The principles of design of instructional materials for English for Specific Purposes (ESP) to be taught in a non-English-speaking country are outlined, and the development of materials for an Indonesian program is described. ESP materials design is tied closely to the specific subject areas of language use and the types of learners addressed. Content must address both vocabulary and linguistic structures typical of the register to be used in the subject area. ESP materials currently available have typical patterns of organization, depending on the publisher and intended use. Materials developed for an English language program in Indonesia have four components: a basic English curriculum at four levels, consisting of pre-reading information, reading passages, structure review, vocabulary, dialogue, and pronunciation review; an English correspondence component at two levels; oral English at four levels; and an advanced language segment. A 23-item bibliography is included. In these materials, the vocabulary component is central, with review and expansion of discourse structures appropriate to the course level. (MSE)
1. Introduction

English for Specific Purposes (ESP) has become a common expression in English Language Teaching (ELT), in particular in the teaching of English as a Second Language (TESL) and in the teaching of English as a Foreign Language (TEFL). This concept has grown out of the awareness that in FL and SL teaching a restricted knowledge of the language, both in the quantity of language items and in types of language skills and activity, is the only reasonable objective due to the limited opportunity and time to learn and use the language.

Hutchinson and Waters (1987) mention three phenomena for the emergence of English for Specific Purposes (ESP), namely (1) the enormous expansion in scientific, technical and economic activity on an international scale; (2) the shift of attention in linguistics away from the formal features of language structure to the ways in which language is actually used for communication in real situations; and (3) the new development in educational psychology, which emphasizes the central importance of learners and their attitudes to learning (Rodgers, 1969; also Oller & Richards, 1973). The post-World War II ascendency of the United States in economic power created new masses of people wanting to learn English, not for the prestige of knowing the language, but because English became the international medium of technology and commerce. This new generation of learners consisting of business people who wanted to sell and buy products, mechanics who needed to read instructions and manuals, doctors and scientist who had to keep up with developments in their field and a whole range of students who had also to study textbooks and journals in English. The effect of all this development was a strong demand for the English teaching profession to meet the required needs.

The term ESP is now about 20 years old, but the concept itself started to spread in the 1960s with publications on English for technology and science like Herbert (1965) and Ewer and Lattore (1967). This need to study a foreign language for specific purposes is mainly the result of the failure of the native language (NL) society to translate materials in specialized fields of study and work not available in the NL. Japan is the standard example of a country that has taken the translation approach, namely during the Meiji Restoration Period when they chose to send thousands of scholars abroad to study, some of whom on their return were assigned to translate the standard textbooks into Japanese. Indonesia has taken the other approach, i.e. to teach the chosen FL, in this case
English, to students who intend to study through the English medium or work in an occupation in which English is required.

The traditional and long-established aim of linguistics had been to describe rules of the grammar of a language, thus focusing on the forms of language or "usage" in Widdowson's terminology. The shift of focus to language "use" brought out the fact that the language people speak and write varies considerably and in different ways from one situation to another. Thus in English language teaching, it became more evident that there are important differences between the English in different fields, for example in commerce, science and technology. It was also held that it should be possible to determine the linguistic features of specific situations and develop a course of study with a special focus on these features. To meet this need, research was undertaken on the nature of varieties of English, for example by Ewer and Latorre on written English in science and technology (1962/1969), by Selinker and Trimble (1976), and by Coffey (1984).

In ESL situations, it is necessary for the majority of learners to acquire a general variety of English, as they will be using the language in most, if not all, language use purposes. But in EFL situations, the general aim of teaching English is the mastery of a restricted variety of English, often referred to by the term "register", particularly the academic and occupational varieties of English. This is what we mean by ESP. This restricted variety of ESP applies to the limited number and types of elements of the language and to the specific uses of the language. The elements of English refers to pronunciation, structures and vocabulary of English. The use of English refers to linguistic activities or skills, specifically: reading, speaking, and writing (mainly correspondence and reports).

