Table 1 shows reading was ranked first (M = 3.11; SD = 1.08). Listening was ranked the second skill at which the targeted students sound proficient, with a mean value of 2.58 and a SD value of 1.09. Crucial was that engineering students perceived themselves as less proficient in both speaking (M = 2.54. SD = 1.19) and writing (M = 2.26; SD = 1.04) skills.

What transpired from the above results was that the targeted students tend to develop the skills on which much emphasis is given in classroom. That is why, productive skills lagged behind receptive skills. The implication of this is that engineering students are likely to encounter communication problems in their potential workplace or when conducting research, for they lack much practice in and outside the classroom. These variations in students' English language skills proficiency could be accounted for by the teachers' perception of the importance of English skills to their students' studies or careers.

Students' perceived English language needs for carrying out their engineering studies

The last section of the students' questionnaire was concerned with thoroughly capturing subjects' perceived English language needs for effectively carrying out their engi-

Table 1. Students' perceptions of their proficiency in English language skills

English Language Skill	Mean	SD
Reading	3.11	1.08
Listening	2.58	1.09
Speaking	2.54	1.19
Writing	2.26	1.04

Table 2. Importance of English skills and components for effectively carrying out studies as perceived by students

N°	Importance of English language skills	Mean	SD
1	How important is listening skill for your engineering studies at your college?	1.76	0.81
2	How important is speaking skill for your engineering studies at your college?	2.03	0.96
3	How important is reading skill for your engineering studies at your college?	2.48	0.91
4	How important is writing skill for your engineering studies at your college?	3.73	0.56
5	How important is grammar for your engineering studies at your college?	2.03	0.96

neering studies. The researcher got 200 questionnaires filled in. Table 2 below gives an account of the subjects' responses

As Table 2 shows, most engineering students rated the four English skills as relatively important. Writing was ranked as the most important among the skills where the mean was (M = 3.73), followed by reading skill (M = 2.48 and SD = 0.96), then speaking skill and grammar (M= 2.03 and SD = 0.96). Listening skill ranked as somehow the least important with a mean value of 1.76 and a SD value of 0.81. Results of the above table revealed that there was a lack of much emphasis on productive skills among engineering students, hence the need to work on developing such by either modifying the teaching techniques or course content.

Students' Linguistic Needs at the TS

Importance of listening sub-skills as perceived by engineering students

Analysis of the items 10 to 13 which investigated subjects' responses about important listening tasks showed various rankings, as illustrated in the following table.

Table 3 shows that 'following question/answer sessions' (M = 1.74 and SD = 0.74) was the most listening task performed by students in ESP classes, followed by 'understanding instructions' (M= 1.49 and SD= 0.69) and 'understanding power point presentations' respectively. Although means of listening activities were high, the ESP course seems to not handle different listening genres, which could result in a lack of interaction and problems in speaking.

Importance of speaking sub-skills as perceived by engineering students

The next 5 questions (14-18) were about the importance of speaking sub-skills as perceived by students. Analysis of students' ratings showed a slight variation in the rankings of such sub-skills.

As shown in Table 4 above, it was found that 'giving oral presentations' (M = 1.83 and SD = 0.81) and 'answering questions' (M = 1.50 and SD = 0.66) were perceived as the most important sub-skills of speaking. Lagged behind were the sub-skills of 'interacting with specialists', 'participating in classroom discussions' and 'asking questions' with no significant difference in their mean values. Considering the results of the speaking sub-skills at large, it can be concluded that students expressed an urgent need to develop interactional skills of communication.

Importance of reading sub-skills as perceived by engineering students

As far as reading tasks were concerned, high mean value of 2.38 was assigned to 'reading instructions for assignments'

Table 3. Importance of listening sub-skills as perceived by engineering students

Listening skill		Mean	SD
	a- How important is listening to lectures?	1.22	0.51
Listening	b- How important is instructions understanding?	1.49	0.69
sub-skills	c- How important is following question/answer sessions?	1.74	0.74
	d- How important is understanding of power point presentations?	1.46	0.71

followed by classroom reading tasks, that is, 'reading hand-outs given by teachers' and 'reading field-related textbooks'. The lowest mean value (1.25) was calculated for only "reading articles in journals", as shown in Table 5 below.

