

ELT-34

English for Specific Purposes: An International Seminar

Milestones in ELT

Milestones in ELT

The British Council was established in 1934 and one of our main aims has always been to promote a wider knowledge of the English language. Over the years we have issued many important publications that have set the agenda for ELT professionals, often in partnership with other organisations and institutions.

As part of our 75th anniversary celebrations, we re-launched a selection of these publications online, and more have now been added in connection with our 80th anniversary. Many of the messages and ideas are just as relevant today as they were when first published. We believe they are also useful historical sources through which colleagues can see how our profession has developed over the years.

English for Specific Purposes: An International Seminar

This report, which includes papers by John Munby, Henry Widdowson and Tom Jupp, was compiled following an international ESP seminar organised in Bogotá, Colombia, in April 1977. The Editorial notes that, while ESP was seen as relatively new, it was also known to be an 'extension and development of insights', rather than a radically different methodology, and also involved a variety of approaches, not a 'harmonised body of doctrine'. These approaches included focusing on: students' needs; communicative methods; discourse analysis; pragmatics; and the teacher's role. The event was seen as enabling participants both to survey current expertise in the region, and to share practice. Papers ranged from relatively technical and theoretical overviews to case studies with more of a practical focus, including consideration of everyday constraints and teachers' attitudes.

THE BRITISH COUNCIL

English for Specific Purposes

An International Seminar

**Paipa
Bogotá, Colombia**

**17–22 April
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I. FOREWORD

In the weeks that have followed the lowering of the flags -- those symbols of the new-found importance of ESP -- and the final departure of the buses from Paipa, a great many delegates to the Seminar have sent us letters of appreciation, letters which certainly exaggerated our role in ensuring the success of the Seminar. We would like to take this opportunity of returning our thanks to all who attended the Seminar and who, by their expertise and the very high quality of their contributions, made the first Latin American ESP Seminar the success that it was.

In particular we wish to thank the Colombian Ministry of Education for its support and our Colombian colleagues who did so much to make delegates from the rest of the world feel at home. The Seminar would not have carried the weight that it did without the presence of distinguished participants from outside Latin America and our thanks go to Professor Louis Trimble, T. C. Jupp, Professor H. G. Widdowson, J. A. Barnett and J. L. Munby for the key contributions which they made. After every big party there is the problem of the washing-up, and my personal thanks go to the Editors for completing the daunting task of preparing this report, -- daunting because there was so much excellent material that had to be excluded if the report was to be kept to a reasonable size and within the limits of our budget.

Bogotá's importance as a focus of interest in ESP may only be temporary. By the end of the Seminar it was clear that there is a need for a Latin-American centre which will undertake the dissemination of information on ESP and possibly a range of their services. T. C. White's article on page 119 is therefore of particular significance. It is likely to be followed by enquiries to elicit a clearer picture of the services that Latin-American teachers of ESP hope such a centre could provide and to secure offers for its possible home.

R S Newberry
Representative, The British Council
Colombia

2. MESSAGE FROM THE MINISTER OF EDUCATION

COLOMBIA

The following telegram was read to delegates during the opening proceedings of the Seminar:

DESEANDOLES MUCHOS EXITOS EN EL EVENTO QUE LOS CONGREGA Y LAMENTANDO NO PODER ACOMPAÑARLOS PERSONALMENTE HE DESIGNADO DOCTORA PILAR DE REYES DIRECTORA GENERAL DE CAPACITACION Y CURRICULUM PARA QUE ASISTA EN REPRESENTACION MINISTERIO. CORDIAL SALUDO.

RAFAEL RIVAS POSADA

MINISTERIO EDUCACION

3. SPEECH OF WELCOME

by la Señora Pilar Santamaría de Reyes, Directora General de Capacitación y Curriculum, Ministerio de Educación Nacional:

Para mí realmente es un privilegio y un honor estar aquí presentándoles un saludo de bienvenida en nombre de mi país y especialmente del Señor Ministro de Educación, quien por compromisos y por circunstancias muy justificadas no pudo personalmente asistir a inaugurar este seminario.

Para el Ministerio de Educación de Colombia tiene especial significado esta reunión de trabajo, y realmente esperamos que estas jornadas de intercambio de conocimientos, de experiencias y de posibles proposiciones de nuevas alternativas para mejorar la enseñanza del inglés en nuestro país, van a ser de particular interés e importancia para el Ministerio de Educación. Nosotros, en este momento, estamos iniciando una reestructuración de nuestros programas curriculares. El año pasado se expedieron normas reorgánicas del sector educativo después de un trabajo de dos años de análisis educativo y de la organización del Ministerio de Educación. Estas normas ordenan una nueva estructura para el sistema educativo colombiano - 9 años de educación básica con dos ciclos: uno de cinco años de primaria y segundo ciclo de cuatro años de secundaria; a continuación el nivel de media vocacional e intermedia profesional - de cuatro años donde la educación se diversifica por modalidades vocacionales. En estos momentos los grupos de curriculum para los diferentes niveles del sistema están trabajando integradamente para definir todas las áreas, intensidades, materiales educativos - tanto para los docentes como para los alumnos-, estableciendo criterios y guías de evaluación y tratando de que la programación curricular no solamente responda en una forma más adecuada a las características de nuestros niños colombianos sino también a las necesidades y a los objetivos sociales, económicos, culturales, y particularmente educativos que nos hemos propuesto en el país. En razón de esta nueva estructura, yo creo que el tema del seminario nos toca íntimamente, ya que creemos que a nivel de la media vocacional y la intermedia profesional, debemos reorientar la enseñanza de los idiomas extranjeros para que verdaderamente sean un instrumento de comunicación y de acceso a otras culturas y especialmente a la ciencia y a la tecnología, y permitan que a través de los distintos niveles de enseñanza particularmente los técnicos y los de las carreras universitarias los estudiantes tengan acceso a una información que generalmente no llega en nuestro idioma. El dominio de las lenguas extranjeras nos permite acercarnos a otras culturas muy importantes, a países que realmente han tenido un desarrollo en el campo científico y tecnológico, en consecuencia, adquirimos un instrumento para el mejor conocimiento de otras culturas y tecnologías.

Sea esta la oportunidad de destacar las diversas actividades del Consejo Británico. No es solamente en este campo del fomento de la enseñanza del inglés en que ha venido desarrollando una labor importante de cooperación técnica con el gobierno colombiano, y posiblemente con otros gobiernos latinoamericanos, pero en el caso particular de este seminario creo que el patrocinio, la ayuda y asistencia que han prestado para su realización es muy importante y ojalá continuemos contando con el apoyo y asistencia técnica permanente del Consejo Británico.

Solo me resta desearles que la estadía en Colombia sea muy grata para ustedes, especialmente en estas tierras boyacenses que son particularmente acogedoras y propicias para este tipo de trabajo, y desearles que el trabajo sea muy fructífero no solamente en términos de nuestro país sino de sus países y de las instituciones que ustedes representan.

4. EDITORIAL

It should be recorded that the Seminar reported in these pages originated from proposals within various Latin-American countries, where "ESP" has been an established fact for at least a decade. In August 1976 it was possible to hold a planning meeting for the coordination of plans and resources at the British Council Headquarters in London. At that meeting the aims for the International Latin-American ESP Seminar, to be held near Bogotá, Colombia in April 1977, were set out as

1. to share information on projects and work in progress
2. to examine and discuss professional issues, both linguistic and pedagogic
3. to make plans for the coordination of resources
4. to undertake workshop exercises leading to the development of improved materials and techniques.

It was agreed also that the Seminar should be planned round a series of interrelated themes, which would constitute a systematic survey and study of the main components of any improved scheme of English Teaching, whether for Special Purposes or more generally, in Latin American countries. These themes were

1. the determination of learners' needs
2. Syllabus specification and design
3. Materials design and production
4. Training, and retraining of teachers.

From the London meeting, responsibility for the detailed organization of the Seminar was passed to the British Council office in Colombia, subject to the proviso that as much coordination and exchange of information as possible should be maintained between London and the countries concerned.

In Colombia, to supplement the deliberations of the British Council staff, an ad hoc Local Advisory Committee was formed of representative Colombian teachers of English to ensure that Latin-American interests and sentiments were fully incorporated into the planning of the Seminar.

The financing of the Seminar was by no means a simple operation in the straitened circumstances of 1977. The British Council in London was able to provide a modest amount of financial and practical help; other costs had to be borne by funds available to British Council Representations in various countries, or by participants personally or their sponsoring institutions.

As a fact of history, - and of the history of English Language Teaching, especially in Latin American, the Seminar took place very much on the lines proposed, and the following pages are to some extent a record of what actually 'went on' at Paipa during those late April days of 1977. To all who took part, it may be said, the Seminar was a valuable and interesting exercise in international communication and organization: the extent to which it will have significantly influenced educational, and language-teaching procedures in Latin-America remains to be seen.

The compilation of this Report as mentioned in the Foreword has not been entirely a straightforward matter. Abundance of material has been available to the editors, and involved the taking of difficult decisions, especially with reference to the principal uses to which the Report will be put. The Seminar, qua seminar, was to be seen not as an end, but as a beginning. It is to be expected and hoped that, stimulated by the Seminar itself, those who participated, and the much wider circle of those who receive information about it, will be challenged to reconsider the theory and practice of their teaching of English in the Latin-American continent. Therefore, while the Report serves to some extent the purposes of a record, - of who attended, where they work, what question they asked etc; and also of a collection of reference material which will be useful to all those who wish to write histories of English teaching in Latin America, its main function, we consider, should be as a teaching resource, valuable to all those, in Latin American and perhaps elsewhere, who have to plan, equip and execute programmes of English studied, in the latter years of the twentieth century, "for special (sorry - specific !) purposes".

We hope, therefore, that teachers of English everywhere will find the Report useful, and relevant to their teaching problems. Especially we hope the Report will prove a useful guide to the new concept of "ESP" which is described by the Director of the British Council English Teaching Information Centre on page 15 as "for the past few years . . . a major developmental focus in the area of communicative syllabus design and materials production".

There is, in fact, within the Report itself, ample warning against the hasty, uncritical adoption of "an ESP approach", seen - in the words of Controller, ETD, - as some kind of "Open Sesame" ; and due attention should be given to the comment by T.C. Jupp who, although himself a pioneer in the ESP field, reminds us that

"our purpose is not to throw out any of the great range of techniques and methods which have been proved useful."

The ESP approach is thus not to be seen as a sudden new approach which requires the rejection of all others, but an extension and development of insights into the reasons for which students of English in Latin America really require English, or let us say appropriate forms of English.

Nor should it be supposed that there actually exists a single universally-accepted "ESP approach". Those who attended the Seminar will probably never forget the stimulating experience of direct contact with the enthusiasm and expertise of the leading contributors. However, for all who reflected, - or who after reading this Report reflect, on what it all signifies, it becomes clear that the "ESP approach" is not a harmonized body of doctrine. Rather it serves to gather together a variety of insights and intuitions about the teaching of English as a foreign language which have been emerging in many parts of the world during the last decade. And, of course, the "ESP approach" is not without its own special areas of controversy and disagreement.

It may be helpful to readers of this Report to attempt a simple survey of these various insights, which can perhaps be described as follows:

1. A much greater sensitivity than in the past to students' needs in the learning of English. "Needs" are to be seen no longer as examination room techniques useful for 'satisfying the examiners', but as real communication needs (matters even of 'life and death' - consider for example the fields of medicine or aviation, - or at least of success and failure) in actual real life situations. Such needs we now know how to study, analyse and describe behaviourally, though we must be careful not to describe them too narrowly, and these descriptions can form the basis of course-designing. This approach does not by any means imply that, for example, all that engineering students need is endless exposure to pages from engineering text-books or 'manuals'.

2. The "communicative" approach. In recent years teachers of languages have come increasingly to perceive an important distinction between "linguistic competence" and "communicative competence". It is no doubt possible by the use of certain types of teaching techniques to produce learners who in given circumstances can produce sequences of absolutely "correct" linguistic responses. Yet - plunged into the hurly-burly of real life, such prodigies may either have "nothing to say", or at least fail to find adequate language to cope with urgent actual situations. The ESP approach in general admits that all forms of verbal communication involve the use of appropriate linguistic forms which of course require learning, but these must be seen for what they are, as means rather than ends. Syllabuses and schemes of work within the ESP approach, therefore tend to be centred less on sequences of graded linguistic items than on sequences of communicative situations or functions.

3. "Discourse analysis". The identification of actual "needs" and "communicative" purposes of students learning English in many parts of the world is now seen to call for more attention to reading than has been customary in the last generation or so of language-teaching orthodoxies. But we also recognize that reading in a foreign language is by no means as simple as might be supposed. It is possible, as Louis Trimble points out, for a reader of a foreign language to recognize every single word in every sentence, and to understand every single sentence in a paragraph, and yet entirely fail to grasp the significance of the paragraph as a whole. So, it is essential, especially if we attach importance to reading, to understand all the ways by which significant meaning is conveyed

in extended discourse. From this realization, new techniques for the teaching of "how to read" are being developed by the exponents of "discourse analysis". This is not entirely a new departure, as it builds on the earlier traditions of the teaching of "rhetoric" which have been well established in the Americas.

4. The pragmatic approach to Materials Development. To many teachers and educators the "ESP approach" is their first contact with the empirical methods used for the production of teaching materials which have become established in other parts of the world throughout almost the whole curriculum. We no longer depend on the professional text-book writers, aloof from the teaching world, but supported by governments, inspectorates, examination bodies and commercial publishing houses, who produce their works in splendid isolation. The new idea is that after 'needs' and corresponding objectives have been established, groups of selected and experienced teachers work together in teams to involve teaching materials specifically to meet the needs of particular categories of students. These materials are passed through various stages of trial-teaching, feed-back, discussion and revision until the best possible product is achieved.

5. The Teacher's role. The foregoing considerations depend upon, and to some extent coincide with, the emergence of new concepts of the learning process and of the role of the teacher. In the modern world there is less need for the authoritative teacher who dispenses 'received' information (whether right or wrong, useful or useless) or for the unthinking learner who passively absorbs all he is told and can parrot it perfectly at command. All developing educational systems nowadays need to produce fully professional teachers who have a clear knowledge of their students' real needs, and who know how to organize their learning, so that they move consciously and cooperatively towards acquisition of the skills which they perceive to be appropriate to the world they are preparing to serve. Teachers of this type, as T.C. Jupp, points out, need no less careful preparation and training than any other.

Crucial Issues

One of the major achievements of the Seminar was to provide a survey of work in ESP thinking and practice in Latin America.

The variety of approaches and tactics demonstrated served to challenge participants to think about some of the crucial issues in ESP at the moment. Some of these issues were discussed explicitly, others were underlying in questions and comments made on some of the papers given. The Editors noticed that the following issues appeared in the records of several sessions, either explicitly or implicitly!

1. The extent to which a needs analysis determines syllabus content. It was pointed out that the course designer includes in the input to the syllabus a variety of factors such as student and teacher attitudes and administrative constraints as well as a specification of students needs. To base the course solely on needs is unrealistic; to give other factors priority can hardly be described as teaching communicatively. Moreover, while a needs specification tells us the terminal objectives, it does not tell us how to reach them. The course designer has to use his experience of the learning process to decide on the best path to reach his objectives-and this path may not in fact be the most direct route. For example, pedagogic considerations may favour working towards unsimplified texts, not beginning with them.

2. Whether ESP necessarily involves an ESP approach. Some of the materials demonstrated were attempting to apply discourse analysis; others adopted alternative linguistic approaches, or set out to be entirely pragmatic. In any case, it was evident that discourse analysis can embrace a wide variety of syllabus contents and methodologies. It can best be seen as a useful extension of existing grammar and reading comprehension approaches, not as a complete break with them.

3. The extent to which one can use students' existing knowledge of how language is used to communicate. Many ESP courses, particularly academic programmes, teach the way language is used to express basic concepts of scientific logic and the way a language can serve as a study skill. If these concepts and skills are unfamiliar to students, there is a danger that too many things are

being taught at the same time. Whilst there was widespraed recognition of the fact that the ESP teacher would be helped if students were given such courses first in the native language, it was pointed out that we should not underestimate or ignore what the student already knows, however inexplicitly, of academic study. This point of view would also suggest that the ESP teacher should consider how a student's knowledge of how his own language works will help him learn English communicatively. This view should by no means exclude translation and mother tongue explanations, but would put them in perspective, as pedagogic devices amongst other for reaching one's objectives.

