

Using Tasks to Improve the Soft Skills among Pre-Final Year Engineering Students of Erode District

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“A college education is not a quantitative body of memorized knowledge salted away in a card file. It is a taste for knowledge, a taste for philosophy, if you will; a capacity to explore, to question, to perceive relationships, between fields of knowledge and experience.”

- A. Whitney Griswold

Abstract

Engineering departments widely recognize an increasing need to equip students with effective study skills early in their university education and basic professional skills prior to graduation. These, however, are traditionally difficult modules to teach successfully to larger groups through traditional lecturing. Observations suggest a poor absorption rate of the students and thus a lack in their ability to benefit from these skills both personally and professionally. This research documents the findings of initiatives which aim to improve the success of teaching of study skills by combining academic and commercial leanings into a modified teaching approach. The results and specific techniques described in this paper can easily be integrated into most types of teaching materials.

Keywords: Soft skills, Engineering, Tasks, TBI, Communicative Language Teaching, ELT

BACKGROUND OF THE STUDY

Over the past 10 years, there has been an increase in emphasis on 'soft' skills in Higher Education engineering programs. Reflecting both the demands of potential employers and professional bodies, as well as the creativity of course designers, modules such as first year 'study skills' and final year 'professional skills' have become more and more common. The greatest focus has been placed on fundamental topics such as presentation skills, effective report writing, teamwork, and time/project management. Whilst this change is certainly a positive one, these modules seem to be among the more challenging to teach and assess successfully, the criteria for success being that the student can understand the concepts presented, apply them using exercises, and demonstrate the resulting competence through assessment. In a recent survey carried out by the University of Hull involving engineering students from five universities, less than 10% of students reported to have found teaching of study skills useful whereas

41% found it to be of no use. It seems that such modules are not popular with students or with engineering staff. The situation appears strained, especially at first year level, with students reluctant to attend and claiming that the subject is irrelevant or that they have covered the material before. There are several observations relevant to the perceived lack of penetration. First, most engineering students are male, and male first year engineering students report a high level of confidence in their own ability in both 'academic' and 'soft' subjects. Secondly, young men are reported to experience difficulty in taking advice from parents and teachers. It also seems likely that engineers as teachers fail to respond to students' attitudes and do not teach topics such as teamwork and presentation skills in a way that is palatable to students; a particular lecturing 'manner' may be appropriate when teaching, for example, circuit theory, but this manner may be inappropriate to the teaching of soft skills. For this reason the investigation reported here combines both the experiences of academic staff at the University of Hull and those from SP Consulting, an international consulting and training company with significant experience teaching 'soft' subjects to professional engineers. A modified teaching approach is required. The approach needs to add interest and obvious relevance; students need to feel that any guidelines presented can solve a pressing issue or concern that exists in their world. Above all, to be successful the teaching approach must be dynamic, interesting, and practical and organized to manage tactically the attention span of the audience.

STATEMENT OF THE PROBLEM

The study was set out to explore the concept of soft skills and has identified the effect that the specially designed tasks had on the soft skills of the students. Also the study has identified the important soft skills for getting a good job and also some innovative techniques for implementing those tasks in the classrooms. Each and every task has a specific goal of reducing

the affective factors of the students, thereby increasing their soft skills. The study has also sought to know whether any changes occurred on implementing the tasks in the classroom. Also if any changes occurred, the reasons were analyzed based on the data from pre-test and post-test questionnaire.

OBJECTIVES OF THE STUDY

The main objective of the study is to show that combining task based instruction and traditional method is practical and effective way of improving the soft skills of the students. To meet this objective the study addresses three separate goals:

- i. To teach soft skills concepts to engineering students by providing them with a real world application of prior knowledge.
- ii. To provide students with an opportunity to express their ideas.
- iii. To provide students with an opportunity to work in teams.

Coverage

The study covered only the pre-final year Engineering students of private Engineering colleges in Erode district. The study also covered the selected English teachers of Private Engineering colleges in Erode district and selected HRs from various working sectors such as IT, Mechanical, Electrical, Civil and MNCs.