The system of language consists of the three subsystems of sound, structure or organization, and vocabulary. Of these three subsystems, the sound system is mastered the earliest; a child of five usually has mastered all the sounds and sound combinations of his language. By the end of high school, he will have mastered all the common grammatical structures. He will also have mastered a large number of general-purpose words and the basic special terms in the various subjects he has studied up to high school. However, there are still a large number of words, especially those that are specific to various sectors of life and various specialized academic fields that are not known to him. The large number of words in any language can be ascertained from the entries in a standard dictionary. For example, there about 45,000 entries (not counting the derived forms) in the 1988 Kamus Bahasa Indonesia (Dictionary of the Indonesian Language) and about 70,000 entries in Webster's Ninth New Collegiate Dictionary. These numbers do not include many slang and taboo words and very
specialized terms in certain fields. Considering just the 70,000 main entries, one can readily understand that it is impossible to master them even receptively, let alone productively. This can be considered as another, but not less potent, reason for developing the ESP approach in teaching the restricted vocabulary of specific fields of study or occupations.

In a foreign language (FL) situation of learning English as in Indonesia, the time allotment to the study of English in the Secondary Schools is very limited, 3 or 4 hours a week. This is another reason why the restricted vocabulary coverage of ESP is necessary. Even in a second language situation like in Singapore, in which the learners are exposed to, and thus are given an opportunity to learn, English by studying the other subjects in school and from its use in societal life, English language teachers have found it necessary to use the ESP approach in vocational colleges and polytechnics (e.g. Tan et al, 1987). In Indonesia, the Civil Aviation Training Center in Curug, West Java, has written three ESP textbooks (two volumes already in print), namely "English for Student Pilots", "English for Technical Students of Aviation", and "English for Air Traffic Controllers".

2. ESP Materials

In teaching any subject, the teaching materials play a very important role, perhaps the most important role, if we subscribe to the idea of "learning-over-teaching". In this learning or self-instructional view, the materials are student-centered. In this respect, ESP should be taken as also implying that the materials should be appropriate to the specific body of learners. In our situation, this means that the materials should be appropriate to our own students, namely their level and age, their linguistic background and educational culture. In other words, the materials for language for specific purposes, in this case ESP, are defined by two major sets of factors, namely (1) the specific areas in which the language will be used, and (2) the types of learners who will be learning the language. The learners' factors will require the materials writer to start from what the learners know, including their native language which also needs to be used as the language for explaining the linguistic sociolinguistic, semantic and pragmatic aspects of the target language. This will make the materials "learner-friendly", therefore, commercial materials that can be used everywhere in the world are by definition not very suitable for LSP purposes, except if the teachers know how to modify and supplement them to make them more learnable for their students. Unfortunately, most of LSP teachers in "developing countries" are rather poorly qualified to do this. In other words, these materials are not "user-friendly".
ESP teaching materials should be based on a syllabus that is taken to cover all the EL needs of the students in their present or future studies or in their future jobs. The contents of a syllabus can be determined by a needs analysis, or often called "register analysis". However, Hutchinson (1987: 30) says that a register analysis is "an insubstantial basis for the selection of syllabus items". He also cites Coffey (1984), who says that register cannot be used as the main basis for the selection, "because there is no significant way in which the language of science differs from any other language". Hutchinson admits that there are language forms that tend to be used more frequently in one register than in another, and cites the classic example of the use of the passive in scientific English. But he thinks that this difference has been overemphasized and cites Tarone et al. (1981) analysis of two Astrophysics journal paper, in which the active voice accounts for over 80% of the verb forms used.

Perhaps there is some credit to the assertion that there is not much difference between the linguistic structures of various ESP registers. Nevertheless, there is much more to structure than the voice of verbs. My experience has shown that a needs analysis, if done properly, can be of great help in deciding on the language functions and communicative strategies of the LSP materials. It is true that more research needs to be done on other aspects of structure like the preference for certain parts of speech, eg. the noun over the verb in expressions like "He is unable to tell the difference of colors" and "His inability to distinguish colors".

