Training in Essential Communicative situations to Engineering Students

Dr. Sunanda Patil (Shinde)* and Dr. Mahesh B. Shinde

*Sanjay Ghodawat Polytechnic Atigre, Kolhapur- Maharashtra
KIT's College of Engineering Kolhapur- Maharashtra
Email: **sunandagpatil@gmail.com**

Abstract

Engineering graduates require high efficiency in English communication skills to maintain relevance with the global environment of the new millennium. Effective communication with various stakeholders within and outside an organization is a key factor for a business organization to run smoothly and successfully. Now-a-days, along with these things, effective communication skills (generally called 'soft skills') have acquired greater importance to sustain the professional growth of an individual and an organization. Hence training to develop communication skills of engineering students is the need of time. Engineers require training in those communicative situations in which use of English is must in corporate world. So the aim of the paper is to find essential communicative situations in corporate world.

A questionnaire consisting important communicative situations for engineers was prepared for in service engineers to find out real communicative situations essential when an engineer takes up a job. The result showed that reading written instructions, writing emails, writing report, writing business letters, facing interviews, delivering public speeches, and giving oral presentations are very important situations for in-service engineers.

Key words: Engineering students, Communicative situations, in-service engineers

Introduction

The need and relevance of English in the institutes of science and technology in India is very high. In engineering field English has its own importance as all the subjects in engineering curriculum require English. Moreover, to survive in today's professional world engineers have to have effective communication skills in English along with the technical knowledge. Hence, engineering students need to have sound background of English. Engineers need to communicate in various communicative situations. They may be formal or informal.

The use of vocabulary, tone, voice, etc., totally depends on the situation they are engaging in. So, engineering students are in need of training to communicate effectively in formal and/or informal situations. As the present researcher was not sure whether the

communicative situations these students need in their professional career ahead are the same they practice during their degree course, she prepared a questionnaire for in-service engineers and sent it to seventy five such engineers to do the needs analysis.

So the aim of the paper is to find real communicative situations in which English is used by in service engineers.

Theory on communicative situations

In the field of communication Hymes' contribution is very important. He tries to expand the span of linguistics by calling it as 'ethnography of communication' that would study "communicative form and function in integral relation to each other" (Hymes, 1974). Thus, for communication to be considered as a whole, Hymes adds a new dimension to formal linguistics. Hymes *ethnography of communication* is based partially on the roots of linguistics and partially on the roots of anthropology, sociology and psychology.

He states "the kind of linguistics that can contribute to the ethnography of communication is now generally known as sociolinguistics" (1974). He defines this term carefully as per the ethnography of speaking in order to differ his focus from some of the other focuses coming under sociolinguistics. According to Hymes for the contribution of the ethnography of speaking to be realized, there is a need of having change in a number of orientations toward language. Therefore, he gives seven orientations:

1. the structure, or system of speech (*la parole*);
2. function as prior to warranting structure;
3. language as organized in terms of a plurality of functions;
4. the appropriateness of linguistic elements and messages;
5. diversity of the functions of diverse languages and other communicative means
6. the community or other social context as starting point of analysis and understanding;
7. functions themselves to be warranted in context, and in general the place, boundaries and organization of language and of other communicative means in a community to be taken as problematic (Hymes, 1974).

Needs analysis

Needs analysis has a vital role in the process of designing and carrying out any language course, whether it be English for Specific Purposes (ESP) or general English course, and its centrality has been acknowledged by several scholars and authors (Munby, 1978; Richterich and

Chancerel, 1987; Hutchinson and Waters, 1987; Berwick, 1989; Brindley, 1989; Tarone and Yule, 1989; Robinson, 1991; Johns, 1991; West, 1994; Allison *et al*. 1994; Seedhouse, 1995; Jordan, 1997; Dudley-Evans and St. John, 1998; Iwai *et al*. 1999; Hamp- Lyons, 2001; Finney, 2002).

According to Iwai *et al*. (1999), the term needs analysis generally refers to the activities that are involved in collecting information that will serve as the basis for developing a curriculum that will meet the needs of a particular group of students. Brindley (1989) and Berwick (1989) offer definitions of different types of needs and accounts of various problems and limitations in making use of this concept, including ways in which we might usefully distinguish between needs identified by analysts and those expressed or experienced by learners. In his state-of-the-art article, West (1994) gives a thorough overview of needs analysis in language teaching, including its history, theoretical basis, approaches to needs analysis, etc.

