

ESP Needs Analysis to Integrate a Scientific Reading Program in the English Language Institute at King AbdulAziz University

Sahar Fadel ^{1*}, Tariq Elyas ²

1. English Language Institute, King Abdulaziz University, Jeddah, Saudi Arabia.

Email: saharfadel@live.com

2. European Languages Department, King Abdulaziz University, Jeddah, Saudi Arabia.

Email: telyas@kau.edu.sa

* Corresponding Author: Sahar Fadel

Abstract – This study explored the needs for ESP among the Foundation Year students in the science field at the ELI, King Abdul Aziz University, Saudi Arabia. It investigated the students' attitudes towards ESP and their readiness for it. The study focuses on the issue of designing a suitable core course of English for Specific Purposes introduces ESP through academic reading. The study is based on the investigation of the learners' needs. The aim of the study is to propose a suitable course in which ESP can be integrated or injected within the regular English for General Purpose's classrooms in order to facilitate the students' academic progress.

Keywords: ESP, Foundation Year, King Abdualziz University, English Language Institute, Saudi Arabia, Academic Reading.

I. INTRODUCTION

In confronting the challenges that the future holds in store, the world sees education as an indispensable asset in an attempt to suit the nature of the modern society. To cope with the needs of this society, the field of English language teaching has rapidly developed during the last few decades. Its ever-changing nature has been influenced by some factors such as the educational requirements and objectives. Accordingly, the demand for English courses designed to meet the needs of specific group of learners has specially become urgent since the 1970s. Therefore, the English language courses should come as a response to students' needs or what Swales (1988) terms, "wider roles". In this regard, English should not be taught as a separate subject exiled from the learner's real needs; rather it should be part and parcel of the subject matter area based on its importance to the learner. Hence, it is important to distinguish the difference between General English (GE) and English for Specific Purpose (ESP). Actually, there is a very fine line that districts GE from ESP but is tangible as Hutchinson *et al.* (1987) claims, "in theory nothing in practical great deal" (p. 53).

In the English Language Institute (ELI) at King Abdul-Aziz University (KAU), English is taught with a general aim to the students at the foundation year. The university prerequisites the students completion of 6 credits to be enrolled in the first year of specialization. As per my personal teaching experience at the ELI, a traditional approach of teaching and assessment is followed. The students graduate from the Foundation year at B2 level. As per the CEFR scale,

B2 level may be referred to as an intermediate stage of proficiency. Users at this level are expected to be able to handle the main structures of the language with some confidence, demonstrate knowledge of a wide range of vocabulary and use appropriate communicative strategies in a variety of social situations.

Many students, especially in the scientific lane, cannot foresee the practical use of General English (GE) when moving to the first year in their actual faculties of specialization. In fact, they are unable to conceptualize the efficacy of GE as facilitating their academic progress, simply because it does not serve their learning needs. Therein, lies the gap between what the foundation year's students actually learn for a whole year and their needs in possessing the appropriate kind of English language that would widen their chances of learning and success in their near future fields of specialization.

Unfortunately, the learners' need of academic English is ignored or under-emphasized in the ELI. Therefore, based on needs analysis, this study attempts to identify the English language learning needs of the foundation year's students in the scientific lane at KAU. It proposes the need to integrate English for Specific Purposes (ESP) terminologies and specific functions of a particular content, namely the 'Academic Reading Program' in the ELI curriculum along with the GE grammar functions and skills. As Orr (1998) stated, "English for Specific Purposes (ESP) is research and instruction that builds on GE and is designed to prepare students or working adults for the English used in specific disciplines, vocations, or professions to accomplish specific purpose" (p.1). Hutchinson and Waters (1987) visualize ESP as the leaves and branches of a language tree. Without any roots to absorb water, leaves or branches would not grow up. Therefore, it cannot be ignored that GE is considered being the roots which support ESP to flourish and it paves a way to the learners to achieve their desired academic progress.

This main aim of conducting this study is to examine the need to launch an ESP Reading Program at the ELI in order to facilitate the academic progress of the foundation year's students at the ELI. To reach this end, this paper first, investigates ELI students' English language learning needs and attitudes towards ESP. Finally, it proposes the need to initiate an Academic Reading Supplementary Program based on the results of the needs analysis. The study tries to find answers to the following questions:

- (1) What are the students' attitudes towards ESP needs?
- (2) What are the language skills the students need to improve within ESP in order to support their academic progress in their current and future studies?