4. Whether one should aim for more standardization in ESP courses. It would seem that one of the values of ESP approaches is that they provide a way of marrying pragmatic and theoretical approaches to course design. It is the duty of the course designer to fit his course to the particular situation of the learner and at the same time select the more usable insights derived from theoretical studies. ESP approaches, in fact, provide a way of increasing the sophistication of the pragmatic input (Munby's paper was of particular value here) and at the same time of ensuring the relevance of the theoretical input. The basic ingredients can therefore be expected to produce different mixtures - so we will find that some courses are subject-specific, others are not, some will treat reading as an isolated skill, others will include writing and oral work as alternative paths to communicative competence. It is to be hoped that the seminar will have provided participants with sharper tools for improving their own programmes, without suggesting that they should become demolition experts.

We hope that this report will be a useful working document for years to come to those, particularly, in Latin America, who are concerned with designing or implementing ESP programmes. The task of the editors would have been made even more difficult had it not been for the valuable record of discussions kept by rapporteurs and chairpersons. Thanks to their efforts, we are confident that this Report will reflect much of the stimulating ferment of ideas that occurred during 5 April days at Paipa.

H.L.B. Moody

Editors

J.D. Moore

5. KEY-NOTE ADDRESS: ESP in ELT

J. A. Barnett, Controller, English Teaching Division
The British Council

It is for me a singular honour to address such a distinguished audience. I am delighted to have this opportunity to participate in this Seminar to meet again some familiar faces from home and many more new ones for the first time. And I am especially pleased to be in South America for the very first time.

For many years I have wanted to visit South America. Whatever doubts anyone may have about ESP I shall be eternally grateful to it for having got me here! Colombia has already captivated me with its impressive culture, its natural beauty, and the charm of its people. I am looking forward to seeing more of South America on this visit and I trust on many more to come.

On behalf of the British Council and all of us here from other countries I would like to thank Colombia for providing us with such ideal surroundings for our Seminar, and Ray Newberry and Len Moody in particular, who with their staff have worked so hard to organize this seminar and bring us all together.

With so many countries represented, and represented moreover by leading teachers, scholars and administrators actively engaged in ESP, the Seminar cannot fail to have a significant influence on ELT in South America. But its importance goes beyond this continent. ESP is assuming increasing importance wherever English is taught. What you have to say here will be read, noted, digested (and no doubt refuted) by your professional counterparts in Europe, Africa and Asia. This importance is certainly recognized by the British Council.

As individuals we all bring a certain influence to bear on the direction and development of ELT theory and practice in our respective spheres. Collectively, from a Seminar such as this, that influence is much greater than the sum of its parts. And in case you think that I'm being carried away by the potential possibilities of this seminar, I should add that its value also lies in applying a corrective influence to our own thinking and professional practice. In ESP, I believe a great deal of corrective influence needs to be exerted.

What concerns us, whether we are teachers, professor, consultants, directors, ELOs, authors or administrators, is the application of our resources and energies. We also determine, through our influence or authority, directly or indirectly, what, in ELT terms, is to be or not to be. This imposes a heavy responsibility, not merely on our organizations, ministries, governing boards, universities etc. but above all for the learners of English who look to us to provide the answers to their needs. How far are we succeeding? Are we even sure what our students' needs are? Do we have the instruments to specify them? Are we sure we have the right objectives? What criteria do we use for assessing results? Are we neglecting areas or aspects of learning that are, or could be fundamental to success? It is in the context of questions such as these that this seminar is significant. It is in the context of these questions that ESP is significant.

ESP is a relatively new term. As with most new terms it is subject to various interpretations, it arouses varied reactions both within and outside our profession, and suffers from as much abuse as it does use. For some it has been an inspiration - the answer for the future. I see, from a recent report on an ESP seminar in Iran, that "essentially all ELT should be ESP". I have heard other ELT specialists refer to it as irresponsible, bogus and dangerous. It is seen by many as something of a band wagon - unless you jump on it, pay the right kind of lip service to it, you'll be considered out of date, out of touch, even out of a job. Others see it as all right for the academics, who have time for research and thrive on theoretical dispute, but of unproven and doubtful value outside a befogging confusion. Finally there are those who are blissfully unaware that ESP can mean anything more than 'extra sensory perception'. I am not referring specifically to South American views. The impressions I have noted here reached me in London and on my travels from all sides.

In the smoke and fog of the confusion that exists I want to try and place ESP in clearer perspective. Can I start with the problem of the S in ESP. The

acronym itself is a source of dispute - not to mention the sons of ESP, as for example, EAP, EOP, EST, ESG, EMG, and so on. Leaving the offspring aside, is there a valid distinction between English for special and English for specific purposes? You will note that in the background papers specific is used, whereas the title of this seminar uses special. British Council usage, at least in London, favours specific. Special is less in favour, as special is in common use with reference to special varieties of English - i.e. the specialized registers or forms of language that are e.g. associated with such restricted varieties as legal English, the English of air-traffic control, the English of advertising. You may recall the often quoted story of Thomas Wade, an outstanding Chinese scholar of his time, finding the best qualified man possible and asking: "Please teach me Chinese". "Which Chinese is it you want to learn, sir?" asked the teacher. "Chinese of the ancient classics, the Chinese of official documents, the Chinese used in writing letter, - or there is spoken Chinese, of which there are many dialects?"

Specific, it seems to me, directs attention not to specialised varieties, but to distinctly formulated purposes. The purpose may well encompass learning specialised and restricted varieties, but it could just as well not include them, or include a combination of specialised and general English, according to specified needs. An ESP course for engineers, e.g. need not be limited to the language of engineering texts, but will include all the identified linguistic and skill components relevant to the participants' needs. Having stated my preference for specific, I am tempted to ask for a re-christening of the seminar. But I have no wish to be prescriptive. Specific and special will I am sure both continue to be used. In Spanish and Portuguese, Instrumental can I imagine dodge the issue.

I said earlier that ESP was a relatively new term. How new is ESP itself? Is it really new or are we using a new term to give a label to a long-standing familiar problem.

The abundance of papers, publications and projects bearing the name of ESP in recent years certainly provides evidence of a significant new movement. The ETIC Information Guide lists over 250 textbooks, 160 articles and reports, 95 dictionaries plus innumerable theses and archives papers - all relevant to ESP. A recent survey of ESP work known to the British Council listed 45 teaching programmes and 22 research projects. From teacher vacancy columns in Britain it is evident that teachers with ESP experience are in demand and in short supply. All this merely indicates however that ESP has come into greater prominence - not that the needs it serves are remarkably new. The British Council Annual Report in 1960 drew attention to specific needs. It said: "The airways pilot, the NATO soldier or sailor, the African politician, the scientist at an international conference, the merchant, the businessman and technician all require English for their special use. The kind of English they need, and they level of proficiency they must have, depend on the uses to which they wish to put it".

Consider another quotation, referring to translators and technicians: "Such people have entirely different aims . . . and we may omit from their programme everything which does not lead directly towards the limited and special end they have in view".

That is Harold Palmer in The Principles of Language Study in the early twenties. And in 1917 in his Scientific Study and Teachers of Languages he discussed standard and special programmes. Michael West's Learning to Read a Foreign Language (1926), however tarnished it may be in these days of discourse analysis, is directed at specific needs and has relevance for the teacher in a specific purpose situation.

ESP is surely as old as specific reasons for learning a language and anyone who learns it sufficiently well is likely to use it for specific purposes. (Shakespeare in Henry V demonstrated direct method technique in Katherine's English lesson. In the same play, in Henry's courtship of Katherine, he also demonstrates FWP - French for wooing purposes). ESP therefore, has its roots in acknowledged ELT principles of the past - in the basic recognition that learners' needs differ, and in the value of formulating clear objectives.

What I have said may help to place ESP in historical perspective, but it does not account for the new impetus that has emerged in more recent years. I would

speculate that this impetus results from three major kinds of influence and change:

- Extraneous political and economic factors.
- Increasing disillusion with materials and methodology that have failed to provide the answer.
- The pioneer work and insight of a relatively small group of teachers and scholars - not working as a group but in time influencing each other to form the foundation or fountainhead of new developments in ESP.

As countries which were under British colonial power gained independence, there developed on one hand a wider use of vernacular languages and a corresponding move away from English as a medium of education and as a language for everyday use. Countries, like India for example, formulated new language policies. The value of English was still recognized (as long as it was untainted with imperialism) but it was no longer taken for granted. The basic question was: What are the essential uses and needs for English that remain? This led to closer identification of the jobs that needed English, of the professions that needed it for international purposes, and of the studies that had to be done in English because there were no vernacular reading materials. I can remember in Pakistan in the late fifties first hearing the term 'functional English' - coined to combat the traditional emphasis on literature and rote learning. It was in India that I heard of English as a 'library language' - the need was to read English as a means of access to higher studies.

On the economic side, countries, whether newly independent or not, have been faced with the monumental costs of mass education. Primary and secondary school programmes in teaching English were not only expensive but often failures.

With vast numbers of untrained teachers, unsuitable materials and limited financial resources, the wasted effort was only too evident. Surely it makes more economic sense to postpone the teaching of English to the later secondary or even tertiary level, when the numbers are less and the needs more evident. Even where school level English teaching continued, it was clear that special service courses were needed at college and university level to enable students to cope with essential studies. The new emphasis on preparatory and service courses at universities provided the background to the more refined approaches which we now term EAP.

The disillusion factor was part of the economic reasoning, but the failure or at least the limitations of existing approaches and methods inevitably had a significant effect on the teacher and the language specialist. As the years have rolled on we have seen the continual striving for the successful method - but to various degrees teachers have, I believe, felt let down by the structural approach, the direct method, audio-lingual techniques, the audio-visual package and so on. Although we may say that the good teacher should be eclectic and choose from the range of methods, techniques and materials to suit the particular needs and conditions of his teaching situation, there remains the lurking suspicion that something vital is being left out - the search goes on for the 'Open Sesame'.

It is against this overall background of political and economic changes and dissatisfaction with existing approaches that new insights are being examined and new approaches being explored. Other factors that have been in the background to developments in Britain, incidentally, are the new relationships between members of the common market which have clear linguistic implications; the problems we face in absorbing immigrants into our society; and the realization that the effectiveness of technical cooperation programmes depends so often on language proficiency. English for development means English for technicians, for commerce, for agriculturalists, for nurses and so on.

I have looked at the sources of ESP and sketched in more recent factors that provided the opportunity for the new ESP impetus to take place. Let us now look at the direction this new force is taking, and finally some of the problems that we are facing.

Early new approaches were characterized by analyses and descriptions of varieties of English, what I would call register-based studies. ESP researchers and materials writers saw the limitations of the structural approach and realized

that to replace 'This is a book' and 'That is a man' by 'This is a monkey wrench' and 'That is an oscilloscope' was not the answer. They attempted to give clear identities to sub branches of science and technology and to use, as far as possible, authentic texts. The products of this approach are known to us in the pioneer work of Ewer and Latorre's Basic Scientific English. Publishers demonstrated their characteristic enterprise and a new wave of publications was launched: such books as Collier Macmillan's Special English Series, the BBC/BC's The Scientist Speaks and OUP's English Studies Series.

I recall this period with some affection as in the mid sixties I felt personally involved in breaking new ground. Ewer was sending me early drafts of his work in Chile and with John Moore I was writing new materials for experimental scientific English courses in London at the Council's ELTI.

The basis of this work - what some now call first generation ESP - was that it was largely text based and text bound. Although it was far more than specialized lexis and structural features common to specialized texts, the teaching and learning tended to be at sentence level. It was valuable work and the best of it is still relevant, but it didn't go far enough.

The next generation of ESP development, with new hypotheses and insights, examined not just specialized texts, but the whole communicative event - the total interaction between text and reader, or between the context of situations and participants. If one thinks of a text as being flat (on a sheet of paper), the new emphasis is to examine the use of language in the round. To look at language behaviour in this way is not entirely new - but there are exciting new insights which are now relevant to ESP.

Studies in sociolinguistics and psycholinguistics have influenced our thinking. Writers like Strevens, Allen, Widdowson, Kirkwood, and Candlin emphasize the way in which language is used to activate the reasoning and conceptual processes of discourse. There has been a move away from emphasis on formal structure to the communicative markers of discourse. As Trimble has noted: "our students are learning a foreign language primarily in order to manipulate difficult intellectual material".

The significance of current analyses and developments can be illustrated perhaps by a fanciful analogy. On the plane from London I read this sentence in The Times:

"Foot it for the post midnight transport".

An unlikely sentence in everyday discourse perhaps, but legitimate in its specialized context. We can study its formal structure, its phonology, its lexis and its collocations. We can construct parallel forms, but useful though this might be it would not enable you to find the six-letter word which is the answer to the crossword clue. I can't tell you exactly how I arrived at the answer but the process included, for example, searching for a possible anagram of 'foot it', looking for any possible pun or similar word play, referring to interlocking words that might provide a key letter, thinking of various forms of transport (car, rail, BR, bus, bike, air), other ways of saying 'foot it' (run, walk, jog, amble) and so on. 'B' as the fourth letter (from an interlocking word) confirmed the probability of 'bus' and 'post midnight' re-expressed as '1 a.m.' led to the solution: IAMBUS.

Now consider a course in ESP for crosswords. The first formal analysis of the text would be inadequate. We would have to look at the sentence, 'in the round' in relation to the thought processes and skills I was employing. To teach anyone how to do crosswords we would have to examine the whole cycle of the communicative process. We would have to break down the basic skill of reading, into the micro-skills and micro-functions relevant to E X W P. We would still need to teach structure and vocabulary, but we would have to go much further. My crossword example may be fanciful but I hope it helps to explain the significance of what is happening in ESP, as I see it, and the challenge we have to face if we are to meet specific needs.

More recent work in ESP will I believe make teachers more aware of and more sensitive to communicative problems and communicative needs. ESP will I hope provide reliable and practical models to enable teachers to undertake appropriate

needs analysis. This in turn will lead to more exact syllabus specification, the preparation of purpose-specific materials, and accurate testing instruments.

Before hopes and expectations can become reality we have to consider the problems and the dangers that confront us. These are central to our seminar. Let me mention five that are specially important.

First, we must proceed with considerable caution. We do not have a fixed body of dogma to work from. There is more hypothesis in current approaches than proof. The application of new insights in the form of teaching materials is bound to be tentative for some time to come.

Secondly, there is a danger that materials and methods in ESP will inhibit the teacher. Not only can his own self confidence suffer through uncertain handling of specialist texts, but he could be led into teaching with so much concentration on materials that he loses his intuitive sensitivity towards his learners. The enthusiastic ESP teacher can also be guilty of sacrificing effective practice to suspect theory.

Thirdly, there is the major problem of training the ESP teacher. Must he have expertise in both English and a specialist subject? If knowledge of the special purpose subject is necessary, how are we to implant that knowledge especially when so many English teachers teach English because they are hopeless at science. Would it make more sense in English for Science, for example, to recruit scientists and train them as English teachers rather than vice-versa?

Fourthly, how are we to integrate the specialist subject content of an ESP course with linguistic skills? Must we just establish a threshold of general competence in English before we specialise? Can we teach study skills without using specialist subject texts? What do we do with mixed groups when the subject of specialization cannot be isolated?

Fifthly, there is the problem of student motivation and interest. Concentration on specialist needs runs the risk of neglecting other human and pedagogic needs. The student of engineering can be turned off and bored to tears if English classes are restricted to engineering texts.

Those and related problems will I hope be examined and clarified in this week's deliberations.

I want to leave you with a final thought: ESP, as I understand it, can be applied to general English as well as to specialist English. The approach I believe in is just as relevant to the nine-year old schoolchild in Mexico as it is to the undergraduate in Caracas who needs to read texts in English on mineral prospecting techniques. The difference is in the area of local pragmatic restraints, not in the approach we adopt to analyse and specify needs, nor in our approach to the design of syllabuses, courses and materials.

6.1. PROCESSING PROFILES OF COMMUNICATIONS NEEDS

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1. Introduction

For the past few years English for Specific Purposes (ESP) has been a major developmental focus in the area of communicative syllabus design and materials production. However, not all of its protagonists have seriously addressed themselves to the vital question: what system (if any) is being used to arrive at the specification of the English deemed appropriate for different purposes, e.g. studying agricultural science, tourist hotel management, etc.? There is clearly a need for a model that takes account of all the potentially significant variables, and systematically applies them to achieve an appropriate target specification.¹ In this paper I would like to propose a way of going about this, concentrating on the first part of such a model, the processing of language communication needs.

2. Theoretical perspective

Let us assume that we are concerned, as syllabus designers, with a foreign language participant or category of participant whose target proficiency in English for a particular purpose we want to specify. In the designing of the model that will enable us to do this, there is a basic question that we must first answer: which view of knowledge and communication is appropriate for our purpose?