METHODOLOGY

In this study, a questionnaire on soft skills was given to 1000 pre-final year engineering students of the private Engineering colleges in Erode district. The questionnaire consisted of yes/no type questions which were used to find out the techniques used by the students in order to understand what they listen to in the modules prescribed for them. Another type of question which was designed using the Likert's scale aimed at identifying the level of the affective factors for each soft skill. Based on the responses from the students, the researcher then designed a set of tasks for improving each soft skill (one pedagogical task; one real world task). Then, an action research has been conducted, among 500 students out of those 1000 surveyed. Before the intervention of the tasks, the researcher gave the students a brief view on soft skills, and about the tasks they were supposed to do. During the intervention process, the tasks were done by the students with the researcher explaining the procedures for completing the tasks. Then, after the task intervention phase, a post-test questionnaire was distributed to the students in order to check the changes these tasks has made in reducing the level of the affective factors, thereby improving the soft skills of the students. Then the gathered data were analyzed for interpreting the results.

Data Analysis and Interpretation

Analysis of Listening Comprehension

For the analysis, data were gathered from the students' questionnaires (before and after pedagogic intervention) and from a set of activities designed and administered by the researcher in four teaching sessions.

Students' questionnaire before intervention

With the aim of finding out which problems the students' believed they had in performing listening comprehension activities, the students were given a questionnaire (Appendix A) which mainly focused on the students' perceptions about listening comprehension tasks. The results coming from question 1 were grouped and classified into categories to facilitate their listening comprehension: (1) Pronunciation, (2) Affective Factors, (3) Environmental Factors, (4) Listening Material and (5) skills.

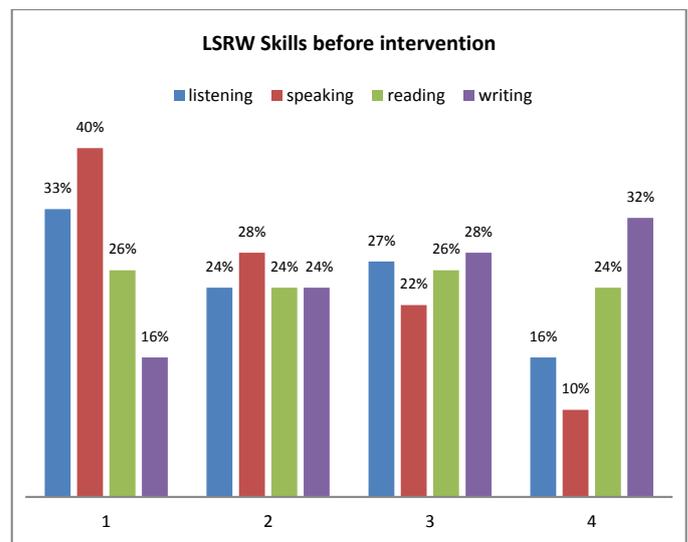


Figure 1. Order of importance of LSRW skills before intervention

From figure 1, it is understood that among the four basic skills of communication (Listening, Speaking, Reading and Writing), before the intervention 33% of the students' considered listening is important whereas speaking is considered the most important by 40% of students'. Reading stands third with 26% and Writing opted by minimum number of students 'with 16%.

Figure 2 below shows the top five factors that affected the learners' degree of comprehension. These factors are presented below in order of importance followed by their percentages in numbers: (1) pronunciation, (2) Listening Materials, (3) Affective Factors, (4) Skills and (5) Environmental factors.

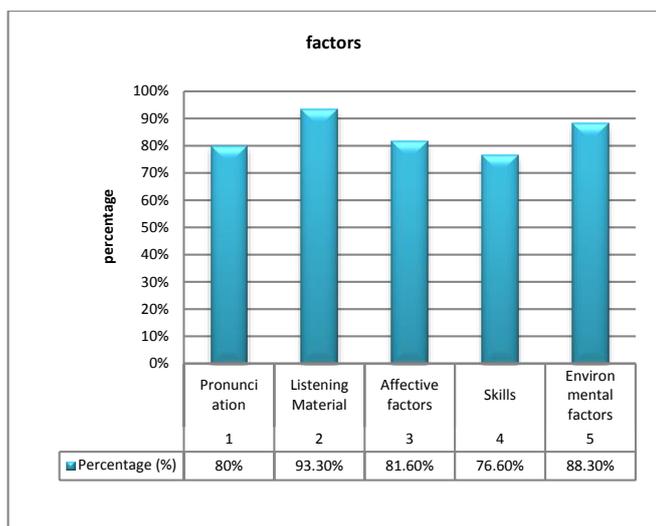


Figure 2. Factors affecting the students' listening comprehension before intervention

On looking at figure 2, it transpires that before the intervention phase, the students had some knowledge of which factors influenced their listening comprehension. These factors, as reported by the learners, correlated significantly with the researcher's initial perception. These results reinforced the researcher's perception that certain crucial changes had to be implemented in the pedagogy in order to help the students develop their listening comprehension skills to become competent language users.

