Objectives of Teaching Technical English in Engineering Colleges

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Abstract

The present thesis "A Case Study and Analysis of Course-Content, Materials And ESP Curriculum Design in Teaching Technical English and Communicative Skills in Select Engineering Colleges" is an attempt at pointing out some of the much-overlooked lacunae that exist in the pedagogy of English at the Engineering level; four State Universities have been taken for research; two of them are State managed Universities and two are privately managed Deemed Universities. They are : Acharya Nagarjuna University, Nagarjuna Nagar, Jawaharlal Nehru Technological University (Kakinada); Koneru Lakshmaiah University and Vignan University, Guntur. The study also aims to critique the pedagogy of Technical English at the Engineering level with specific reference to the objectives of teaching/learning English. The study is concerned with the practice of teaching and its productive results, rather than the ideology of teaching English. It also makes an attempt at suggesting measures to better the existing conditions.

Keywords

Communicative Skills, Technical English Pedagogy, Global Scenario, Methodical

Introduction

In the Post-Colonial Indian context, many "Roles of English" have come under close scrutiny, and English has become a term representing not merely "language and literature", but a divergent range of areas. English has become as large and capacious as a subject, as Prof. K. Narayan Chandran comments in *A Companion to English in India: Reflections on a Project and a Proposal :*

English is now generally understood not only as 'language and literature' (as it used to be) but also as an instrument for the institutional and cultural practices that underpin them. Literature and other arts; literature, philosophy, and the social sciences;

disciplinary measures and categories that involve translation, creative writing, media and gender studies, and many more…. English may be shown to mediate crucially, or it may be gainfully aligned for professional purposes (2001: 17).

English has been playing varied roles as mentioned above, though no attempt has been made by any institution or body to evolve a definitive plan of action for realising the success of any of these roles. As far as the tertiary courses of higher education are concerned, some institutions helped in strengthening the professional courses in the national system of education; they are: University Grants Commission (UGC), All India Council for Technical Education (AICTE), Indian Council for Agricultural Research (ICAR) and Indian Medical Council (IMC). In 1968, the National Policy on Education (NPE) laid emphasis on the study of English and other international languages. The NPE insisted that India must not only keep pace with scientific and technological knowledge, but should also contribute to it significantly. It is for this purpose that the study of English is required to be strengthened.

The Importance of Objective

Objective play a very important role in indicating the direction of an educational programme in which teaching, learning and evaluation have to operate. They are crucial in making these three processes methodical and systematic. They indicate a starting point in planning. As Ivor Kevin Davies has rightly put it, "They are an ideal, an aspiration and a direction in which to go" (1976). Objectives are vital in making education activities valuable, fruitful and worthwhile.

The Rationale for Using Objectives in an Educational Programme

Having acknowledged the fact that objectives decide the success of any educational programme, it is necessary to examine the rationale for using them.

Educational Accountability

As teaching like any other enterprise, represents an investment in human and financial resources, it is essential that whatever is done by way of teaching is accounted for. Accountability entails a balance between investment (in terms of both money and man-hours) and student learning. If an educational endeavour,

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like any other endeavour, has to prove its success or utility to the society, it must have a set of explicit objectives which everyone involved in the endeavour is aware of.

Educational Accountability can be translated into reality only when the objectives are made explicit and a demonstration of the extent to which these objectives have been realised is made at the end of an educational endeavour. Merely stating a list of objectives does not ensure educational accountability. What is needed is a circulation of these objectives among all the participants who are involved in the endeavour and also among the people who are interested in it.

Thus, as far as ensuring educational accountability is concerned, having a set of objectives for a course is as good as not having any objectives at all if they are not known to the beneficiaries and not carried out by the executioners, and ultimately are not achieved. In such a situation, the objectives often remain unfulfilled.

Facilitation of Course Design and Syllabus Design

A syllabus must reflect the objectives, and, the course is meant for their realisation. Coordination between syllabus and course design presupposes a set of explicit objectives. A glance at the objectives given in the syllabus in this context has revealed that they are neither meticulously worked out nor do they contain any specificity. For instance, Acharya Nagarjuna University mentions that the objectives of teaching "Technical English Communication Skills Course" is to make the learners "linguistically aware and communicatively competent." It also demands that "special attention" should be paid "to contemporary texts on language and industrial needs." These phrases appear mere rhetoric in the absence of the awareness of the teacher on the communicative method of teaching; and, the inadequacy of the languages texts to cater to the desired objectives.