Approaches to the competence concept display orientations that are predominantly linguistic, psycholinguistic, sociolinguistic, or sociophilosophical. The question is one of emphasis since it is of course possible to have an orientation that is socio-psycholinguistic, but the comprehensiveness of this term blurs the focus which a theoretical perspective is intended to provide. We shall take a sociolinguistic view of knowledge and communication, where the contextual or environmental factors which are involved in the development of communicative competence (Hymes, 1971) or in the realisation of meaning potential (Halliday, 1971, 1972) are predominantly sociocultural.

From this view we derive important features that underlie the design of our model.

2.1. Sociocultural orientation towards communication

2.1.1. Contextual appropriacy

Knowledge about the the target language, in the sense of knowing whether and to what extent something in that language is formally possible, may not be sufficient for effective communication. Hymes, Cooper (1968), Widdowson (1971) and others have drawn attention to the equally important factor of contextual appropriacy: "There are rules of use without which the rules of grammar would be useless". It follows that in specifying communicative competence which, following Hymes, subsumes grammatical and contextual competence, dealing with one component alone will usually not be valid.

2.1.2. Communication needs

A sociocultural orientation focuses on the social function of language and displays a learner-centred approach. Before deciding what to teach the learner we want to know his requirements in terms of, for example, communicative purpose, setting, and activities, and the relationships between him and his interlocutors. In other words the specification of communication needs is prior to the selection of the speech functions or rhetorical acts to be taught. By constructing a profile of actual communication needs we have a valid base from which to proceed to the speci-

¹ See Munby (1977/8), forthcoming

fication of the particular skills, functions and forms required for a specific purpose.

2.2. Sociosemantic basis of linguistic knowledge

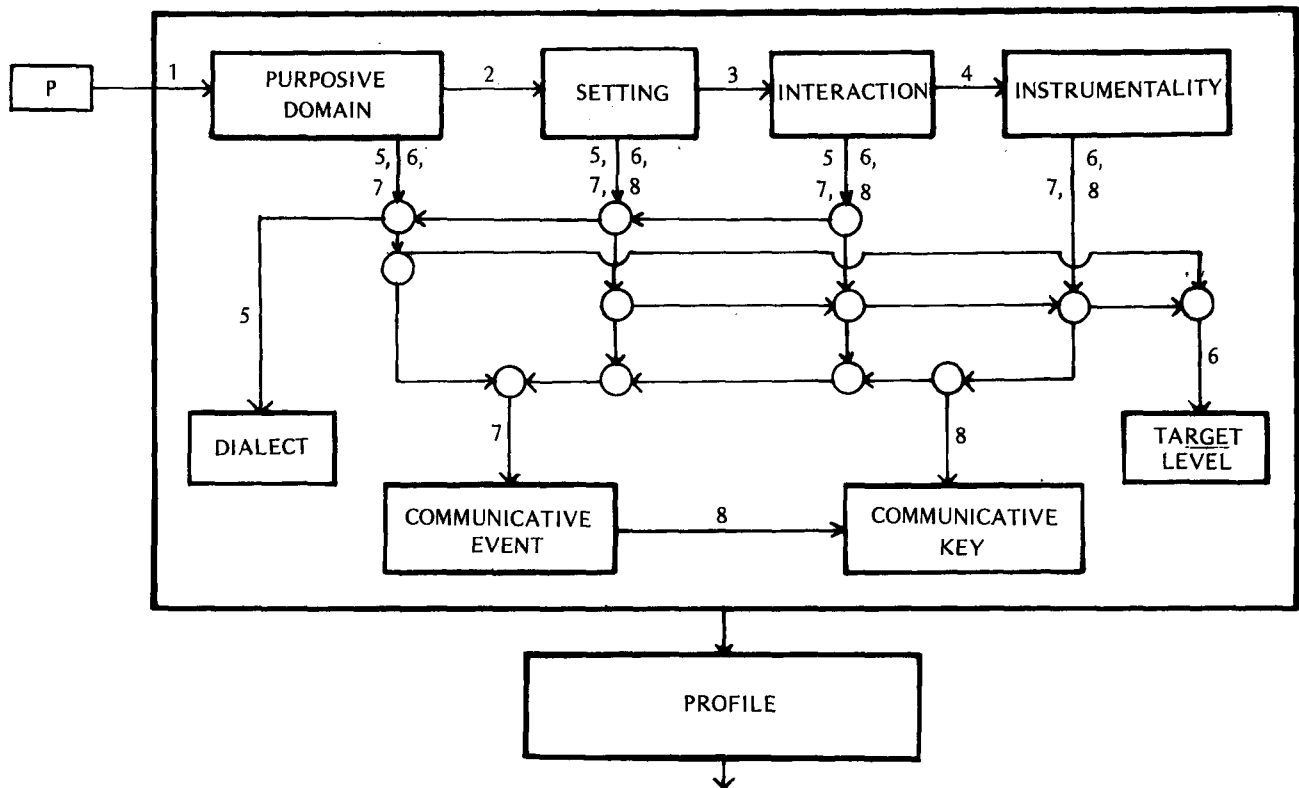
Halliday's concept of meaning potential draws attention to the sociosemantic basis of linguistic knowledge and indicates the metamorphosing role of the semantic options available to a person) in converting options in behaviour into options in linguistic form. That is, what the speaker can do becomes what he can say via what he can mean.

2.3. Discourse level of operation

Sinclair et al. (1972, 1975) postulates discourse as the level between grammar and non-linguistic organisation. Hymes (1972) puts it another way when he says that "the level of speech acts mediates immediately between the usual levels of grammar and the rest of a speech event or situation in that it implicates both linguistic form and social norms." Here we are concerned with units of communication, spoken and written, which are distinct from and generally above the level of the clause, units which have formal characteristics and rules of occurrence. It seems clear that that communicative competence includes the productive and receptive ability to use linguistic forms to perform communicative functions, and to use language skills to realise communicative activities. This happens at the level of discourse.

The theoretical perspective we now have affects the kinds of model that we need for ESP syllabus design. In this model the output, the appropriate specification of communicative competence, is processed from a profile of language communication needs which must itself be systematically arrived at, and to which sub-model we now turn.

3. Communication Needs Processor



In the Communication Needs Processor (CNP) we take account of the variables that affect communication needs by organising them as parameters in a dynamic relationship to each other (see below). These parameters are of two kinds, those

that process non-linguistic data and those that provide the data in the first place; or, put another way, one set of constraints (a posteriori) that depend upon input from another set of constraints (a priori) before they can become operational. The a priori parameters are: Purposive Domain, Setting, Interaction, and Instrumentality. The a posteriori parameters are: Dialect, Target Level, Communicative Event, and Communicative Key.

Before considering the parameters themselves, we should comment generally on the operation of the CNP. The input to the CNP, which consists of base-line information on a L2 participant (individual or stereotype) is successively processed through the first four boxes in the order indicated by the numbered arrows. In each of these boxes questions are answered in terms that will be useful as input to other boxes. Therefore this information is both stored here for subsequent use and passed on as conditions on the input to the next box. The information identified in the upper band of parameters then provides the relevant and necessary inputs for the lower band of parameters to become operational. The dependency relationships (what is affected by what) are indicated by the numbered lines, 5 to 8, that carry the inputs. Thus, for example, the Dialect box can be seen to depend on input from Purposive Domain, Setting, and Interaction. The results from the processing in each of the eight parameters are written out as the profile of communication needs for that particular participant.

Structure and System of Each Parameter

There is not time in this paper to deal fully with each parameter so I will confine myself to brief comments, beginning in fact with the input.

3.0 Participant

This input consists of a minimum amount of potentially relevant information concerning identity and language. The data relating to identity tell us the participant's age, sex, nationality, and place of residence². This information becomes relevant when it is matched with the identity of members of the participant's role-set (see Interaction) and placed in a spatial context (see Setting). To be told that a participant is twenty five years old, female, English, and from London, is not especially revealing; but if we find that this person, or category of person, will be communicating with middle-aged, male, northern Nigerians in Nigeria, we have culturally, significant information which will affect decisions to be made in the Communicative Key box. The data concerning language identifies the participant's target language and the extent, if any, of his command of it, his mother tongue, and any other languages that he knows, including the extent of such command. The information on the last point may prove to be irrelevant in some cases but helpful in others.

3.1 Purposive Domain

In this parameter we first establish the type of ESP (English for Specific Purposes) involved and then specify the occupational or educational purpose for which the target language is required. After identifying the ESP type as, for example, occupational: post-experience, questions are asked which establish the general occupational classification, the specific occupation, the central and other duties. If the purpose is educational, questions are asked which identify the specific discipline, central area of study, etc. A suitable term to indicate the nature of this higher-order sociocultural constraint that will identify the communicative purpose in such terms is Purposive Domain (we prefer not to use the term role unless focussing on relationships).

3.2 Setting

This parameter deals with features of both physical and psychosocial setting. In including both categories under setting we are following Hymes (1972) rather

² The question of role, which may come to mind here as a sociological attribute of participant (see Ervin-Tripp, 1964, or Richterich, 1972) is not part of this input. Role involves relationships which are a feature of social interaction in a particular setting, and is therefore dealt with later in the CNP. It would be premature to specify such relationships before we have taken account of the variables which affect them.

than other authorities. Questions are asked on the spatial and temporal aspects of the physical setting in which the target language is required for use. This includes place of work and study settings, as applicable. Then a selection has to be made from a list of psychosocial settings which are seen as different environments in which the target language is to be used. Examples of such environments are noisy, demanding, culturally different, aesthetic, unfamiliar. This information, besides operating as constraints on the original input, provides input to the boxes below, the information on physical setting, for example, being relevant to Dialect and Communicative Event, that on psychosocial setting to Communicative Key.

3.3 Interaction

This is the variable where we identify those with whom the participant has to communicate in the target language, and predict the relationships that may be expected to obtain between him and his interlocutors. In this parameter we first state the participant's position, i.e. in which he enacts a particular role, by reference to Purposive Domain. Then, taking account of constraints from Physical Setting, we identify the participant's role-set 3, i.e. the different people with whom he will interact in English in the enacting of a particular role. We also specify here the role-set identity in terms of the size of participation, age-group, sex, and nationality of its members. The interaction of the participant's position with a member of his role-set produces a role relationship, e.g. assistant teacher-headmaster. Although interaction relationships tend to be expressed in terms of role relationships, we shall specify them in terms of the social relationships, e.g. subordinate-superior, which are implied by the role relationships and the other relevant features so far obtained in the profile of needs. It is the social relationships which will be more significant for determining attitudinal constraints when we come to Communicative Key. I have therefore set up an inventory of social relationships, from which to make appropriate selections, a few more examples of which are official - member of the public, therapist - patient, insider - outsider, group member - group member, adult - adult.

3.4 Instrumentality

Here we are concerned to identify constraints on the input in terms of the medium, mode, and channel of communication. We need to know if the required medium of communication is spoken or written or both, and if the type of command is receptive or productive or both. Distinctions concerning the nature of the participation between the parties to the communication enable us to specify whether the mode of communication is, for example, 'monologue, written to be spoken' (e.g. news bulletins). There is a set of such subcategories of communicative mode from which to select as appropriate. The third aspect of instrumentality concerns the channel of communication that is required. This ranges from the commonly required print and face-to-face channels (both unilateral and bilateral) to the rarer radio contact for navigators and the police. These constraints, either individually or in combination, provide information relevant to the further processing of the input.

3.5 Dialect

Given the constraints of physical setting, role-set, and purpose, we are now in a position to process the input for dialect, e.g. to specify whether it is British or American English, or a regional variety of either, that is more appropriate for the participant to produce or understand. The main dimension of dialect with which we are concerned is the regional/non-regional, although matters of social-class and temporal dialect are also dealt with here.

3.6 Target Level

In our system we assign broad values, on the basis of relevant input information for that participant, to the defining characteristics of level. These values, which derive from a separate interpretation of the a priori variables for each participant, will then guide the subsequent processing of that particular profile of needs into the required communicative competence specification.

3 A concept introduced by Merton (1957).

The defining characteristics of Level are its dimensions, and the conditions on those dimensions, all as related to verbal medium. We postulate six dimensions of level: size, complexity, range, delicacy, speed, and flexibility. We want to know the size and complexity of the utterance or text, the range and delicacy of the forms, micro-functions and micro-skills, and the speed and flexibility of communication, which the participant needs to be able to handle receptively or productively. We mark each of these dimensions on a seven-point scale of broad values from very low/very small to very high/very large (see below). The decision to assign a particular value is made after referring to relevant input information.

Although a participant may need to handle a fairly high level of complexity, his communicative situation (as determined by the a priori variables) may allow a fairly high tolerance level of error. Or, a participant may need to understand utterances spoken at high speed where the tolerance level of asking for repetition is low. Such tolerance factors, which operate as conditions or constraints on the dimensions of level, need to be taken into consideration in the specification of target level. There appear to be five such conditions, viz. tolerance of: error, stylistic failure, reference, repetition, and hesitancy. To mark these conditions we use a five-point scale of broad values from very high to very low tolerance.

Dimensions and conditions relate to medium, viz, the receptive or productive command of spoken and written English. We express this as two grids, with medium along one axis and either dimensions or conditions along the other. The values are placed in the empty cells at the intersections of the two axes. The grids, completed as applicable to the particular participant, represent the target level guide.

It is important not to confuse the identification of the target level with the specification of the particular language behaviours for which the target language is required. Level is a determinant, not an objective.

3.7 Communicative Event

This parameter is concerned with what the participant has to do, either productively or receptively. It first identifies communicative events that result from the interaction of relevant inputs deriving from the prior identification of the participant's purposive domain, physical and educational setting, role-set, and instrumentality requirements. The events thus systematically arrived at are what might be regarded as macro-activities, such as 'waiter serving customer in restaurant' or 'student participating in seminar discussion at univeristy.' The parts, such as 'attending to customer's order' or 'introducing a different point of view', which make up these events, can then be regarded as micro-activities or simply activities.

Events consist of communicative activity and subject-matter. The term activity is to be distinguished from the various uses of the terms act and function. These two terms are used in both a macro and a micro sense. I am concerned with them as a micro-concept, as exemplified by many of Wilkins' subcategories of communicative function (1976), Widdowson's rhetorical acts (1971), or the speech functions of Candlin, Leather and Bruton (1976). We will call every such function or act a micro-function, to be distinguished from an activity which is a higher order unit at the behavioural level of communicative event.

Our use of 'activity' is partly similar to Bung's "operation". Bung's study of a waiter serving food in a restaurant enabled him to analyse this event (he calls it a function) into eighteen operations (1973). However, these operations are the product of a very detailed analysis for the purpose of module construction, where a "must-precede relation" applies in the writing of the materials, which is a different purpose from ours. If we had not had the benefit of Bung's description, our introspective analysis would probably have resulted in a less detailed breakdown, perhaps into only five or six activities. With an event like this, where the tasks are highly predictable, our six activities would probably subsume his eighteen operations. It may be the case that for many events the most viable level of analysis is one that is neither too delicate nor too gross. When analysing on the basis of introspection the criterion should be that the resultant communicative activities will facilitate the subsequent processing into

meaning units or language skills. As indicated above, the term activity includes discursual activities, such as 'note-taking from lectures' or 'writing up an experiment', from which specific language skills e.g. differentiating major and minor points, derive and for which such skills are required. Events, then, are broken down into their constituent activities. In some academic study contexts, there might be some events which are less susceptible to this treatment, in which case an event can be passed intact for interpretation in the skills selector.

The subject-matter of an event consists, initially, of topics or referential vocabulary categories for the communicative activities, thus acting as the central generator of the lexical items that the participant has to be able to understand or produce.

3.8 Communicative Key⁴

This parameter is concerned with how (in the sense of manner) one does the activities comprising an event (the what one does). Its categories derive from different sources from those for events. The prior identification of the participant's identity, role-set identity, social relationships, the psychosocial setting, and the nature and size of the participation, enables us to specify the likely attitudes or keys that need to be produced or understood in connection with an event. We need a taxonomy of such features from which to make appropriate selections to mark each communicative act, features which will eventually affect the choice of linguistic realisations. I have therefore, constructed an attitudinal-tone index which consists of a set of continua, each one labelled with a superordinate pair of keys in a relation of antonymy to each other, e.g. Courteous - Discourteous. The more likely attitudinal-tones for each continuum are indicated, these being co-hyponyms of each of the two antonymous parts of the superordinate term.