Based on these findings, the next step consisted in designing a course of action to help these students improve their L2 listening skills. First, a set of listening activities was designed. These tasks contemplated, as closely as possible, most of the students' needs as presented in the findings above. Second, those pedagogical tasks designed were implemented. Finally, post-intervention data were gathered to compare and evaluate results.

Pedagogic intervention: focus on listening

Prior to the instrumentation of this listening project, the listening classes at the institutions were basically product-oriented in that they mainly sought to test the students' listening comprehension, rather than teach them the listening strategies per se. as a general principle, listening classes usually started out by eliciting some information from the students about the topic of listening material they would be later on exposed to. Then, the students were made to do the first activity (improving listening skills). This primarily aimed at checking the students' level of listening comprehension. Finally, the students were made to check the right answers.

The researcher designed a battery of tasks with a focus on listening skills and implemented them in two consecutive classes. Each of these classes was divided into three stages: pre-listening, while-listening and post-listening activities (Hedge, 2005). As these stages pursued different aims, they comprised a set of assorted comprehensible tasks, all with a focus on the

development of listening skills. The aim of these tasks was to activate previous knowledge and guessing strategies.

Students' questionnaire after intervention

After the intervention of these tasks on listening, the students were given a post-intervention questionnaire (Appendix B). This questionnaire aimed at making the students compare the development of their listening skills before and after the implementation of change. In this second questionnaire the students indicated those factors that they reported had hindered their listening comprehension before intervention, the skills they had turned to complete the set of activities done and their perception as regards their development of their listening comprehension.

Then the students were made to analyze and reflect on the set of activities done during these tasks. The outcome of the students' report is displayed in the form of a matrix (see table below) which consists of two rows. The skills the students thought they had used in their lessons are presented in percentages on the right of this table.

Surprisingly, those skills that the students recurrently referred to in their reports more often and which were allotted the highest percentages (activate general knowledge 95%, guess from context 72%, and concentration on prominent words 87.5%) were the ones that the researcher looked at and worked on more during the implementation of this project. This might mean that after the pedagogical intervention these students noticed the importance of using and developing these skills for the betterment of their listening comprehension, a fact that in the past they had probably ignored.

Table 1: Skills used to complete the set of listening activities proposed

S.no.	Skills used	%
1	I tried to understand everything	60%
2	I tried to listen word by word	12.5%
3	I tried to activate general knowledge of the topic to understand the listening text	95%
4	I guessed in order to understand when I missed information	72.5%
5	I thought ahead generally, what was going to be talked about while listening	57.5%
6	I used my knowledge of the language	70%
7	I concentrated on particular words which were made prominent	87.5%
8	I assumed success that understanding was relatively easy and that there would not be serious breakdowns in communication	62.5%

In the second questionnaire, the students were also asked to refer to those same factors which they had reported as barriers for their understanding in the first questionnaire. The aim of this was to see if, after the implementation of this change, these learners thought that these factors still affected the development of their listening skills. Thus the students ranked those factors on a scale ranging from A Lot – Very Much – Fairly – A Little – None.

All in all, it seems that the changes implemented in teaching the listening strategies with the help of tasks arose a feeling of self-reliance and confidence on the students.

Analysis of Teamwork

Analysis of Teamwork

For the analysis, data were gathered from the students' questionnaires (before and after pedagogic intervention) and from a set of activities designed and administered by the researcher in four teaching sessions.

Students' questionnaire before intervention

With the aim of finding out which problems the students' believed they had in performing teamwork activities, the students were given a questionnaire (Appendix C) which mainly focused on the students' perceptions about teamwork tasks. From the review of literature, the researcher found that the following are the factors which affected the teamwork skills of the students: (1) win-lose attitude, (2) Individual opinion, (3) poor-interpersonal skills, (4) independence vs. interdependence and (5) confusion/ flock mentality.

