

Students and Teachers of Engineering Speak Out! What do you really need?

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Abstract

The main aim of this study was to determine the English language needs of the Faculty of Engineering and its undergraduate students at the British University in Egypt in order to help the English Department enhance its current programme. Information was obtained from a combined quantitative-qualitative approach in which questionnaire surveys of teachers and students were followed by a round of interviews of students and a set of teachers. The findings of the study have shown that a) there is a need to prioritize speaking and writing skills and b) to incorporate a number of curriculum components for each language skill in the syllabus for each English module that students would find interesting and relevant to their requirements.

Keywords: language needs; foreign language; curriculum; needs analysis

1. Introduction

This study examines the English language needs of engineering students and their engineering faculty at the British University in Egypt (BUE). The purpose of writing and submitting such a paper is that although needs analysis is claimed to be a very important part in the process of curriculum planning in second and foreign language learning, few studies have been conducted in the Arab world on this topic. Therefore, this paper adds to the findings of studies by presenting evidence to show that besides equipping students with the right skills, English classes should be more specifically related to the degree area. The findings may prove to be beneficial for language teachers, curriculum planners and materials writers in other universities and institutions worldwide.

2. English for Specific Purposes (ESP)

An important development in English Language Teaching which came into focus during the 1960s is the introduction of English for Specific Purposes. ESP has become a recognised and lively branch of ELT which has had considerable influence in the area of syllabus design and materials development. The term ESP refers to situations where the learner of English has some specific reason for wanting to learn the language. For example, an engineer needs English to be able to read textbooks about his subject, write reports and to keep up-to-date with new developments in his specialised field. Therefore, we can say that ESP focuses on the learner and the reasons why he requires the target language. More importantly, the learners' course of study is initiated after their needs have been analysed and identified. The same arguments are expressed in Munby (1978).

The theory of communicative competence brought about a new dimension in the field of English Language Teaching. It was a theory which has had considerable influence on ESP. Robinson (1991:22) in agreement with Widdowson (1978) says:

One important reason for the development of ESP was the realisation by those involved in teaching English as a foreign language that, while students might be acquiring some knowledge of English usage through EGP classes, they had not actually learned to use the language in the specialised contexts of work or study.

What Robinson is referring to follows on from Hymes's view of communicative competence, that is, the language we speak and write varies according to the context in which it is used. Therefore, we need to know more about the language learners' needs in order to develop their ability to be communicatively competent. This view has had an outstanding effect on the fact that there are important differences between say, the English of business studies and that of engineering. With this new insight into language teaching it is now possible to design courses for specific groups of learners based on features of learners' needs. By introducing the learners of English to texts within their field of knowledge will motivate and interest learners. They will be able to see the relevance of the material in relation to their immediate and future needs.

According to Gillet (1996) "ESP courses are based on a needs analysis which aims to specify as closely as possible exactly what it is that students have to do through the medium of English." More importantly, the learners' course of study is initiated after their needs have been analysed and identified. Richterich (1984, p.29) states that "... a need does not exist independent

of a person. It is people who build their images of their needs on the basis of data relating to themselves and their environment.” After all, it is the students who are going to learn and use the language. Therefore, showing students that teachers are taking their needs into consideration will motivate them to learn the language. Dörnyei (2001, p.8) emphasises that “motivation is responsible for why people decide to do something, how long they are willing to sustain the activity and how hard they are going to pursue it.”

Richards, Platt J., and Platt H. (1992, pp. 242 & 243) state that Needs Analysis is “the process of determining the needs for which a learner or group of learners requires a language and arranging the needs according to priorities.” Needs analysis can help students awaken their awareness of what they need, the teacher to adapt his/her teaching accordingly, for teachers to develop or look for material to suit students’ needs and for faculties and departments to plan and adapt their current programmes. Unfortunately, since the needs of learners in the Arab world are seldom or never analysed, but rather perceived for them (Johns, 1991) there is a lack of published studies conducted in the Arab world on this topic.