The main drawback of teaching English in India is clearly evident in this context. The facts to be noted are as follows:

i. The Technical English syllabus is provided with a long list of books for reference, without any information and guidelines on the books useful for particular units. The untrained teachers cannot use these reference books in the absence of micro

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details concerning the syllabus and the specific material prepared to deliver the syllabus; and more so in the absence of any lint on the methodology. For instance, Koneru Lakshmaiah and Vignan Universities mentioned different topics in the prescribed syllabus. In the same way, Unit II of Acharya Nagarjuna University mentions "Corporate Information" without any hint on what should be dealt with under the heading. Similarly "technical words" are supposed to be taught; but the list of words is not given.

Making of Teaching Objective Oriented

The objectives of a course give direction to teaching and make it an objective oriented activity which would proved to be meaningful and purposeful. A constant watch and review by the teachers and the students has to be taken up as the fulfilment of objectives is to be monitored.

Facilitation Evaluation of Student Learning

Evaluation is an inseparable part of any course. The purpose of evaluation is to test how far a specified set of objectives has been realised. Objectives enable to test the learning capacity of the students. They act as guidelines by providing information about what should go into the evaluation procedures.

Facilitation Evaluation of Teacher Performance, Teaching Materials, Methods and Evaluation Procedures

Objectives provided a yardstick with which one can gauge the success and efficiency of the teacher performance, teaching methods and materials. If a course fails in the realisation of its objectives, there could be many reasons for it; the chief among them being the use of improper methods, materials and evaluation procedures. One cannot realise the given objectives without adopting the right methods of teaching and testing.

Formulation of Objectives

There are basically three ways in which objectives figure in the process of planning. A detailed account of these three ways is given by Ivor Kevin Davies in his book entitled Objectives in Curriculum Design (1976:86). The three ways are :

   i.   Systematic Planning

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ii.   Expedient Planning

iii.   Piecemeal Planning.

i.   Systematic Planning

In Systematic Planning, objectives are formulated first and the means to achieve these objectives are determined next. Systematic Planning is based on Ralph Winfred Tyler's model (1949: 5-47), that is to say; objectives are derived from a study of learners, society and the discipline concerned.

ii.   Expedient Planning

In Expedient Planning, the reverse of what happens kin Systematic Planning takes place. The ends or objectives are formulated after defining the means. The planning is not from objectives to means, but from means to objectives. On the face of it, this kind of planning might seem illogical and irrational but it is after all expedient.

iii.   Piecemeal Planning

In Piecemeal Planning neither the end nor the means is predetermined in clear cut terms. It involves a merging of ends and means. As the name itself suggests, no master plan is drawn in advance. Instead, the objectives are formulated in a Piecemeal Planning, keeping certain aims at the backdrop. There is no one thing always determining the other. That is to say, neither the objectives nor the means have control over each other. It is a very flexible kind of planning in that, it can incorporate at any stage any new discoveries related to either the subject matter or the means or the objectives themselves.

The Objectives of Technical English in Engineering Disciplines

An attempt has been made here to enumerate the implicit and explicit objectives of the Technical English in Engineering disciplines.

Based on the responses of the teachers and the syllabi of different Universities, a general tentative list of some implicit and explicit objectives of Technical English Course in Engineering disciplines has been prepared and these objectives are enumerated below in their descending order of importance.

To develop in the students the critical ability to judge the texts prescribed dispassionately.

The students of Engineering disciplines come from different academic backgrounds and might follow different learning methods during their earlier period of study.

To prepare the students to face competitive examinations such as GRE, TOEFL, CAT, CAD, GMAT etc.

This objective of preparing the students for important competitive examination has to be taken care of, by the syllabi of the selected Universities. It is be noted that even English medium students, who study English as a subject of study, from the L.K.G. to the

Graduation, under the 2+10+2+4 pattern, for nearly eighteen years, are also in need of taking special coaching to appear for competitive examinations at national and international levels. The Technical English that they study during their Engineering course and its components does not match the level of language proficiency expected in these examinations.

