

Designing an INSET Course for The Teacher of English Literature to Teach Technical English to Teenage Students

1. Introduction

English as a foreign language in Indonesia is not taught until the Junior High School (JHS) level where it is a compulsory subject. Students enter this level (JHS) at thirteen years or more and receive for four hours a week throughout the three years of JHS. Those who continue to Senior High School (SHS) level study English for a further three years. At tertiary level a one or two-semester course in English is compulsory for all first year students. (See English Teaching Profile, 1983:2)

At Senior high School level, apart from Senior high School, there are also vocational schools such as Technical high School and Economic High School. Therefore, English as a subject in Technical high School or Economic High School is slightly different from the one taught at Senior High School. In other words, English at Technical high School is treated as ESP/EST. ESP/EST as a new trend of language training has created a series of problems for the teachers in English. It is not surprising because the teachers of English are not specifically trained as ESP teachers; some are trained at Faculty of Letters which emphasizes literary studies. Accordingly, they undergo a serious problem when teaching ESP/EST. Teaching EST is different from GE in terms of concepts, objectives, special language features, etc. To overcome such a problem, there has been a teacher training programme which converts EFL teachers into ESP teachers. It is also in line with the increasing number of learners in ESP, so the need for trained teachers of ESP becomes more urgent, as has been calculated by EEWER (1976), the number of learners in ESP situations may run into hundreds of thousands, if not millions. The provision and training of ESP teachers therefore becomes a matter of urgent necessity (Kennedy, 1979:41)

In designing a course to prepare literature teachers to teach EST, I will consider the following factors: profile of the course participants and their main problems, aims, and the objectives of the course, methods used in the course, course components, and course evaluation.

2. Needs Analysis

2.1 Profile of the Course Participants

The participants are recruited from among teachers of English literature who are experienced in teaching General English at high schools and faculty of letters. They have been teaching GE and literary studies for several years, so they have gained basic knowledge of the principles and practices of teaching and been familiar with the problems that learners have in learning in foreign language. In other words, their knowledge of teaching is picked up on the job or gained from the experience. As their educational background from the

humanities (i.e. literary studies), they, to some degree, are ignorant of science which is completely cut off from the humanity studies.

The participants have gained initial qualifications through English courses at universities which have dealt exclusively with literary studies and included linguistics study. For the first three years they studied language skills including no linguistics study. For the first three years they studied language skills including grammar/syntax and introduction to English literature and for the second two years they dealt with literary studies such as novel, drama, poetry, etc. in other words, during their studies at the faculty of letters, they spent their time dealing with pure literary studies which have nothing to do with science. Thus, the concept of teaching technical English may seem strange, even frightening to some teachers (Kennedy, 1979:43), and they will lose self confidence when facing a technical text and technical students.

2.2 Problems of transferring from EKT to EST/ESP

According to Ewer (1975:44), the problems faced by an ELT teacher when transferring from ELT to EST/ESP can be grouped under five main headings: attitudinal, conceptual, linguistic, methodological, and organizational.

2.2.1 Attitudinal

Since his previous and job career is oriented to teaching either English literature or General English, he is unfamiliar with the world of science. His main intellectual contacts are also limited to people whose interests centre around history and literature. His life experience is completely cut off from the world of science. This isolation creates an attitude leading to anti-science bias. For art students, sciences (e.g. mathematics, engineering) have become a monster like creature and also there is an opinion that science studies are more prestigious than art studies. Therefore, it is no wonder that he will lose self-confidence and feel uneasy when teaching technical students. His ignorance of science would be a barrier to the effective teaching of EST: there will be a mutual disturbance between teacher and students which is fatal to the whole enterprise.

2.2.2. Conceptual

Since his previous education is not prepared to understand science and how it is used, his conceptual knowledge of science will be inadequate for his teaching needs (EST). Since science and art subjects in developing countries are sharply divided since high school level, his concept and appreciation of science is very minimal. For instance, he may understand the individual words in technical texts, conceptually he cannot grasp, say, the mechanism of the internal combustion engine. He may also be frustrated by a series of technical terms which are strange to him. So, as long as he does not master the concept of science, he may find a problem in teaching EST. The initial step is she should have an interest, however slight, in science /technology. With an interest comes a motivation to learn more about science journals, and regard learning about science as an additional interest to their work (Kennedy, 1979:43)

2.2.3. Linguistic

The linguistic features of SET may also be a great problem for the teacher since he is not trained to teach the special features of the language with which EST is concerned. To some extent, literary or general texts are different from technical texts. In technical texts, it is common to find long compound nouns which derive from Latin words. The texts are sometimes crammed with both technical terms (Latin words) and science abbreviations and symbols which make him soon frustrated. Another problem is he will still need to know the basic lexis of a wide range of different specialities, whereas each group of his students (but not the teacher) will already be acquainted with many technical terms since they have been involved in learning the subjects for a long time.