3. The Setting

English is the medium of instruction at the BUE. The English Department acts as a support centre for all students in the different faculties and departments. All students have to take English. There are six faculties, namely, Faculty of Business Administration, Economics and Political Science (BAEPS) Engineering, Informatics & Computer Science, Nursing, Pharmacy and Dentistry with numerous specialisation areas.

There are four levels of English on the Preparatory Year: Intermediate, Upper Intermediate, Advanced and Advanced Writing. The Advanced and Advanced Writing modules are compulsory for all students to take.

The University also offers a Foundation Programme for those students whose English language is not yet ready for them to enter the Preparatory Year. This is a one-year programme which allows students to study twenty hours a week to enable them to develop their English language skills. Students will progress to the Preparatory Year upon passing the Foundation Programme and obtaining a score of 120 (i.e Intermediate) on the English Placement Test.

4. Aim of the study:

The main aim of the study was to provide data concerning the English language needs of undergraduate engineering students and their faculty at the BUE to help the English Department enhance its current English programme.

5. Research methodology

5.1 Subjects

Ninety three students learning English as a foreign language from the Faculty of Engineering comprising six departments: Petroleum 57 (61.3%), Architecture 5 (5.4%), Civil 11 (11.8%), Mechanical 13 (14%), Electrical and Communications 7 (7.5%) and 26 teaching staff participated in the completion of the questionnaire. The teaching staff was from the three above named departments: Petroleum 1 (3.8%), Architecture 4 (15.4%), Civil 8 (30.8%), Mechanical 5

(19.2%), Electrical and Communications 5 (19.2%) and Basic Sciences 3 (11.5%) The students were from degree years one (after the preparatory year) two and three.

Fourteen engineering students and 6 lecturers participated in the semi-structured interviews. Students were selected according to their faculty, the English module they were in and the grade obtained for English. One lecturer from the departments of Petroleum, Architecture, Civil, Mechanical, Electrical & Communications and Basic Sciences was invited to take part in the interviews. Lecturers were selected randomly. While interviewed students were representing the students in the Faculty of Engineering, lecturers were speaking on behalf of their departments. It was also possible to compare teacher responses to look for commonalities and compare them with the student findings.

6. Data collection instruments

To obtain a strong overall needs analysis a combination of four information-gathering procedures have been used: 1) a questionnaire for students; 2) a questionnaire for teachers; 3) a semi-structured interview for students and 4) a semi-structured interview for teachers. As stated by Brown (1995, p. 52) “multiple sources of information should be used in a needs analysis.”

6.1 Student and teacher questionnaires

Two questionnaires were devised and used in order to obtain data for this study: a questionnaire for students and a questionnaire for teaching staff. The questionnaire for students contained 24 questions divided into six sections. The topics were: background information, importance of English, overall skills level, curriculum components, additional information about the course book, writing components, and contact hours as well as one open-ended question. The teacher questionnaire consisted of 22 questions which paralleled those of the students' version with an additional 2 open-ended questions. The student questionnaire was piloted on a group of intermediate level preparatory year students and was modified as required prior to being administered on the subjects for the research.

6.2 Student and teacher semi-structured interviews

Four interview questions were devised for the selected students and lecturers to help complement the quantitative research findings. The students' questions which paralleled those of the lecturers are as follows:

1. What kind of reading material would you find interesting and relevant to your degree area?
2. What kind of writing tasks would you find interesting and relevant to your degree area?
3. What kind of speaking tasks would you find interesting and relevant to your degree area?
4. How can the English Department help you to make more progress in your degree area?

7. Data collection procedures

The investigation consisted of four stages. For the initial stage, the questionnaire was administered to all the students by two of the researchers towards the end of Semester during their regular English class time. The students who were present on the day the questionnaire was administered took part in the completion of the instrument. For the second stage, the teacher

questionnaire was sent electronically to all teaching staff, including teaching assistants, in the Faculty of Engineering. Those who were willing to assist completed the questionnaire. The third and fourth stages of data elicitation were the interviews. Two semi-structured interview techniques were used as a second instrument for the present study. The interviews were conducted during the regular working hours of the university and over the period of three weeks. Students and lecturers were contacted and appointments were made. Individual interviews were audio-taped.