Figure 9 below shows the top five factors that affected the learners' degree of comprehension. These factors are presented below in order of importance followed by their percentages in numbers: (1) win-lose attitude, (2) Individual opinion, (3) poor-interpersonal skills, (4) independence vs. interdependence and (5) confusion/ flock mentality.

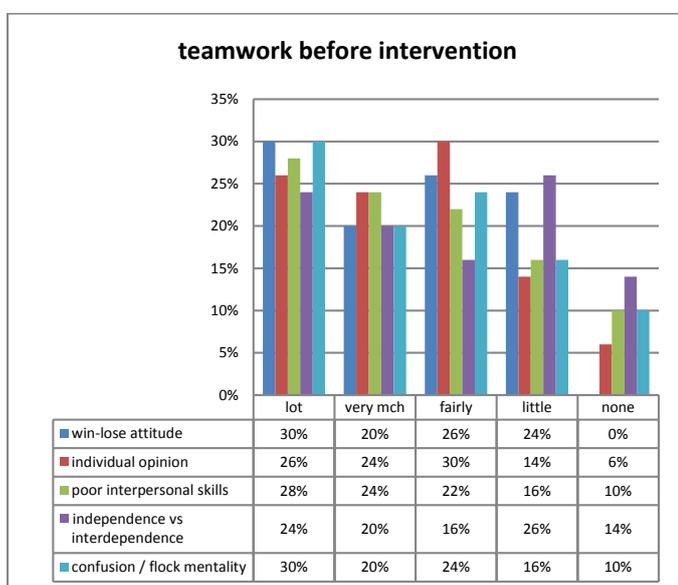


Figure 3: Factors affecting the students' teamwork before intervention

On looking at figure 3, it transpires that before the intervention phase, the students had some knowledge of which factors influenced their teamwork. These factors, as reported by the learners, correlated significantly with the researcher's initial perception. These results reinforced the researcher's perception that certain crucial changes had to be implemented in the pedagogy in order to help the students develop their teamwork skills to become competent language users.

Based on these findings, the next step consisted in designing a course of action to help these students improve their teamwork skills. First, a set of team activities were designed. These tasks contemplated, as closely as possible, most of the students' needs as presented in the findings above. Second, those pedagogical tasks designed were implemented. Finally, post-intervention data were gathered to compare and evaluate results.

Pedagogic intervention: focus on teamwork

Prior to the instrumentation of this listening project, the career classes at the institutions were basically product-oriented in that they mainly sought to test the students' group abilities, rather than teach them the team dynamics per se. As a general principle, teamwork classes usually started out by eliciting some information from the students about the topic of team activities they would be later on exposed to. Then, the students were made to do the first activity. This primarily aimed at checking the students' level of teamwork knowledge.

The researcher designed a battery of tasks with a focus on teamwork skills and implemented them in two consecutive classes. Each of these classes was divided into three stages: pre-task, while-task and post-task activities (Hedge, 2005). As these stages pursued different aims, they comprised a set of assorted interesting tasks, all with a focus on the development of teamwork skills. The aim of these tasks was to activate interpersonal skills and the interdependence skills of the students.

Students' questionnaire after intervention

After the intervention of these tasks on teamwork, the students were given a post-intervention questionnaire (Appendix D). This questionnaire aimed at making the students compare the development of their teamwork skills before and after the implementation of change.

In the second questionnaire, the students were also asked to refer to those same factors which they had reported as barriers for their teamwork ability in the first questionnaire. The aim of this was to see if, after the implementation of this change, these learners thought that these factors still affected the development of their teamwork skills. Thus the students ranked those factors on a scale ranging from A Lot – Very Much – Fairly – A Little – None.