However, this brings us closer to the area of vocabulary, which Swales (1986) has called the much-neglected area in ESP research. Vocabulary is one of the distinctive characteristics of registers. Swales (op. cit.,: 42) surmises that the lack of attention to vocabulary in Latin American countries, in which a great deal of ESP research has been done, may be the fact that the Romance languages spoken in those countries and English have a high percentage of cognate technical and semitechnical vocabulary. This peculiar circumstance does of course not justify the neglect of vocabulary in other situations of ESP, like the one we have in Indonesia. Swales (loc.cit) cites Michael Swan as saying (apparently in sarcasm) that this neglect of vocabulary work in ESP classes seems to stem from the belief that "ESP classes are composed of 'linguistically-gifted idiots'; 'linguistically-gifted' because the learners are supposed to know the meanings of all the words already, or to have magical powers of correctly guessing the meanings of words they do not know, whereas they are treated as 'idiots' because their attention is continually being drawn to such points as that "the initial sentence in the text they are studying is making an introductory statement". Swales further says that "if we give our ESP learners an elaborate special language reference work and then presume that thereby any vocabulary problems will disappear,
we are treating those learners as 'linguistically-backward geniuses.' I agree with the position taken by Swales on the importance of vocabulary in an ESP course (as, for that matter, in all language teaching and learning).

Vocabulary is actually the most characteristic feature of a register, and words have specific meanings depending on the particular register in which they are used. Take for example the word "set". We all know that in ordinary language it means a "collection of items". However, in mathematics and in logic it takes the special meaning of "exhaustive group of elements that share certain features"; and in tennis it means "a total of six games won by one player", etc. The word "function" means usefulness or use in everyday language; in communicative language teaching, as in "language function", it takes on the meaning of "what one intends to achieve by using a sentence", whereas in mathematics it means a relationship between two values, expressed in the form of a formula like \( y = 3x + 2 \), in which \( y \) is a function of \( x \), or in the general form \( y = f(x) \). We have all recently heard of the specific use of the word "program" in computer science, namely to mean "an ordered chain of steps in calculating something or solving a problem", which in the register of mathematics is called "algorithm". In ordinary language, "program" means an agenda of activities.

In the structural approach, the predominance of structures made people disparage the role of vocabulary. In the current communicative approach, the overwhelming interest in language functions and communicative skills has pushed back the elements and units of language to the farther reaches of attention. In language use, the learner's schematic or background knowledge of the topic, not only in comprehension but also in expression, plays a very important role; in fact it is this schema that enables people to talk and write sensibly and enables them to understand what is being said or written. This schema or background knowledge is stored in people's minds in the form of linguistic elements, especially words and lexemes (ie. wordlike phrases).

Another aspect of register that to my knowledge has not been researched sufficiently is what is called "discourse structure", ie. the particular way of indicating relations between contents or propositions in a discourse. For example, the "cause-effect" relation that pertains say between "the road is wet" and "it has rained" can be expressed by "the road is wet because it has rained" or "it has rained, therefore the road is wet". The question is whether there is a marked tendency to prefer either one of these expressions in certain registers. When we consider the two propositions to be in a conditional relationship, we can say in General English "if it rains, the road will be wet". In the register of logic, this relationship is expressed by the formula \( p \rightarrow q \) (read "if \( p \) then \( q \)"), in which \( p \) is "it rains" and \( q \) is "road is wet". The ways in which concepts and relationships between propositions
are expressed make up what now has come to be called "discourse structures". Some of the concepts and relationships that make up discourse structures are: description, process, definition, classification, comparison and contrast, analysis, synthesis, relations (both order and class relations, one-to-one, one-to many and many-to-many relations, etc.), condition and inference, analogy (cf. Kaplan, 1983; Van Dijk, 1972). A great deal of work still needs to be done before we can characterize the preferred discourse structures in different registers. Nevertheless, we can already identify some of the characteristic discourse structures of various registers.