8. Data Analysis

8.1. Questionnaires

The data obtained from the questionnaires was analysed by means of using the Statistical Package for the Social Sciences (SPSS Version 13.0). The analytical procedure consisted of running frequencies, and descriptive statistics. The Chi-squares test was also conducted whenever appropriate. P -value <0.05 was considered statistically significant.

8.2. Interviews

The data collected through interviews was analysed by using content analysis technique. Based on this analysis, responses were categorised according to each question. At the end of the analysis, there was one complete table for each student and lecturer illustrating the responses to the question.

9. Results & discussion

9.1. Student & Teacher Questionnaires

9.1.1. How important is English for your degree area and work field?

The student and teacher's questionnaires have two questions concerning the importance of English. Question 1 (Q) concerns the importance of English for the student's degree area, while Q.2 examines the importance of English for the student's work field. With regard to the former question, the majority of students 90 (96.8%), and all the teaching staff 26, (100%) perceived English to be either *very important* or *important* to the student's degree area. There were similar findings to the latter question as 88 (95.6%) students and all teaching staff 26 (100%) believe that English is *very important* or *important* for the students' work field.

9.1.2. How would you rate writing, reading, listening and speaking skills from 1 – 4 to your degree area?

The aim of Q.3 was to determine which of the four language skills is considered by students and teaching staff to be most essential for their faculty. The students and teaching staff were asked to rank the four skills from 1 to 4, where 4 is the most important skill and 1 is the least important. The results of the descriptive analysis of the data (See Tables 1 & 2) showed that speaking and writing are considered to be the most important skills for the students of engineering followed by reading and listening respectively. The findings for the teaching staff reveal a similar picture with regard to the former two skills as they also believe that speaking and writing should also take priority followed by the other two skills in reverse order. Specifically,

engineering students are required in their faculty to give effective oral presentations, the ability to write technical reports and research projects.

Table 1. *Descriptive Statistics of Data for Students*

Variable	N	Minimum	Maximum	Mean	Std. Deviation
How would you rate writing skills to the degree area?	93	1.00	4.00	2.9570	.94310
How would you rate reading skills to the degree area?	93	1.00	4.00	2.6129	1.15186
How would you rate listening skills to the degree area?	93	1.00	4.00	2.6022	1.11453
How would you rate speaking skills to the degree area?	93	1.00	4.00	3.2903	.95075
Valid N (listwise)	93				

Table 2. *Descriptive Statistics of Data for Teachers*

Variable	N	Minimum	Maximum	Mean	Std. Deviation
How would you rate writing skills to the degree area?	26	1.00	4.00	3.1154	1.14287
How would you rate reading skills to the degree area?	26	1.00	4.00	2.8846	1.21085
How would you rate listening skills to the degree area?	26	1.00	4.00	3.0000	1.05830
How would you rate speaking skills to the degree area?	26	1.00	4.00	3.3846	.85215
Valid N (listwise)	26				

9.1.3. How satisfied are you with your language level?

In response to Q.4 which asked about the degree of satisfaction with the students' language level 72 (77.4%) students indicated that they are satisfied to some degree. With regard to the teaching staff, although 16 (61.5%) claim to be satisfied, 10 (38.5%) stated that they are not really satisfied or not satisfied at all. The results of the Chi-square test demonstrate that students are more satisfied with their language level than the teaching staff is.

9.1.4. Does your language level affect your learning in your degree area?

Just over 70% (66/93) of students and 53.9% (14/26) of teaching staff stated that the language level of the students affects the learning in the degree area to some extent. There is, however, a significant difference between the number of students 21 (22.6%) and teaching staff 12 (46.2%) who believe otherwise ($P < 0.02$, $OR = 2.94$). This finding indicates that not all teaching staff believes that the students' language level affects the learning of subjects in the degree area. One possible reason for this is that modules orientated towards numbers may be seen as requiring a lower level of English language proficiency than those that are more text-based.