To prepare the students for post graduate courses in their respective disciplines.

In order to prepare the technical graduates for higher courses, intensive teaching in technical English is imperative. As is followed by most of the Universities abroad, ESP (English for Specific Purposes) should be offered to the first year Engineering students. If it is found, on diagnosis, that they do not possess the required proficiency in English, they should be given an English course in the first year of study to bring them upto the mark. Technical English course could be offered in their second year.

To inculcate certain "moral" and "ethical" values in the students

The students of the first year Engineering courses are usually in the age group of 17-19 years. That is a

volatile period of their life, where they feel that they are adults, though they are not yet adults. After facing the entrance examinations they wish to enjoy a new won sense of freedom. It is at this stage of their life that they should be shaped on right lines.

To familiarise the students with Technical English texts of different countries and to make them capable of understanding these texts.

To achieve this objective, the students could be encouraged to browse the Internet for information on various subjects and fields for preparing essays on them. Internal assessment can include some assignments which demand such reference work by the students.

To develop the ability to read with comprehension and write cogently and effectively

This objective is probably the most explicitly mentioned one in the syllabi of all the Universities. Within the syllabi in Acharya Nagarjuna University, Jawaharlal Nehru Technological University (Kakinada), Koneru Lakshmaiah University and Vignan University, there is no prerequisite for this particular objective. There is no special or exclusive module pertaining

to the development of the ability in Reading or Writing. Even in teaching, this objective gets hardly any focus. The ability to read and write cogently and effectively is something which can be acquired only with adequate practice. Every time the students attempt something in reading or writing, they need to know their individual lapses. This demands considerable personal effort on the part of the teacher. But the Engineering students of all the disciplines hardly get any practice in reading or writing. It would be appropriate to quote here the words of Francis Bacon: "Reading maketh a full man, conference a ready man and writing an exact man" (1941:15).

To develop "Oral Communication Skills" and "Soft Skills" of the students

This objective, the most important one in the context of the present thesis, is concerned with promoting communication skills of the students. It includes the development of communicative abilities both in speech and writing. This is the most important objective from the point of view of the students. But the course as such seems to do very little towards the realisation of this objective. What the course offers in the form of its

Technical English Communication Skills does not cater either to the objectives of the course or students.

To stimulate a "desire" to read even beyond the prescribed texts in the students

This objective is akin to the first objective in that, its realisation depends on many factors like the methodology, the course material provided, the students' general attitude towards it and their motivation.

During the survey conducted for this research, the following two questions are posed to the first year Engineering students of different disciplines.

- Have you read all the units in the prescribed texts?
- How many English books have you read in the first year, which are

not prescribed for your study?

The responses of the students to these two questions have not been positive. Quite expectedly, most of them conceded that they have not read even the prescribed texts. In all the classes surveyed, there was not a single student who has read all the prescribed textbooks. In one section,

there is only one student who has read two of the prescribed textbooks; and, all the others have confessed to have tried reading only one or two textbooks. The two chief reasons, most of them have stated for not reading even the prescribed textbooks, are : 1) want of time; and, 2) unintelligibility of the textbooks.

To prepare the students for the needs of a job and building up a career

This objective is the most practical of all in the sense that it pertains to the most practical requirements of the students. This objective is not directly reflected in the syllabus, except in a small component called English Language Teaching (ELT).

To develop a taste for "Technical English" in the students

The syllabi of Technical English should create an interest and aptitude towards the course among the students. Through formal and informal talks with the students and through the tests conducted, it is noted that many of the Engineering students do not show enthusiasm towards their Technical English syllabus. They are of the

opinion that Technical English is one amongst their technical subjects.

Profiles

The profiles of teachers and students who take part in the survey are placed in a sequence in an order to assess their background, their perceptions on the course which they are teaching and learning.

Profile of the Teachers

Teachers in the Engineering Colleges have the basic qualification of M.A. (Litt.); a few of them have M.Phil. Degree, which is also in English literature; and, very few possess a doctoral degree. Most of them do not have any training in teaching or testing Technical English Courses prescribed for the students of Engineering disciplines. However, some exceptions are to be found; a few of them who have the Post Graduate Diploma in Teaching of English)PGDTE) from the Central Institute of English and Foreign Languages (CIEFL) (now EFLU), are well aware of the teaching methodology of English. The opinion of the teachers who do not have such training has also not been positive with reference to the handling of Technical English Courses in the Engineering Colleges.

