning English after graduation (UPM, left; UCM, right).



Having the chance to practice English, the vast majority of the UPM students affirm using it. Thus, 83% of the respondents say that they would not speak Spanish in a non-Spanish country, even if there was such a possibility. 63% of the students try to understand the text while listening to English songs or watching movies. The results got from the UCM students show even higher scores: 85, 7% and 71, 5 respectively.

Graph 7. Students' attitude towards practicing English in authentic situations (UPM, left; UCM, right).



## Conclusión

### CONCLUSIONS AND PEDAGOGICAL IMPLICATIONS

This study was aimed to investigate the industrial and technical Engineering students' motivation and attitudes toward learning the English language with regards to Modern languages students from the UCM School of Humanities, commonly agreed to have the highest motivations and the best attitudes to the learning foreign languages. As far as the students' motivation concerns, the findings showed that the instrumental motivation turns out to be the primary source of the industrial Engineering as much as of the Modern Languages students' motivation towards learning the English language.

The UPM students' emphasis on instrumental reasons, both the utilitarian and the academic ones, supports the idea that the knowledge of English is of vital importance for most of the Engineering students. According to Joseba (2005), English has become *de facto* the international language of science and technology. Since most of the scientific and technological information is in English, Engineering students have to face this fact. Besides, the knowledge of English language is of outmost importance in the labor market. 82% of the UPM participants indicated their need to communicate in English with people all over the world, 83% pointed out the importance of English while travelling abroad, and 61% underlined their interest in participating in English language cultural activities. The UCM respondents, in comparison, got higher scores in integrative motivation questions, but quite especially in those regarding the need to communicate in English and the interest in participating in cultural activities in English. Integrative reasons were also generally regarded by students as an important element in their motivation. The UPM students' results provide evidence of their interest in the culture of the English speaking countries, in particular, in such areas as science, economy, music and movies. They also express their desire to get in contact with native speakers, as well as to feel more integrated into the English culture. In the case of the UCM students, the most popular topics resulted to be music, traditions, literature, movies, and arts; the last positions being occupied by religion, moral,

science, and economy. Thus, Engineering students give clear preference to scientific and economic issues while Humanities students are more interested in literature and arts. Both groups coincide in their interest towards music and cinema.

In reference to students' attitudes, the results revealed that the UPM students have positive attitudes towards the English language itself, as well as towards its use in the Spanish social and educational contexts. In fact, the students' responses indicated that almost all of them showed their willingness to achieve fluency. They also stated their desire to continue studying English after graduation. In addition, most of the students self-reported to be eager to speak as much English as possible in the classroom, and would try to practice the language if abroad. Results are also highly positive as far as students' attitude towards English culture is concerned. Science, technology, economy, and entertainment are just some of the areas most of the students are interested in. Similar results were obtained for UCM students when it comes to getting a good command of the English language, expressing the desire to speak English as much as possible in the language classroom, or opting for the teacher's explanations in English. Quite surprisingly, though, in the case of UCM students, even if 89, 2% of the respondents assert their interest in studying English there is a high 75% who would rather not continue learning English after university.

Results are quite positive in both cases, the only differences being in their fields of interest and / or the fact that Humanities students feel English to be so much integrated in their curriculum that they do not consider it to be an extra subject to be studied after graduation. These general findings can be used to provide some pedagogical implications that should be taken into consideration when designing the English language syllabus for industrial and technical engineers as much as for graduates in Modern Languages.

The implications go as follows:

1. The research demonstrated that most of the students are instrumentally motivated. Thus, English language courses should be designed in a way to help them to meet this objective.
2. Most of the students affirm the necessity to speak fluent English. However, the duration and number of the courses should be increased. In the case of engineers, because the time allocated for the current English language course is only half of a year and this is not enough to help the students to be proficient in the language. In the case of Modern Languages students, because they really expect to achieve the proficiency level by the time they graduate, not feeling the need to keep working on fluency after graduation.
3. Though more obviously in the case of Modern Languages students, the results of the study show students' general interest towards English-speaking culture. Therefore, we would strongly recommend the introduction of authentic material (articles, documentaries, movies, etc.) on different cultural topics, even for elementary level students.

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