9.1.5. How would you rank yourself in the following skills?

Questions 6-12 of the Student's Questionnaire asked students to rank themselves in various skills areas. In addition, the teaching staff, were asked to rate the problems students have with these skills in their faculty (Qs 7-13 of the teacher questionnaire). Differences can be noted in the relative ratings of skills by students and teaching staff (See Table 3). The results indicate that with all the skills students perceive themselves to be at a higher level than the teaching staff regards them to be. Along similar lines, in a study conducted by Zaghoul & Hussein (1985) results showed that students tended to overestimate their abilities in the different language skills.

In addition, with regard to Q.6 of the teacher questionnaire, teaching staff were asked to rate the language problems of students in their faculty. Of the 26 teaching staff, 10 (38.5%) believe that over 50% of students have problems with English whereas 16 (61.5%) indicated that less than 50% of students have problems. There may be a number of possible reasons for this finding, such as, whether the content of modules is orientated towards numbers or text-based, the educational backgrounds of the students (i.e. IGCSE, American Diploma and Thenawee Amaa) and the students' language proficiency which varies greatly amongst them.

Table 3. *A Comparison Between Students & Teaching Staff Rating of Skills*

Skills	Percentage of 93 students' ratings from good to excellent	Percentage of 26 teaching staff ratings of 50% or more students that have problems
Speaking (oral presentations, short talks & group discussions)	49 (52.7%)	13 (50%)
Asking relevant and clear questions in lectures & tutorials	54 (58.1%)	13 (50%)
Listening to academic lectures	75 (80.6%)	17 (65.3%)
Reading academic texts	63 (67.7%)	16 (61.5%)
Writing academic English	50 (53.7%)	11 (42.3%)
Taking notes during academic lectures and tutorials	57 (61.3%)	9 (34.6%)
Taking notes from reading texts	54 (58.1%)	8 (30.8%)

9.1.6. Choose three components for each skill (reading, writing, listening & speaking) which you consider to be the 'most important' to your academic studies and future profession?

Regarding the importance of academic skills to the English modules, students and teaching staff were asked to choose three curriculum components for each skill (reading, writing, speaking and listening) which they consider to be the 'most important' for their academic studies and future profession. Results have shown that there is agreement in the responses of students and teaching staff for more than half the number of these skills components (See Table 4). The results clearly indicate that students and teaching staff believe that these skills should be incorporated in the syllabus for each English module. In particular, attention should be given to those skills that have been rated by 60% or more of students and teaching staff. For example: reading academic texts, writing technical reports, giving oral presentations, listening to course lectures and to oral presentations.

Table 4. A Comparison Between Students & Teaching Staff Ranking of Curriculum components

Skills	Student (n=93)	Teacher (n=26)
Reading		
	Yes	Yes
Academic reading texts	59 (63.4%)	21 (80.8%)
General reading texts	28 (30.1%)	-
Technical vocabulary	47 (50.5%)	13 (50.0%)
Critical thinking	32 (34.4%)	11 (42.3%)
Instruction booklets	-	10 (38.5%)
Journals	-	11 (42.3%)
Writing		
Technical reports	67 (72.0%)	23 (88.5%)
CV's	30 (32.3%)	-
Describing diagrams/charts/processes	-	11 (42.3%)
Technical vocabulary	-	9 (34.6%)
Research paper	-	12 (46.2%)
Speaking		
Giving oral presentations	66 (71.0%)	24 (94.3%)
In class discussions	34 (36.6%)	10 (38.5%)
Communicating with lecturers & TA's	30 (32.3%)	8 (30.8%)
Speaking at conferences and seminars	30 (32.3%)	-
Giving opinions/suggestions/ideas	34 (36.6%)	10 (38.5%)
Listening		
To course lectures	63 (67.7%)	21 (80.8%)
In class discussions	47 (50.5%)	14 (53.8%)
To lectures & TA's communicating	45 (48.4%)	14 (53.8%)
In tutorials	29 (31.2%)	-
To presentations	62 (66.7%)	18 (69.2%)

Only 30% or more of students & teaching staff who considered these components to be important have been included.