II. LITERATURE REVIEW

A. What IS ESP?

During the past few decades, the science of ESP has developed considerably as an outcome of the rapid expansion of various domains of human knowledge that derived more specific language needs. ESP addresses certain group of learners based on their needs as part of an academic curriculum in educational institutions. There are many fields of interest that

require particular linguistic competency such as technical English, scientific English, medical English, English for business, English for political affairs, and English for tourism. Wright (1992) defines the concept as, "ESP is, basically, language learning which has its focus on all aspects of language pertaining a particular field of human activity, while taking into account the time constraints imposed by learners" (p.2012). Mackay and Mountford defined ESP as the teaching of English for a "clearly utilitarian purpose" (p.2). The purpose they refer to is defined by the needs of learners, which could be academic, occupational, or scientific. For many, ESP context must be preceded by a sizeable background of general English and is associated with mature learners by large as it has a profound relation to specialization in different fields.

Most ESP definitions studies three themes: the nature of language to be taught and used, the learners, and the context. All the three aspects are connected together to realize certain practical purpose.

Hutchinson *et al.* (1987) state that, "ESP is an approach to language teaching in which all decisions as to content and method are based on the learner's reason for learning" (p.19).

It is worth mentioning that teaching language in general, and English, in particular, is no longer just a matter of application that serves all needs through any kind of syllabus and methodology. Rather, it is a regulated application that deals with each situation or given discipline independent of the other. And unless language teachers are trained enough to handle such situations and realize the idiosyncrasies of ESP, fruitful outcomes would never be reached.

B. Defining Needs Analysis

The procedures used to collect information about learners' needs are known as "Needs Analysis". Needs analysis (NA) is a formative stage that should be taken into consideration prior to, during, or after a language program. Researchers have different approaches in defining NA, but many of them agree that NA reflects necessities, wants and needs of learners in their subject area. Schutz and Derwing (1981) point out that this was a new concern with ESP: "most language planners in the past have bypasses a logically necessary first step: they have presumed to set about going somewhere without first determining whether or not their planned destination was reasonable or proper" (p.30). Nunan (1988) defined needs analysis as "techniques and procedures for collecting information to be used in syllabus design" (p.130. In ESP learners' needs are often described in terms of the outcomes or what the learners will be able to do at the end of a language course. Hutchinson and Waters (1987) defined needs analysis by distinguishing between target needs, i.e. what the learner needs to learn, and "wants" which are the learners' views concerning their needs.

C. Why Needs Analysis?

Needs analysis is recommended in English language teaching in general, and in teaching ESP and EAP in particular. According to Robinson (1991), "needs analysis is generally regarded as critical to ESP, although ESP is by no means the only educational enterprise which makes use of it" (p.7). Hutchinson and Waters (1987) argue that "any language course should be based on

needs analysis" (p.53). Dudley-Evans & St John (1998) state that "needs analysis is the process of establishing the *what* and *how* of a course" (p.121). They also point out the following three elements of needs analysis:

First, needs analysis aims to know learners as people, as language users and as language learners. Second, needs analysis study also aims to know how language learning and skills learning can be maximized for a given learner group. Third, needs analysis study aims to know the target situations and learning environment so that data can appropriately be interpreted.

Dudley Evans & St John (1998, p. 121)

Jack C. Richards (2001) states that "the goal of needs analysis is to collect information that can be used to develop a profile of the language needs of a group of learners in order to be able to make decisions about the goals and content of a language course" (p.90). He also argues that needs analysis in language teaching may be used for various purposes. Some of these purposes are:

- To identify the language skills a learner needs to perform a certain role.
- To determine the needs of students from a group for training in particular language skills.
- To help determine the adequacy of and efficacy of an existing course in addressing the potential needs of students.
- To identify the gap between what the students are actually able to do and what they need to be able to do.
- To collect data about a particular problem that learners are experiencing.

D. Needs Analysis, for and by whom?

In needs analysis, the main source are the learners, people working in the study field, ex-students, documents relevant to the field, colleagues and ESP research in the field (Dudley-Evans & St John, 1998). The main instruments for executing needs analysis study are questionnaire, analysis of authentic oral and written texts. (Dudley-Evans & St John, 1998; Hutchinson & Waters, 1987; Robinson, 1991).