It is essential to ensure that our engineering students are equipped with the necessary communication skills to face their challenging professional environment. While designing syllabus, syllabus designers should consult or solicit necessary information from industries as well as elicit students' needs. The syllabus needs to be more relevant to industry because this will help enhance human-capital development in the country. We can also seek recommendations from the private sector on what to include in the syllabus, so that we can equip students with the knowledge and skills that are needed.

Workplace communication needs

In today's corporate world engineers are not only required to effectively convey technical information but they also need to have appropriate communication skills in order to excel in the workplace. Unfortunately, some engineers are unable to meet these challenges and requirements. Lack of communication skills is one of the most prominent reasons of failure. It has resulted in collaboration between engineering education, the industry and communication educators. Now a day, it is very much essential for communication and language educators to adapt new approaches to teach ESP. They need to know in what manner they can better equip the engineering students so that they can function well in their professional life.

The study

The present researcher prepared a questionnaire for in-service engineers, which consisted below given situations in which engineers are expected to use English.

Table 1

Communicative situations in which in-service engineers use English

S.N.	Communicative Situation	S. N.	Communicative Situation
1	Reading written instructions/advice	**15**	Talking about daily life situations
2	Reading abstract of projects	**16**	Telephonic conversations with boss/ clients
3	Reading journals and publications	**17**	Facing interviews
4	Reading manuals	**18**	Public Speeches: formal/ informal
5	Reading office documents	**19**	Listening in international seminars
6	Reading safety checklist	**20**	Listening to English speaking boss or clients
7	Communicating through E-mails	**21**	Doing post graduate study
8	Writing minutes of the meetings	**22**	Joining field trips abroad
9	Writing daily/periodic reports	**23**	Training abroad
10	Writing abstracts of projects	**24**	Resolving conflicts
11	Writing business letters	**25**	Negotiating with team members
12	Writing resumes and job applications	**26**	Teleconferencing
13	Delivering oral presentations	**27**	Working in a team
14	Attending meetings/ occasional visits	**28**	Talking about everyday task & duties
		29	Internet Surfing

The main objective of the questionnaire was to analyze expectations of business world and to get working engineers' suggestions on incorporating communication skills in the 'Engineering English' syllabus.

From the seventy five in service engineers, fifty responses were received. All these engineers work in well known companies such as: Gharda Chemicals Ltd., Lote; Infosys, Pune; Cognizant, Pune; Bharati Shipyard, Dabhol; BMC, Pune; Capgemini, Mumbai; and others. These engineers were requested to mark in an appropriate column indicating in which situations they need to use English frequently. They were even requested to write oral and/or written situations in which they use English apart from the situations included in the questionnaire.

The received responses were analyzed quantitatively. Following table shows responses received to each communicative situation.

Table 2

Responses of in-service engineers on use of English in different communicative situations

S N	Communicative Situations	None/ Least	Less	Moderate	Much	Most
1	Reading written instructions/advice	**0**	**1**	**4**	**15**	**30**
2	Reading abstract of projects	**0**	**0**	**10**	**15**	**25**
3	Reading journals and publications	**2**	**3**	**5**	**15**	**25**
4	Reading manuals	**10**	**10**	**10**	**5**	**15**
5	Reading office documents	**0**	**0**	**13**	**20**	**17**
6	Reading safety checklist	**0**	**10**	**10**	**10**	**20**
7	**Communicating through E-mails**	**0**	**0**	**5**	**15**	**30**
8	Writing minutes of the meetings	**5**	**30**	**5**	**5**	**5**
9	**Writing daily/periodic reports**	**0**	**0**	**6**	**9**	**35**
10	Writing abstracts of projects	**6**	**15**	**9**	**10**	**10**
11	**Writing business letters**	**0**	**0**	**10**	**10**	**30**
12	Writing resumes and job applications	**4**	**2**	**7**	**15**	**22**
13	**Delivering oral presentations**	**1**	**1**	**3**	**15**	**30**
14	Attending meetings/ occasional visits	**5**	**10**	**10**	**15**	**10**
15	Talking about daily life situations	**5**	**15**	**19**	**4**	**5**
16	Telephonic conversations with boss/ clients	**3**	**2**	**15**	**10**	**20**
17	**Facing interviews**	**0**	**0**	**10**	**20**	**20**