9.1.7. To what extent do you think your English course has helped you in your degree area?

Question 17 asked students to rate the extent to which they think their English course has helped them in their degree area. The results showed that 68 (73.1%) believe it has helped them to some degree. Although the teaching staff was not asked this specific question, a total of 10/26 (38.5%) claim not to be satisfied with the students language level (See 9.1.3).

9.1.8. In your opinion, is the content of the course book interesting and relevant to your degree area?

In response to Q.18 which enquired as to whether or not students think their course book is interesting and relevant to their degree area, the results are shown in Table 5. The selected course books and material do not focus on English for Specific Purposes (ESP), that is, English for Engineering Students. There are no specific course books for the Advanced and Advanced Writing modules. Therefore, this question relates to the material that is selected and used by teachers. Although a number of students chose 'Yes' indicating that the course book and materials are interesting to some degree, in contrast to this, others have responded 'No'. In addition, some students wrote comments on the questionnaire stating that they are not relevant to their degree area indicating that course books and materials should be relevant to the engineering field.

Table 5. *Is the Content of the Course Book/Selected Material Interesting and Relevant to Your Degree Area?*

	No. Students	Yes (%)	No (%)	NA
Intermediate	23	17 (73.9)	6 (26.1)	-
Upper Intermediate	32	17 (53.1)	15 (46.9)	-
Advanced	16	6 (37.5)	10 (62.5)	-
Advanced Writing	22	10 (45.5)	12 (54.5)	-

NA = No answer

9.1.9. Are the reading topics in the course book interesting and relevant to your degree area?

Question 19 of the student's questionnaire concerns the interest and relevance of the reading topics in the course book for the Intermediate and Upper Intermediate modules and the selected reading material by teachers for the Advanced and Advanced Writing Modules. As shown in Table 6, there is a consistent pattern that has emerged with regard to the number of students that responded 'No' for the Upper Intermediate, Advanced and Advanced Writing

Modules. Responses indicate a need for teachers to incorporate reading topics that are relevant to the students' subject-matter studies.

Table 6. Are the Reading Topics in the Course Book/Selected Material Interesting and Relevant to Your Degree Area?

	No. Students	Yes (%)	No (%)	NA
Intermediate	23	15 (65.2)	8 (34.8)	-
Upper Intermediate	32	9 (28.1)	23 (71.9)	-
Advanced	16	3 (18.8)	13 (81.3)	-
Advanced Writing	22	10 (45.5)	12 (54.5)	-

NA = No answer

9.1.10. Are writing paragraphs and essays such as the following interesting and relevant to your degree area?

Both questionnaires (Qs 18 & 20) elicited opinions from students and teaching staff as to whether they thought the writing components listed for each of the English modules are interesting and relevant to the students' degree area. As shown in Table 7 more than 50% of students and teaching staff have responded positively to the majority of the writing components. However, there is a significant statistical difference for the descriptive paragraph and essay which indicates that students believe this to be of more interest and relevance to the degree area than the teaching staff ($P < 0.02$, $OR = 4.75$). Significant differences can also be found with the narrative paragraph/essay as only 2 (7.7%) of the teaching staff in comparison to 14 (60.9%) students (< 0.00008 , $OR = 18.67$) have answered positively to this component. Furthermore, although only 7 (31.8%) of the advanced writing students gave a positive response to the problem and solution research paper, there is a significant statistical difference among students and teaching staff (< 0.000003 , $OR = 53.57$) as the latter perceive it to be more relevant to their faculty than the students.

