Designing an ESP Curriculum for Saudi Science Students

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Abstract
The present study looks at available views on ESP especially for students of science both as an academic tool and as an occupational need. It also endeavours to present a curriculum for the undergraduate students of Science at Qassim University, KSA. It is an objective of the paper to propose a use and need based syllabus to prepare the learners for life. The study concludes with a set of recommendations and suggestions that would improve the Academic and occupational aspects of the ESP scenario at all institutions of Higher Learning in the Kingdom where English is a secondary subject.

Keywords: Designing curriculum, Saudi students, ESP

1. Introduction
The growth of the middle-eastern countries’ economies from oil suppliers in the past few decades to a potential bank of tertiary level workers has given rise to new needs in the educational input. Touched by changes in the world from the end of the cold war to cultural and economic revolutions east to west, KSA adopted liberal education, especially in the scientific fields. One drawback though has been the fact that the medium of education has strictly been Arabic with the world language English getting a subordinate status as a second language at best and a foreign language at the worst. Classically, the approach toward EFL has been to centre the focus on getting through the exam in a paper that is basically multiple choice based. The learners are required to merely circle the correct answer and the only correct answer is the one in the teacher's manual book. Thus, critical thinking is not called upon and it is at best only 'valid' when their answers match those in the manual book.

There is in the world a distinct shift in thinking today. Money and skill have overtaken transnational boundaries: Knowledge and technology too have become borderless. Supply chains, whether in terms of human resource or products are fully international. However, the one common cord that runs through these processes is communication. It is actually a boon of communication technology that the world is fast turning into a global village. In this changed paradigm, possessing excellent communication skills in English is a necessity more than a luxury. If we talk of IT, from programming to tech support as customer service operatives to analysis, design, architecture and understanding customer needs, IT skills will only be secondary to the ability to communicate. Similarly, in management, the primary skill required is excellent communication. There is today a steep rise in the demand for IT and Business graduates who also possess good communication skills in English. While it is true that these skills can be acquired and excelled over a life long period, as teachers we can give our learners in KSA a headstart by giving them a rich corpus of relevant knowledge in functional English. Needless to say, effective English communication skills are a crucial prerequisite for success in the 21st century workplace.

English for Specific Purposes (ESP) is precisely what answers these needs. It is a functionality centred course designed to meet specific needs of the learners in a particular discipline. These courses may be designed especially for technologists, doctors, managers, or any other specialized area of study. It is important that we evaluate ESP course material periodically to find out whether or not the set goals have been achieved. It is imperative that modern day workplaces require one to possess a fairly good command of the English language. It is one of the aims of this research, consequently, to evaluate the present curriculum for the English language course at the College of Science in Qassim University, Saudi Arabia. When we talk of curriculum in this context, we refer to the entire course consisting in six aspects that determine the success or failure of the course researched.

Since one of the aims of the current language course is to prepare the students to enter into another phase of their life that is their career, this research aims to suggest viable changes in the course content by proposing a new need based syllabus.

2. Significance of the Study
Science and Technology students in KSA aspiring to pursue higher education in the west rarely make it to the best universities there for lack of sufficient English ability. This, in spite of the fact that by the time they are eligible for higher education, they have had almost ten years of exposure to the language. As workers too their employability is poor in the multinationals for want of English proficiency. It may be noted here that it is functional proficiency that is
This is perhaps the first study of its kind in ESP in KSA. This study aims to increase the body of knowledge that is available in terms of course design and content. It is hoped that the recommendations of this study will be helpful to the teaching community in delivering what counts to the learners. These are only the peripheral objectives. Above all, it is hoped that this study will prepare the young Saudi workforce to compete at an equal footing with others in the world job market, whether it be research or service sector. There is no exaggeration in stating that the current poor English language proficiency level of science students of Qassim University is a reason for concern to academics and business circles alike. These students are certainly not equipped to do so in the present. The English language courses offered to the students in schools and colleges are merely grammar-based theoretical courses with little practical use. The fact is that even after completing two courses in English language at the college of science, there is very little real achievement in terms of language proficiency.