18	**Public Speeches: formal/ informal**	**0**	**3**	**5**	**10**	**32**
19	Listening in international seminars	**5**	**5**	**10**	**12**	**18**
20	Listening to English speaking boss or clients	**4**	**10**	**10**	**10**	**16**
21	Doing post graduate study	**4**	**20**	**10**	**5**	**11**
22	Joining field trips abroad	**10**	**8**	**10**	**10**	**12**
23	Training abroad	**10**	**13**	**6**	**5**	**16**
24	Resolving conflicts	**11**	**20**	**10**	**6**	**3**
25	Negotiating with team members	**12**	**15**	**15**	**4**	**4**
26	Teleconferencing	**7**	**12**	**15**	**9**	**7**
27	Working in a team	**15**	**10**	**10**	**10**	**5**
28	Talking about everyday task & duties	**13**	**15**	**10**	**10**	**2**
29	Internet Surfing	**0**	**0**	**0**	**5**	**45**

Findings and discussion

Following analysis is done by grouping together the responses 'none/least and less' and are called negative, and 'moderate, much, and most' together and are called positive responses.

Reading written instructions/advice, reading abstract of projects, reading journals and publications, reading office documents have got forty nine, fifty, forty five, fifty positive responses respectively. It indicates that these situations are very important to in-service engineers. Reading safety checklist, reading manuals have got forty and thirty positive responses respectively which reflects these situations are comparatively less important to engineers.

Communicating through e-mails, writing business letters, writing daily/periodic reports have received fifty out of fifty positive responses. It means that in writing tasks in-service engineers need to write emails, business letters, and daily/periodic reports frequently as a part of their duty. Writing minutes of the meetings, writing abstracts of projects, writing resumes and job applications have got fifteen, twenty nine and forty four positive responses respectively and it shows that writing minutes of the meetings, writing abstracts of projects have low rating in engineers' professional life. But writing resumes and job applications play vital role in their life.

Forty eight respondents out of fifty say that delivering oral presentations is crucial to all engineers. Because whatever product, software, chemicals, machine designs companies produce,

engineers have to give its demonstrations or presentations to customers. Facing interviews has received fifty out of fifty positive responses, which shows the importance it has in corporate world. Engineers keep on changing their jobs and companies to get different experiences and advanced knowledge and at each stage they have to face different interviews in which they have to speak in English.

Public speech- formal/informal has got forty seven positive responses and this skill is also important to them. Telephonic conversations with boss/clients have got forty five positive responses and attending meetings/ occasional visits has received thirty five positive responses. Talking about daily life situations has got only twenty eight positive responses. It shows that some in-service engineers prefer to use their mother tongue/ regional language to talk about daily life situations.

Listening to international seminars and listening to English speaking boss or clients have received forty and thirty six positive responses respectively. It means to update the knowledge and acquire recent developments in each field engineers need to attend international seminars and conferences. Doing post graduate study has received twenty four negative and twenty six positive responses. It shows that half of the respondents are planning for PG and they are aware that English is must at that time. However, half of them have given negative responses probably because they may not be planning for PG.

Joining field trips abroad, training abroad, resolving conflicts, negotiating with team members teleconferencing, working in a team, talking about everyday tasks and duties have received thirty two, twenty seven, nineteen, twenty three, thirty one, twenty five, twenty two positive responses respectively. This data shows engineers might not use English for resolving conflicts, negotiating with team members and even for talking about everyday task and duties.

Internet surfing has received all positive responses, which shows that how English is important for surfing on internet because all the scientific and technical information is available in English.

These in-service engineers were also requested to write the situations they frequently meet and have to use English in. Some of them have given following oral and written situations:

- Chatting with friends

- Emailing service department
- Regarding the project update and queries
- Remote support to the customer/client on the technical issues via phone
- Speaking to any customer care executive, shopping centers, malls
- Writing personal diary
- Talking at home amongst friends
- While making entry in Offshore Delivery Center (ODC)
- Talking in the canteen
- For writing project document that is Test Case Report
- Writing safety reports
- At the time of daily updates

Conclusion

Thus, as per the above analysis, in oral communication, *public speech (94%), interviews (100%), and presentations (96%);* and in written *letter writing (100%), e-mail writing (100%), and report writing (100%)* have got maximum positive responses showing that these communicative situations are very important for engineers.

Hence it can be concluded from the above discussion that strong communication skills are a part of practically every interaction in engineering work. It is no wonder communication consistently ranks among the top skills essential to the profession. So proper training must be given to the engineering students during their graduation course. The communicative situations which are highly important to them should be included in their syllabus.

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