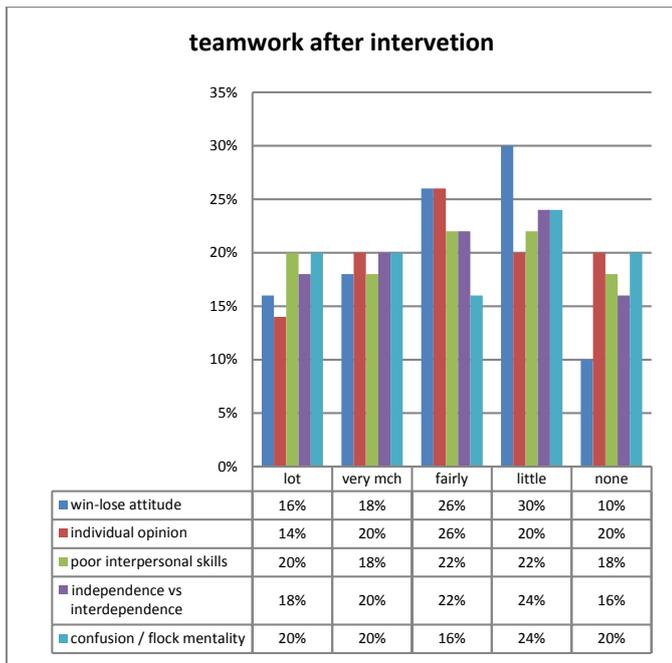


Figure 4: factors affecting the students’ teamwork after intervention

From the above figure, it is understood that, majority of these students acknowledged the importance of being taught teamwork strategies for the improvement of teamwork skills of the students. All in all, it seems that the changes implemented in teaching the teamwork strategies with the help of tasks arose a feeling of oneness and confidence on the students.

Analysis of Time Management Skills

Analysis of time management skills

For the analysis, data were gathered from the students’ questionnaires (before and after pedagogic intervention) and from a set of activities designed and administered by the researcher in four teaching sessions.

Students’ questionnaire before intervention

With the aim of finding out which problems the students’ believed they had in performing time management activities, the students were given a questionnaire (Appendix E) which mainly focused on the students’ perceptions about time management tasks. From the review of literature, the researcher found that the following are the factors which affected the time management skills of the students: (1) procrastination, (2) unclear objectives, (3) not wanting to say no and (4) disorganization.

Figure 16 below shows the top four factors that affected the learners’ time management skills. These factors are presented below in order of importance followed by their percentages in numbers: (1) procrastination, (2) unclear objectives, (3) not wanting to say no and (4) disorganization.

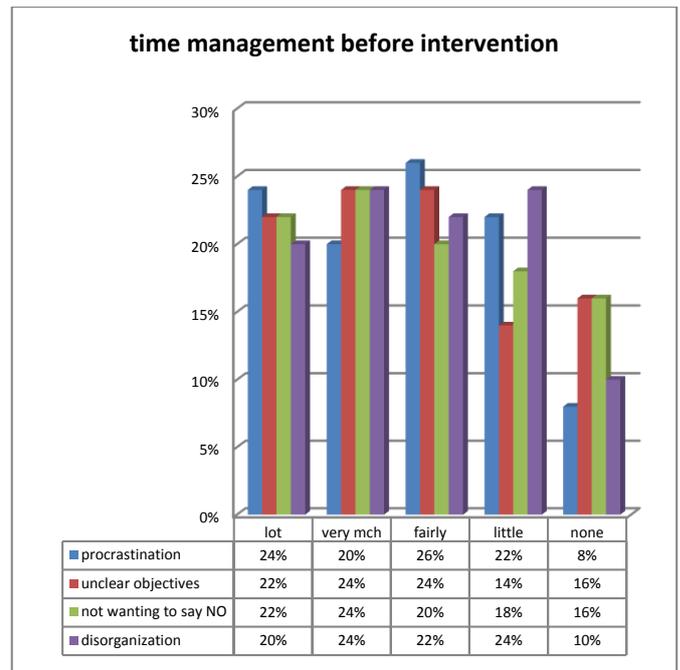


Figure 5: Factors affecting the students’ time management skills

On looking at figure 5, it transpires that before the intervention phase, the students had some knowledge of which factors influenced their time management skills. These factors, as reported by the learners, correlated significantly with the researcher’s initial perception. These results reinforced the researcher’s perception that certain crucial changes had to be implemented in the pedagogy in order to help the students develop their time management skills to become competent language users.

Based on these findings, the next step consisted in designing a course of action to help these students improve their time management skills. First, a set of activities were designed. These tasks contemplated, as closely as possible, most of the students’ needs as presented in the findings above. Second, those pedagogical tasks designed were implemented. Finally, post-intervention data were gathered to compare and evaluate results.

Pedagogic intervention: focus on teamwork

Prior to the instrumentation of this project, the career classes at the institutions were basically product-oriented in that they mainly sought to test the students’ time management abilities, rather than teach them the strategies involved in managing the time. As a general principle, time management classes usually started out by eliciting some information from the students about the topic of time management activities they would be later on exposed to. Then, the students were made to do the first activity. This primarily aimed at checking the students’ level of utilizing the allotted time.