3. Review of Related Literature

According to Fiorito (2005), the term "specific" in ESP refers to the specific purpose for learning English. Students approach the study of English through a field that is already known and relevant to them. This means that they are able to use what they learn in the ESP classroom right away in their work and studies. The ESP approach enhances the relevance of what the students are learning and enables them to use the English they know to learn even more English, since their interest in their field will motivate them to interact with speakers and texts.

Renowned linguists such as, Lattore, Swales, Selinker and Trimble contributed majorly to English for Science and Technology with their path-breaking studies on various aspects of EST including pedagogies best suited to teach learners majoring in the sciences.

English for Specific Purposes (ESP) is an offshoot of Language for Specific Purposes (LSP) and a branch of ELT; it began in the 1960s. It is a short term, need-based course for a group of learners pursuing a common goal to which they are likely (and obviously) to be more motivated. It involves teaching/learning of English for a clearly unique and identifiable goal, using specific materials related to that goal. It is all about 'relevance' i.e. it is more concerned with the learner as an individual. It gives great importance to practical outcomes. "The main concerns of ESP have always been, and will possibly remain, with needs analysis, text analysis, and preparing learners to communicate effectively in the tasks prescribed by their study or work situation". (Dudley- Evans and Jo St John, 1998).

Hutchinson and Waters (1987) have rightly averred that the general effect of world developments in and post the cold war era was to bring much attention upon the language teaching profession to fulfil new needs. Consequently, whereas like many other languages, English determined its own destiny earlier, now it had to consider the wishes, needs and demands of the masses and not just the language teachers.

English specifically for Science and Technology got a shot in the arm with much research being undertaken on the area in the 1970s. Hutchinson and Waters (1987) point out that one significant discovery was in the ways that spoken and written English vary. In other words, depending upon the context of usage of the language, the variant of English will change. This idea was taken one step farther. If language in different situations varies, then tailoring language instruction to meet the needs of learners in specific contexts is also possible. It is clear that teachers need to be specially trained to take up ESP with the science students in order to cater to their specific needs. An interesting study in the field has been the EST Teacher Training Programme at the University of Chile at Santiago. The EST component was actually a part of the regular undergraduate teacher training programme for English. Though it started with a focus only on scientific and technological English, with the passage of time, the course also included English for vocational purposes.

According to Ewer (1979), these teacher trainees had a background in humanities and the English they had already learnt was in accordance with the conventional “general” English approach. When they came to EST teacher training course, their problems were five fold: Attitudinal, conceptual, linguistic, methodological, and organisational. To overcome these, a novel combination of theoretical and practical classes were adopted. This was further complimented with ‘careful planning’ and ‘patient teaching’. Further, “Not only the content of the course, but also the methodology used in its presentation can serve as a frame of reference for other institutions planning pre-service or in-service teacher training in ESP”.

According to Mackay and Mountford (1978), special language is actually a ‘restricted repertoire’ of language items picked from the whole. It covers ‘every requirement within a well-defined context, task or vocation’. However, a specialized aim refers to the purpose that drives learners to learn a language, and not the nature of the language they learn. This implies that the focus of the word ‘special’ in ESP ought to be not the vocation specific jargon or register, but the ‘purpose’. The classical confusion between ‘special’ and ‘specific’ in ESP was noted by Perren (1974) who noted that it is a matter of focus: Learning is purpose (or needs) governed when we say English for Specific Purposes while it is enrichment of register when we refer to English for Special Purposes. The former it appears, has a wider scope while the latter is more restrictive. However, communicative competence of the learners is certainly addressed in both.

4. Research Questions

1. What is the ideal duration for an ESP course for the students of science?
2. Should the ESP syllabus focus on language only?
3. Can a course pack be prepared to support an ESP course for students?
4. What is the most suitable outline for preparing a course especially for science students at the undergrad level?