The postulation of a continuum indicates that the attitudinal-tones on each side of the continuum are not polarised as independent qualities but are in a "more than" and "less than" relationship to some relevant implicit norm (Lyons, 1968). For example, a person who says "Take off your shoe," with a high fall intonation pattern, is polite rather than impolite (or at least not impolite) with respect to the norm relevant for the doctor-patient interview situation, but impolite rather than polite with respect to the norm relevant for the shop assistant-customer situation. A continuum also allows for a central position, e.g. half-willing, for an attitudinal-tone that is neutral with respect to the extremes of its continuum.

Given the relevant inputs, our procedure is first to predict from the index the likely keys for each communicative activity. This marking is done here in the CNP. The specification of the appropriate attitudinal-tones is done later at the stage of sociosemantic processing of activities into meaning units. The differentiation of a superordinate into its hyponyms varies between individuals as a result of their communication needs, and the initial decision to be more general or more specific is based on the particular needs of different participants.

We now have a profile of the communication needs of a particular participant or category of participant. This profile has been systematically arrived at, having been processed through the eight parameters of the CNP. The necessary sociolinguistic variables have been taken into account so we can say the profile is contextually or situationally constrained (where context means social context, and situation embraces all the variables and not just that of setting). In designing this component of our model we have been guided by the first constituent of our theoretical framework, namely a sociocultural orientation towards communication.

It should be noted that the profile is a detailed description of particular communication needs without containing any specification of the actual language forms that will realise those needs. The CNP, therefore, operates at the pre-language stage in the specification of communicative competence. In trying out

⁴ We take the term "key" from Hymes (1972); this seems the most suitable cover term for the type of constraint handled here.

this part of the model on a group of teachers of ESP, it was noticeable how some of them, in their questioning, kept on trying to make the CNP deal with the language itself. This is indicative of both a widespread failure to understand the nature of communication needs (or to distinguish between them and their linguistic realisations) and also a premature insistence on getting down to the target language specification. Syllabus specification in ESP can only take place after the prior and necessary work has been done on needs, or we shall not know whether or to what extent the specification is appropriate. Misunderstanding the nature of communication needs also shows itself when matters of logistics or pedagogy are included as variables in the consideration of the participants' communication needs. For example, the number of teachers available, the intensity or length of the course, financial considerations, the learner's attitude to teachers, and his previous learning methods, are all important factors for consideration in the organisation of the programme and the construction of the materials, but they are irrelevant to the specification of what the learner needs the target language for, which is what comprises his communication needs.

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DISCUSSION

In the brief subsequent discussion, Fernando Silva (Colombia) asked: At what level should concern for subtlety in the linguistic coding of a micro-function be taken into account? How tolerable is it to risk a slight misplacement but to achieve basic communication?

Answer: This can be accounted for in the tolerance factor for stylistic failure (i.e. when inappropriate is not incorrect).

T C Jupp (Britain) asked: Please clarify. When you said the profile of needs is at "a pre-language stage", I am confused. Surely, the examination of "communicative event" and "communicative key" in the C N P is based in language data (intuitive or observed)? The specification of needs is at the prelinguistic inventory of teaching items stage - not pre-language. Do you agree?

Answer: In the C N P there is no exemplification of language items.

Ruth Pappenheim (Colombia) offered a commentary on the statement that language should not be taken into account at the profile stage: she agreed with this in the sense that specific language items should not be tackled at this stage. However, the kind of language should be defined on establishing the communicative event; e g for E A P in Latin America it is necessary to consider that students need to shift from English to Spanish at the stage of note-taking. This is a specific need.

The answer given was in agreement with the general idea, although the specific instance, of note-taking in Spanish, was not discussed.

Participants then divided into small groups to discuss and develop a Communication Needs Profile or a hypothetical or prototype student and, if there was time available, to convert the profile into a syllabus specification.

6.2 THE COMMUNICATIVE APPROACH AND ITS APPLICATION

H.G. Widdowson, Professor of English as a Foreign Language
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It seems self-evident that if we are to claim to be teaching English for specific purposes, then the first task must be to specify what these purposes are. Such a specification will enable us to define what needs to be learnt. It does not, however, necessarily tell us what needs to be taught. Nor does it tell us how the teaching is to be done. Having established the desired terminal behaviour of learners, we then have to work out the best way of getting there. The best way may not be what appears to be the most direct route, although one is generally inclined to think that it is. Consider, for example, the case of a group of technical college students who need English for the quite specific purpose of reading textbooks in metallurgy. One's immediate inclination might be to design a course whose exclusive concern is with reading and whose content derives directly from the textbooks which the students will eventually have to deal with. This is the direct route. But it may be that the students could be more effectively prepared by a course which developed more general communicative strategies over a wider range of language use, which concentrated not so much on direct teaching as on setting up the kind of conditions which created a favourable set towards later learning. I am not saying, please note, that the direct route is necessarily the wrong one but only that it is not necessarily the right one. We need to examine the pedagogic terrain.

My point is that a specification of learner needs, though a crucial matter, does not relieve us of the responsibility for devising a methodology. I think that this is a point that needs to be stressed because there is a tendency in some quarters to allow terminal needs to determine teaching procedures. This is the case, for example, with those who insist, as a matter of pedagogic principle, on the presentation of what they call 'authentic' language on the grounds that since the learner will have to deal with such language eventually he should be exposed to it right from the beginning. I have discussed the notion of authenticity and its pedagogic validity in some detail elsewhere (Widdowson 1975) and I shall refer to it again later on. Here I simply want to suggest, in passing, that it comes from an uncritical belief in the direct route, an undue compliance with need specification. The learner will have to be able to cope authentically with genuine language use at the end of his course. It does not allow at all that the only way of achieving this is to expose him to genuine language use at the beginning. It may be one way and in some circumstances it may indeed be the best way. But this is not axiomatic: it has to be established by reference to pedagogic criteria.

The specification of learner needs should not then (or so it seems to me) determine methodology. At the same time it obviously will have to be taken into account as a crucial factor, since it defines what methodology will ultimately have to achieve and in so doing indicates a theoretical orientation to the teaching task. To maintain my metaphor, it does not provide us with a route but it points us in the right direction. It suggests an approach. Thus if in our specification we establish that a group of learners needs English for the purposes of communication of some kind, then this suggests that we should adopt an approach which represents what is to be learnt not simply in terms of formal linguistic units but also in terms of the communicative functions they fulfil. In ESP a communicative approach seems to be the obvious one to adopt because even the most elementary assessment of needs reveals that learners will have to put the language they learn to actual use outside the language teaching context. Where need specification and examination requirements are not distinct, where language activity thus is confined within the language teaching context, the relevance of a communicative approach is not so obvious.

Nor is it obvious how such an approach can be realised as a workable methodology, whether this is designed for ESP or not. The communicative approach is being rapidly adopted, adopted indeed with almost indecent haste, as the new orthodoxy in language teaching: adopted, almost inevitably, without critical examination. It is always easier to join the ranks of the faithful than to question the creed, and as usual the more recent converts are the most zealous and the most embarrassing to the cause. But how exactly is a, or the, communicative approach to be characterised? What are its principles and how can a methodology be devised which will effectively apply them?

These are the questions that I want to explore in this paper. They are very difficult questions and involve issues of a complex kind. I shall not come up with any definitive answers. All I can hope to do is to make a suggestion or two about the kind of answer we might most profitably be looking for.

One view of what constitutes a communicative approach, and probably the most influential, finds expression in the work emanating from the Council of Europe, and in particular in Wilkins (1973, 1974, 1976) and Van Ek (1975). It is based on need specification of a sort and arises from the recognition that in the actual use of language people do not just produce sentences but express concepts and fulfil communicative functions in so doing. On this basis, it is proposed that the content of language teaching courses should be defined in terms not of the formal elements of syntax and lexis, as is customary in structural syllabuses, but of the concepts and functions these elements are used to realise. Wilkins groups these concepts and functions under the general heading of 'notions' and outlines a preliminary inventory (Wilkins 1976). Van Ek (1975) provides a more detailed specification of notions together with a selection of English exponents. The rationale behind this approach is very simple. Wilkins puts it in this way:

The whole basis of a notional approach to language teaching derives from the conviction that what people want to do through language is more important than mastery of the language as an unapplied system.

(Wilkins 1976: 42)

We would all, I think, share this conviction. The question is whether the notional approach as proposed by Wilkins and Van Ek (and others) really does account for what people want to do through language. Earlier in his book, Wilkins gives grounds for preferring notional to grammatical and situational syllabuses in the following terms:

The advantage of the notional syllabus is that it takes the communicative facts of language into account from the beginning without losing sight of grammatical and situational factors. It is potentially superior to the grammatical syllabus because it will produce a communicative competence and because its evident concern with the use of language will sustain the motivation of the learners.

(Wilkins 1976: 19)

But to what extent does an inventory of notions of the kind proposed take the communicative facts of language into account? There is one rather crucial fact that such an inventory does not and cannot of its nature take into account: which is that communication does not take place through the linguistic exponence of concepts and functions as self-contained units of meaning. It takes place as discourse, whereby meanings are negotiated through interaction. What the notional inventory presents us with is a collection of idealised elements of which discourse is compounded: idealised because, listed as they are in isolation from context, they are exemplified in such a way as to make their conceptual and functional meanings linguistically explicit. In discourse such meanings are not signalled with such convenient clarity: it would often be damaging to communicative effectiveness if they were since contextual dependence is a necessary condition for discourse development. In discourse one has to work out what concepts, or propositions, are being expressed and what functions, or illocutions, they count as.

What we are offered in Wilkins (1976) is really only a very partial and imprecise description of certain semantic and pragmatic rules which are used for reference when people interact. They tell us nothing whatever about the procedures people employ in the application of these rules when they are actually engaged in communicative activity. These are 'communicative facts' which are ignored. So it is hard to see how a notional syllabus of the sort proposed can, of itself, produce communicative competence since it does not deal at all with one of its most fundamental aspects. It is also hard to see why, this being so, such a syllabus should provide so much more motivation for learners than the structural syllabus. The learners are presented with language items called notions rather than with language items called sentences. The items are organised and labelled differently, but unless learners are persuaded of the relevance of this to a development of an abili-

ty to deal with discourse, an ability which they associate with a natural use of their own language, they are likely to regard it as yet another pedagogic confidence trick. There will be no motivation then.

I have discussed the notional approach in some detail, and perhaps a little harshly, because many people assume that this is the communicative approach, the only form a communicative approach can take. It is important, therefore, to recognise its limitations. These can be summarised by saying that it does not deal with language use in context but only in concepts and functions in idealised isolation, informally described and exemplified by citation forms whose very explicitness signals their ideal character. The move from sentence to notion is, I believe, an advance but it still leaves us with a long way to go. We still have to face the complexity of real communication, the way in which notions are realised in discourse.

If we are to adopt a communicative approach to teaching which takes as its primary purpose the development of the ability to do things with language, then it is discourse which must be at the centre of our attention. What kind of 'communicative facts' would such an approach have to take into account? The most fundamental of them might, perhaps, be expressed as follows:

When a sentence is used, or its use is apprehended, in a normal communicative context, it activates a range of different relationships; or, to put it in an alternative (and Hallidaian) way, its meaning potential is realised in a number of different ways. The concept, or ideational content, is realised as a particular proposition which links up with and develops from the propositions previously expressed. This is the relationship of cohesion (see Halliday and Hasan 1976). As an example, consider the following:

One of the important mechanisms by which the individual takes on the values of others is identification. The term is loosely used to sum up a number of different ways in which one person puts himself in the place of another.

Here the second sentence is used to express a proposition which combines with the first by virtue of the anaphoric link between the term and identification. This is not, however, the only relationship that can be recognised between the two sentences as they occur together in this context. We may note that the second proposition is to a very considerable degree a paraphrase of the first: the expressions the individual takes on the values of the others and one person puts himself in the place of another are conceptually alike. So we recognise that the second proposition functions in a certain way in relation to the first, that it acts as a clarifying restatement or gloss. This is relationship of coherence, the manner in which the illocutionary functions which propositions count as combine into larger units of discourse. Here coherence is realised in the recognition that the second proposition functions as some sort of elucidation of the statement expressed through the first.

So far I have been talking about cohesion and coherence as relationships which obtain between propositions and illocutions. In fact, I think it is preferable to conceive of these relationships not as existing in the text but as established by the interactive endeavour of participants engaged in a discourse. In this view, they are dependent on a third kind of relationship which the sentence in context realises: the relationship of interaction. The sentence can be said to represent a set of clues provided by the writer, or speaker, by reference to which the reader, or listener, can create propositional and illocutionary meanings (See Widdowson, 1977 b). One kind of clue is the manner in which propositional content is organised so that what is assumed to be recoverable from shared knowledge, what is given, appears first and what is assumed to be informative, known only to the addresser and new to the addressee, appears last. Consider, for example, the first of our two sentences. Here identification is presented as new and this indicates to the reader that what is to follow will provide more information about it. The underlining serves to point out the clue more clearly. The same proposition could be expressed by the use of a different sentence, one in which given and new are reversed:

Identification is one of the important mechanisms by which the individual takes on the values of others.

The indications here is that identification is assumed to be given, so that the reader will not expect any further elaboration. Hence if this sentence were

to be followed by our second sentence, he would find it unpredictable and puzzling. The two propositions could still be recognised as having a cohesive relationship, but there would be a breakdown in interaction in that the writer would be misleading the reader and denying him the opportunity to participate. What the reader would expect to follow from this second version of the first proposition would be some elaboration of the ideas expressed in the predicate noun phrase. Thus he might expect some substantiation of the assertion that identification is important, in which case he will be primed to anticipate something like:

Its importance can be assessed by considering the behaviour of children.

Alternatively, the reader might fix on the clue provided by the expression one of and expect a concessive statement to follow, like:

It is not, however, the only one.

The reader, then, predicts, on the basis of the clues provided, what the possible functions of the succeeding proposition are likely to be. The success of his predictions is a measure of the effectiveness of the interaction relationship which the sentence in question mediates between the participants.

Of course, as he proceeds the reader may find that he has favoured the wrong clue and followed the wrong lead. Thus, in the case we have just been considering, he may fix on the expression important as the clue and predict that a substantiation is to follow. If instead a concession follows, then he has to adjust his interpretation so that he recognises the preceding sentence as having the function of a summary of a preceding discussion. He may not pick up a necessary clue at all and in this case he has to retrace his steps and have a closer look. If he still makes no sense of the text, the interaction breaks down and there is no discourse.

When a sentence is used in context, then, the reader, or listener, has work to do to make sense of it. This work is directed by what Grice (1975) calls the 'co-operative principle', which provides the basis for interaction. The addressee uses the clues provided by the addresser to create cohesive links between the proposition and coherent links between the illocutionary functions which these propositions count as. The sentence, then, can be said to activate an interaction relationship which in turn enables the addressee to create the relationships of cohesion and coherence.

An approach to teaching which concentrates on the business of communication must, it seems to me, concern itself with discourse. I have given here only a sketchy and imprecise idea of what this might involve. The whole field of discourse analysis is busy with exploration at the moment (for a review see Coulthard 1975, Widdowson 1977 a) and it is not easy to find one's way around it, let alone establish significant common principles of investigation. Ethnomethodologists, sociolinguists, philosophers, semanticists are all digging away at their own particular claims. For our present purposes I want to suggest that there are two basic characteristics of (or 'communicative facts' about) discourse which we need to account for in a communicative approach to teaching. The first is that it is essentially interactive, and involves negotiation of meanings. This aspect of discourse is particularly stressed by the ethnomethodologists (see Turner 1974) and is demonstrated (in different ways) in Labov (1970), Grice (1975), Harder and Kock (1976). In this view, what is presented on a page as written text has to be converted by the reader into discourse whereby meanings are negotiated. The second characteristic is that this interaction creates hierarchical structures whereby the combination of propositions and illocutions builds up to larger units of communication. This aspect of discourse is given prominence in Sinclair and Coulthard (1975). Their concern is with spoken language. Recent work in the University of Washington examines the structure of written discourse in terms of the rhetorical development of the paragraph in technical writing. (See Selinker, Trimble and Vroman (1974) and the papers cited there).

Let us then assume that a specification of needs indicates that the teaching approach which would be appropriate is one which concentrates on the development of communicative competence and that this is defined as the ability to cope with the interactive structuring of discourse. Let us further assume that it is written discourse of an academic kind that is to be dealt with. What methodology can

we devise which will incorporate this approach and meet these needs? I want to propose that the structural characteristic of discourse should inform the manner in which language items are sequentially graded in a syllabus and that its interactive characteristic should inform the manner in which these items are presented. I am proposing, then, that the two basic characteristics of discourse that I have identified should be converted into basic methodological principles. Let us now consider, in a very tentative way, how these principles might work.