According to the results represented in Table 5, it can be concluded that reading skills were considered important. This might be due to the methods of teaching used in classroom which focus much on reading skills. It can also be accounted for by its importance in conducting further research. Indeed, reading skills are routinely used in reviewing previous studies on a given research topic.

Importance of writing sub-skills as perceived by engineering students

Analysis of the last four items which investigated subjects' responses about important writing tasks showed various rankings, as illustrated in the following table.

'Writing field-specifi reports' was ranked as the most important writing sub-skill students need with mean value of 1.91 and SD value of 0.85. 'Writing for class quizzes and exams' was ranked the second with mean value of 1.81 and SD value of 0.79. "Writing assignment and homework" (M = 1.66 and SD = 0.85) and "taking notes during lectures" (M = 1.26 and SD = 0.55) were identified the least important sub-skills or tasks on this ranking. The different ranking values can imply that writing skill mainly focused on exams or assignments. Students seem to rarely work on developing the skill of writing for reports, which accounts for its top ranking as an urgent linguistic need.

Comparatively considering the descriptive statistics about the different English skills and sub-skills needed in ESP classes in Table 2 through Table 6, it can be concluded

that engineering students needed English primarily for professional purposes at the TS (giving oral presentations, reading articles and writing specific field-specifi reports, etc) and then for academic purposes (exams, note taking, classroom participation, etc). The results revealed the need for exposure to an integrated skills approach. However, due to time constraints of any given ESP course, it seems difficult to prioritize the practice provided in each skill.

Qualitative Analysis

Qualitative analysis of data included all the results elicited from the questions of the semi-structured interview protocol. From the large amount of raw data, interpretation was conducted only on those potentially meaningful to the study. The qualitative data were presented and discussed in such a way as to reinforce and/or compare the results obtained in the quantitative data.

Interview of Targeted Teachers

Importance of English for engineering students

Question one sought their response about how important they thought English was for engineering students to carry out their content-subject studies at their college or perform well at workplace. All subjects strongly agreed that it was of vital importance and the following factors have been mentioned in this regard.

a. Their medium of research is English.

b. They need it to read their field-specifi textbooks which are most of the time written in English.

Table 4. Importance of speaking sub-skills as perceived by engineering students

Speaking skill		Mean	SD
	a- How important is asking questions?	1.37	0.54
	b- How important is participating in classroom discussions?	1.39	0.60
Speaking	c- How important is answering questions?	1.50	0.66
sub-skills	d- How important is giving oral presentations?	1.83	0.81
	e- How important is interacting with specialists in your field of study?	1.40	0.62

Table 5. Importance of reading sub-skills as perceived by engineering students

Reading skill		Mean	SD
	a- How important is reading articles in journals?	1.25	0.47
Reading	b- How important is reading instructions for assignments?	2.38	0.79
sub-skills	c- How important is reading handouts given by teachers?	1.60	0.69
	d- How important is reading fiel -related textbooks?	1.60	0.69

Table 6. Importance of writing sub-skills as perceived by engineering students

Writing skill		Mean	SD
	a- How important is taking notes during lectures?	1.26	0.55
Writing	b- How important is writing for class quizzes and exams?	1.81	0.79
sub-skills	c- How important is writing assignment and homework?	1.66	0.82
	d- How important is writing fiel -specific reports	1.91	0.85

c. They need to read a lot of reference material in English if they intend to conduct further research and studies.

d. They need it to interact with their non-Arab teachers or researchers.

e. They need it to interact with professionals in their field

f. They need it to attend certain engineering seminars, workshops and conferences.

g. They need proficiency in English to perform better in their different job requirements.

Teachers' perception regarding the most important language skill for their students

Question two elicited the targeted teachers' perception about the most important language skill for their students to accomplish their engineering studies or to perform well at their potential workplace. Table 7 below gives an account of the distribution of the following four skills.

As Table 7 shows, according to 60% of the targeted teachers, the most important English skill needed for students was reading (M = 3.2 and SD = 1.47). Listening skill was ranked as the second important skill for engineering students by 40% of the teachers with a mean value of 2.7 and a SD value of .95. With regard to speaking skill, 40% of the teachers identified it as the third skill of great importance with a mean value of 2.3 and a SD value of .95. With regard to writing skill, subjects' responses showed rather more variation when they were asked to rate its importance. Indeed, a good majority of respondents(40%) identified it as very important for students' studies and future job requirements.