E. Needs Analysis Models in Higher Education in the Arab World

Internationally, regionally and locally, there is a plethora of needs analysis studies which has been undertaken. Within the Arab context, unfortunately, there is a serious lack of research related to ESP. It is important to mention that NA literature published by Arab scholars is scarce and more attention is required to meet the gradual increase in numbers of ESP courses in the Arab countries. This study sheds light on the studies conducted in the Arab context in order to serve for a better conceptualization of the present study.

Al-Busaidi (2003) conducted a needs analysis study to investigate the EFL learners' needs in Sultan Qaboos University in the Sultanate of Oman. The study focus was mainly to reveal the academic needs of those students. The three tools used in this study were interviews, email dialogues and questionnaires. The study aimed to identify the program practices that were effective in bringing about the students' needs. Based on the findings, the study suggested the implementation of a hybrid content-based curriculum model to be used to integrate language and college courses. Also, more cooperation is required between the language center and subject teachers to develop awareness about learners' needs. Pritchard & Nasr (2004) conducted a needs analysis study in the college of Technology in Egypt. The purpose of the study was to develop materials that would help improve the reading performance of the third year engineering students. The need analysis was conducted to investigate the ways in which students and teachers perceive major required reading skills. Based on such perceptions, a reading program was designed to meet the needs of both parties. The reading program was implemented and was effective in improving the students' reading abilities. However, only a questionnaire was used to collect the data without involving the administrators or teachers.

In 2010, Al-Tamimi and Shuib investigated the needs of petroleum engineering students at Hadramout University in Yemen during the academic year 2006/2007. A questionnaire was administered to collect data from the study's participants (n=191). The data analysis revealed that the skills participants mostly needed to better integrate the four skills of reading, writing, listening and speaking.

In 2010, Harrbi investigated the perceptions of ESP courses by Tunisian science and technology students. The total number of students who participated in the study was 49. The study results indicated that the majority of the respondents are mainly interested in reading as a skill.

III. THE ORIGINALITY OF THE STUDY

In short, the field of ESP includes a number of needs analysis conducted on language programs in many different areas. Needs analysis has been conducted in ESL and EFL settings representing academic and professional ESP programs. In Arab Gulf countries, needs analysis studies have covered a group of different specialties. Many of these studies investigated the students' academic needs, however, up to my knowledge; no study to date has looked specifically at the English language needs of the science lane students in the foundation year in Saudi Arabia.

IV. METHODOLOGY

Every situation has its own factors that makes is dissimilar to other situations and so do needs analysis approaches in foreign language teaching. According to Hutchinson and Waters (1987) "the choice of method will depend on time and resources available and the procedures of each will depend on accessibility" (p.56). This study adopts the quantitative method. The information was collected through a questionnaire because it seemed to be the most appropriate tool for gathering the views and demands of the learner.

A. Participants

The participants in this study are the Foundation Year students in the scientific lane at King Abdulaziz University. The English language program in Foundation Year is sponsored by the English Language Institute (ELI). The program comprises four levels of instruction: beginner, elementary, pre-intermediate and intermediate. Students who enter the program at the beginner level generally complete two levels, or modules, per semester, thus finishing the entire course in one academic year. The level at which new students enter the English language program is determined by a placement test designed to measure their proficiency in the language. Predetermined ranges of scores are correlated to ELI's four levels of study and students are placed accordingly. The sample of the study consists of 85 female students whose age ranges from 18-19. They are all placed in the intermediate level. While conducting the study, they were in their first module- seven weeks each quarter usually lasts- in the academic year 2013/2014. All the students in this nature speak Arabic as their mother tongue.

B. Procedure

This study employed one source of survey which is questionnaire. The questionnaire was written in Arabic to guarantee the students' full comprehension of the items included. The questionnaire was designed to explore the respondents' perceptions about ESP and its significance to their current and future studies. The survey questions try to analyze the target situation, the present situation and the context situation. The questionnaire included 14 questions, 12 questions were close-ended with multiple options so that students can choose their answers. The other 2 questions were open-ended as students were freely able to express their views.

C. Instrument

In this study Google Document survey is used which is a web based survey tool. An online survey is a questionnaire that the target audience can complete over the Internet. Online surveys are usually created as Web forms with a database to store the answers and statistical software to provide analytics. The analytics reveal a summary of responses which appear as bar graphs or pie charts with all demographics presented as percentages for each questionnaire item.