In designing the syllabus, our aim is to order the language items to be learned in such a way that they build up into larger communicative units. We might conveniently take paragraph units as defining the scope of each section of the syllabus. Within each section there are stages which introduce new coherence relationships and these can be labelled by the overt clues which are used to mark them: for example, marking exemplification, that is to say marking restatement, however marking concession, on the other hand marking contrast and so on. Thus we devise a syllabus which is not a collection of structures or situations or notions but a sequence of relationships which build up into a structured paragraph, and subsequently into a series of paragraphs which approximate to the kind of reading material which the learner will ultimately have to handle.

Let us suppose that, after due consideration of the question of teaching and learning objectives that I raised at the beginning of this paper, we have decided that our starting point in preparing such a syllabus is the point the learners will arrive at at the completion of the course: instances of genuine reading matter derived from their textbooks. Our task is to analyse it into teaching materials, to contrive a pedagogic presentation which will develop in the learners a capacity for ultimate authentic response. Let us suppose that we want to design a reading course for students of sociology, and let us suppose that we wish to begin with the simple relationship of exemplification. We search through our corpus of genuine passages for instances of this. One such passage, we will suppose, is the following on identification:

IDENTIFICATION

One of the important mechanisms by which the individual takes on the values of others is identification. The term is loosely used to sum up a number of different ways in which one person puts himself in the place of another. People are said to identify with others when they are able to feel sympathy for another's plight, to understand and perhaps even experience the emotions someone else is experiencing, and to treat others as they themselves would like to be treated.

The normal tendency of the child to take the same attitudes toward himself that others take toward him is also a form of identification. If the average child does not steal, it is not because he has reached the rational conclusion that it is unwise or inexpedient to do so. Rather he takes the same morally disapproving attitude toward such behaviour that others take toward it. He identifies with the adult point of view, and the thought of stealing prompts feelings of guilt.

It is also normal for the child to take the same attitudes toward his environment that his 'significant others' take toward him. The little girl who is spanked by her mother may in turn spank her dolls, acting toward her dolls as her mother acts toward her. She identifies with her mother according to her limited experience of what a mother does and feels.

There is a stronger and more specific sense in which children identify with others. Some adults the child's experience appear to him as ideal figures; the child wants to be like them and models himself upon them. In early childhood, he identifies with one or both of his parents. Later, he may develop 'crushes' on teachers and peers and take them as ideal images to be emulated. Identification of this sort is often temporary, but it can permanently shape character and personality. Broom L and Selznick P. Sociology, Harper and Row (1955).

From this we can extract the following:

The child takes the same attitude towards himself that others take towards him. Children take the same attitudes towards their environment that adults take toward them.

The learner is then presented with a set of sentences and asked to select from them those which could be used to provide an example.

Among these would be:

If the average child does not steal, it is because he takes the same disapproving attitude towards such behaviour that others take towards it. The little girl who is spanked by her mother may in turn spank her dolls.

Appropriate combinations will yield the sequences:

The child takes the same attitude towards himself that other take towards him. If the average child does not steal, for example, it is because he takes the same disapproving attitude towards such behaviour that others take towards it.

Children take the same attitude towards their environment that adults take towards them. The little girl who is spanked by her mother, for example, may in turn spank her dolls.

At the next stage we might move on to consider how these embryonic instances of discourse might be extended by other supporting acts. The learners can be asked to consider the combinations they have produced and to select a sentence which can be used to restate the idea in the example, which can be linked with it by means of the markers, that is to say or in other words. The set of sentences provided would include the following (again extracted from our original text source).

She acts towards her dolls as her mother acts towards her.
By combining this with what has been produced before, the second of our instances of discourse is extended as follows:

Children take the same attitude towards their environment that adults take towards them. The little girl who is spanked by her mother, for example, may in turn spank her dolls. That is to say she acts towards her dolls as her mother acts towards her.

We might then at a further stage go on to ask the question: What do you conclude from this? Among the sentences which the learner has to choose from are the following:

She identifies with her mother according to her experience of what a mother does and feels.
He identifies with the adult point of view, and the thought of stealing prompts feelings of guilt.

The discourse can now be extended further by use of the marker thus: hus:

The child takes the same attitude towards himself that others take towards him. If the average child does not steal, for example, it is because he takes the same disapproving attitude towards such behaviour that other take towards it. Thus he identifies with the adult point of view, and the thought of stealing prompts feelings of guilt.

Children take the same attitude towards their environment that adults take towards them. The little girl who is spanked by her mother, for example, may in turn spank her dolls. That is to say she acts towards her dolls as her mother acts towards her. Thus she identifies with her mother according to her experience of what a mother does and feels.

What we are aiming to do here is to get the learner to participate in developing a paragraph which has roughly the following structure:

Main statement

Support

exemplification (for example)

clarification (that is to say)

conclusion (thus)

The paragraph can be said to consist of two parts: main statement and support. The support in turn consists of three acts, which I have labelled (for the nonce) exemplification, clarification and conclusion, which exhibit increasing degrees of generalisation, the last coming close to the level of generalisation of the main statement.

The diagram given above represents a simple plan of one section of the syllabus. At each stage of the course a number of different paragraphs are being simultaneously developed along similar lines, so that this diagram, and others representing different paragraph structures in other sections of the syllabus, can be regarded as a device for generating different textual tokens of essentially the same discourse type.

Obviously I do not have the time here and now to work out in detail the kind of syllabus I am proposing. Such a task would need careful and collaborative effort in the context of actual teaching circumstances. All I have outlined, by way of example, is how one unit might be organised around the relationships marked by for example, that is to say and thus. Other units would deal with other patterns, with other types of discourse development concentrating on relationships marked by therefore, however, on the other hand and so on. Later units would then go on to combinations of paragraphs.

The raw material used in this operation is extracted from genuine texts. In the examples I have been giving this extraction has not involved very great changes. If one wanted to begin at a linguistically less complex level one could decompose the original texts into simple propositions and begin the paragraph build-up from a more elementary base. The methodological principle informing the design of the course would remain the same. As the course proceeds, the learners, then, create paragraphs of different patterns and then combine these paragraphs into sequences which constitute reading passages, which are simplified versions of the passages from which they originally derived. At these points they can be presented with these genuine passages, and others like them, having been prepared to respond to them authentically as discourse by what has preceded. The learners will be practised in recognising underlying rhetorical patterns through stylistic variation. They will have acquired interpretative strategies for textual use. That, at least, is the theory of the thing.

The kind of methodology that I have in mind, then, organises the syllabus in such a way as to develop in the learners the interactive capacity to create structured discourse, with each stage focussing on a coherence relationship and each unit focussing on a paragraph type, with later units bringing different paragraphs into an appropriate sequence to form passages which represent in simple form the underlying structure of the genuine texts from which they derive and to which the learners can now be exposed.

I have already suggested how such a syllabus might be presented, how learners might be involved interactively in the discovery of discourse structure. As the course proceeds, the learners' scope for participation would quite naturally widen. Thus, they might at some point be presented with the beginnings of paragraphs and be invited to predict possible developments, guided by the provision of alternatives. An exercise of this kind could be designed as a branching programme. Another, and similar, activity is suggested by the kind of 'logical trees' described by Sheila Jones (Jones 1968) which transpose passages of written language into visual graphs and list structures representing question and answer sequences. There would also be a place, I think, for the procedures of information transfer and "gradual approximation" (described in Widdowson 1975, 1976 b) both of which are designed to engage the learner's active participation in the writing, and therefore in the interpreting, of discourse.

All of the procedures I have just mentioned are thought of as directly realising the syllabus. At the same time, one has, I think, to allow for supplementary activities of various kinds. One may need, for example, exercises on the different forms which are customarily used to perform the communicative functions we are concerned with. Such exercises would be concerned with the ideal linguistic realisations of Wilkins' concepts and functions. Again we might need exercises which familiarised learners with common cohesive devices such as are described in Halliday and Hasan (1976). Other exercises might deal with the different ways in which propositional content can be organised in sentences and with the presuppositions which are thereby created. This last would offer plenty of scope for

interaction and for the representing of speaking and reading as alternative realisations of the same underlying ability. I think of all of these activities as loops: they extend from and return to the main teaching point which they serve and which gives them their raison d'etre. I conceive of them as optional practice elements in the course, to be exploited or by-passed as required, and to provide the flexibility which is necessary in classes of uneven attainment or varying rate of progress.

All of this is, I am aware, very sketchy and very imprecise: more of a gleam in the eye than a reasoned set of proposals for immediate application. What I am certain about is that any approach to the description and teaching of language that claims to account for communicative competence (a very large claim indeed) must deal with discourse. What I am uncertain about is the way in which our as yet imperfect understanding of discourse can be applied to the design of an effective methodology. What I have done in this paper is to suggest one or two possibilities that I think might be worth exploring. A lot more exploration needs to be done. This is a painful and frustrating business, especially when you find only that you have been following a false trail. But I think we must persist. Above all we must deny ourselves the comfort of dogma which deals in the delusion of simple answers.

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DISCUSSION

Questions:

Mary Todd Trimble (U.S.A.) asked:

How early in the course can this approach be used? What can be done at the very beginning level? Answer: From the very beginning we can work towards building linked units, not just separate sentences, using at first explicit and then implicit links. We can often draw here upon the learner's knowledge of how such links work in his own language.

María Horzella (Chile) asked:

What happens in a situation where the student has intuitively incorporated the reading skills to a high degree of proficiency in L1 but has difficulty in transferring this ability to L2? Answer: The student in the situation described requires elements of language coding in English. These certainly include the lexis and syntax of English.

She also asked:

What happens in a situation of proficiency in reading skills both in L1 and L2?

Answer:

In that situation flexibility of the programme routes the student to more demanding work.

Lyn McLean (México) asked:

You have presented some specific examples of how to exploit the sequencing of discourse functions in a text when they are explicitly marked or when they are not marked. Now, how are we to deal with ellipsis - at the discourse level - given that this ellipsis is likely to be the result of shared presuppositions which may be specific to specific scientific disciplines in a general reading course? Answer: It may be assumed that in certain texts such as laboratory reports items can be omitted and the passage will be understood because the scientist reading the text will share the same presuppositions as the scientist writing the text. So it seems it would be necessary to deal with presupposition in some way, with special types of exercises.

She further asked:

Do you think that at this level (i.e. the point at which we as teachers attempt to deal with ellipted discourse resulting from shared presuppositions) it might be wise to leave the general reading material and begin reading subject specific texts. Answer: Yes, that might be a good idea.

Blanca de Escorcía (Cali) asked:

How do you bridge the gap between these well edited paragraphs and the real discourse? Answer: By gradually introducing complexity in your texts.

Tom Jupp (England) asked:

How far has work in discourse analysis revealed underlying similarities and common discourse structure of texts from different academic disciplines? I am interested in this from the point of view of a common core reading course. Answer: Work has not gone far in this direction. But my view is that, if we have learned reading skills in literature, we can later apply them in the sciences; the teacher can evolve and create his own syllabus with this aim in mind.

Guillermo Latorre (Chile) asked:

Behind syllabus specifications, is there a corpus of original target discourse? Answer: Target language discourse does not necessarily have to be taken from target language itself. The aim of the teaching is to concentrate on general rhetorical features. This can be done, in principle, through a corpus which is not target subject specific.

Ruth Pappenheim (Colombia) asked:

Taking reading comprehension as an interactive process through which meaning has to be found, and considering that our students' need is to read for academic purposes (e.g. to give reports, take exams, write papers) what is the place of note taking in syllabus design? Answer: The recognition of hierarchy in discourse should be taken as the basis for summarizing and note-taking. The problem is that we tell the student to write summaries using their own words but we never give them any guidance to discover the hierarchy of ideas in a text.

Van Milne (England) asked:

In many fields of activity leading exponents are under pressure to follow their ideas into practice. Are we to expect a communicative syllabus from the speaker? Answer: Well, I am working on this and you might receive a manuscript one day. But the important thing is that there must be no suggestion of a new doctrine ready-made for all teachers to follow.

John Moore (Colombia) commented:

It is important not to forget that as was pointed out by a previous question, the reader makes an active contribution to the reading experience. It is important to allow students to read according to purposes which they will formulate and not to impose a narrow method of reading on them.

Mary Todd Trimble asked:

Are there two types of reading, one where one reads to see main points and where supporting statements can be forgotten once understood, and another kind where rhetorical structure needs to be understood but details must also be retained? Answer: It is necessary to distinguish between information required only in order to understand main point and information which must be retained. Many textbook writers do not observe this in comprehension exercises and ask questions on points which are not for retention.

Peter Brown (Argentina) asked:

There are two problems involving a) Understanding of discourse in one's own language, b) Studying how discourse is encoded in a target language. Are we not trying to do two things together? Should students not learn these skills in their native language? Answer: Yes, if you can. But in certain areas e.g. The Far East, you just have to do both. There is also a case for bilingual syllabuses.

He also asked:

If course elements are taught as discrete items, are we sure they will gell. Answer: They are not taught as discrete items.

WORKSHOP ACTIVITY

For further study of these issues and techniques, participants again divided into small groups -

- a) to study two additional papers by Professor Widdowson - "Gradual Approximation" (contained in the Background Papers) and "The Process and Purpose of Reading" (which was distributed), and
- b) to test out Professor Widdowson's suggestions by submitting one of a number of given passages to the process of "decomposition" and reconstitution, as an exercise in discourse analysis.

At the end of the day, a further plenary session was held. M P Mason (Brazil), summarizing the experience of this group in studying the paper on "Gradual Approximation" and attempting to apply its recommendations to a passage entitled "The Importance and Role of Photosynthesis", had the following comments to report:

1. Vocabulary. The group found several items of General English vocabulary, both in the passage in the "Gradual Approximation" paper and in the Photosynthesis passage, which would need to be taught. The group discussed the stage at which these vocabulary items should be introduced.
2. It was remarked that the sentence-matching exercise - the one particularly intend to co-opt the student's own specialist knowledge - was not an exercise for which marks could be given if the exercise was to be done by students from a variety of Faculties, because correct sentences could be formed which were not correct statements, but only students from relevant Faculties could know this. Teachers should be warned not to give grading marks for this exercise. The difficulty could be overcome with heterogeneous classes by doing the exercise as a group activity with at least one student in each group who could advise his colleagues on the factual accuracy of the sentences produced from the table.
3. The group considered that the step from making separate statements to composing continuous discourse was too large. It was stated in the paper that this step could be controlled for difficulty, but to the group this appeared to be a complicated and time-consuming process. For their own exercise the group proposed to combine several propositions (from their "decomposed" version of the passage) into single sentences, and then to use a modified Cloze procedure to handle the organization of discourse.
4. The group had found the "Gradual Approximation" paper to be a useful and stimulating piece of work.

6.3.1 MATERIALS PRODUCTION FOR ESP - SOME FIRST PRINCIPLES

Ana María Harvey and Maria Horzella
Department of Humanistic Studies, University of Chile
and
Guillermo Latorre
Language Department, Catholic University, Chile

The production of teaching materials for ESP courses is normally a part of a larger operation which comprises several stages and presupposes the clarification of some basic issues which will in turn provide the framework required by the materials producer. These previous steps have been dealt with in depth by Mr. Munby and Professor Widdowson in their presentations.

Materials production for ESP is then an intermediate stage in a process which begins with the determination of the learner's needs and the conception and design of a syllabus or programme, and ends with field testing plus the attendant feedback. The situation is illustrated in Fig. 1.

THE INTERACTION OF MATERIALS
PRODUCTION ELEMENTS.

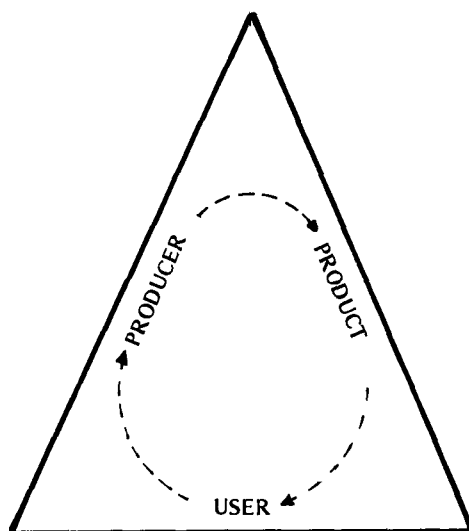


FIG. 1

Let us first consider the three basic elements which enter into the process we shall be discussing. These are the user (student), the producer (materials writer) and the product (the materials).

It is by now axiomatic that production must necessarily start with a full identification of the target learner group. (1) When identifying the group, special attention must be given to age, mother tongue, previous EFL experience, level of knowledge in specialist study, and motivation. We shall stop to consider the latter since it is a factor which has begun to be better understood only recently.

