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An Investigation of English Language Needs of Engineering Undergraduates at Jawzjan University

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ABSTRACT

The purpose of this investigation was to identify the English language needs of the students currently studying at the engineering faculties of Jawzjan University in Afghanistan. A total of 212 under-graduate engineering students from the second and third year classes took part in this investigation. The main tool for data collection was a student questionnaire used to gauge learners' perceptions on their needs pertaining to the English language. The findings of the study show that the English language proficiency of most of the students is at the average and good level, and most of the students study English for academic purpose and for their future profession. Likewise, the students believe that their English language proficiency has a significant effect on their academic performance in content subjects. Furthermore, the current English language program and classroom resources do not fulfill their needs as they prefer to have a class with lots of activities or more student-centered. Moreover, a majority of the students were not satisfied with the amount of time allocated for English classes. It is hoped that the findings of this study would be the basis for designing a suitable course that would meet students needs.

Keywords: Needs analysis, English language needs, language proficiency

1. INTRODUCTION

For the last three decades due to the conflict, Afghanistan was an isolated country. However, recent political changes in Afghanistan resulted in the collapse of Taliban regime. In 2001, Afghanistan became the focus point of international community (Wordak, 2013). The government could establish relationships with foreign countries in various fields such as politics, economy, business, culture and education. And many international companies invested in different regions of Afghanistan. One of the prioritized fields which needed urgent action to be reviewed was education. As a result, thousands of Afghan students were sent abroad for study. The close contact of Afghans with international communities resulted in the emergence of English as a dominant language in all fields of Afghans lives. And of these fields education is the most salient one. This is evident in the increased English teaching hours and making English compulsory at different levels of education (Hikmat, 2009). Hence, English language proficiency became as important as the employee's major related field when it comes to employment opportunities, as local and international organizations prefer to hire employees with good proficiency in English. Furthermore, to keep abreast with the demands of job markets and the aims of higher education policy, engineering faculties give importance to English as the language of science and technology.

The students of engineering faculties of Jawzjan University study general English course for two academic years. The students learn English to prepare themselves for the job market. This study could be the first step towards involving the engineering students in the processes of an English language curriculum design in a war-torn and under-developed country like Afghanistan. It also draws attention to the fact that the current English language program may not be matching the needs of the students.

Hence the main objective of this study is to identify the English language needs of current students in the engineering faculties of Jawzjan University.

2.0 DEFINITIONS OF NEEDS ANALYSIS (NA)

A needs analysis is administered to find out what the learners will need to deal with in the foreign language in the targeted situation and how learners could be proficient in the target language through the period of teaching (Richards, 1994). Furthermore, Nunan (1988, as cited in Channa et al 2013) stated that needs analysis address the processes of collecting information about learners and about communication tasks for use in syllabus design. Ellis and Johnson (1994) stated that needs analysis is a way of getting comprehensive information of learners, a needs or a cluster of learners needs. Needs analysis considers the specific purposes that the learners will use the language, the types of language to be used, the beginning level, and the target level to be achieved. The information can be collected from different types of stakeholders, for example, teachers, learners and potential employers. Similarly, Bachman and Palmer (1996, cited in Barnawi, 2011) claimed that needs assessment is concerned with collection of certain information about the language needs of learners and the exploration of this information for language syllabus design purpose. Thus it can be interpreted that needs analysis plays a significant role for the development of designing a language program. The program could either be English for Specific Purposes (ESP) or English for General Purposes (EGP).

2.1 A Review of Previous Studies

A great number of needs analysis studies have been done to analyze learners needs in different areas of academic settings in different institutions around the world. Kim (2013) conducted a needs analysis to identify the English language needs for engineering students in Korea. The groups investigated were the students, the engineering professors, and the industry workers. Her findings indicated that the students need to understand the significance of general business English. On the other hand, the industry workers have low level of satisfaction with their English language ability. Furthermore, the findings showed that the language course should allocate more time on writing skills. Additionally, engineering professors have very low level of satisfaction on the students English ability. In conclusion, all three groups agreed that communication with customers is very important and the required proficiency level is higher than the present level.

Similarly, Midoul (2013) carried out a needs analysis to investigate the English language needs of Moroccan engineering students and their perceptions towards the usefulness of the current English language teaching materials and the students perceptions to their needs. The findings of the study showed that students have positive attitudes towards learning English language; and the students rated speaking and writing skills as productive skills that they want to develop most. Furthermore, the students claimed that the current teaching materials do not match their needs.

A study to assess the English language needs of engineering students to determine the possibility of designing a textbook based on the obtained perceptions from the investigation was conducted by Salehi (2010). He carried out a questionnaire survey on 225 students at Sharif University of Technology. The findings showed that the students need to improve writing and speaking skills. And he suggested that priority should be given for the two mentioned skills in the curriculum. Likewise, Rahman (2012) investigated the needs for reading skills of undergraduate students of Computer Science at Putra University, Malaysia. He conducted the investigation based on three situational aspects to identify language needs: Target Situational Analysis, Present Situational Analysis and Learning Situational Analysis. The findings of the study showed that most of the undergraduate students of Computer Science discipline had problems in reading skills, mostly in skimming for the meaning of the material written in English, scanning to elicit specific information of subject matters written in English and interpreting meaning of the subject matters written in English. He recommended an English language course, English for Computer Science, that fits the target needs of undergraduate students to improve their skills in English language for their specialized field at the university.