IV. LIMITATIONS OF THE STUDY

2200 is the approximate number of the Foundation Year female students in the scientific section at the ELI. The survey in this study designated only a group of 85 students in the intermediate level, i.e. it is considered to be a small scale study if compared to the total number of students. As such, the representative sample may limit the generalization of the findings. In addition, this study does not investigate all stockholders' views and perceptions about the significance of ESP courses to the academic progress of students. Finally, the study is limited

as it investigates the need of the science lane students only and disregards the Arts lane students enrolled in the same program.

VI. RESULTS AND DISCUSSION

Results in this section are described in accordance with the research questions' order as they appear in the questionnaire. The analytics reveal the summary of responses which appear as bar graphs or pie charts with specifications of percentages for each questionnaire item.

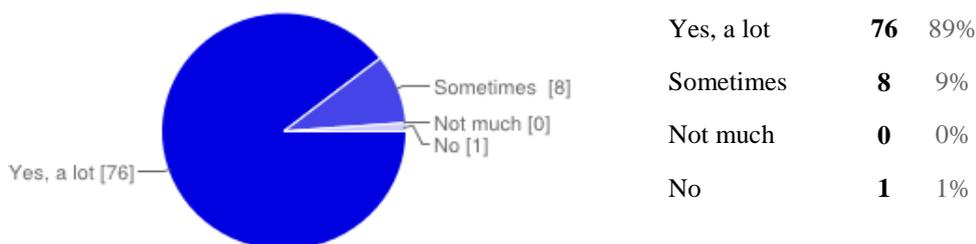


Figure1. Students' need to use of English in present studies

Item (1) in the questionnaire survey aims to investigate the students' present use of English not just in EFL classrooms but also in the other subjects which they study in the science lane. The analytics revealed that the vast majority of students (98%) need to use language in their current studies. as it obviously appears in the chart, only (9%) of students need to use the language sometimes in their studies while only 1 student stated that she doesn't use it in her studies at all.

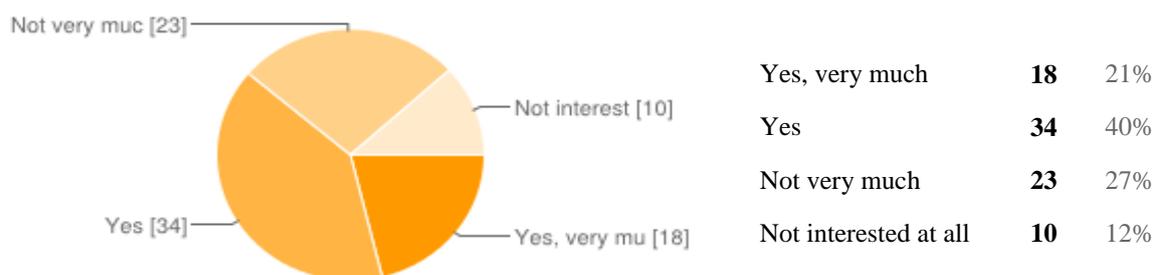


Figure 2. Students' interest in taking an ESP course

As can be seen in figure 2, a large proportion of responses show that most of the students are interested in taking an ESP course. However, their levels of interest vary as only 21% expressed their enthusiasm to study ESP stating that they are very much interested, while (40%) were moderately interested in ESP. almost a quarter of students think that they are not very much interested in ESP. A small minority at (12%) expressed that they are not interested in ESP at all.

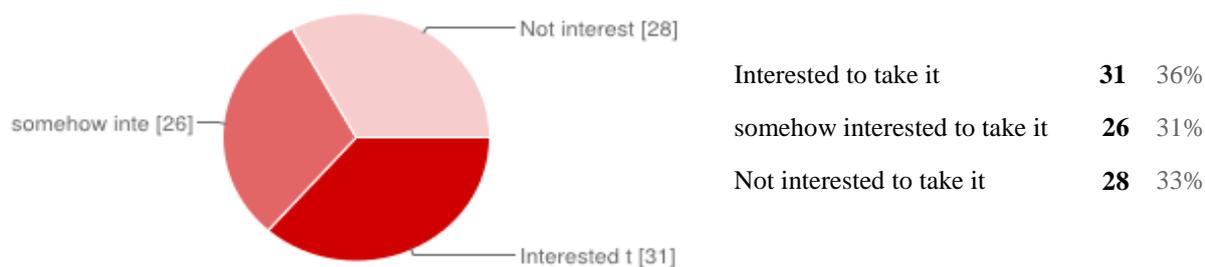


Figure 3. Students' attitude towards the grades granted for ESP in their final overall grade

