

## **OPEN LEARNING STRATEGIES FOR ENHANCING ON-CAMPUS TEACHING: AN EXPERIMENT**

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### **1. TEACHING OF ENGLISH IN ENGINEERING INSTITUTIONS**

One of the major problems of professionals in Asia is communicating effectively in English both at the written as well as the verbal levels. With globalisation and the ever-increasing international exchanges, the amazing gap between the professional competencies and the required matching communication competencies has been highlighted. This is most evident in the field of science & technology.

In India, teaching of English in Engineering colleges has always held a dubious status. While everyone agrees that adequate language and communication competencies are imperative for good engineers, attention given to these curricula has been, at best, half-hearted. In most developing countries, only a very small percentage of students have access to English medium schooling but the medium of all higher and professional education is English. Consequently, at the level of higher education, the expectations change and progressively become more demanding.

There is sufficient evidence to believe that the problem is not unique to India, but is more or less universal all over Asian countries and there is an urgent need for evolving common remedial strategies.

Although most engineering colleges offer one or two courses in English Language, little effort is made to identify the most appropriate content, methodology, time and place for delivering these courses. The actual learning outcome of these courses is therefore, highly questionable because some of the following basic facts are overlooked:

- A substantial number of students opting for Engineering come from vernacular medium schools and need help in English which happens to be the medium of instruction in all engineering colleges in India.
- Language learning is a skill-oriented activity and needs an entirely different pedagogic approach from the one used for other conventional Courses.
- The students come from different states and types of schools. Even within the same group their individual problems need to be addressed differently in terms of materials and methodology.
- As the learners are adults they have different learning styles which must be respected.

The other important fact to be noted is that language learning demands very strong *motivation* both on the part of the teacher as well as the taught. In the present system there is little of it due to several genuine and understandable reasons:

- i) The teacher has little motivation because much of the teaching is remedial in nature and offers little scope for professional growth. Rarely, a faculty member views teaching English in an engineering college as a really meaningful assignment.
- ii) For the student, on the other hand, it is a question of wrong timing. Most of the English Language courses are offered in the first year, often in the very first semester. At that stage, the student is in no frame of mind to work on English. He feels cheated for he has, with great difficulty joined an Engineering College and wants to be exposed to *higher* learning experience rather than to seemingly irrelevant English writing and grammar. At this stage, he is too young to

realize the eventual need of these skills. It is only in the third year or so that the students become aware of their needs and are then desperately looking for help which, due to time constraint, becomes not only difficult but almost impossible.

There is, therefore an urgent need to find a workable solution so that the students in professional colleges have an opportunity to acquire skills on which their professional excellence depends.

## 2. THE PROBLEM

How to provide instruction to large, heterogeneous groups who need English language for their professional survival ? How to motivate students to spend time and effort in developing the required language competencies? How to accommodate teaching of these essential competencies within a very limited time frame available at the higher/professional education level.

*There is simply too much to be learnt in too short a time with very limited human resources.* New avenues need to be explored. **On-line Programme for English Language (OPEL)** is one such attempt.

## 3. THE CONCEPT

The concept OPEL is founded on the belief that some of the major lacuna in on-campus teaching can be overcome by using strategies used by open/distance learning. Putting a fair share of responsibility on the on-campus learner, the concept attempts to propose a new pedagogical approach. The focus is intentionally shifted from **teaching to learning**, and the role of the teacher is being redefined from a lecturer to a guide.

Today, the educational delivery systems are clearly demarcated into - traditional On-campus mode and the Open/distance mode. There have been substantial amount of research and development in both microcosms and today, both the systems have a well-defined learner universe and well-established operational strategies. Technology has played a major role in reshaping both the systems. Can it go further and help to wed the two systems for the eventual bliss of the learner? Can open learning strategies be employed to enhance on-campus teaching?

The answer, according to this author, is an emphatic Yes. This paper discusses the possibilities of harnessing the strongest features of the open system to plug some of the major handicaps of the on-campus system for teaching English language.