2.2.4 Methodological

There are also some differences in attitudes and classroom procedures between those of the general classes and those of EST classes. Firstly, in GE classes the teacher's role is very dominant. In other words, the teacher functions as an instructor and the classroom activities are still centred. If need be, he acts as a dictator in the positive sense. The students are treated as a blank paper to be filled in. On the other hand, the EST teacher cannot work in the same way as the GE teacher for two reasons: (1) the EST learners are usually late adolescents and adults whose interests, motivation and emotional maturity are different attitudes, classroom practices and resources. Thus, an EST teacher should act as an organizer, a guide or a friend rather than as an instructor.

Secondly, in General English the teaching modes still focus on drills such as repetition, substitution and the activities are teacher to learner or teacher to learners, whereas in EST the teaching modes focus on learner to learner (pair work), or group work. The learners are given more chances to take part in the classroom activities and the teacher is somewhat withdrawn.

Thirdly, in GE classes, the syllabus is readily available according to the Ministry's decree; the teacher handles the teaching materials according to the fixed syllabus; whereas in EST classes, the teacher has to be able to evaluate, select and adapt existing materials to the needs of his students, and may well find himself in a position where he will have to produce entirely new ones.

2.2.5 Organizational

In terms of organization, the GE teacher's role is much lighter than of the EST teacher. In GE course, everything (e.g. syllabus, course book, etc) is

provided by the school, whereas in EST programme, the teacher has variety of functions; he deals with many things such as student job analysis, materials writing, and infra structural organization (the Provision of books, clerical facilities, etc)

3. Aims and Objectives of The Course

3.1 Aims of the course

- 3.1.1 to provide participants with a theoretical background to the various approaches to ESP teaching.
- 3.1.2 to give participants skill and confidence in processing technical information for use in their teaching situations.
- 3.1.3 to provide participants with skill in analysing SP language (e.g. English of engineering).

3.2 Objectives of The Course

by the end of the course, the participants will be able to:

- 3.2.1 identify the language teaching approach upon which a given textbook is based and decide how relevant this would be for their own students' needs;
- 3.2.2 prepare teaching objectives and lesson plan for a given teaching item of textbook unit;
- 3.2.3 demonstrate effective implementation of the lesson plan;
- 3.2.4 provide activities/task to extend the practice of functions e.g. role play/communication games;
- 3.2.5 present and practice a language function using dialogues;
- 3.2.6 demonstrate techniques for presenting and exploiting a given reading text focusing on one or two selected skills (e.g. scanning, identifying discourse markers, etc.);
- 3.2.7 identify ways in which technical demonstrations can be used for classroom teaching.

4. Methods used in the course

There are several methods (teaching techniques) which will be used in this course. The reasons are that we should avoid "one way traffic of knowledge" give more chances to the participants to take part actively in the programme, and provide the participants with various activities. The teaching techniques are as follows: video lessons, audio visual presentation of simple technical topics, discussions, teach-reteach (peer teaching), group work, and practical workshop (Bonamy and moon, 1981).

4.1 Video Lessons

As the participants are already experienced in teaching ELT and literature, video lessons, I think, are the most appropriate for them. In this video lessons, they are provided with worksheets containing a set of questions and these are immediately followed by a discussion. In the discussion the participants should comment the teaching techniques presented in the video lessons, for example, strength, and weakness of techniques. By doing so, the tutors may get inputs from the participants and share experience with them. Later, the participants give practice lessons (peer-teaching), which are videoed and analysed or discussed in the same way. If need be, some basic techniques (e.g. formats for lesson plan, modes for writing objectives, sample background layouts, use of OHP and making OHP transparencies use of the cassette recorder) may also be introduced by the tutors, so that the participants could incorporate them in later peer-teaching exercises.

4.2 Audio Visual Presentation

This is another kind of model-giving approach which also quite useful and interesting. The tutor gives short audio visual presentations of simple technical topics (e.g. simple DC circuit electric bell), and then gives out copies of the source material (taken from books on technical topics for laymen). Participants then have to prepare and present talks in their own words. This method may help the participants overcome the problem of self confidence in dealing with technical subject matter.

4.3 Discussion

At first, the tutor chairs the discussion. This role later is taken over by the participants when they have the opportunity to see the procedure in discussion. This activity helps them to play a more role and build self-confidence.