This item aims to scan the students' attitude towards studying ESP as an optional course which doesn't add to their final score. The presented data in figure 3 shows very minimal differences between the three proportions. The highest proportion at (36%) indicates that more than a third of the students are willing to study ESP even if they will not be granted any scores. (33%) expressed that they are not interested to take ESP under such condition and (31%) expressed that they would be to some extent interested to take ESP if the grades they score are not added to their final GPA.

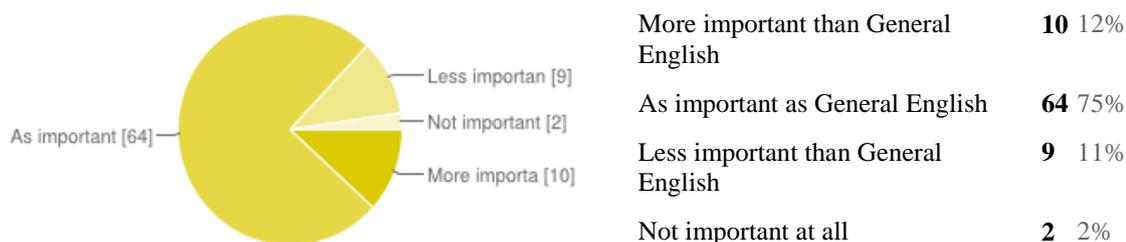


Figure 4. Importance of ESP in comparison to General English

The presented data in figure 4 indicates that a significant majority of students at (75%) consider ESP and EGP to be equally important to be them. (12%) of the students believe that ESP is more important to them while (11%) see ESP as less important than EGP. An insignificant proportion at only (2%) view ESP as not important to them at all.

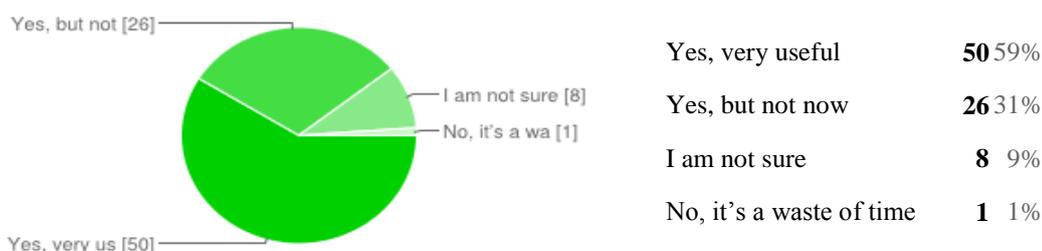


Figure 5. Students' opinion about the usefulness of ESP for them

The pie chart in figure 5 illustrates that nearly all of the students think that ESP is useful for them. About (60%) of the participants view ESP to be very useful for them during their current study. About third of the students believe that ESP is useful for them, however, they are not willing to study it currently. Finally, only 1 student rate ESP as waste of time.

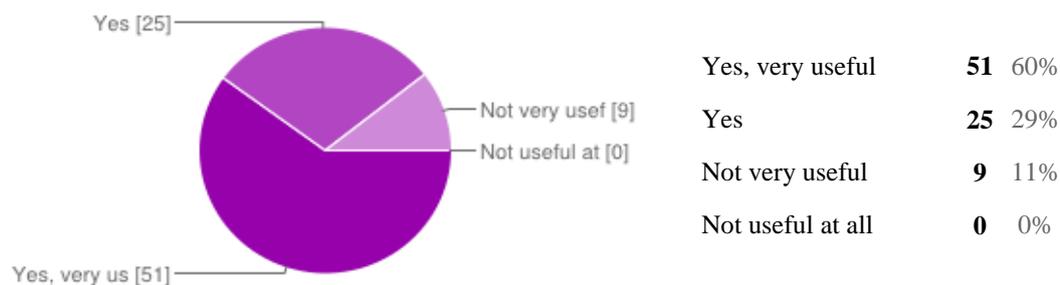


Figure 6. Students' opinions about the usefulness of ESP to facilitate their future studies

Figure 6 shows that (90%) of the students gave affirmative answers. (60%) strongly believe that ESP will be very useful to facilitate their future studies in the field of sciences while about a third of the students think that they expect it to be useful. A small minority at (11%) do not expect ESP to be very useful in facilitating their future studies. None of the respondents chose to answer that ESP is not expected to be useful at all.