A distinction drawn by Wilkins (1972), *inter alia*, is worth commenting on. He speaks of two types of motivation, depending on the learner's attitude towards a foreign language. The first category is the so-called 'instrumental' motivation in which the student sees a mastery of the foreign language as a means to

(1) The organizational framework in which the target group is found also has a role in the process since the type of organization requiring ESP places additional constraints upon students, syllabus, materials and teacher.

some further end (e.g. to pass an examination, to use in one's job, to use on holiday in the foreign country, etc.). Conversely, 'integrative' motivation involves a perception of the foreign language and culture as ends in themselves, the learner being interested in knowing more of the culture, in making actual contact with foreign speakers, even in modeling personal behaviour on L2 and C2 patterns, to name the most familiar reasons.

Is the ESP learner motivated instrumentally or integratively? The answer is obviously the former, but labelling the motivation is of little help to the producer since in ESP settings 'instrumental' attitudes may affect learning positively in the sense that the student may perceive a knowledge of English as a means to higher economic and professional status. Or it may well happen that the almost compulsory need to learn English - a not infrequent feature of some EOP situations - will in some instances actually harden the learner's disposition into one of reluctance and even rejection.

Now the lesson is clear. Although determining students attitudes to English clearly belongs in the stages prior to materials development proper, this datum will certainly enter into the materials themselves in the form of any techniques that make learning enjoyable in addition to useful.

A second set of related factors to be considered involves the performance expected of the learners and the time the learner has to achieve the desired performance. Time is, of course, a crucial factor for the ESP student, who has to make room for English in schedules densely packed with specialist subjects. The time constraint thus forces the virtue of economy on the materials writer: his productions must incorporate only contents of the most immediate relevance to the user.

The producer should also be aware of the fact that the learner brings not only needs, previous knowledge - both in English and the speciality -, attitudes and motivations to the ESP class. He will also transfer certain approaches to learning that he has employed with various degrees of success in the specialist subjects. All practising EST teachers realize that their students are being trained in analysis, explanatory systems, integrating principles and models. It is only natural that the latter tend to apply these principles to the solution of their language problems. Learning techniques originating in a scientific background have been exploited in the EST classroom to good advantage.

A second type of learning strategy common to all adult EFL learners may affect the learning process negatively to some extent. Research has indicated (Taylor 1975) that overreliance of the learner on certain types of strategies might partially affect the efficiency of the learning. For example, the mature EFL learner has a tendency to analogize and simplify, the latter possibly the result of a crowded time-table. Accordingly, the student would either rely on his native language and transfer L1 rules to English (at a initial stage), or would extend L2 rules already learned to cases where these would not apply (at a later stage). Both the scientific conceptual approach and the adult learning strategies hold implications for the producer that will be discussed below.

Having touched upon some user related factors, let us now turn to the producer. Of special importance is the view of language -explicit or otherwise- that the writer is applying in his work since this view will have a direct bearing on his analysis of target-language samples, on the organization of the materials into teaching steps, and on the methodology recommended for most effective use of the product. Moreover, the last two will also be informed with the particular views held of the learning process -behaviouristic, mentalistic, or the inevitable compromise.

The producer will also have to bear in mind additional considerations of two types. These can be roughly sub-sumed under the headings of psychological and sociological considerations.

The first considerations flow from the nature of the learner. We have noted two characteristic sets of strategies the student tends to apply when learning English; we must now briefly comment on how these affect the preparation of materials. Firstly, the fact that students are being trained in analysis, explanation, model-building and so on means that the course materials will have to make generous provision of exercises utilizing these modes of thought as learning stimuli. Exer-

cises in information-transfer, inference, quantification and others are now a standard feature of most ESP materials.

Secondly, in addition to these strategies peculiar to the scientist or scientist in training, the ESP student will also bring in the strategies characteristic of all adult EFL learners. In so doing, a number of errors will be generated. The production process must then provide for a measure of error analysis leading to an inventory of the most common types of mistakes. However, the items in this inventory would have to be carefully assessed on at least two counts, namely, their relevance (do they really interfere with communication in the situations in which the student will be facing English?), and also the time available for possible remedial teaching. Out of the total number of errors only a few will be singled out as sources of really serious interference. The course writer should then provide some remedial teaching where applicable only: in view of the short time available it is just not economical to devote much effort to errors whose effect are largely compensated for by context and redundancy.

The second set of considerations has to do with what we might loosely call socio-linguistic factors. The most important of these refers to the place of English regarding the local culture. It is now well known that underlying the classical distinction between ESL and EFL we find in fact a variety of possible configurations for English in various parts of the world. Lott (1971) distinguishes four major categories:

- a) Category I: regions in which English is used in all or almost all levels of the educational system (e.g. Ghana, Zambia, parts of the West Indies, etc.);
- b) Category II: regions where a local language has recently been adopted, leaving English only as the medium used in higher education and advanced technology (e.g. India, Pakistan, West Malaysia);
- c) Category III: regions where the local language is sufficient for most communicative needs, excepting those of science and technology. Growing foreign aid makes English economically important (e.g. Turkey and possibly Thailand);
- d) Category IV: regions with major languages of their own, sufficient for all communicative needs including most of those of science and technology. The urgent need for English in specialized communication becomes apparent when these economies begin to operate with other economies beyond national boundaries (e.g. Japan, Latin America, some European countries).

The corollary of all this is that in some regions ESP learners will be called upon to perform social roles with an overt realization through English. In effect, a student in a Category I country will evidently have to deal with peers (fellow-students) and superiors (teachers and headmasters) and all these relationships will have to be reflected in the language used, a fact that will have to be taken into account when preparing materials. Thus the course writer will have to consider the possibility of 'multiple-skills' syllabuses and materials versus 'limited-skill ones.

Another important consideration flowing from the position of English is that, although certain skills are required by all ESP learners regardless of country or mother tongue, the particular relation of English to the native language will affect all aspects of ESP -materials included- as regards the sequence of skills, the age at which the learners will be introduced to particular skills, and the conceptual contents of the materials. To take but one or two examples, students in a Category II country will need to develop note-taking capabilities the very moment they begin tertiary education whilst those in Category I will need to do no earlier in their studies. Again, in a Category IV setting, the need for English will become apparent at tertiary level with special priority given to reading comprehension.

So far our discussion has centred round user and producer. It is now time to take a closer look at the product itself. Three main aspects will be analysed in this respect: the specification of aims, the determination of contents and the experimental try-out.

To begin with, the aims pursued by a materials writer must be defined in terms

of terminal behaviour to be defined in turn as skills. An example of the way this has been done in Chile is the Specifications for a Co-ordinated Programme in EFL for Science and Technology Students drawn up by J.R. Ewer (see References). This document clearly details the skills to be developed, the type of instruction to be imparted and, most relevant to the present discussion, the types of materials available or required to comply with the objectives contemplated. In addition to acting as a guide to syllabus planning, the Specifications provide a kind of checklist for materials production by highlighting those skills for which no adequate provision has yet been made.

Final aims may also be viewed as successive language learning objectives to be attained. This perspective has proved fruitful as it not only allows breaking the learning task into successive steps, but also permits matching skills and linguistic content. The following quotation from another set of specifications (Harvey and Sindermann 1974) can be offered as an illustration:

"Given a written selection students should be able to follow the logical sequence of ideas by detecting and underlying linguistic clues: anaphoric and cataphoric elements, introductory formulas, connectives and their function . . ."

In this case, the over-all objective has been broken down into the discrete tasks of identifying a number of different clues in sequence. For instance, the text is first read to detect back-referencing and forward-referencing; a second time for introductory formulas and so forth. Ewer (1976) has used a similar approach specifying the various tasks and their sequence in the development of speed-reading by means of an ingenious technique of cyclical stages.

The distinction between formal and functional approaches to ESP syllabus construction and materials development is a good starting point for discussing contents. As drawn by Johns (1975:3) amongst others, this distinction involves on the one hand defining contents in terms of the phonological, syntactical and lexical features of the target language variety (formal approach), and on the other specifying contents in terms of the uses to which the learner will put the language (functional approach). The latter of course specifies such acts as defining, classifying, generalizing and so on. At present, it has become quite clear that there is room for both approaches in materials production since the two have proved effective in actual ESP practice. The advice offered to teachers by Prator (1976) "to regard all tested techniques as resources" is naturally also applicable to materials producers.

The steps suggested for the selection and organization of materials contents are the following:

- a) determination of area and type of discourse (related to general conceptual content and to skills to be developed);
- b) determination of subjects within area (related to representativity of samples for analysis);
- c) formal/functional analysis of target language samples (essential to ensure that teaching materials bear close conceptual and linguistic relation to target language);
- d) selection of formal/functional core-language (essential to ensure that materials will cover the most essential elements);
- e) organization of resulting core-language into units whose aims, length, layout and themes will be most relevant and affective.

The interaction between the three elements discussed so far is illustrated in Fig. 2.

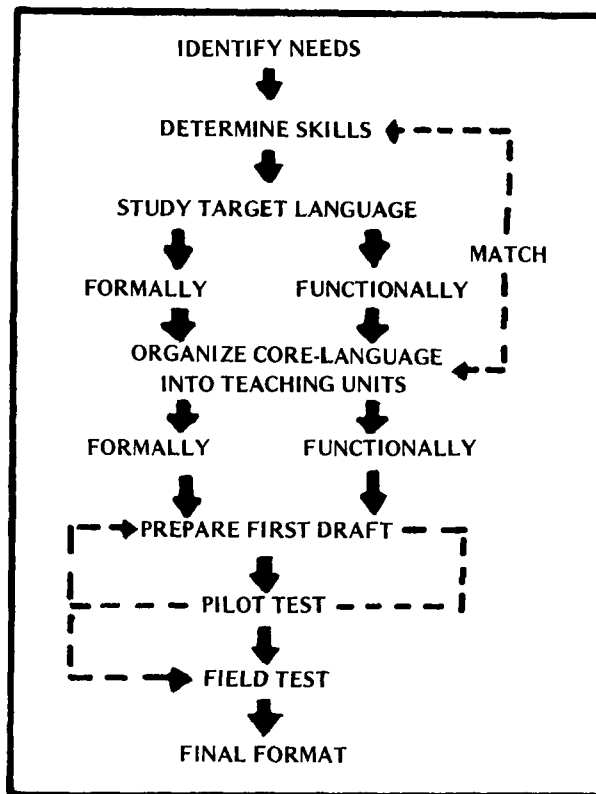


FIG. 2

To what extent have our procedures actually resulted in materials which will be conceptually relevant, linguistically reliable and pedagogically effective? That answer can be obtained only through testing under operational conditions. But prior to that, the draft resulting from the procedures outlined above must go through a double 'filter'. First of all, all materials, whether written, recorded or graphic, must be submitted to the scrutiny of a native speaker of English in case the writer is not. Secondly, the 'native-filtered' version must then be read by an English-speaking specialist to ensure factual accuracy. This should be followed by pilot testing with sample groups and then more extensive testing with as wide a variety of teachers and teaching conditions as possible. The value of experimental try-out cannot be overstressed since it clarifies the thinking behind the basic assumptions and over-all approach right down to details of classroom operation and even lay-out. It also gives the opportunity of finding out whether other inputs, graphic, visual or aural, are required. Feedback from experimentation will certainly point to any modifications to be incorporated into the material. One of the ways this feedback might take would be a materials evaluation sheet similar to the one illustrated in Appendix I. Only after the process of experimentation has been completed can we be sure of the validity of the conceptions that went into the materials prepared.

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DISCUSSION

José Ignacio Silva (Venezuela) asked about the need to strengthen skills in L1 before undertaking L2 programmes. Answer: The question is very crucial, but needs to be studied in the context of specific circumstances.

Harry Hawkes (Perú) asked how it is possible to estimate the point at which "error" in reading comprehension leads to communication breakdown. Answer: Comprehension questions are often too detailed to test reception of essential information from a passage. A checklist of rhetorical devices reflected in understanding is perhaps the ultimate answer.

T C White (Chile) asked whether the term 'core language' could be better replaced by 'generalized language learning activities'. Answer: Yes, the term 'core language' had been loosely used. Studies of language categories, e.g. those of the Edinburgh School, have much interest to materials developers.

David Harper (Mexico) asked whether an error inventory had yet been developed in Chile. Answer: Some work has been done, but no formal lists exist. However, there is a feeling that communication takes place despite a considerable level of formal inaccuracy.

R S Newberry (Colombia) suggested the following distinction between an Aim and an Objective: An aim is essentially directional. It shows the direction in which we are trying to move the student, for example to improve his comprehension of medical texts. An aim is not quantifiable. The learner never achieves an aim, in that we none of us ever gain complete mastery of any area of language. An objective, on the other hand, is quantifiable. It is a task which the student is asked to achieve - it can be 'marked'. Answer: The speaker agreed.

6.3.2 MATERIALS DEVELOPMENT:

A Case Study

"The preparation of rhetorically-focussed materials for Colombian university students."

J.D. Moore, British Council Officer,
Materials Development Project
Universidad de los Andes
Bogotá

Introduction

This paper present aspects of the work of the Universidad de los Andes materials development team. It draws particularly on the experience in writing a third semester course in English for Academic Purposes, "Reading and Thinking in English".

The members of the team engaged in this were, besides the writer, Luisa Fernanda Ayala, Dora de Salgado and Teresa Munévar. The team was set up in the university Department of Modern Languages, whose head is Beatríz de Campo.

This paper contains:

1. An outline of the project
2. Planning the material
3. Production and use of the material
4. A Procedural Guide to Producing a Unit

The purpose of the last section is not to provide a recipe for materials production but to set out some of the procedures which team preparation helped make explicit.

1. An Outline of the Project

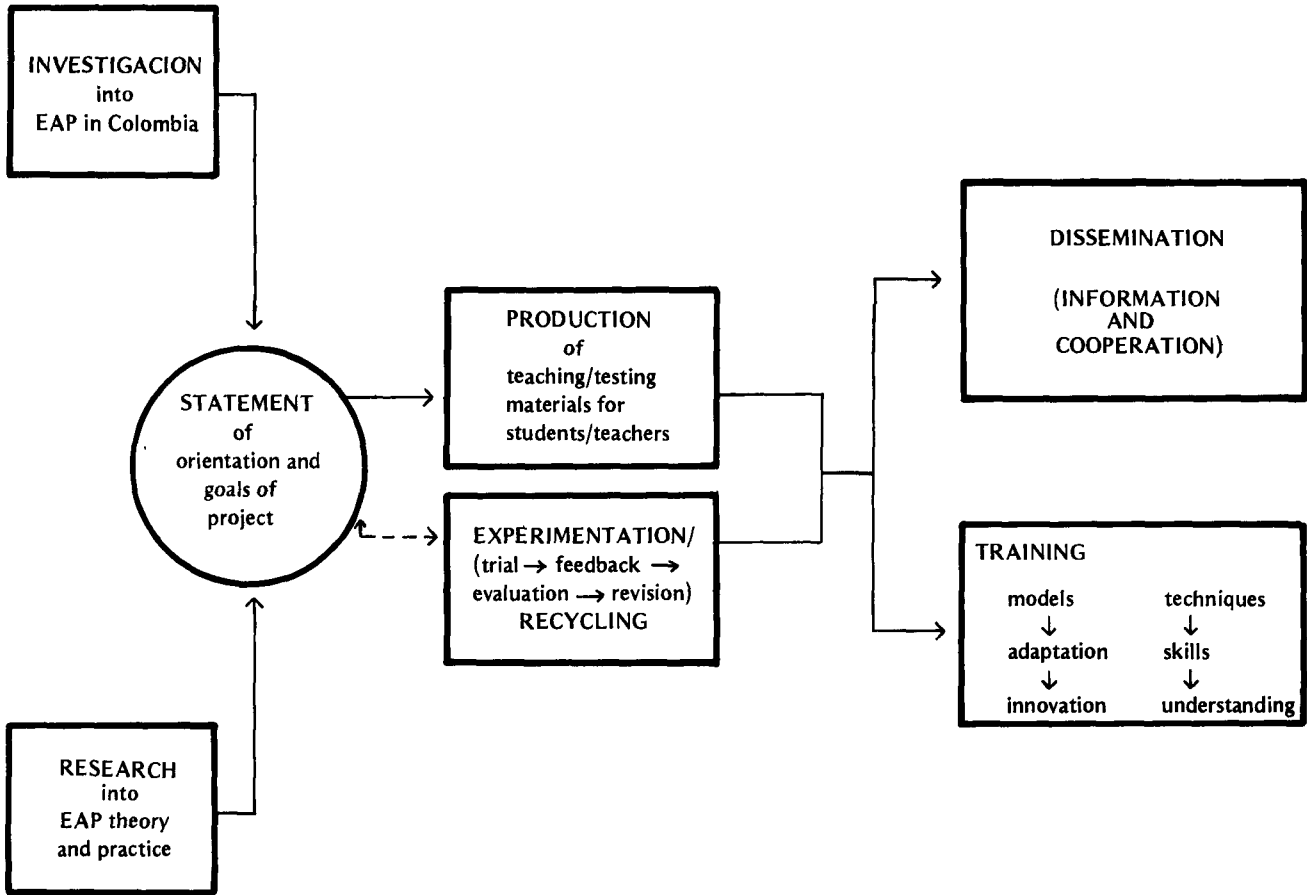
Any individual teacher can (and many do) sit down and concoct a set of materials partly out of his own head, partly from a selection of available sources. Some of these materials work well, some less well. A materials development project aims to eliminate some of the hit-and-miss procedures of materials production by:

- 1) using a coherent methodology
- 2) being based on team planning and teacher evaluation.