The statistics given in the table above indicates that the four English skills seem to play an important role in the engineering field. This field is also hailed as an international industry which often involves a range of inter-cultural encounters. The language of this industry is quite clearly English in an international context as well as in research, but it is also the language of meeting needs and of providing high levels of service, to name but a few.

Teachers' perception regarding the teaching of field-specific terminology

Question three in the interview protocol elicited teacher's perception regarding the teaching of engineering terminology in ESP classes. 60% of the targeted teachers strongly recommended that engineering terminology should be included in English syllabus whereas 40% considered it not a strong necessity. Rather, they recommended that pronunciation should be emphasized in particular.

All the faculty members unanimously reported that the students need reading skills to read relevant reference material from different sources. Speaking and listening were reported other important skills in this regard.

Comments and Suggestions for a Practical ESP Course at Engineering Colleges

All the interviewees were asked to give comments about the status quo of ESP learning/teaching at the engineering colleges in order to improve it. On a general level, ESP teachers provided comments and suggestions but SM teachers could not express their opinions in understandable English; some used poor English, some used Arabic, and some others mixed Arabic dialect with English. Using poor English or code-switching between Arabic and English gives a clue that their English proficiency was low. Regardless of the quality of English they used, they provided comments on how ESP course could be improved. The immediate task was to synthesize all the answers in such a way as to reveal possible patterns, yet without misrepresenting the data. This procedure was adopted to get a key word analysis, generating categories from the statements made by the respondents. This resulted in such categories as "what should be included in ESP course", "syllabus design", etc. Such categories were then grouped together according to whether they were referred to as language needs, learning needs or engineering-related needs.

To begin with, ESP teachers thought that the ESP course taught to engineering students seems irrelevant to either their potential research or workplace since it focused more on reading than writing or speaking skills. This supports the results in Figure 1 and Table 1 above. They also argued that the English course was introduced in non-supportive teaching conditions and there was no link between the ESP course and subject-matter courses. In this regard, they suggested that the ESP course should have been designed and prepared by both the ESP and SM teachers. However, in reality, ESP teachers and SM teachers seem to have never met to discuss and share ideas on teaching English for the engineering students. Besides, it was recommended that more time should be assigned to English course during the first two years

As for SM teachers, based on their experience they stated that engineering students could face many difficulties in English. They believed that ESP teachers should not allow students to use other language than English to help them develop their speaking skills. They also suggested that more time should be allocated to GE course as well as ESP classes. This was similar to the ESP teachers' suggestion. In addition, they thought that students should have been provided with supplementary materials that can enhance the ESP program. Important was that they recommended providing ESP teachers with a specialized training that will help them make the ESP course successful and productive. Indeed, in evaluating the progress of ESP as a component of English language teaching (ELT), Swales (1985: 214) contends that "one of the most constraining factors to this progress is the lack of specialized teacher-training." This situation applied even more emphatically at higher education where very little attention, if any, has been given to ESP teacher training thus far.

Table 7. Teachers' ratings of the importance of English skills for engineering students

English Language skills	Mean	Median	Standard Deviation (SD)
Speaking	2.3	2	0.95
Listening	2.7	3	0.95
Reading	3.2	3	1.47
Writing	2.4	2	0.84

On the whole, all these interviewees' comments corresponded to what Dudley-Evans and St John (1998) consider as effective ways of learning needs of students, namely, the skills they might need to develop as well as the lacks that should be dealt with. The given comments also showed that an urgent policy-intervention should be undertaken. Put differently, English teachers, administrators and syllabus designers have to join efforts and find solutions that meet the students' needs including language needs, learning needs and field-specific needs, among many other