An experiment was designed and pilot- tested at IIT Delhi, which proposes to harness the power of the computer to overcome one of the most pressing problems of engineering education in India. The experiment undertakes to design and set up an innovative system of delivery of on-campus courses in open-distance mode. It is a **virtual** class on a **real** campus.

The experiment called **On-line Programme for English Language (OPEL)** was designed to place the learner at centre stage. The philosophy of the system is based on the belief that *a language must be learnt and not taught*. The concept is built on the belief that students learn to write by writing and by listening to an expert discussing how writing should be done. For effective learning in this case, activities and assignments are needed with minimum directions from the *front* of the classroom. OPEL, therefore, offers:

- Multi-layered curricula
- Visually rich learning material
- Need-based learning
- flexibility of time of learning
- flexibility of pace of learning
- flexibility of place of learning
- learner preference of sequence of learning
- On-line evaluation
- Greater confidence in handling computers

The delivery system offers the possibility of designing personalized curricula where the learner has the full freedom to choose what she wants to learn, how long she wants to learn and the order in which she wants to learn. The on-line delivery system though designed for **intranet** use is fully usable as an **internet** system.

#### 4. THE EXPERIMENT

Involved the following steps -

- A) Identifying the users and providing each one of them with an e-mail address and access to the Computer Centre.
- B) Developing the course material in appropriate (computer compatible) format.
- C) Developing a system for placing the materials on the net for proper accessibility by the students.
- D) Evolving a system of evaluation

##### 4.1 THE SAMPLE

A detailed student profile was drawn up with the help of questionnaires. There were two different sets of learners -

- A. Institute students who were not registered in any English Language course but wished to work towards enhancement of their writing competencies. These students were more or less on their own. A database was maintained to see how many people were accessing OPEL and which modules were being accessed the most.
- B. The second set of learners were students who had registered for one of the three mandatory courses.
  - A random sample of 50 students were approached and given the *diagnostic test*.
  - On the basis of the diagnostic test (which also served as the Pretest), three different levels were identified.
    - a. Group I (Extremely weak)
    - b. Group II ( Lower Intermediate Level)
    - c. Group III (Upper Intermediate Level)
  - Each group followed a different curriculum but worked with the same teacher. Every third lecture was taken with the entire class. This offered possibility to the students to meet and interact and feel a part of the same programme. The teacher kept her usual office hours during which time any one from any group could come and discuss their problems.. The learners chose their own sequence but took the same test conducted at the same time.

##### 4.2 THE COURSEWARE

A list of competencies were drawn up. Syllabi from many colleges were collected to select the *basic common competencies*. 50 competencies were identified (Annexure I). These were then regrouped to form 12 modules. The competencies were divided into three categories -

- Enabling
- Developmental
- Task Oriented

## THE COMMUNICATION PRECESS

### BASIC COMPETENCIES - 50

ENABLING	DEVELOPMENTAL	TASK-ORIENTED
About Words	Developing Ideas into paragraphs	Report Writing
Common Errors - I (Grammar related)	Describing people/products	Technical Presentations
Common Errors - II (Meaning related)	Narrating events/processes	Research papers
About Sentences	Explaining concepts/ideas	Writing Resumes
	Giving instructions	

It was decided not to provide any print support material.

After the diagnostic test, three different curricula were evolved which had different competencies:

Group I - 70% from Enabling and 30 % from Developmental

Group II - 40% from Enabling, 40% Developmental & 15% from Task Oriented (a small report)

Group III - 25% Enabling, 30% Developmental & 45% Task-Oriented (Report/Presentation)

### 4.3 THE SOFTWARE

For the pilot programme, stand alone modules were prepared in different platforms ranging from Turbo Pascle to Authorware to Visual Basic. These were then made available to the students on floppies. The students interacted with the teacher through e-mail and face-to-face contact during office hours.

A data base was maintained (manually) of the sessions/time per session used by both the sets of learners.