The considerable investment that such a project demands can only be justified if:

1. The materials can claim some theoretical validity (they must take into account current models)
2. The materials are pragmatically valid (they must be capable of being used effectively by the teachers and students they were intended for)
3. The experience in producing them equips those concerned with skills in materials development.
4. The experience in using the materials helps increase the professional competence of classroom teachers to higher standards of achievement of students.
5. The materials and the experience acquired in producing them are ultimately of benefit to the major institutions which share the relevant curriculum setting.

The following plan was therefore drawn up:

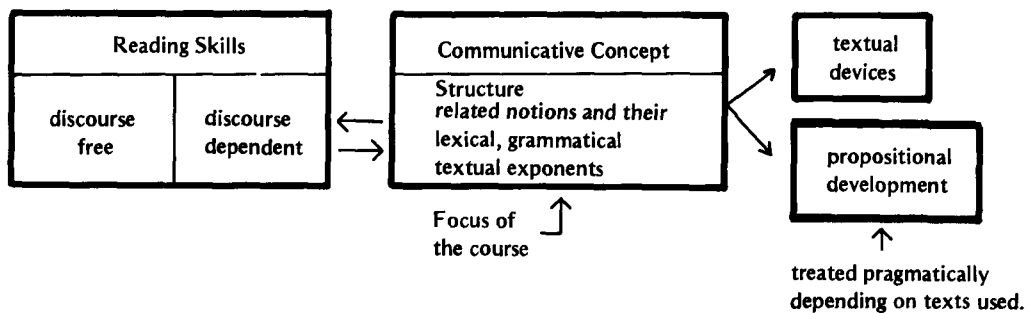


2. PLANNING THE MATERIAL

2.1. The results of our investigations into needs and the curriculum setting, and the way in which these helped form our aims is described in News Bulletin 1, sections 2 and 3.

2.2 The model of discourse which we have attempted to apply is that described in Candlin et al "Developing Study Skills in English" in English for Academic Study. We supplemented this with a model of reading comprehension derived from the Open University Development course. In this description a normal reading experience involves the reader's purpose, his strategies, his use of tactics of recognition, prediction and deduction, and the internal or external outcomes which are a result of his reading experience.

2.3. We decided to produce materials spanning three semesters. The material for level 3 has now gone through the production/experimentation phases and published in January 1977 under the title "Reading and Thinking in English". The level 2 material is due to be published in the summer of 1977. The above discourse/reading comprehension models have been applied in the following way:

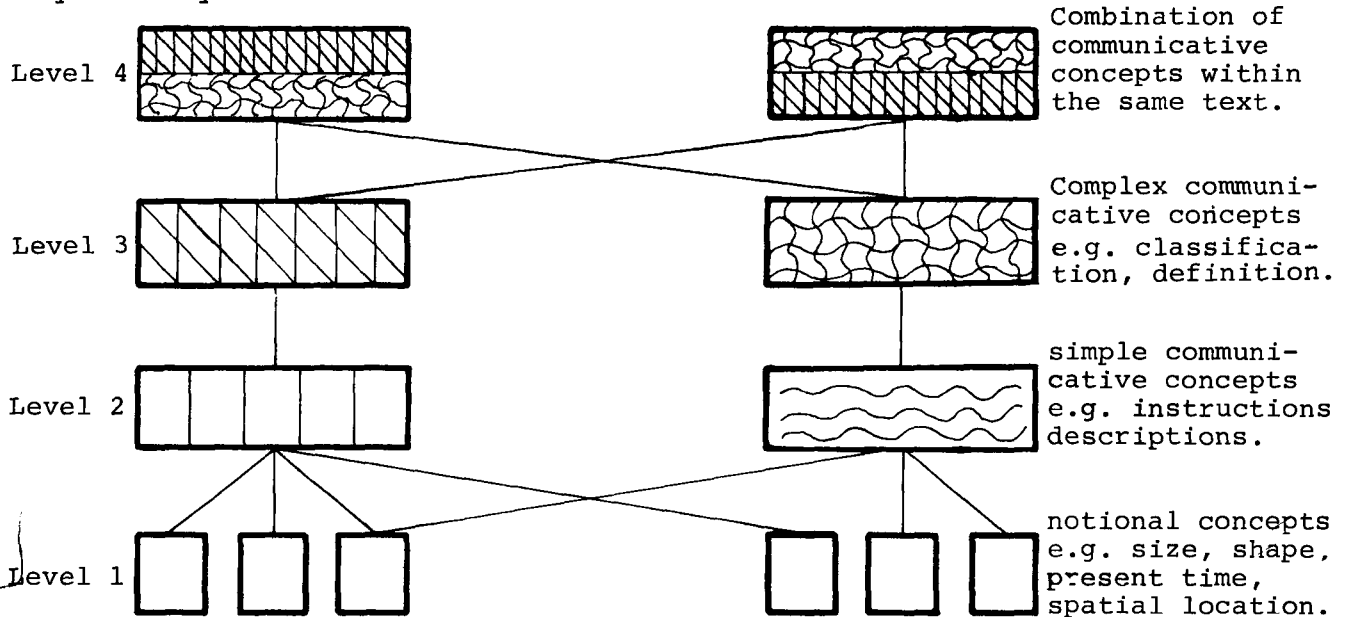


In level 2 concepts are analyzed simply, there is a review of basic grammatical structures and texts are drastically simplified. Level 3 includes more complex concepts and grammar and only slightly simplified texts.

The level 1 material, which is currently in production, is similar in philosophy to the Tabriz "Nucleus" material. The main skill exercised is that of reading but the reading skill is limited to understanding notional concepts expressed by a specially written text.

We are considering the extension of this scheme to a fourth level, the reading component of which would consist of a wider range of unsimplified texts which involve combinations of communicative concepts.

The sequence may be visualized thus:



2.4. Two other characteristics of the material may be mentioned.

2.4.1. It is not subject-specific. We have attempted to make texts and exercises interesting and relevant by choosing inter-disciplinary topics or themes of general academic interest and to include study skills useful in a variety of disciplines. The criteria for the selection of texts has not been topic but style (the way a text is structured to reflect the methodology of academic disciplines), exemplificatory adequacy and 'exploitability'.

2.4.2. Reading is not treated as an isolated skill: we reject the silent classroom and use writing for reinforcement.

3. PRODUCTION AND USE OF MATERIAL

3.1. We have discovered that two essential tools are an efficient eraser and a large waste paper basket. The rough sequence of development which the level 3 material has followed and which the other levels have now embarked on is:

- | | | |
|---|--|--|
| 1 | Production of isolated units | discussed in outline by team
written individually
revised by team
re-written individually
approved by team |
| 2 | Trial of isolated units (in UniAndes and collaborating universities) | taught by member of team with one class
evaluated by teacher and students
revised by team |

3	Production of pilot course	Sequence and overlap discussed by team revised individually approved by team
4	Trial of pilot course (in UniAndes) (distributed to students in individual duplicated units)	production of brief teachers' notes each unit discussed in advance with teachers using it (2-3 classes) post mortems after each group of units with all teachers periodic students questionnaires
5	Revision of pilot course	modification in the light of <u>acceptable</u> suggestions from teachers and students
6	Use of pilot course (in UniAndes and collaborating universities)	As for trial, with the addition of more complete teachers' notes
7	Final revision for pilot publication	

Almost every stage of the materials production has therefore involved team work: we have found this method slow but rewarding (although it demands a sophisticated mastery of human relations from all concerned).

3.2. We have therefore benefited from the opinions of students and teachers outside the project team in the following way:

- a. general discussions of the aims and methods of the material
- b. anticipation of difficulties
- c. comments and suggestions on individual texts and exercises after use in class involving suggested changes, reduction, expansion
- d. indications of any supplementary material used
- e. production of tests. This has been done largely by collaborating teachers in consultation with the team and gives valuable insights on the purpose of the materials.

3.3. Training and assistance to teachers has so far taken the following forms:

- a. 'orientation' seminars to familiarize teachers with the aims and methods of the material
- b. pre-teaching seminars containing demonstration lessons, group planning of units, discussions of teaching techniques
- c. teachers meetings during experimental use of the material, to foresee problems, discuss doubts, collect evaluations, observe classes, discuss modifications of the material
- d. teachers notes, compiled for each unit and continually supplemented by comments of teachers using the material. These notes, which will form the basis of a teacher's guide include reminders of the purpose of parts of the unit, range of acceptable answers, and procedural suggestions.

3.4. The aims of this guidance to teachers have been:

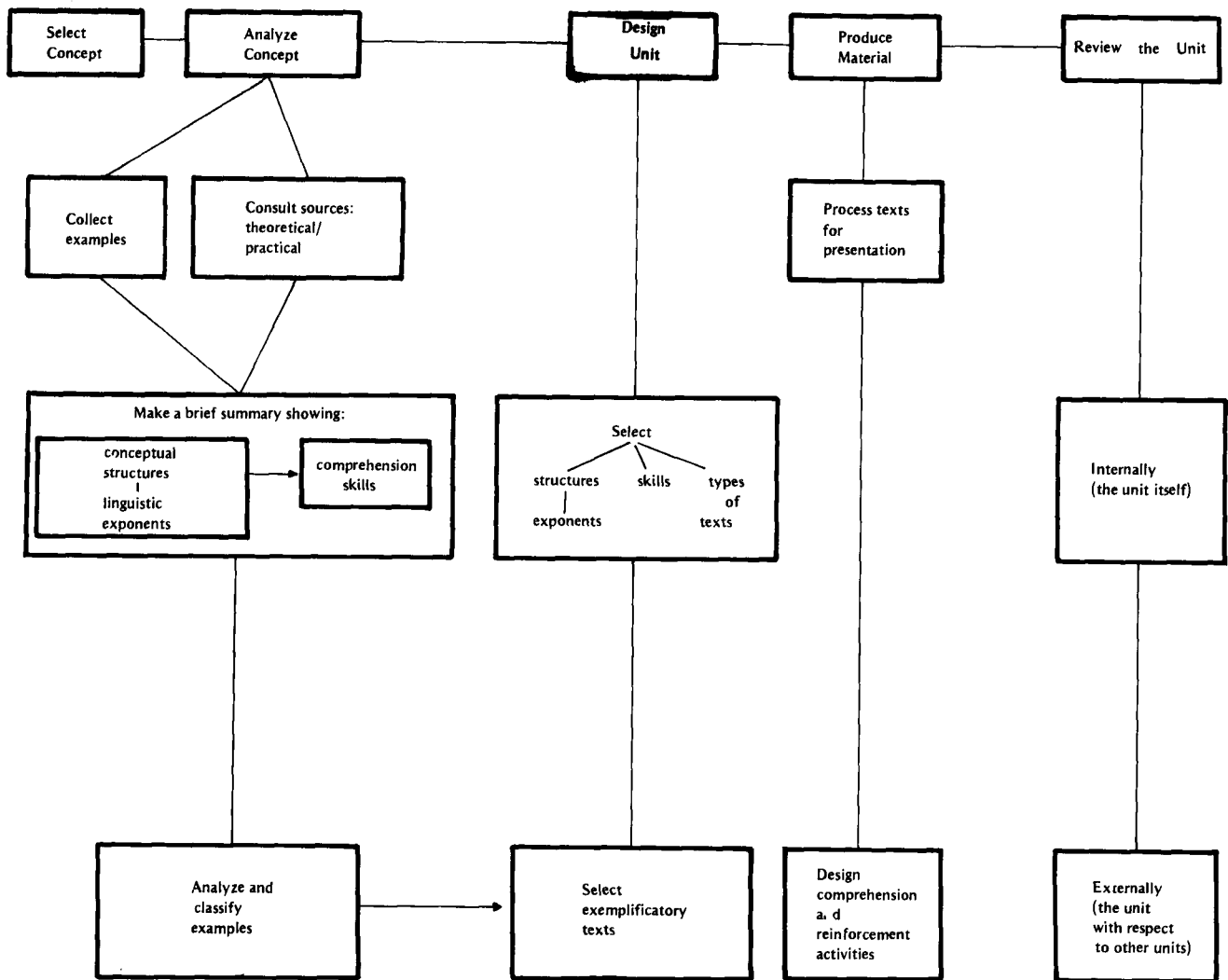
- 1) provide a model of recommended teaching techniques. For some teachers the

transition from teacher-initiated lessons structured by the material, where much of the students' work is done in groups with the teacher acting as moderator and advisor, gives rise to some problems of adjustment.

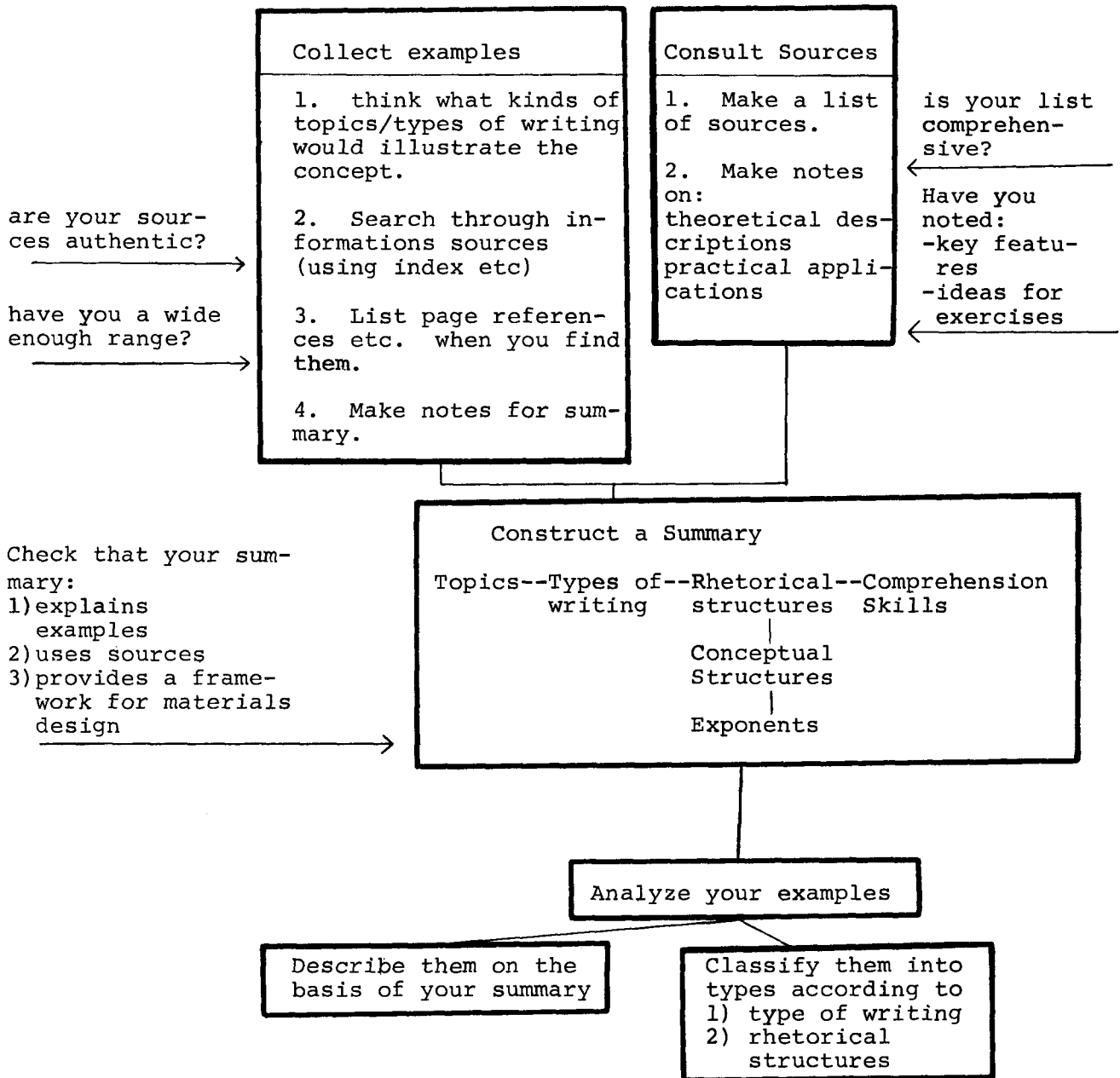
- 2) to allow the teacher to adapt the material to his own circumstances and to develop skills of interpreting the material and supplementing it with his own ideas. This is necessary in order to provide motivation, additional examples, judgement of the acceptability of student contributions, choice of teaching procedures, etc.
- 3) to provide the teacher with a confident understanding of the fundamental purpose of the material so that he can convey this to the pupils and become an innovator himself.