All the studies mentioned proved the importance of identifying learners needs. From the conducted studies, the necessity and usefulness of needs analysis before designing any courses can be inferred. Nonetheless, Hutchinson and Waters (1987) suggested that learners needs must be evaluated continually, because these needs could possibly change due to process of time, depending on contextual and human affective variables.

3.0 METHODOLOGY

A students questionnaire was used as a needs analysis instrument.

3.1 Participants

The participants who took part in this investigation, for the purpose of conducting a needs assessment, were 212 second and third year engineering undergraduate students. The students belonged to the faculties of Civil Engineering, Chemical Engineering, and Geology and Mine.

3.2 Instrumentation

The instrument used in the study was a survey questionnaire. The questionnaire was divided into two parts. The first part deals with the participants demography including age, sex, academic year and level of English proficiency. The second part was divided into four sub-sections. The first part was concerned with the perceptions of the students regarding the importance of English in their professional field and future career. The second part deals with students perceptions regarding the current English language program, the third parts deals with students learning preferences in language skills and the forth part deals with the students perceptions about the classroom collaboration, teachers role preferences and time allocation. To ensure intelligibility of questionnaire items, the Persian version of the questionnaire was administered to the students.

3.3 Data Collection

The data were collected during the fall academic semester. A briefing was given before the students answered the questionnaire as the students have not had any previous experience to answer questionnaires.

4.0 DATA ANALYSIS

Descriptive statistics was only used and analysis was showed by frequency and percentage.

4.1 Proficiency Level of the Students

The table below shows that most of the learners (95. 44.8%) were in average level and the least number of the learners were (4.1.9%) in very poor level. In addition, 69 (32.5%) of the participants English level was good and 34 (16.0%) of the participants were in poor level. In summary just 10 (4.7%) of the participants English proficiency level was excellent.

Table 1: English Proficiency Level of the Participants

	Frequency	Valid Per cent
very poor	4	1.9
Poor	34	16.0
Valid Average	95	44.8
Good	69	32.5
Excellent	10	4.7
Total	212	100.0

4.2 Importance of the English Language

For this question, the students were allowed to select more than one answer. The results for the purpose of studying English illustrates that a large number of the students which is 193 (91.1%) state that success for future profession is their main reason for studying English. Similarly, some students (70.8%) consider higher education is their main purpose for studying the language.

Table 2: Purpose of Studying English

Why do you need to study English?	Frequency	Percentage
Higher education	150	70.8%
Success for future profession	193	91.1%
Speak to foreigners	48	22.6%
Speak to friends and family	14	6.6%
It is part of the curriculum	1	0.5%

In Table 3, the outcome of present use of English described that most of the students (82%) use English in studying or academic purposes and 122 (57.5%) use English for socializing. In contrast, just 9 (4.2%) use English at home.

Where do you use English?	Frequency	Percentage
When studying	175	82.5%
When socializing	122	57.5%
At home	9	4.2%

Table 3: Present Use of English

The result for future use of English illustrates that 184 (86.6%) of the students will use English for their career and 120 (56.6%) will use English for academic purposes. Furthermore, 79 (37.3%) will use English for socializing purposes. In conclusion a minor number of the students which is 8 (3.8%) use English language at home (refer to Table 4).

Table 4: Future Use of English

In future, I shall be using English for	Frequency	Percentage
Higher education	120	56.6%
Job/career	184	86.6%
Socializing	79	37.3%
At home	8	3.8%

4.3 The Positive Effects of English Language Proficiency

Table 5 describes that out of 212 participants, 111 (47.6%) of the students strongly agreed and 95 (44.8%) agreed that if the students have a good level of English proficiency it has positive effect on their academic performance. However, only 5 students disagreed about the effects of English language proficiency on their academic performance and just one student (0.5%) was undecided about the issue.

Table 5: The Positive Effects of English Language Proficiency

If a student, 's level of English proficiency is high, it can have a good effect of his/her academic performance.	Frequency	Percentage
Strongly disagree	0	0
Disagree	5	2.4%
Undecided	1	.5%

Agree	95	44.8%
Strongly agree	111	47.6%

Table 6 shows the beliefs of the students regarding the association of English language proficiency and their performance in engineering content subjects. Based on this table 94 (44.3%) of the students agreed and 88 (41.5%) strongly agreed that when the students level of English proficiency is low, they will face difficulty in studying the content subjects. In contrast, only 7 students (3.3%) strongly disagreed and 8 (3.8%) disagreed and 15 (7.1%) were undecided about the roles of English proficiency on understanding content subjects in engineering field.