The other important factors in a teaching-learning situation are: the process or method of classroom interaction, the teacher (qualification and academic background), and the facilities available. In the teaching of ESP at ASMI Jakarta, the process is mainly communicative in the sense that all the EL units taught must be understood by the students and meaningful for their future careers. Because the classes are large (60 to 100), we have used the "group study" approach, that is by dividing the class into groups of 5 or 6 and assign them to discuss and do the classroom exercises together, while the teacher goes around to help groups who ask for it.

3. ESP Books

The ESP materials writer organizes the materials in a way that is considered to be effective in learning and helpful to the students. Before we describe the FL ESP Materials we are using at ASMI, Jakarta, it seems to be in order to look at the typical organization of materials by different authors for various purposes. The Prentice Hall Regents books, e.g. *The Language of Air Travel in English* (1976) by Carol Akiyama, have the following components in each unit: (1) Special Terms, which introduces the important words and phrases in the Reading Text of the unit, followed by Vocabulary Practice of those words and phrases; (2) The Reading Text, dealing with a special topic in the general field; (3) Discussion, consisting of questions on the contents of the text; (4) Review, consisting of the use of the new vocabulary learnt in the form of completion exercises and writing exercises on a given situation, diagrams or pictures.

The Oxford University Press *English for Secretaries* (1978) is organized into units consisting of 10 components. The unit is started with a Tape Recording of a dialog followed by Comprehension Questions. Then the written Text is presented, followed by other Comprehension Questions and Key to the Exercises. This is followed by another Tape Recording for drills, Pronunciation Practice, another Dialogue, Correspondence presenting a type of letter with appropriate terms and phrases, Telegram samples, Language
Laboratory work and drills consisting of Listening Practice texts followed by questions, and lastly Role Simulations in a particular situation.

Another example of a specialized ESP book is Naterop and Revell's (1987) Telephoning in English, Cambridge University Press. This textbook is organized into 8 units, each consisting of 4 components: Listening, Language Study, Speaking, and Reading, presented as various kinds of tasks. The underlying principle guiding the tasks is the "language function", i.e. the communicative purpose of using various linguistic forms. Useful terms and phrases are presented to suit the need of people working (or expecting to work) in business and commerce like secretaries and junior executives.

Closer-to-home books are the Intermediate English Series written by the Civil Aviation Training Center at Curug in 1982. As an example, we take Book II: An Intermediate English Course for Technical Students of Aviation, which organizes its materials into 9 units, consisting of 5 components each: (1) Reading; (2) Structure; (3) Listening Practice; (4) Oral Practice and Dialogue; and (5) Terminology and Idioms. The Reading part starts with a Vocabulary List with glosses in simple English or Bahasa Indonesia. The reading text is introduced by an introduction or "advance organizer" in simple English or Bahasa Indonesia. The reading passage is followed by Comprehension Questions and a Discussion Points section, which explores related topics of interest to practice the use of English in the domain of the reading passage. The Structure part reviews the grammar of English with a semantic, i.e. language use, approach. The Listening part provides practice in pronunciation of segmental phonemes, consonant clusters, stress patterns and intonation. The Oral Practice and Dialogue component provides oral practice, either in the form of questions and answers and/or a dialogue between aircraft mechanics and supervisors. The approach used is what they call a "language function approach", meaning to say that the students' attention is drawn to what communicative function the dialogue is to achieve. The Terminology and Idioms part presents aircraft standard terminology and phrases, glossed in simple English or Bahasa Indonesia, followed by exercises in sentence and paragraph/discourse contexts.

4. The ASMI ESP Materials

The ASMI ESP program has 4 components that we call: (1) English for Specific Purposes, consisting of 4 levels; (2) English Correspondence, consisting of 2 levels (at present); (3) Oral English, consisting of 4 levels; and (4) one Advanced English class. The Oral English component is prerequisite for taking English Correspondence, which the students may take beginning from Semester 3. This means that the students are expected to finish Oral English 1-4 in Semesters 1 and 2. This
Oral English component is intended to upgrade the students' post-SMA knowledge of English, and to strengthen the oral competence that they acquire much more slowly in the ESP component.