DISCUSSION

The results generated by the three instruments: classroom observation, close-ended questionnaire, and semi-structured interview protocol identifi d that reading skill was the most important skills for engineering students. This finding echoes the conclusions of many studies (Labassi, 2009;Rais, 2007) that ESP courses focuses mainly on reading skills. Writing skills, where students were reported to have low level probably out of the scant attention given to it, were perceived by students as one of the most important targeted needs. This finding contradicts that of Basturkmen's (1998) study where he reported that writing was not very important for ESP students. The questionnaire data indicated that listening was the least important skill for students whereas teachers perceived it as the second important skill as shown in the interview results. The implication of this was that students seemed to under-estimate the importance of different language skills without considering their specific academic or professional needs. Indeed, it has been reported that 'the questionnaire might have unreal answers, vague responses that require clarification (Rizk, 2006: 97). Hence, this fact should be taken into account when designing an ESP course for engineering students.

The variations in the results about the importance of language skills can be accounted for by the type of the ESP course which tends to be language-based where much focus was put on grammar and vocabulary. Such a course cannot be responsive to all students' needs. Students may at best attain a 'textbook' type of knowledge of ESP or English, but may not be able to use English in the professional world.

On the basis of the results, a number of recommendations were offered to upgrade the ESP course for engineering students. A highly structured ESP course for engineering, integrating academic skills with subject or field-specifi skills, derived directly from the learners' discipline should be framed. Such a course, if based on a pervasive and comprehensive 'needs analysis', is expected to facilitate the process of mastering both academic and subject-matter specific aspects of the target language as well as motivate students to become actively involved in the process of learning. That is, a needs-based syllabus is expected to accommodate for ESP needs in terms of skills at the macro and micro levels. However, worthy of note is that NA is not a process administered once and for all at the beginning of the course; rather, it should be an on-going process repeated during the life of the ESP program.

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APPENDIX A

Classroom Observation Protocol

1. Subject:
2. Date:
3. Time:
4. Name of the Teacher:
5. Time for different activities:

o	Activity	Time (minutes)	No	Activity	Time (minutes)
1	SRT		4	TST	
2	SLT		5	SST	
3	SWT		6	F/AST	

6. Any other observations:

APPENDIX B

Students' structured Questionnaire

I- Background

Name:…………………….
Age:………………………
Field of study …………….
Email:……………………

* What level of proficiency do you think you have in the following language skills or components?

1= Excellent   2= very   good   3= good   4= fair   5= poor

1. Listening ____ ____ ____ ____ ____
2. Speaking ____ ____ ____ ____ ____
3. Reading ____ ____ ____ ____ ____
4. Writing ____ ____ ____ ____ ____

II- Language Needs

* Rank the following according to their importance. Circle the most appropriate choice.

1 = very important   2 = important   3 = not important   4 = not applicable

5. How important is listening skill?	1	2	3	4
6. How important is speaking skill?	1	2	3	4
7. How important is reading skill?	1	2	3	4
8. How important is writing skill?	1	2	3	4
9. How important is grammar?	1	2	3	4

Listening

10. Listening to lectures	1	2	3	4
11. Understanding instructions	1	2	3	4
12. Following question/answer sessions	1	2	3	4
13. Understanding power point presentations	1	2	3	4

Speaking

14. Asking questions	1	2	3	4
15. Participating in discussions	1	2	3	4
16. Answering the questions	1	2	3	4
17. Giving oral presentations	1	2	3	4
18. Interacting with specialists in your field of stud	1	2	3	4

Reading

19. Field –related textbooks	1	2	3	4
20. Articles in journals	1	2	3	4
21. Handouts given by teachers	1	2	3	4
22. Instructions for assignments	1	2	3	4

Writing

23. Taking notes in lectures	1	2	3	4
24. Class quizzes and exams	1	2	3	4
25. Assignments and homework	1	2	3	4
26. Field-specific report	1	2	3	4

APPENDIX C

Teachers' Semi-structured Interview Protocol

Part I

Background Information
1. Name:……….
2. Gender:………
3. Age:………….
4. What subject(s) do you teach?………………….

Part II

1. To what extent do you think English is important for engineering students to carry out their studies or to perform well at the workplace?
2. What language skill do you perceive engineering students at need the most to carry out their engineering studies effectively?
3. Do engineering students need to be taught field-specific terminology in English course Why?
4. How do you evaluate the teaching of English course? What can you suggest to improve the quality of ESP teaching and learning as well?