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Acquisition and Teaching of Technical English

R.S.A. Susikaran, M.A., M.Phil., Ph.D. Candidate

Abstract

Good communication skills are the key to success in the job market. Mastery of technical English gives an advantage to those who are skilled in English. Similar to every language teaching, the teaching of English also has some underlying ideology - the nature of language and to whom it is taught. Technical English is the language used for specific purposes. The language in which scientific and technical facts are expressed is not certainly a language different from that of general English. But it poses a number of special problems to the English Speakers of Other Languages (ESOL). In Technical English language acquisition and teaching, the language teaching professionals of Technical English need to acquire the terminologies used in various fields of Science and Technology and their objective is to introduce to the engineering and professional graduates the complexities of effective and practical communication skills in the affairs of business, industry, science and technology, which have acquired the global dimensions in the age of information revolution. Thus this paper deals with the imperative need for the Language in India www.languageinindia.com

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designing course materials for the budding scientists and technologists and teaching of technical English language by the English language teaching professionals.

Key Words: English Speakers of Other Languages (**ESOL**), English for Specific Purposes (**ESP**), English Language Teaching (**ELT**).

Introduction: Technical English Language Acquisition and Teaching

Technical English has its own importance. It is the language used for Specific Purposes (**ESP**). One may be aware that good communication skills are the fundamental aspects of knowledge dissemination. Hence for the budding professionals the development of the linguistic and communicative competence in their fields of interest is the need of the hour.

The widely recognized problems in communication are grammar, vocabulary (technical) and usage, structural patterns and spoken skills. Technical English is used for specific purposes employing the terminologies, specially used in Science, Engineering, Technology, Medicine, Music, Sports, etc. In academia, over 50% of all research is published in English and in some scientific fields; virtually all studies are published in English. In the context of new approaches to **ELT** (English Language Teaching), the study of **ESP** (English for Science and Technology) is to be carried out to deepen into the language for the use of scientists, technologists for betterment.

English in Technical Arena

The essence of communication is the presentation of information in such a way that it is easily understood by the receiver. To enhance their employability, the graduate engineers and technologists have to develop their technical English language communication skills. They should acquire terminologies having specialized meanings used in the fields of Science, and also in various fields of Engineering, Technology and Medicine. Methodology of writing needs to be specialized. On mastering the skills of English language with technical communicating ability one can enter, survive, compete and thrive in their job market.

(Suchitra.G. Know your Technical English, Scitech Publications (India) Pvt Ltd. Chennai)

English for Specific Purposes

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Report Writing

For scientists and technologists, report writing forms a major task. In writing a report, “who” performed the action is of less importance than “what” is being carried. Hence the English teaching professional should train the budding engineers and technologists to write the reports using impersonal passive constructions with past form of the verb. In writing project proposals simple present forms and passive forms are to be used. Regarding patent write-ups, simple present form of the verbs and impersonal passive constructions can be used.

Report writing is a specialized form of written communication. Many of the rules applicable to written communications in general must be observed when writing a report also. A report is a document in which a given problem is examined for the purpose of conveying information, report findings, putting forward ideas and, sometimes, making recommendations. An effective report must be well organized. The skeleton of ideas that makes up its structure should be firm, clear and logical. Engineers and Scientists use memos to make requests, to give announcements, and sometimes to communicate reports. The teachers of English have to teach the budding scientists and technologists the structure of reports, memos and the style of writing.

Patent Write-up

Regarding patent write-ups, it is mandatory to use simple present form of the verbs and impersonal passive constructions.

Oral presentation

Business houses conduct conferences frequently. As an employee, professionals may be attending such conferences where they listen to people presenting ideas. When they deliver, they interact on a theoretical concept, making a few educated guesses or arriving at conclusions, or posing a few questions that will make others think. Thus they add to the knowledge already available in their disciplines or fields of research, where their learning environment gets enlarged. Paper presentations can also be a source for growth and success.

Presenting papers involves two major activities—preparation and practice. Preparation needs three skills: Reading, Writing and Speaking. Reading involves topic selections and reading for the topic. For writing skill, the presenters have to take notes, write outline with abstract and prepare visuals. For Speaking skills, the presenters have to rehearse plenty of times making the audience clear on the technical terms mentioned. Introducing the topic is crucial. The presenters

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need to explain, elaborate, and exemplify by describing, comparing, contrasting, arguing, and providing support data with the help of visuals.