Table 6: The Effects of English Language Proficiency on Students Content Subjects

Students in my class face difficulties in studying content subjects due to their low English language proficiency	Frequency	Percentage
Strongly disagree	7	3.3%
Disagree	8	3.8%
Undecided	15	7.1%
Agree	94	44.3%
Strongly agree	88	41.5%

Table 7 describes the frequency and percentage of the students who strongly disagreed and the students who disagreed were 164 (77.4%) and 34 (16.0%) respectively. Conversely, a minority of students 7 (3.3%) strongly agreed and 5 (2.4%) agreed for the removal of English from university curriculum. 2 (0.9%) students were undecided on the issue.

Table 7: Removal of English Program from University Curriculum

English should be deleted from the curriculum because it is not needed for future job	Frequency	Percentage
Strongly disagree	164	77.4%
Disagree	34	16.0%
Undecided	2	0.9%
Agree	5	2.4%
Strongly agree	7	3.3%

4.4 Students' Perceptions Regarding the Current English Language Syllabus, Approaches and Classroom Resources

The results in table 8 shows that most of the students were not satisfied with the usefulness of the current syllabus and teaching approaches in terms of fulfilling their needs for English language. Almost half of the respondents, 105 (49.5%) disagreed about the usefulness of the current English language syllabus and teaching approaches. Respectively 53 (25.5%) strongly disagreed about the current English language course effectiveness. On the other hand, 27 (12.7%) students agreed and 11 (5.2%) strongly agreed that the current syllabus and teaching approaches meet their needs. On the other hand, 16 (7.5%) students were undecided about the practicality of the current syllabus and teaching approaches.

Table 8: The Current Syllabus and Teaching Approaches

The current syllabus and teaching approaches fulfil my needs for the English language	Frequency	Percentage
Strongly disagree	53	25.5%
Disagree	105	49.5%
Undecided	16	7.5%
Agree	27	12.7%
Strongly agree	11	5.2%

In Table 9, the outcome of the survey revealed that 77 (36.3%) disagreed that the resources are not sufficient. Moreover, 53 (25%) strongly disagreed for the adequacy of the current classroom resources. Conversely, 43 (20.3%) of the students agreed and 11 (5.2%) strongly agreed about the sufficiency of the current classroom resources.

Table 9: The Current Classroom Resources

The current classroom resources (i.e. white-board, marker, textbooks etc.) are sufficient.)	Percentage	Frequency
Strongly disagree	53	25%
Disagree	77	36.3%
Undecided	28	13.2%
Agree	43	20.3%
Strongly agree	11	5.2%

Table 10 shows the results of the survey. Based on the results, a number of students which is 68 (32.1%) strongly disagreed and 66 (31.1%) disagreed about the sufficiency of the allocated time for English classes. On the contrary, some students (16.5%) agreed and 14.2% strongly agreed about the efficiency of allocated time for teaching English language classes. Additionally, 6.1% of the participants were undecided about the efficacy of the allocated time.

Table 10: Sufficiency of Time Allocation

The time allocated for the English language classes at the engineering faculties is sufficient	Frequency	Percentage
Strongly disagree	68	32.1%
Disagree	66	31.1%
Undecided	13	6.1%
Agree	35	16.5%
Strongly agree	30	14.2%

5.0 CONCLUSION AND RECOMMENDATIONS

The study investigated the perceptions of the students about the importance of English language proficiency level in their related field, usefulness of the current English language program, the classroom resources and types of English language class, and sufficiency of the given time. The findings revealed that the level of English language proficiency of the students was not so good. However, the students had positive perceptions towards learning English and they study English for their academic purpose and success for future career. Thereby, priority should be given to all four main language skills to make the students fit for their future

career. Pertaining to the students observations about the effects and usefulness of the English language proficiency on their content subjects, the study found that a majority of the students recognized the effects of English proficiency on their major field and their future careers. Regarding the current English language program and classroom resources, the findings revealed that the current English language program do not fulfil their needs and the classroom resources are not satisfactory as well. It is suggested that the responsible authorities should consider the needs of the students in designing a curriculum in which the needs and level of English proficiency of the students are taken into account. Classrooms with modern educational language technology resources including computer, internet, sound system, and self-learning software, among others, should also be provided. Furthermore, it is found that the most of the students preferred to have a class with lots of activities, i.e. pair/group works and projects. The findings also revealed that the students feel that time allocated for the English classes is not sufficient.

Based on the findings of the investigation, the following recommendations are suggested:

- Students, English language proficiency and background of their knowledge should be taken into account when course materials are designed
- Classroom resources should be upgraded
- Learner-centered type of class should be administered in order to provide , more opportunities for the learners.
- The time allocated for English classes should be increased.

The current study has investigated the English language needs of engineering undergraduate students of Jawzjan University. It is hoped that the findings of the study would benefit the English language instructors and authorities of the university in revising and designing English language curriculum for engineering students.

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