4.4 Teach-Re-teach

This techniques may be time consuming but it can improve the participants' performance considerably. By the help of comments from peers watching the video playback, the participants giving lessons can identify which sections he/she needs to improve or re-teach. The area of weaknesses can be a slow moving and meaningless drill, wordy presentation, vague explanation, etc. after a brief discussion on possible improvement he/she prepare to re-teach on the same day or the following day.

4.5 Group Work

After the formal input (a short talk in the morning session), discussion is carried out in the afternoons session. The participants should discuss in groups what they have learned from the morning input. They are asked to summarise the input in writing and also list any points which are not clear enough. This activity may help the tutor check whether the points are already absorbed and the ones which should be discussed further. Group work is also an effective way of generating feedback from the participants. To some extent, it can be used to share the knowledge between the tutor and the participants.

4.6 Practical Workshops

practical workshops are commonly used for a short training programme. These are conducted immediately after the participants get enough inputs in this activity, the participants have to practice writing objectives or preparing mini role plays on the model of those given. By doing so, the tutor may detect which points the participants misunderstand or which areas should be emphasized and reinforced.

5. Course Components

As the profile of the participants and their main problems have been described in the previous section (See needs analysis), it is relatively easy to map out a training programme which will eliminate or at least reduce the teachers' problems and lead to essential improvement in the efficiency of EST courses.

Considering the given short programme, I will not be able to cover the whole course components needed by the participants. Instead, I will select the ones which are quite essential for their immediate needs. These components areas follows :

- 1) Reading assignments (subject knowledge)
 - the scope of modern technology
 - how scientist actually work
 - sheets of questions
- 2) The special language features of EST (Examination and analysis of actual scientific texts)
- 3) The methodology of teaching EST in various circumstances.
- 4) Material production/adaption.
- 5) The organization and administration of an EST programme.

(See Ewer 1975:43)

5.1 Reading Assignments

These are intended to cover the participants' conceptual vacuum and to arouse their interest in science and technology. The reading materials will cover two topics; one on the scope of modern technology and the other on how scientist actually work. Each reading passage is accompanied by a work sheet a set of question to key in each passage and to get them to think about what they are reading. There will be two types of reading activities and intensive readings. Extensive reading aims to enlarge the participants' insights about science and technology in general and intensive reading aims to improve their understandings about specific subjects in detail. In order to absorb reading materials as many as possible, there will be classroom reading which is followed by a discussion and outside reading which may be done at home. The reading materials are selected from various sources (e.g. text books, magazines, journals, newspapers, etc)

5.2 The Special language feature of EST

This component is intended to overcome the participants' linguistic problem in EST. even though the participants are already experienced in handling GE or literary texts, they will feel uneasy or bewildere when confronting EST texts. This is because EST text have specific lexical term which are quite unfamiliar for them. In this training course I will focus on some aspects which are quite in the language of EST. these are grammar, lexis, and text types.

If we look more closely at scientific dominant and discover that certtain aspects of grammar are quite dominant and other aspects are hardly use. For instance, question-tags will not be of importance in scientific written text, whereas passive forms, modals and complex nominal groups may well be (Kennedy, 1979). So, the best way to introduce grammatical aspects in EST texts is by giving a number of scientific texts from various disciplines. We need to look not only at what occurs in scientific texts but also how an aspect of grammar (e.g. simple present) is used. By looking at a number of texts we can see the common grammatical features which occur frequently in scientific texts.

Scientific text of any disciplines also exhibit special lexical features which create a serious problem for the learners. In scientific text, we may find three categories of lexis : highly technical, sub-technical, and general. Every subject has its set of highly technical terms which are an intrinsic part of the learning of the discipline itself. A biological student studying the circulation of the blood will meet such items as atrium, ventricle, arteriole, and venule in the course of his studies. While in sub-technical vocabulary we may find words which are not specific to a subject speciality but which occur regularly in scientific and technical text e.g. reflection, intense, acumulate, tendency, isolate and dense. Learners frequently find difficulties in understanding such words (Kennedy and Bolitho, 1984:58). And many words, both technical and sub technical, are made up of root plus suffixes and prefixes like cyto-, extra-, -logy, -meter which can carry meaning. A teacher-trainee should be aware of these aspects of lexis, since part of the understanding of scientific textx depends on knowledge of their use.

An EST teacher would not be able to teach texts and design materials without having some knowledge of how a text is constituted. So, in the first place a teacher-trainee should have knowledge of analyzing at its structure or discourse markers. For instance, we may find certain link-words such as first, and, after this, subsequently, at this stage, etc. which are commonly used in proceed texts.