Written format is different from speaking. Technical vocabulary, tense forms with simple style of language is much needed for speaking. On an analysis between oral and written presentation a complex nature it noted that the grammar of spoken English differs greatly from that of written English. The reason for not sticking on to the rules of presentation is that most presenters have not undergone specific training. Various researches of the study show that the genre of the oral scientific presentation, while displaying a variety of speaking elements does not exhibit the kind of uniformity of structure and expression, evident in written scientific texts. Writers of English teaching materials have to design course materials keeping in mind the structure of presentation.

Product/Process Description

While describing a product, simple present form of the verbs should be used with some relevant technical vocabulary by technical professionals. While describing a product or an object, it is to be explained in detail in a simple style. We have to describe its physical appearance, by giving its component parts one by one in a logical sequence, highlighting its characteristics its purpose and functions, utility and also its advantages and disadvantages.

For example, to describe the working of a device or machine, only the activity is given importance. Hence in describing process, technical and scientific, impersonal passive constructions are used.

(Lakshminarayanan. K.R. English for Technical Communication (second edition, 2001. Sietech Publications Pvt. Ltd. Chennai.)

Understanding Technical Documentation

Knowledge of technical vocabulary and its usage is a must for comprehending technical documentation. English teaching professionals have to prepare materials on how to write technical documentation. Two aspects of reading skill-skimming and scanning are to be developed in the young professionals.

Technical English—Acquisition

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English language teaching professionals need to prepare technical vocabulary usage and structures. To acquire Technical English language, the teachers of English can encourage the budding professionals to read books and journals like Encyclopedia Britannica, international and national journals in varied fields of Science and Technology, CSIR journals, “Science Reporter” etc.

Listening to scientific programmes in the Discovery channel, National Geographic channel, Fox History channel, Sports channels enriches scientific vocabulary. The students can also access internet and visit Wikipedia site to enrich terminologies in their fields of interest.

Technical English Teaching

The teachers of Technical English have various responsibilities in designing course materials for the young professionals and to enrich the specific phraseology used in varied technical areas such as

English for Information Technology

English for Flight Assistants

English for Aviation Engineers

English for Marine Engineers

English for Diving based on marine life

English for Architects

English for Medical Study

English for Doctors attending medical conferences.

What to teach

English teaching professionals need to teach the budding professionals the following aspects: Technical Vocabulary, Sentence Structure, Subject and Verb agreement, Voice. Use of present, past and present perfect tense forms with various technical sentences as examples, Discussions of the right usage

Terminologies

Terminologies of purely technical, semi technical and scientific sounding formal words are to be introduced to the future scientists and engineers.

Technical - e.g. Metallurgy, Thermodynamics

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Semi Scientific/Semi technical - e.g. Work, plant, load, feed, force, drive (word functions)

Scientific sounding formal words - e.g. extrude, negligible, propagate

Terminology – usage

It is suggested to introduce the usage of terminologies to the students of various fields of Engineering as given below.

Civil	- drafter, Theodolite, cement
Architecture	- dome, tower, pillar
Electronics	- diode, microprocessor, triode
Communication	- satellite, fax, cellular
Electrical	- ammeter, rheostat, wire
Mechanical	- thermodynamics, lathe, turbine
Computers/IT	- software, byte, modem
Aerospace	- astronaut, rocket, sonic
Marine	- starboard, barge, life raft

Science

Medicine	- ophthalmology, cardiology, neurology
Bio-technology	- stem cell, gene, chromosome, H1N1
Agriculture	- pesticide, fertilizer, manure
Physical Science	- resonance, radiation, organic
Life Science	- parasites, amoeba, intestine, epidemic, endemic

Entertainment

Music	- orchestration, harmony, scale, chords, tone
Sports	- defender, striker, keeper, fielder, skipper

www.manythings.org/vocabulary/lists/e/

Writing methodology

Report writing—Impersonal Passive + Past tense/Present tense structures

Project proposal – Simple future + passive voice

Patent writing -- Simple present + passive

(William Sanborn Pfeiffer , T.V.S. Padmaja, Technical Communication- A practical approach, Dorling Kindersley (India) Pvt Ltd. (Sixth Edition))

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Conclusion

By and large, Technical English language is a combination of terminologies and general English. Hence this paper dealt with the imperative need for designing course materials for the varied branches of Engineering and Technology by the Technical English language teaching professionals.

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