Profile of the Students

The Engineering students in Andhra Pradesh come from diverse backgrounds and thus possess diverse levels of proficiency in English language. Due to this diversity in their academic backgrounds, there is a need to strike a balance between the conceptual and linguistic level of each learner. The encouraging factor is that these students who take admission into Engineering colleges usually possess a high degree of motivation to learn.

With such conditions prevailing in a language class room, a single approach towards teaching of English would be inadequate to meet the requirements of all the students. Use of different methods and materials of different levels, books specific to the communicative requirements of language have to be recommended when the students form such a heterogeneous group. Therefore, a learner-centred approach should be followed. Before this process of teaching – learning begins, a thorough analysis of the needs of the learners should be made; and, this should form the basis for designing the syllabus. As the target students here are prospective professionals, suitable ESP (English for Specific Purposes) courses in English

should be of prime choice: In view of Chris Kennedy, "The essence of ESP is in catering to the needs of particular groups of students, taking into account the variable and constraints involved" (1984: 1-15).

Vital Focus of the Thesis and Objectives of Study

The vital focus of the thesis is on critiquing the objectives of teaching/learning Technical English at professional level. The most glaring deficiency in the pedagogy of Technical English lies at the grass root level. The incompatibility of various objectives is present both at the grass-root and system levels.

The following facts point at some of the most glaring gaps that exists in the pedagogy of Technical English at the Engineering level:

1. The first year students who belong to different disciplines in Engineering courses have English and as a common subject. Most students expect their English paper to improve their communication skills (this is made evident in the survey conducted); but the course seems to do little, either directly or indirectly, with realising this

particular desire or requirement of the students. This shows that the syllabus as well as testing patterns in English, as offered by different Universities, do not take into account even the primary objectives of the English syllabus meant for professional students studying in the Engineering and Technology courses. Further, it also shows how oblivious and indifferent the courses have remained to the practical and realistic needs of the students.

2. There seems to be little compatibility between the objectives of the students and those of the teachers. Most students aspire that the course would somehow improve their English communication skills; but most of the teachers teach the course through the use of traditional methods which are teacher-centred rather than learner-centred.

3. The long-held objectives of the students and those of the teachers seem to be different from operational objectives. While most students do hold that improving their communication skills is their main objective in

this course, they eventually give importance to securing a pass mark in the examination. The objective of passing the examination sidelines the primary objective of the students. Thus, there is a wide gap between the held and the operation objective of the students and that of the teachers.

4. Many a time, Technical English course does not seem to follow even the explicitly stated objectives, which renders the existing evaluation meaningless.

5. Admissions to Engineering courses are made through an open entrance examination irrespective of their medium of instruction at the +2 levels of different disciplines. Consequently, the disparate needs of the students coming from non-English medium background are not taken care of by the course.

6. Primarily at the beginning of the course one needs to conduct an examination to test the abilities and the capacities of the students in the course and divide them into three categories – active learners, average learners and slow learners rather than following the present pattern of all the students of different capacities being put in one section.

A random sample of five scripts written by the first year Engineering students (2009-2010) on their first-day in the college testify to their diverse levels of proficiency in English in joining the course. It is this diversity in English proficiency of the students of the same class that has triggered the interest of this researcher. The question posed is: "What do you expect from this Technical English Paper in your course.

Conclusion

The present study aims at identifying students having an opportunity to reinforce their basic communication skills, enabling them to acquire industry specific knowledge and skills, such as soft skills, management and employability skills. In view of the demands of the 21st century and its world-class education, professionals and the University academicians have been designing course work and textbooks to meet the challenges of the new-millennium. Such of these texts

focus on the latest methods and approaches, especially the use of modern software and innovative methods available in the market to help improve the proficiency in language nad communication skills of the students. This study aims at finding out how far these textbooks have been helping the students to equip themselves with the knowledge and skills that are considered pre-requisites for employment today.

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