5. Current Syllabus for Science and Technology students at Qassim University

5.1 Recommendations

5.1.1 Proposed Syllabus for Science and Technology students at Qassim University

The guiding principle while doing English with students of science should be “Learn how to do things in real life”. The teacher must focus not on the learners’ answering the questions but on developing the ability to answer them instinctively and automatically: this will prove their knowledge. After all, in the real scientific world, nobody will ask the young people to define an interrogative or an imperative sentence. But yes, definitely, failure to place a question mark or a period mark correctly will certainly raise an eyebrow. Conversely, anyone who can place these correctly can be assumed to know the difference between various types of sentences. Clear thinking in the target language is the first step. We have to train these students of science in accurate and intelligent thinking: Not an impossibility given their grounding in science.

The very primary thing that students entering the university need to know is their grammar. In fact we work with them on the presumption that having freshly graduated from high school they have a certain level of grammar proficiency. Further, that starting with a course on grammar will be a big waste of time. True, they are supposed to have been trained in some grammar skills, but sadly they are rarely trained in the use of the same. For instance, an entry level test of basic grammar usage (writing correct English) administered to the first year students of sciences at Qassim University showed that only 29.1% of them could muster a score of 50% or above. Therefore, a short course on using grammar should be the first component of the ESP curriculum. Other elements could be punctuation, spelling and word bank building. This will be covered under the Language Section. The other, and more interesting section for the learners will be Communication. Here is the syllabus at a glance.

Language for the Students of Science

**Duration: 4 Months**

Module 01: Review course in Grammar
Objective- Focus on correctness in writing and speaking English
Methodology- Exercises and illustrations to be drawn from sentences and phrases in which errors are likely to occur.
Example: Exercise 1. Choose the correct way to write this
   i. Who/whom is it you refer to?
   ii. He don’t/ doesn’t like science.

Module 02: A short course in ‘Common Sense’ Punctuation.
Objective- Practice in capitalization, use of comma, semi colon; differences in the use of various punctuation marks.

Module 03: Miscellaneous elements of correct writing.
Objective- Familiarising the learners with abbreviations, foreign words, idioms, compound words, basics of phonetics: All as used in the sciences.

Module 04: Mastering spelling
Objective- Enabling the learners to form a large vocabulary bank based on the following:
   i. A list of words required in science education
   ii. Words often misspelt in science
   iii. Scientific words often confused
   iv. Homophones and homonyms studied in association with their meaning
   v. Words often mispronounced to be studied purely for their pronunciation

Communication for the Students of Science

**Duration: 4 months**

Module 01: Communication
Methodology: Videos and class interaction
Brief introduction to Communication, 7C’s of Communication, Basics of Communication, Barriers to Communication, Listening, Verbal and non-verbal Communication

Module 02: Writing
Methodology: Collaboration with actual scientific set ups: Apprenticing the learners for short term assignments
Formal letter, e-mail, preparing the Resume, Writing an Abstract, Scientific report, Project report, Notice, Agenda, Minutes

Module 03: Making presentations
Methodology: Involving learners in taking up the role of the instructor by presenting sections of the science course content to their peers
PowerPoint Presentations and their principles
Oral presentation

Module 04: Interview Skills
Methodology: Mock interviews

Module 05: Group Discussion and speaking skills
Methodology: Organising group discussion on current world affairs.

6. Conclusion
Markets are flush with books claiming to be the panacea for all language woes of the science students. However, it may be surmised that a simplified text be specially prepared with the modules as suggested here. Needless to say, the thrust for all professional courses should be on learning by doing. Creating real life work situations as opposed to the conventional lecture method should be encouraged as also critical thinking among the learners. On similar lines, need based syllabi should be prepared for learners of other streams such as management and business. In general, our approach should move from General English to English for Specific Purposes and back to General English if we are to prepare the young learners of KSA to become world citizens.

Here is a word for the teacher in the ESP classroom. Fiorito has this to say for the teacher’s role: Teachers of ESL can make use of their background in language teaching while tackling ESP. teaching skills merely need to be adapted for the teaching of English for Specific Purposes. Content specialists will definitely play a vital role in developing suitable lessons in the subject matter field at hand. Thus, an ESP teacher has many hats to wear, from organising courses, to determining learning objectives, to ensuring a positive learning-conducive environment, and finally, to evaluating students’ progress.

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