Table 7. Are Writing Paragraphs and Essays Such as the Following Interesting and Relevant to Your Degree Area?

Variable	No. of Lecturer & TA's	No. (%) positive	No. of students	No. (%) positive	P-values [OR] ¹
Intermediate					
Descriptive paragraph & essay	26	13 (50)	23	19 (82.6)	$P < 0.02$ [4.75]
Narrative paragraph &	26	2 (7.7)	23	14 (60.9)	< 0.00008

essay					[18.67]
Classification essay	26	13 (50)	23	16 (69.6)	NS ²
Upper Intermediate					
Compare & contrast essay	26	22 (84.6)	32	26 (81.3)	NS
Cause & effect essay	26	19 (73.1)	32	27 (84.4)	NS
Advanced					
Argumentative essay	26	13 (50)	16	5 (31.3)	NS
Advanced writing					
A problem + solution research paper	26	25 (96.2)	22	7 (31.8)	<0.000003 [53.57]

¹Odds ratio. ²Not significant

9.1.11. Is the vocabulary in the course book/selected material relevant and helpful to your degree area?

The aim of Q.21 of the Student's Questionnaire was to elicit from students whether or not the vocabulary in the course books and from the selected material is relevant and helpful to their degree area. Although a higher percentage of students for the majority of modules responded 'Yes' to this question, it needs to be stated that a number of students also gave written comments stating that the vocabulary is helpful to their everyday life, but not for their degree area (See Table 8). With regard to the teaching staff, a total of 23 (88.5%) indicated that technical vocabulary related to engineering would be more relevant and helpful to students and their faculty.

Table 8. *Is the Vocabulary in the Course Book/Selected Material Relevant and Helpful to Your Degree Area?*

	No. Students	Yes (%)	No (%)	NA
Intermediate	23	14 (60.9)	9 (39.1)	-
Upper Intermediate	32	15 (46.9)	17 (53.1)	-
Advanced	16	10 (62.5)	6 (37.5)	-
Advanced Writing	22	12 (54.5)	10 (45.5)	-

NA = No answer

9.1.12. Is the listening material in the course book interesting and relevant to your degree area?

Results for Q.22 of the Student Questionnaire deal with assessing the listening material in the course books. The Advanced and Advanced Writing Modules have not been included since they do not focus on developing the skill of listening. 17 (73.9%) Intermediate and 18 (56.3%) Upper Intermediate students believe the listening material to be interesting and useful for developing this skill. As for the teaching staff, they believe that listening material should focus on scientific and technical material, listening at conferences and seminars, to oral presentations, discussions, documentaries, professional meetings and the language of negotiation.

9.1.13. In your opinion are the contact hours for this course (i.e. 48) sufficient to help you improve your language proficiency?

The next two questions for both questionnaires (Q.21, 22, 23 & 24) concern the contact hours for the English modules. As many as 70 (75.3%) students and 19 (73.1%) teaching staff believe that 48 teaching sessions per semester is sufficient to enable students to develop their language proficiency. One possible reason for this finding is that students are required to take English modules alongside their degree area subjects. This puts a heavy load on their shoulders. Therefore, students would not welcome more contact hours for English. As for the teaching staff they may be concerned that if more English sessions were to be given it would be at the expense of the degree area modules.

9.1.14. In your opinion, do you benefit more from the one hour or two hour teaching session?

Both questionnaires (Q.24 & 22) asked students and teaching staff to give their opinions as to whether students benefit more from the one or two hour teaching session. The results clearly demonstrated that 55 (59.1%) students are in favour of the one hour session whereas 16 (61.5%) teaching staff believes two hours is more beneficial.

9.1.15. In your opinion, how can the English Department help students make the necessary progress in their degree area?

The last consideration of the questionnaires for the needs analysis was to elicit the opinions of students and teaching staff as to how the English Department can help students make the necessary progress in their degree area. Among the responses of 30% or more students were: developing speaking skills related to degree area, 34 (36.6%) introducing and developing technical writing (including technical reports) and technical vocabulary, 71 (76.3%) class discussions/debates and oral presentation skills, 42 (45.2%). With regard to the teaching staff, included in the responses were: introducing and developing technical writing and technical vocabulary 9 (35%).