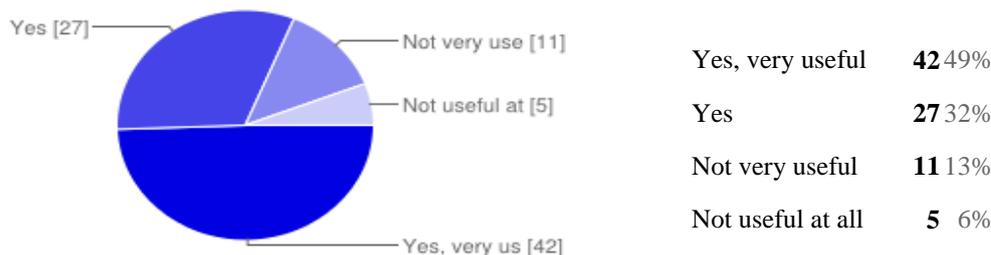


Figure 7. Students' opinions about the usefulness of ESP to facilitate their communication with subject teachers

Figure 7 shows that a considerable percentage at (49%) of the students think that ESP would very useful for communication with teachers of different scientific subjects like biology, chemistry, physics or statistics. About one third of the respondents view ESP to be fairly useful for communication with subject teachers while (13%) seem to consider ESP not very useful for the purpose. An insignificant proportion at (6%) view ESP as not useful for the purpose at all.

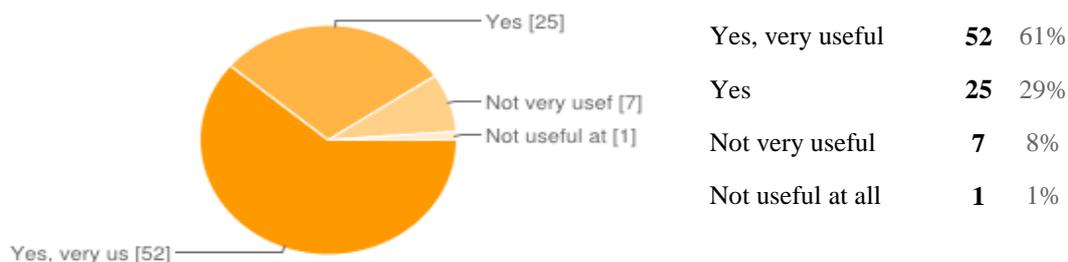


Figure 8. Students' opinions about the usefulness of ESP for improving their general language skills

Figure 8 illustrates that the vast majority of students think that an ESP course will be useful for improving their general language skills while the minority at (8%) views show that ESP would not be useful for the purpose and only one student doesn't think ESP is useful at all for the general improvement of language skills.

Item (9) in the questionnaire was an open-ended question. Not many students provided additional reasons why ESP could be useful for them. Here are the suggestions received as to why else ESP could be useful:

1. To be well prepared for current and future study and specialization.
2. To save time and effort given in understanding scientific subjects.
3. To achieve progress as ESP will make difficult technical terminologies easier to define and understand.
4. To improve the academic language skills.
5. To be ready for my future profession.
6. To facilitate communication with doctors in hospitals.
7. To improve oral presentations required in scientific projects.
8. To understand scientific articles.

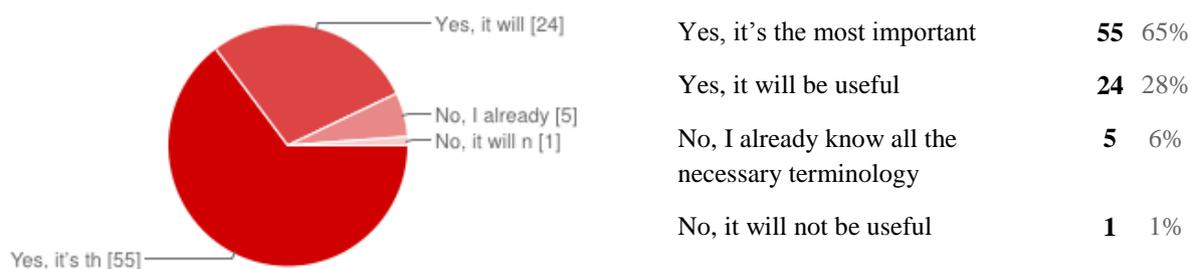


Figure 9. Students' needs to study technical terminology in ESP

As it can be seen in figure 9, almost all the students stated their need to study technical terminologies in ESP course. About two thirds of the students think that technical terminologies are the most important component which they need to study in ESP. (28%) believe that ESP 'will be important' while (6%) claimed that they already knew all the necessary terminology.

