
ENHANCING THE SOFT SKILLS OF ENGINEERING STUDENTS THROUGH TASK BASED INSTRUCTION

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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, task based instruction.

Introduction: 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.

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. 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:

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

Findings of the study:

The major findings of the study are as follows:

- a. Implementation of tasks in the classrooms brought a remarkable change in reducing the level of the affective factors of the soft skill concerned.
- b. Students were eager to participate in each task, since every task was designed to stimulate the energy and the thinking power of the students.
- c. 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.
- d. 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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