In response to Q.24 of the teacher's questionnaire which enquired about how students' language development is picked up and reinforced in their faculty, a total of 11 (42.3%) teaching staff stated that students write technical reports and 9 (35%) give oral presentations.

10. Interview Results

10.1. What kind of reading material would you find interesting and relevant to your degree area?

Students' perspective

The next consideration for the needs analysis is what reading material should be emphasised in the English modules. In accordance with the findings of Table 6, the responses to Q.1 of the interview clearly demonstrate that all students (100%) believe that receiving topics related to their degree area would be interesting and relevant for them. This is how one student responded to the question: *"Students should receive reading material related to the degree area. Students must see relevance of material to attend classes."* In addition, a number of students 6 (42.9%) stated that receiving interesting and age appropriate topics would help motivate them. Students' preferences for reading topics were: the environment, geology, worldwide events, biographies, technology (power plants, engines & machines) and sports. The teachers' findings concur with the results of the students as all teachers, 6 (100%) claim that reading material relevant to the degree area should be introduced in the English modules. *One teacher stated that reading material should be relevant to the degree area modules.* This teacher goes on to say: *Engineers can provide resources to English staff.* Furthermore, 16 (61.5%) teachers believe that students have problems reading academic texts (See Table 3). The following subject-related topics were elicited from teachers: new technology, inventions, electricity, understanding assignment sheets, historical sciences, historical mathematics, National Geographic and simple science articles. One teacher also mentioned introducing authentic reading material on worldwide issues. In accordance with this finding, Edwards (2000) ESP case study demonstrates that authentic materials are appreciated by students and instrumental in motivating them.

10.2. What kind of writing tasks would you find interesting and relevant to your degree area?

Students and teachers are in agreement that writing technical reports, CVs, developing research and writing skills are important components for their faculty. These findings concur with those of 9.1.15 above as 71 (76.3%) students stated introducing and developing technical writing skills (including technical reports) would help them make more progress in their degree area. In a study conducted by Abu-Rizaizah (2005) in Saudi Arabia, the results demonstrated that report writing is the most common activity for engineers in communications. One interviewed student in this current study highlights this by saying: *"Paragraph and essay writing is not helpful for engineers. We need to develop skills involved in report writing."* This is what another student had to say: *"Focus on students writing needs and help them develop this skill."* This interviewed teacher's response is in accordance with the students. *"Technical report writing is more useful for the degree area and the work field. It should be introduced from the Preparatory Year."* Furthermore, as shown in Table 3, 11 (42.3%) teaching staff expressed that students have problems writing academic English.

10.3. What kind of speaking tasks would you find interesting and relevant to your degree area?

The emerging patterns for Q.4 of the interviews indicate that there are a number of speaking tasks that students would find interesting and relevant to their degree area. Amongst these giving oral presentation have been rated highly by students (92.9%) and teaching staff (100%). This student believes that English modules should: *“Help students develop their oral presentations skills.”* Similarly, interviewed teachers also mentioned that: *“Oral presentation skills need to be introduced in all English modules.”* Developing communications skills have also been rated highly by 85.7% of students and 83.3% teaching staff, while 57.1% of students stated class discussions and debates and 50% teaching staff.

In accordance with this finding, giving oral presentations has been rated highly by both students and teaching staff (See Table 4). Also, in response to the last question of the student questionnaire, 42 (45.2%) students stated that developing presentation and speaking skills (i.e. through class discussions and debates) would help them make more progress in the degree area (See 9.1.15 above).

10.4. How can the English Department help you to make more progress in your degree area?

Question 4 of the interview attempted to elicit what students think the English Department can do to help them make more progress in their degree area. The results show that there are similarities in perspective between the students and teachers as both groups have identified three important factors which are: 1) motivation; 2) developing speaking skills in all English modules and 3) the English Placement Test.