The ESP (I - IV) is the basic component. The materials of each level are organized into 12 units corresponding to the number of "functioning weeks" per semester, i.e. 18 weeks per semester minus 1 week for examinations, 1 silent week, 1 midterm test week, 2 review weeks and a contingent holiday.

Each unit generally consists of 6 parts. In Books I and II, the unit begins with a Reading Text, preceded by the so-called "Obstacle Words/Phrases" that might hinder an understanding of the passage, followed by a list of new/important vocabulary items and comprehension questions. The second part is Structure Review, which presents the more important structures and their functions (i.e. meaning and use). The third part presents a list of Vocabulary items and phrases in a particular office work domain with exercises in sentence form. The vocabulary domain may be the same as that of the reading text or another related domain.

The Dialogue part presents a realistic discussion between two people on certain aspects of office work and management or sometimes of general interest. The dialogues are introduced by an introduction as "advance organizer" to make the discussion more meaningful by putting it in a larger context. This part also contains vocabulary explanations and comprehension questions. The last part is Pronunciation Review which presents materials and descriptions of the segmental phonemes, diphthongs, consonant clusters, stress patterns and intonation.

In Book III, the order of materials is: Reading Text, Vocabulary, and Dialogue. It contains no Structure and Pronunciation components, which are considered to have been fully reviewed in Books I and II. The approach to the presentation of the Reading passage, Vocabulary and Dialogue is the same as in Books I and II.

In Book IV, each unit consists of 4 components: Reading, Vocabulary, Dialogue, and Writing. The Writing component presents explanations and practice of the common problems in sentence writing including both structural and pragmatic ones. It also provides training in minute taking and simple report writing. This part is included to support the writing lessons in English Correspondence.

For lack of space/time, I will give only a summary description of the other two major components of the English language program at ASMI. We are at present writing two text-books for English Correspondence with a communicative approach, by which I mean that: (1) writing is an expression
of meaning or a message, and (2) letter formats and phraseology are deemphasized and presented as "knowledge" and not as "skill". For the Oral English component, we use the materials of New English Course (Cornelius, 1990) but used and handled in our own special way.

5. Conclusion

After the above discussion, we can now try to answer what an ESP should or can contain, namely that it should not only be based on the content of the fields of study and occupation but that it should also be based firmly on the students' linguistic and educational backgrounds.

The choice of the components depends on the particular ESP course. In writing materials for the ESP course, the emphasis should be placed on the component that is appropriate for, and most helpful in, achieving the course objectives. However, it should be evident from the above discussion that the vocabulary component should be, in my opinion, the central core of any ESP. Review and expansion of linguistic structures as appropriate to the level of the course can also be made a part of the syllabus; especially in EFL situations, this should be given serious consideration, as even at the tertiary level many students will need a review and expansion of their knowledge of structures. In most ESP courses, the Topic of Discourse is the basis and a motivating factor of registers. Discourse structure as we defined them above should be included in the syllabus, especially for the purpose of reading and writing academic discourse. If speaking ability is one of the objectives of the ESP course, then Language Functions and Pronunciation should also be included. In fact, this was the strategy that we followed in constructing the syllabus of ASMI ESP textbooks.

I should add here that the ESP program at ASMI also contains two supporting components: (1) an Oral English subprogram consisting of 4 levels, and (2) an English Correspondence subprogram consisting of 2 levels. These two supporting components reinforce those skills introduced not in sufficient depth in the 4 levels of the ESP main component of English instruction at ASMI.

ESP Classroom Procedures include reminding the students that 1) they are doing the learning and 2) the results of their study depend on their active involvement and commitment in the teaching-learning process. Learning results (i.e. the objective) can be achieved without teaching, but they cannot be achieved without learning; this is what is meant by "facilitation of learning". We have achieved encouraging results at ASMI, but we are still improving our materials and classroom procedures in order to achieve increasingly satisfactory results.

Thank you.

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REFERENCES