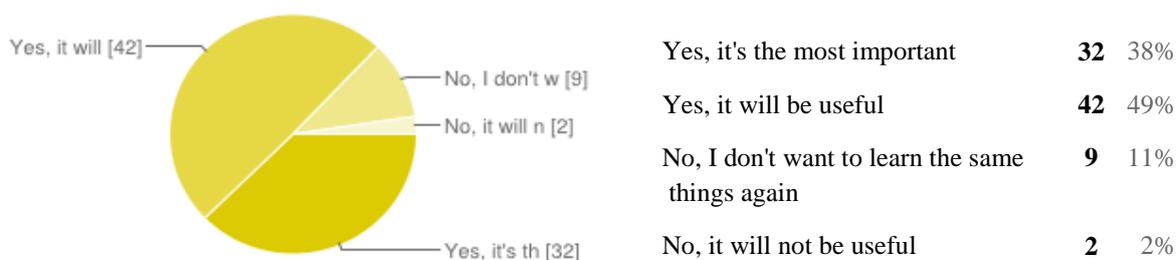


Figure 10. Students' needs to study topics related to their future field of study

Figure 10 indicates that (38%) of the respondents highly need to study different topics related to their future field of specialty and consider it as one of the most important components in ESP. Almost half of the responses stated that it 'will be important useful' while the minority claimed that they don't want to learn the same things again. Only 2 of the students see that they don't need to study topics related to their future field of study.

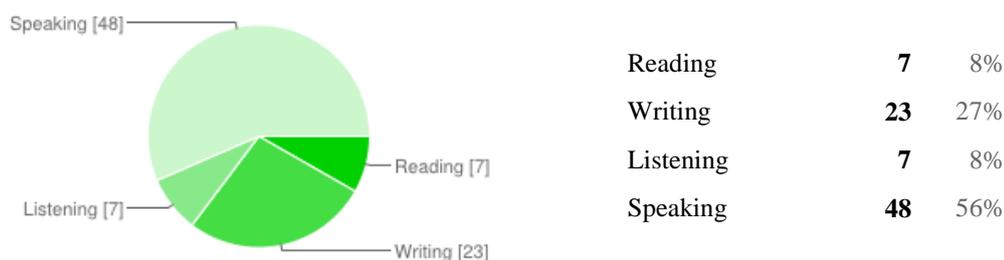


Figure 11. Students' opinions about the most language skill they need to improve in ESP

Figure 11 significantly illustrates the students' needs to improve the productive skills. More than half of the students want to improve the speaking skill while 27% want to develop their writing skills. The receptive skills of reading and listening were equally important to be improved according to 14 students at (8%) for each skill in ESP.

In addition to what had been provided in figure 11, item (12), the questionnaire included an open-ended question as item (13) to investigate the students' need to develop other skills other than the previously mentioned ones. Most of the students expressed their need to be able to properly integrate all the four skills in order to have better academic performance.

Table of students' preferable forms of work in ESP classes

Forms of work students prefer to practice in ESP classes	The most effective	Effective	Not very effective	Not effective
Teacher explains a new topic and corrects my mistakes when I do exercises.	46%	37%	14%	2%
Analyzing language structures and trying to work with new words on my own	21%	36%	36%	7%
Class discussions, role-plays/ group work	47%	29%	14%	10%
Films/games/projects/presentations	78%	14%	5%	2%

The above table indicates the students' preferences in terms of work forms to be practiced in ESP classes. The vast majority view films, games, projects and presentations to be the most effective method to be practiced in ESP. Class discussions and role plays come second at (47%) to be most effective. According to the respondents the traditional method in teaching

is preferred in which the teacher explains and corrects the students' mistakes in exercises at (46%). Obviously, 'analyzing language structures and trying to work with new words on my own language' is not regarded as the most effective form of practice that the students prefer to have in ESP.