10.4.1. Motivation

An important factor that can have a detrimental affect on the motivation of a student is the Module-Specific Components, which are related to the syllabus, the teaching materials, and the learning tasks. Ten (71.4%) students and all interviewed teachers, 6 (100%) mentioned that there should be a connection between what students take in English and Engineering modules. Among the motivational factors elicited from the students and teachers were: make the classes interesting, meaningful and relevant to the degree area, that is, incorporate reading material, speaking and listening tasks as well as writing topics that are appropriate to student and faculty needs. One interviewed student expressed his opinion on this issue by saying: *“If English classes are not interesting and do not relate to modules in the degree area students will not attend.”* In accordance with this, one teacher stated: *“It is important to make classes attractive, interesting and relevant to the degree area.”*

10.4.2. Speaking Skills

While students and teaching staff rated speaking skills to be the most important skill for students of Engineering (See Tables 1 & 2), half the number of teaching staff (that took part in the completion of the questionnaires) stated that 50% or more students have problems with this skill (See Table 3). While some students mentioned that it is possible to pass English modules without enhancing speaking skills, the majority are in agreement that all English modules should allocate sufficient time to developing this important skill. One student highlights this by saying:

“More emphasis should be on speaking skills.” Furthermore, students stressed the need for developing oral fluency, a British accent and as one student stated: *“A need for the BUE to employ British academic staff so that teachers will not be able to speak Arabic and students will be discouraged to do so.”* Teaching staff also agreed that: *“Students should be encouraged to speak in English with teachers and classmates.”*

10.4.3. Placement Test

Nine (64.3%) students and 2 (33.3%) teachers raised concern over the English Placement Test which students sit upon entry to the BUE and are placed in one of the English levels according to the score they obtain. The English Placement Test consists of two components: Listening and Grammar. Students expressed their concern with the components of this test as expressed by this student: *“There are problems with the test. There is no speaking and writing components. Students are misplaced.”* The same concern is also illustrated in this teacher’s comment: *“Students in English modules have been misplaced.”* Both students and teachers believe that writing and speaking components should be added to the English Placement Test to determine the students’ overall language proficiency and to ensure correct placement in one of the four English levels at the outset.

11. Conclusion

This research paper has been an attempt to describe the English language needs of engineering students and the Faculty of Engineering and to draw the attention of policy makers, curriculum planners, materials designers and language teachers to the need of not only equipping the students with the language skills they regard to be the most important, but also to support the need for English modules to be more specifically related to the degree area. Relevance to the students’ needs and interests is essential as it will have an important influence on their motivation.

12. Recommendations

It is recommended that the important findings of this research be included in the English Department’s Annual Programme Review (APR) and fully implemented within the weekly plans of each module. It is also suggested that a member of the English Department is selected to work collaboratively with teaching staff identified by the Faculty of Engineering to help select content-based reading material and topics, vocabulary, writing tasks and research projects to ensure relevancy. Although students ought to be given material representative for their target language use situation, it will also be possible for teachers to select interesting and subject-related material from a variety of sources.

In addition, since lecturers and teaching assistants in the Faculty of Engineering are not English language teachers but rather specialists in the field of engineering, they can help students develop the content of their technical writing, whereas staff in the English Department can focus on developing the form (i.e. vocabulary, spelling, sentence structure, focusing on the task and organisation of ideas). This can be applicable for the writing of reports and research projects. Cooperative teaching will reduce the workload of students as less writing will be required of them which in turn should result in a higher standard of written work.

13. Limitation of the Study

This study invited all teaching staff (i.e. lecturers and teaching assistants) to take part in the completion of the questionnaire survey and one lecturer from each department in the Faculty of Engineering took part in the semi-structured interviews. The teaching assistants, however, who assist by giving the tutorials and give individual conferencing to students are an important source of information and should have been involved in the interview sessions.

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