5.3 The Methodology of Teaching EST

This component is intended to give more insight and pratical skills on teaching techniques of EST. As teachers of English literature and General English, they are used to lecturing technique to teach literary studies and approaches emphasizing oral skills developed through structural pattern practice to teach general English. In this training course, they will be encourage to practice and develop a more communicative approaches emphasizing language functions and skills and based on task-based approacg to learning. The focus of attention moves away from the teacher who no longer directs but acts as

informant and prompter. There is more emphasis on group work, with student-rather than teacher interaction (Kennedy, 1979).

In this component, the participants will also be introduced to some communicative exercise types which are quite dominant in ESP teaching techniques. Two exercise types which are worth mentioning here are information transfer, and gaps. Information transfer principle is to transfer information from passage to diagram (e.g. table, flow chart) or vice versa. Gap principle can be divided into several types:

- a. Information gaps : One learner has some information, another do not. There is a need to communicate and share the knowledge.
- b. Media gaps : the information is available in one medium and needs to be transferred to another medium, for example read : make notes : discuss using notes : complete gapped text.
- c. Reasoning gaps : There are clues and pieces of evidence, but the answer needs to be extrapolated.
- d. Memory gaps : The learners have received some information at one stage of the lesson. Now they must use their memories to reconstruct.
- e. Jigsaw gaps : All the parts are there, but they need to be put together to form a complete unit.

(See Hutchinson & Water, 1987:140)

5.4 Materials Production

This component aims to equip the participants with skills of designing, producing teaching materials since materials writing is one of the most characteristic features of ESP in practice. By having such a skill, an EST teacher will be able to exploit or manipulate the existing materials, and hence he can match the students' needs. He may find the materials from textbooks, magazines, journals, newspapers, etc. and such materials can be designed or adapted depending in his analysis.

In designing or writing materials we take into account the following factors : input, content focus, language focus, and task (Hutchinson & Waters, 1987:108-9).

- a. Input : this may be a text, dialogue, video recording, diagram or any piece of communication data, depending on the needs.
- b. Content Focus : Language is not an end in itself, but a means of conveying information and feelings about something. Non-linguistic content should be exploited to generate meaningful communication in the classroom.
- c. Language focus : The aim is to enable learners to use language, but it is unfair to give learners communicative tasks and activities for which they do not have enough of the necessary language knowledge. Good materials should involve both opportunities for analysis and synthesis. In language focus learners have the chance to take the language to piece, study how it works and practice putting it back together again.
- d. Task ; The ultimate purpose of language learning is language use. Materials should be designed, therefore to lead towards a communicative

task in which learners use the content and language knowledge they have built up through the unit.

5.5 The Organization and Administration of an EST Programme.

This component is intended to give the knowledge of how to organize and administer an EST programme. It consists of the examination and evaluation of teaching materials, programme analysis, time-allocation, budgeting and staff management.

5.5.1 The Organization and Administration of an EST Programme

Before the teaching materials are put into use, they should be examined and evaluated. In evaluating the materials, the following principles should be taken into account:

- a) Relate teaching materials to your aims and objectives
- b) Be aware of what language is for and select teaching materials which help equip your students to use language effectively for their own purposes.
- c) Keep your students' learning needs in mind.
- d) Considering relationship between language, the learning process and the learner. (Cunningsworth, 1984:5-6)

5.5.2 Programme Analysis and Time Allocation

An EST teacher is expected to be able to analyse his programme. It means he should make a foregoing analysis before the programme starts and also weigh the programme needs, which component come first, which part is given more emphasis, etc. the programme analysis may be carried out before, during, and after the programme. By analysis it, he can measure or decide all the elements (e.g. budget, staff, materials, etc.) which support the programme. Time allocation deals with curriculum for the long run, syllabus for a particular programme, and time-table for daily activities.

5.5.3 Budgeting and Staff Management

An EST teacher may also function as an administrator. He deals with budgeting, he should be able to make a project proposal of an EST programme. A project proposal includes the purpose of the programme, staff recruitment, time allocation, resources and facilities, and overall costs, etc.

6. Course outline

6.1 Reading assignments on subject knowledge (5 hours)

In this component, the following topics are included :

- The scope of science and technology
- How the scientist actually work

Materials :

- How it works : Series 654 (Ladybird books Ltd)
- Junior Science : Series 621 (Ladybird books Ltd)

- Young Scientist Books (Usborne)
- Visual books (Macdonald), etc.