VII. PEDAGOGICAL IMPLICATIONS

The results of the study indicate that the ELI students are willing to study ESP. The majority of them are able to conceptualize the benefits which they can gain through ESP. The English language instructors or administration should not be caught in the either ESP-or-EGP dichotomy. An ESP program that matches the nature of students' majors and their professional needs can create a win-win situation. Not only will the ELI students gain ESP competence, but they will also improve their overall language proficiency. More importantly, as this study demonstrates, an ESP program that takes learners' needs as its first priority can grasp students' internal motivation to learn English rather than as a response to outside forces.

VIII. SUGGESTIONS

Several suggestions are made based on the results of the study. The positive attitudes of the students towards ESP suggest that ESP courses should be included as part of the English curricula in the ELI for the upper levels which are the pre-intermediate and the intermediate levels. If this is done, students can engage in learning ESP during the regular academic year, which will broaden their opportunities to achieve better academic progress. However, many problems can be expected if the ESP course is conducted as an optional and not a mandatory non-credit course. The students need to be motivated enough to be enrolled and to continue attending such course. Being aware that the course is not taking into account their regular attendance or assessment grades by the end would de-motivate them. For that essential reason, it is suggested that ESP be integrated or injected in the regular EGP classrooms. The program be to substituted by ESP is, the supplementary Reading Program which is part of the ELI curricula. The Supplementary Programs are designed to enhance and further support student achievement of SLOs of the EGP courses by providing targeted and measured support in areas of focus not covered by the main course book alone. A total of 20% of students' grades are based on their performance in each supplementary program. The Reading Program is allotted 5% of the total grades in the supplementary program. The current Reading Program goal is to encourage positive reading habits in students. It consists of a number of instructor led sessions in which students discuss the assigned graded reader for the course, spend a portion of the time engaged in silent guided reading, read additional portions of the texts outside the class, and orally share their reactions to what they have read. The Readers in the reading program for the intermediate level at the ELI are fantasy stories like: "The Jungle Book" and "The Travels of Ibn Batutta". The suggested Reading Program should dictate a focus to enhance students' abilities in reading scientific articles or magazines related to their field of study to foster awareness towards the subject matter and to enhance their academic progress. The Reading Program should be specifically designed to satisfy the situational needs of the ELI and the

learning needs of its students. It consists of a number of instructor led sessions in which students discuss the text, spend a portion of the time engaged in silent guided reading, taking notes, and share their reactions to what they have read. Follow on activities can take the shape of a role play to provide further practice of the academic language learned.

IX. SUGGESTED COURSE DESCRIPTION AND OUTLINE

Program Title: Supplementary Academic Reading Program

Reading Program Description: The goal of this program is to prepare higher education students for the use of English language skills in an academic content. The skills include, but are not limited to, reading and speaking. The program is 'goal-oriented' with a focus on students' needs.

Program prerequisite: the program is designed for the students of level 103 and 104 only.

Program Structure: within the ELI six week module, each reading session should be allotted 2 hours per week.

Learning Outcomes: upon the completion of this program students are expected to:

- Read short academic essays.
- Improve their vocabulary
- Acquire basic technical terminology
- Locate, select and assess data
- Deliver short oral presentations bases on their readings

Instructional Material: Selected readings by the students and the instructor

Program Objectives:

- Understanding and analyzing scientific articles and texts.
- Using effective reading, speaking and listening strategies
- Building confidence to use the academic language
- Locating, analyzing and evaluating information

Program Content:

- Reading: students will read range of short academic passages that would focus on comprehension strategies and introduces technical terminology.

Assessment:

- Classroom participation.(based on reading the academic articles, students should share views and present oral summary of their readings)

X. CONCLUSION

This study investigated the students' attitude towards ESP as well as their expectations and needs. Major findings indicated that students consider ESP to be important and necessary for their academic progress whether in the current studies or the futures ones. Also, the study

reveals that ESP instruction should focus on the technical terminology and with special attention should dedicate to improve the productive skills of the students within the academic context. The results of the study are based on ELI students enrolled in the Foundation Year. Case studies in the ELI students in other professional fields should be conducted in order to seek other potential forms of ESP materials development, program design, and implementation. Finally, an Academic Reading Program is suggested as a suitable form of ESP implementation which seems to be the most convenient option in the ELI current context.

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