The researcher designed a battery of tasks with a focus on time management skills and implemented them in two consecutive

classes. Each of these classes was divided into three stages: pre-task, while-task and post-task activities (Hedge, 2005). As these stages pursued different aims, they comprised a set of assorted interesting tasks, all with a focus on the development of time management skills. The aim of these tasks was to activate prioritizing and the scheduling skills of the students.

Students' questionnaire after intervention

After the intervention of these tasks on time management, the students were given a post-intervention questionnaire (Appendix F). This questionnaire aimed at making the students compare the development of their time management skills before and after the implementation of change.

In the second questionnaire, the students were also asked to refer to those same factors which they had reported as barriers for their time management ability in the first questionnaire. The aim of this was to see if, after the implementation of this change, these learners thought that these factors still affected the development of their time management skills. Thus the students ranked those factors on a scale ranging from A Lot – Very Much – Fairly – A Little – None.

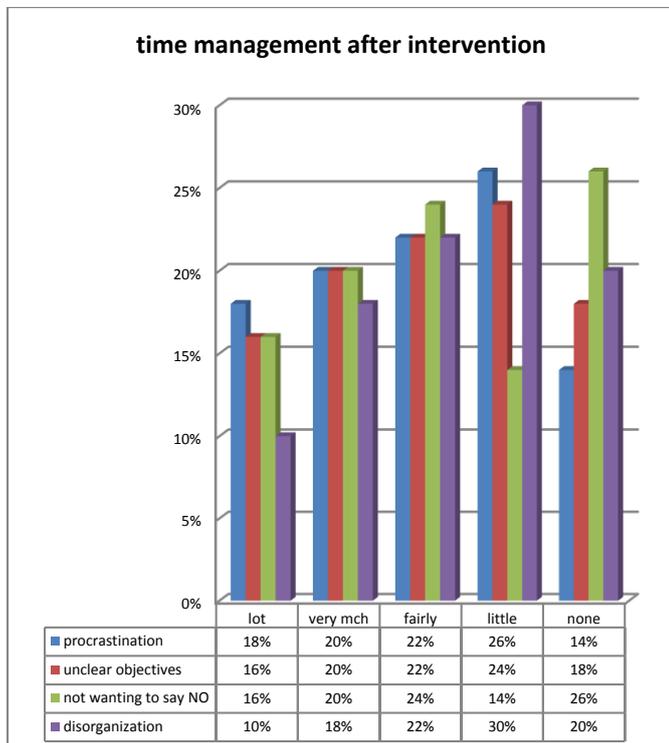


Figure 6: factors affecting the students' time management skills after intervention

From the above figure, it is understood that, majority of these students acknowledged the importance of being taught time management concepts for the improvement of time management skills of the students. In total, it seems that the changes implemented in teaching the time management strategies with the help of tasks arose a feeling of timeliness and confidence among the students.

FINDINGS OF THE STUDY

The collected data were analyzed using percentage analysis. Interpretations were made based on the results. The major findings of the study are as follows:

- Implementation of tasks in the classrooms brought a remarkable change in reducing the level of the affective factors of the soft skill concerned.
- Students were eager to participate in each task, since every task was designed to stimulate the energy and the thinking power of the students.
- Team work tasks were not that much effective because of the students strength exceeding the size of the classroom. In the large size classrooms, the learning becomes more teacher-centered rather than the desired group work, discussions and so on.
- In large size classrooms, it becomes difficult to incorporate any feature that has an element of personal attention.

CONCLUSION

In the light of the role the English language plays in the twenty first century, there is a need to teach English as a life skill. Life skills are abilities individuals can learn that will help them to be successful in living a productive and satisfying life. The urgent requirement of the hour is to gear up engineering students for the job market by teaching them job-oriented English language skills.

In the age of globalization, teachers of English need to undergo a paradigm shift and change their teaching methodology that will suit the need of the learners. They should be willing to come down to the level of learners and instill confidence in the latter. They should asses the present and future language needs of learners and teach them how to fish instead of giving them fish to eat. Teachers of English are not mere teachers of grammar; they are expected to play the role of soft skill trainers. They should teach English as life skill and this is how they do justice to the learners. This is possible only if curriculum designers become aware of the real needs of the future engineers of the country.

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