6.2 Language of EST (5 hours)

In this component, the following are included :

- Syntax
- Lexis
- Text analysis

This will be a workshop session, with analysis of real texts and group discussion.

Materials :

- Davies, F & T Greene (1984), Reading for Learning in the Sciences School Council.
- Ewer, J. R. & G. Latore (1969), A Course in Basic Scientist English. Longman.
- Herbert, A. J. (1965), The Structure of Technical English . Longman.
- Widdowson, H. G. (ed. 1979), Reading and Thinking in English. OUP (4 volumes)

6.3 Methodology (6 hours)

6.3.1 Classroom management includes:

- preparing teaching objectives and a lesson plan for a given teaching item or textbook unit.
- providing appropriate classroom seating and a chalkboard/whiteboard layout for a given teaching activity/lesson.
- demonstrating effective use of correction technique.
- demonstrating effective ways in dealing with student questions.

6.3.2 Language skills include :

- using appropriate drilling techniques for practice.
- providing activities/tasks to extend the practise of functions, e.g. role play/communication games.
- demonstrating techniques for presenting and exploiting a given reading text focusing on one or two selected skills (e.g. scanning, identifying discourse marker).

6.3.3 Communicative exercises include :

- Information transfer
- Gap exercises

This will be a workshop session and followed by peer teaching in the afternoon session.

Materials :

- Johnson, K. (1982), Communicative Syllabus Design and Methodology. Pergamon.
- Hutchinson, T. & A. Weters (1987), English for Specific Purposes. CUP

6.4 Materials production (5 hours)

In this component, the following are included ;

- General principles
- Samples of materials design/adaption

This will be a workshop session and group discussion.

Materials :

- Hutchinson, T. & A. Weters (1987), English for Specific Purposes. CUP

6.5 Organization and Administration (4 hours)

In this component, the following are included :

- Examination and evaluation of teaching materials
- Programme analysis
- Budgeting and staff management

This will be a workshop session and group discussion.

Materials:

- Cunningsworth, H. (1984), Evaluating and Selecting EFL Teaching Materials. Heineman.

6.6 Course evaluation (5 hours)

It consists of written tests and teaching practice.

Materials : The materials are based on the teaching materials and designed by the tutors.

Notes :

As the given time of the course is very short (30 hours) and many topics should be covered, I would organize the everyday activities in the form of "learning cycles" consisting of the following elements: formal input, leading to practical workshops, video lessons followed by discussion, peer-teaching exercises by participants, videoed, followed by feed-back and opportunities for re-teaching, group work, etc. (Bonamy and moon, 1981:81).

At the end of the course (the last day), the participants will have a written test and teaching practice (per-micro teaching) to check whether the essential points (9 topics) given have been understood.

7. Course Evaluation

In order to get maximum results, a programme should be evaluated. In this course the evaluation will be focused on the participants' achievement. It will cover the following components ;

- a. Theoretical component : It will be a written test which comprises essay questions based on the materials given during the course.
- b. Practical component : It will be a teaching practice (i.e. peer-micro teaching). Each participant should demonstrate his teaching skill in front of his peers for a particular skill and it will last 10-15 minutes.

The following is a sample of the written test ;

- 1) In theory there is no difference between ESP and GE teaching in practice, however, there is a great deal of difference. How far would you agree with this statement? What differences, either in theory or practice do you think there are?
- 2) What do you understand by the term "communicative"? What features would, for example, characterize "communicative" materials?
- 3) Describe the differences between General English texts and EST texts?
- 4) What criteria would you regard as the most important in evaluating materials? Put the categories in the checklist in a rank order of importance?
- 5) Design "communicative" exercises based on the five principles of communicative exercise type (e.g. information transfer, information gap) from the following materials.

8. Conclusion

Having such a short programme (30 hours), we cannot expect the maximum results from the participants. It is not possible to transfer skills in a short time. To overcome such limitation, the following are some suggestions:

- 1) Providing handouts as many as possible, not only outlines but also samples of various teaching activities, etc.).
- 2) Providing more peer-teaching exercises. Each participant should give more than one exercise using both a general English text book and an ESP text book. Bearing in mind that principle of teach-reteach should not be neglected. That is why video recording plays an important role. This recording can also be used for the next course.
- 3) Providing more practical workshop to share experience between the tutors and the participants. This technique may be useful to get more inputs in the improvement of an EST programme.
- 4) The course should be generative. It means there will be a post-course activity or a follow up. For instance, the participants may have periodical meetings, reading circles or periodical monitoring.

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