### 4.4 THE EVALUATION PROCESS

Evaluation was an important issue in this concept. In addition to the initial diagnostic (Pre-test), three different possibilities of evaluation were offered:

- i) **Self-assessment** of learning at the single module level. This will be provided within the module so that the learner can get an immediate feedback at the end of the module. This would enable the learner to decide whether or not to repeat the session. Learners must receive feedback and must self-monitor for personal control over the learning process (Stevens, 1995)
- ii) In the exercises related to material for Developmental Tasks, possibility was provided to the students for **Peer evaluation**. The learners were able to interact with the other students. Some learners chose their own partners but in some cases, help could be requested.
- iii) A **formal evaluation** was planned at the end of each of the sections - Enabling, Developmental & Task-Oriented. The system will be evolved both for a diagnostic test and for end of the term tests.

## 5. IMPORTANT CONCLUSIONS

1. Good progress was reported in *Enabling* competencies.
2. Maximum interaction was maintained by learners following these modules.
3. Excellent results were recorded in Developmental Competencies.
4. Contrary to expectations, the students did not interact with each other - rarely exercises were exchanged.
5. Students found the experience very interesting and motivating.
6. Observations and results showed that learners following the task-oriented modules worked more confidently.

7. 40% of the students did not see the teacher even once.
8. 5% of the students stopped sending the exercises for correction after the second week.

## **6. POTENTIAL OF OPEL AS A DELIVERY SYSTEM**

The initial results are very encouraging. It is hoped that the OPEL, which is a pedagogical effort to mark the first step towards synergy in open learning strategies and on-campus teaching, would set the direction for a great deal of similar activity in other disciplines, particularly in areas:

- where skill-oriented activities are involved;
- where there is heterogeneity at the foundation level;
- where specialized inputs are to be provided to a limited number of students and a full time teacher is not justified;
- where senior, more experienced students can guide and assist their juniors and peers to master the required skills.

The system also opens doors for further research in the areas of :

1. Effectiveness of machine-based learning.
2. Effectiveness of the system for Laboratory Experiments.

## **7. EPILOGUE**

Based on the success of the pilot experiment, the author has designed and developed a full fledged CALL programme with twelve modules. A large number of open learners are making use of the system and the students registered for three courses (Preparatory, one UG and One PG course) are using the material in a controlled way. The results of this phase of the experiment will be presented during the forum on 1-5 March, 1999.

Annexure I

### **IDENTIFIED CORE COMPETENCIES**

1. Principles of Communication
2. Words and their Meaning
3. Evaluating Your Vocabulary
4. Increasing Your Vocabulary
5. The Dictionary & the Thesaurus
6. Types of Sentences
7. Common Errors in Constructing Sentences
8. Providing Variety in Sentence Structure
9. Using Prepositions
10. Coping with Spelling
11. Managing Punctuation
12. Common Errors in Tenses
13. Using Articles
14. Using Phrasal Verbs
15. Building Ideas into Paragraphs
16. Different ways of Developing a Paragraph
17. Using Links and Transitions
18. The Process of Writing: The Steps
19. Establishing the Objective of Writing
20. Identifying Audience
21. Brainstorming on Paper
22. The Art of Drafting
23. Editing and Proofreading a Document
24. Seven Cardinal Principles of Good Professional Writing

25. Developing Conciseness in Writing
26. Developing Clarity in Writing
27. Sustaining Consistency in Writing
28. Managing Tone in Writing
29. Describing People, Things and Events
30. Narrating Events/Processes
31. Giving Instructions
32. Explaining Concepts and Ideas
33. Asking & Answering Questions
34. Comparing and Contrasting Information
35. Citing References and Generating Bibliographies
36. Essentials of a Technical Reports
37. Types of Reports
38. Parts of a Report
39. Designing Good Reports
40. Illustrating Data
41. Issues related to Lay out
42. Essentials of a Research Paper
43. Writing an Abstract
44. Designing a Research Paper
45. Importance of Technical Presentations
46. Selecting & Structuring the Content of a Presentation
47. Designing Audiovisuals and Support Materials
48. Planning & Preparing the Delivery of Presentation
49. Writing Resumes
50. Evaluating Readability of Writing?