



A Review of English Syllabus in Engineering Programs of Select Universities

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Abstract

It is time to develop English language abilities among engineering students. Helpful and needed syllabus and learning materials have to be provided to the engineering students as per their needs analysis. Curriculum is an overall idea that mirrors the philosophical and theoretical perspectives on language. English for specific purposes (ESP) should be preferred to general English. The syllabus for EST ought to fulfill the students' requirements.

Keywords: Curriculum and Syllabus, ESP, EST, Language Abilities

Introduction

Right now English is an inevitable link language of global business, innovation, science and technology, tourism and so on. Among the majority of the professional experts such as the researchers, technologists and business specialists belonging to various social and semantic settings, English is primarily viewed as a language of correspondence. Competence of English language is an imperative aspect in the academic and professional life of engineering graduates. There is great demand and need of English language abilities for engineering students in view of accomplishing their scholarly needs and employability skills. So, it is the immediate need to provide helpful and needed syllabus and learning materials to the engineering students as per students' needs analysis.

Hutchinson and Waters (1987:65) state, "An integrated series of teaching-learning experiences, whose ultimate aim is to lead the learners to a particular state of knowledge." In this context, Munby (1978:2) says, "ESP courses are those where the syllabus and the materials are determined by the prior analysis of the communication needs of the learner". It is somehow difficult and complex for ESP syllabus designers because they have to identify necessities and different functions in order to meet the learners' needs.

EST (English for Science and Technology) is a subcategory of the enormous field of ESP. It arose after the Second World War when an uprising in science and technology, business and commerce was witnessed. Around then, there

was a need to plan individuals who have a specific level of English language competency and be familiar with the motives of utilizing particular English knowledge. In context, Kennedy and Bolitho (1984: 6) state that:

“Much of the demand for ESP has come from scientists and technologists who need to learn English for a number of purposes connected with their specializations. It is natural; therefore, that English for Science and Technology (EST) should be an important aspect of ESP programmes”.

Therefore, the EST students ought to learn English for which the teachers of EST (English for science and technology) should design and improve the EST syllabus/materials in order to meet the needs of engineering students (Rao, C S, 2017).

Curriculum and Syllabus

Curriculum is an overall idea that mirrors the philosophical and theoretical perspectives on language and language learning and relationship between teacher and students. It characterizes the overall objectives of language instruction and acquisition; and furthermore, it considers administrative and evaluative contemplations. Robertson (1971) says, “Curriculum includes the goals, objectives, content, processes, resources and means of evaluation of all the learning experiences planned for pupils both in and out of the school and community through classroom instruction and related programmes.”

The words syllabus and curriculum frequently are used alike. According to Nunan (1989), “Curriculum is concerned with planning, implementation, evaluation, management and administration of educational programmes, syllabus on the other hand, focuses more narrowly on file selection and gradation of contents”.

The authors, Saylor, Alexander, and Arthur (1981) declare, "We define curriculum as a plan for providing sets of learning opportunities to achieve broad goals and related specific objectives for an identifiable population served by a single school center for persons to be educated."

The disparity between curriculum and syllabus is comprehensible. In this context, Shaw (1975) states that: "... the curriculum includes the goals, objectives, content, processes, resources, and means of evaluation of all the learning experiences planned for pupils both in and out of the school and community, through classroom instruction and related programs..." He then defines "syllabus" as "a statement of the plan for any part of the curriculum, excluding the element of curriculum evaluation itself".

There are various sorts of syllabuses for teaching of English, their attributes, the benefits and detriments relating to each. All syllabuses are intended to assist the students in learning English; and they are coordinated relying upon what they center around. A few syllabuses center on the end product- structural syllabus and others on the process- the procedural syllabus. Therefore, the syllabuses are primarily two kinds: structural syllabus /product-based syllabus and procedural syllabus / process-oriented syllabus.

There is a difference between the product- and process oriented syllabuses:

“A syllabus can be seen to have either or both of two major roles. It is, on the one hand, an articulation of what is intended to be taught, and, on the other, an indication of what is to be done in the classroom. In its first role, the syllabus is an analysis of the objectives or content of teaching and may be said to be product-based.... In its second role, the syllabus is a specification of the means envisaged for achieving objectives and may be said to be process-based,” (Prabhu, 1983:1)

ESP Materials and Course Design

Materials assume a very important part in ESP with huge consideration in the text of the subject, contingent upon the techniques took on. The ESP teaching materials ought to be ready and given by a language educator or organization to fit the particular branches of knowledge of specific students as per the requirements for scholastic purposes. The materials ought to urge students to be dynamic in the classroom. Heaps of training in the classroom could foster the abilities required for correspondence in English in a professional situation. The materials ought to be taken from authentic circumstances (Rao, C S, 2017).

There are many attempts to provide different kinds of courses in ESP for students of different disciplines. There is a lot of change in the ESP materials these days especially in English for Science and Technology. A wide range of materials have been produced for classroom use. The human-interest factor should take priority while selecting the materials, as it is intimately related to motivation and learning. The interest of students can be sustained only if they are presented with meaningful uses of language. Authentic material is taken from a scientific textbook and used in the English classroom.

The concept of needs analysis was developed alongside the communicative approach to language teaching. Analysis of needs of learners offers the course designer a framework for the selection of language content according to the goals of particular learners.

Students' needs refer to studies, job requirements or personal aims or wants or desires, that is, what they have to be able to do at the end of the language course (objectives of the course). It includes the needs of the society and the institutions where the course is offered. “ESP courses are those where the syllabus and materials are determined in all essentials by the prior analysis of the communication needs of the learner” (Munby).

According to Hutchinson and Waters (1987), “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 and they stress that designing a course is fundamentally a matter of asking questions in order to provide a reasoned basis for the subsequent processes of syllabus design, materials writing, classroom teaching and evaluation.”

Existing Prescribed English Syllabuses of B.E./B.Tech

The English courses prescribed at the universities in both the states (A.P. and Telangana) for B.Tech students aim to enhance the students' English communication skills and use of English for technical and scientific purposes as well as employment opportunities.

In this paper the Existing Prescribed English Syllabuses of the five select universities have been keenly reviewed and analyzed. The three JNT Universities had been one up to the year 2008 as 'Jawaharlal Nehru Technological University' and later in 2008 JNTU was trifurcated into three independent universities as: JNTU, Anantapur, JNTU, Hyderabad, and JNTU, Kakinada. However, the syllabuses of the universities have similarities, but there is a distinction of approximately 20% noticed in their English syllabuses. Conversely, the B.E./B.Tech English courses/syllabuses prescribed by Osmania and Kakatiya Universities are also similar to the English courses offered by JNT universities, but there are some distinctive variations found in the methods and styles used in teaching-learning process.

All the five universities offer regular B.E./B.Tech Programs/Courses, of which common engineering branches are: Civil, Electrical and Electronics, Mechanical, Aeronautical, Electronics and Communication, Electronics & Instrumentation, Electronics & Control, Electronics & Computer, Computer Science, Information Technology and Computer Science & Systems Engineering, Chemical Engineering, Metallurgical, Bio-Medical, Bio-Technology, Automobile, Mining MM, Petroleum and Petrochemical, Aircraft, Agriculture and Textile Engineering.

However, the five universities designed and prescribed English syllabuses for engineering programs are common for all. Generally the prescribed syllabus is the combination of theory and language lab for practice. The syllabus for English courses in the five universities consists of the content and study items in the areas of vocabulary, grammar, four language-skills, LSRW (listening, speaking, reading and writing).

The prescribed course syllabus has been designed to improve linguistic and communicative competencies of engineering students. Further, it is aimed to enable students to use authentic material for language learning, strengthen their grammar and vocabulary, develop their reading and comprehension skills, hone their writing skills and motivate them to think creatively and critically. The intended outcomes of the course are that the students would use English language efficiently in spoken and written forms, understand the given texts and respond correctly, communicate assertively in different contexts and obtain necessary proficiency in English including reading and listening comprehension, writing and speaking skills.

Analysis of the Syllabuses and Implications

Most of the English syllabus prescribed for engineering students appears as general English for degree courses. English course prescribed for engineering students should comprise English for Science and Technology (EST). The English syllabuses of the universities have been analyzed and noticed that the syllabus would be needed to update regularly in every academic session. Very few topics are related to the needs of engineering students. English for specific purposes (ESP) should be preferred to general English. Needs and requirements of engineering students for English communication skills should be taken into account while designing syllabus. Such contents and skills should be included in the syllabus that can make engineering students ready for their career advancement. It is to understand that syllabus designers should keep in mind and consider the industry-demands and recommendations. The materials prescribed for developing reading skills should be authentic. Writing and speaking skills should be given weight-age for engineering students as they help in writing and speaking.

Syllabus designers should keep in mind the interest of the students while selecting a text. If the interest of the target audience is taken care of, teaching and learning will be productive. When choosing the text social and cultural setting must be taken considered. It will be good to prescribe such texts that are technology related. The authentic English texts cover the language used in the literary genres and functions and modern structure of English language. Extensive training and instruction are needed to make students proficient in English. In the light of various surveys and data presented by different organizations about the unemployment of engineering students, it is observed that the main reason behind the unemployment of the engineering graduates is lacking their communication skills. The only solution to this problem is that engineering institutes should take the teaching of English seriously and institutions of technical education should set a good example of English teaching for engineering students.

The English language communication skills lab that is introduced at the universities as well as affiliated colleges focuses extensively on listening and speaking skills. It is a good structured syllabus for enhancing the listening and speaking skills. The topics of phonetics such as, Vowels, Consonants, Phonemes, Syllables, Articulation of Speech Sounds, Place and Manner of Articulation, Transcription of words and simple sentences, using International Phonetic Alphabet should be covered and taught in the lab syllabus. Phonetics should be taught in a very effective way through technology or computer assisted language learning. There are many sophisticated software technologies available that can be used to improve the pronunciation skills of students. It is necessary for a language instructor to make students aware of the basic concepts of phonetics.

Conclusion

It is time for the stakeholders to think seriously about the syllabuses that can fulfill the requirements of engineering students and can make them industry ready. A good and organized syllabus can produce better results and can make learning and teaching process meaningful. Therefore, universities/institutions should reflect and make students aware of the skills to maintain rapport and relevance of the universities/institutions in this globalised world. They have to impart training to engineering students accordingly.

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