4. A Procedural Guide to Producing a Unit

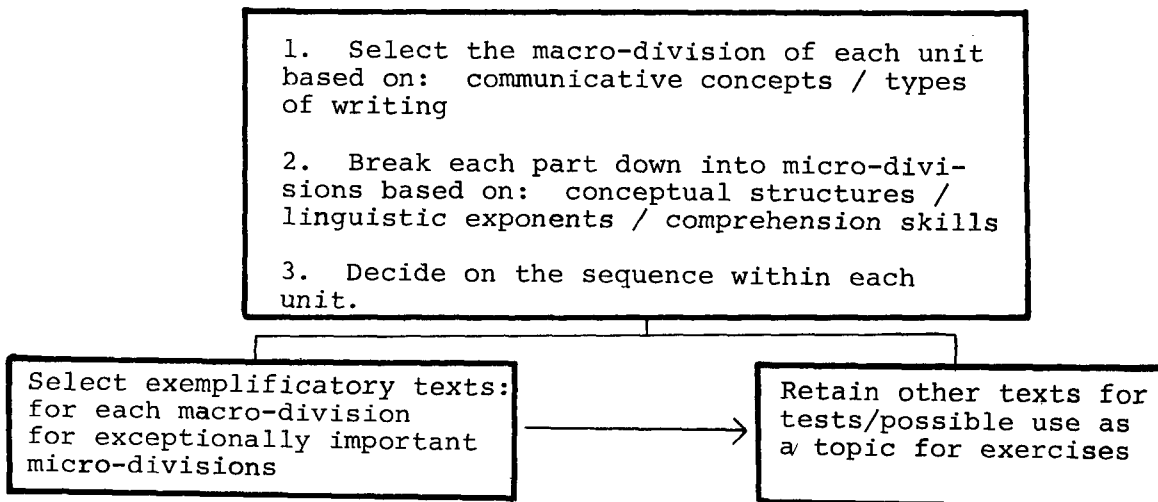
4.1. Outline



4.2. Analysis of Concept.



4.3. DESIGNING THE UNIT



Criteria for the selection of texts:

TOPIC	<ol style="list-style-type: none"> 1. Is it interesting for students/teachers? 2. Is the information accessible to students/teachers? 3. Does it provide variety?
TYPE OF WRITING	<ol style="list-style-type: none"> 1. Is it an authentic example of academic English? 2. Is it of likely relevance for students?
EXEMPLIFICATION	<ol style="list-style-type: none"> 1. Is it a clear illustration of conceptual structures and exponents selected? 2. Does it exemplify an optimum range? 3. Does it involve appropriate reading tasks?
DIFFICULTY	<ol style="list-style-type: none"> 1. Is it at an appropriate level of linguistic difficulty? 2. Is it at an appropriate level of conceptual difficulty?

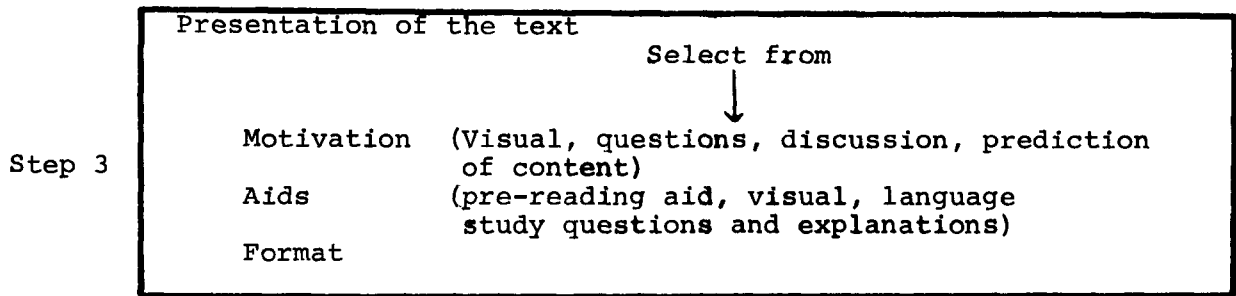
4.4. SEVEN STEPS TO PRODUCING MATERIAL:

Step 1	<p>Supplement your analysis of the text by examining: information structure cohesion</p>
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Simplifying the text																
Step 2	<table border="0"> <tr> <td style="vertical-align: top;">When?</td> <td> If decided— <table border="0" style="display: inline-table; vertical-align: middle;"> <tr> <td style="font-size: 2em;">{</td> <td>when designing the unit</td> </tr> <tr> <td style="font-size: 2em;">}</td> <td>in step 1</td> </tr> </table> </td> </tr> <tr> <td style="vertical-align: top;">Why?</td> <td> <ol style="list-style-type: none"> 1. to improve exemplification 2. to remove conceptual difficulties 3. to remove linguistic difficulties </td> </tr> <tr> <td style="vertical-align: top;">What?</td> <td> <ol style="list-style-type: none"> 1. opaque rhetorical or information structure 2. lexical, grammatical, syntactic or cohesive problems </td> </tr> <tr> <td style="vertical-align: top;">How?</td> <td> <ol style="list-style-type: none"> 1. Identify difficulties 2. Decide whether to <table border="0" style="display: inline-table; vertical-align: middle;"> <tr> <td style="padding-left: 10px;">reduce</td> </tr> <tr> <td style="padding-left: 10px;">expand</td> </tr> <tr> <td style="padding-left: 10px;">adapt</td> </tr> </table> </td> </tr> </table>	When?	If decided— <table border="0" style="display: inline-table; vertical-align: middle;"> <tr> <td style="font-size: 2em;">{</td> <td>when designing the unit</td> </tr> <tr> <td style="font-size: 2em;">}</td> <td>in step 1</td> </tr> </table>	{	when designing the unit	}	in step 1	Why?	<ol style="list-style-type: none"> 1. to improve exemplification 2. to remove conceptual difficulties 3. to remove linguistic difficulties 	What?	<ol style="list-style-type: none"> 1. opaque rhetorical or information structure 2. lexical, grammatical, syntactic or cohesive problems 	How?	<ol style="list-style-type: none"> 1. Identify difficulties 2. Decide whether to <table border="0" style="display: inline-table; vertical-align: middle;"> <tr> <td style="padding-left: 10px;">reduce</td> </tr> <tr> <td style="padding-left: 10px;">expand</td> </tr> <tr> <td style="padding-left: 10px;">adapt</td> </tr> </table> 	reduce	expand	adapt
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Does your simplified version:
 remove the difficulty?
 constitute a natural text?
 introduce extra difficulties?

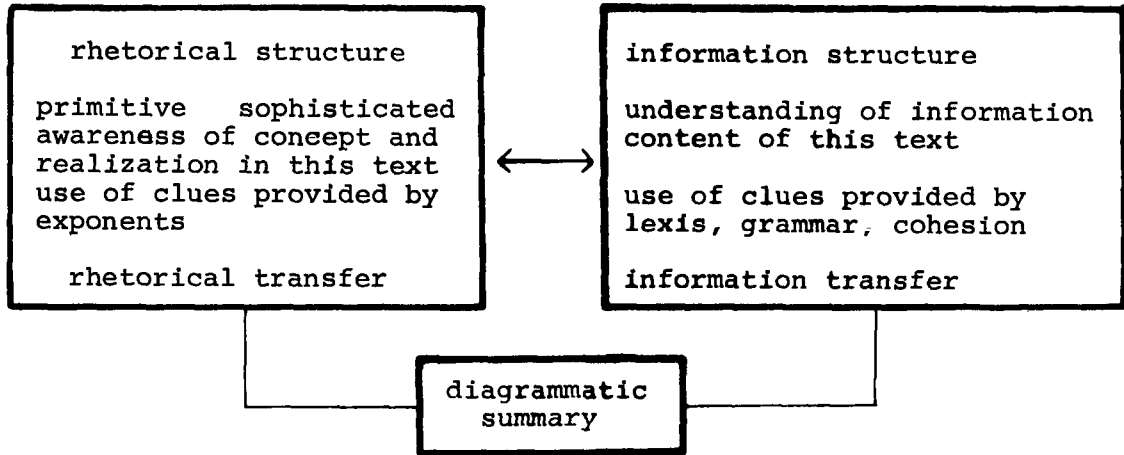
Check:



Check: Are motivation/aids: necessary/clear/sufficient?
Is format clear?
Is length appropriate?

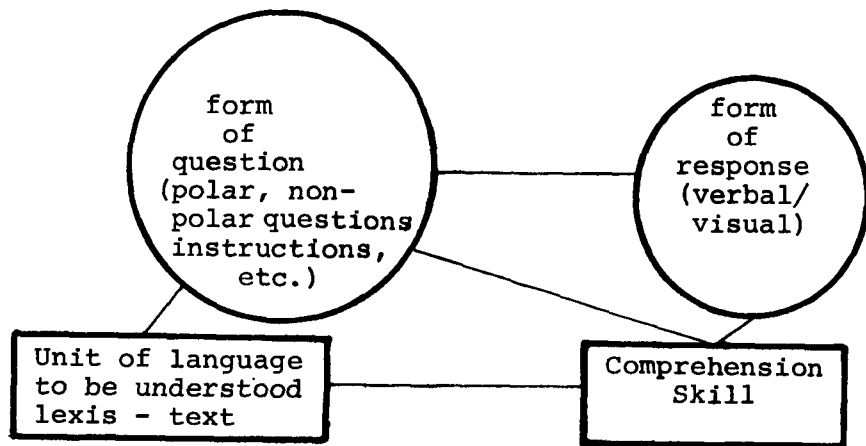
Step 4 Exploitation of the text - Exercise Content

1. Remind yourself of the particular rhetorical structure(s) you wish to practice.
2. Activities should include the following types of understanding:

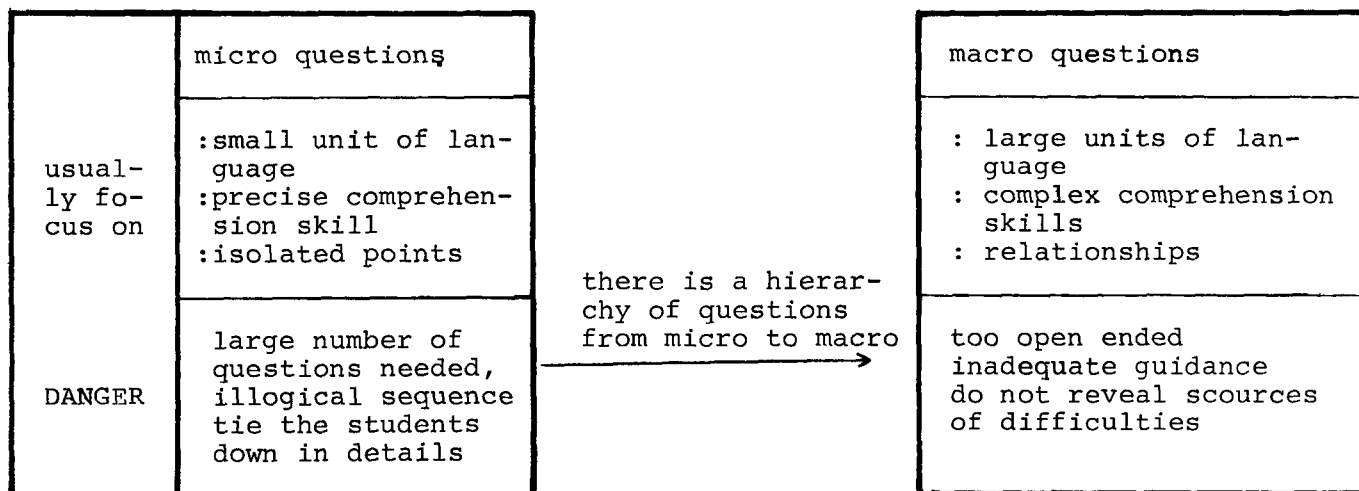


Step 5 Exploitation of the text - Exercise Types

1. Bear in mind the following parameters:



2. Decide whether you need a micro question or a macro question.



Step 6 Reinforcement Exercises

1. Identify the items / skills to be reinforced
2. Find illustrative data concerned with an appropriate topic
3. Identify the production task
4. Present information which the student manipulates (verbally, visually)
5. Define the form of response

Step 7 Criteria to be applied to each activity?

- | | |
|--------------|---|
| PURPOSE | Is the purpose clearly defined? |
| TYPE | Does the exercise type effectively and economically accomplish the purpose? |
| | 1. Is the ratio of language given/student task economic? |
| CONTENT | 2. Are instructions to students clear? |
| INTEREST | Is it interesting? |
| AUTHENTICITY | Is it a meaningful task? |
| | Is it challenging? |
| DIFFICULTY | Does it contain distracting difficulties? |

4.5. Reviewing the Unit

Check that the unit contains:

Type of practice	Purpose
Motivation for the whole unit	<ol style="list-style-type: none">1. elicit what students already know of the concept and how to express it.2. sensitize them to the communicative use of the concept.
Controlled comprehension of exemplificatory texts	<ol style="list-style-type: none">1. awareness of structures and their forms of realization2. development of reading strategies
Reinforcement exercises	Consolidate above and improve productive efficiency
Interpretation of complex texts	Application of strategies

Internal Review

Check that: the unit covers the points included in your summary
there is an appropriate balance between the different parts
there is sufficient variety of topics and tasks

External Review

Check that: there is a balance with other units
there is sufficient variety of topics and tasks
there is continuity but not overlap
assumed knowledge and skills is covered earlier in the course

Note: This was illustrated by describing the evaluation of a unit from "Reading and Thinking in English" on Definitions from the planning stage to the final published materials (copies were available for Seminar participants to examine).

DISCUSSION

T C White (Chile) asked whether the Los Andes materials were meant to be self-instructional and whether they had been used without a teacher.

Answer: Students do most of the work in using these materials, but the teacher has an important role in being available for consultation, and amplifying the materials or making them more interesting where possible.

Sally Richards (Mexico) asked what type of testing of the materials had been done.

Answer: At the end of each unit, periodically throughout the course, and at the end.

H G Widdowson commented that, following the communicative approach, testing is not a normal communicative activity. Imposing tests on learners, therefore, may have the effect of compromising the naturalness of behaviour which the communicative approach aims to promote.

T C Jupp commented that, on similar lines, testing of English skills in an employment situation is done by the workers' supervisors without their being aware of being tested.

David Harper (Mexico) asked what had been the reaction of teachers, new to this methodology, to the materials.

Answer: There had been virtual unanimous agreement that by a careful use of the teachers' notes, teachers could very soon adapt themselves to using the materials. One teacher had reported that, once students became oriented to the materials, the teacher soon fell into the role of informant and activities-manager.

P J Brown (Argentina) asked whether the grammatical and rhetorical terms used in the course are to be explicitly taught, and why.

Answer: The student needs to know what he is doing, or has done. Knowledge of such terms seems to help learning.

T C Jupp asked: Do you make a distinction between validation and evaluation?

Answer: Yes. We have to test students as a form of validation to see if they can apply similar skills to other passages and activities. On the other hand, we have Biology teachers in one university designing the evaluation test.

6.3.3. THE DEVELOPMENT OF E F L MATERIALS FOR OCCUPATIONAL ENGLISH

by

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This paper treats that overlapping area of English teaching where EAP and EOP coincide. According to the British Council document A Statement on ESP, prepared in response to the ODM request of 2 March 1976, "EAP is concerned with those communication skills in English which are required for study purposes in formal education systems" and "EOP is concerned with the precise demands which specific occupations place on communicative ability in English." When a course of study is clearly concerned with the types of materials which will be used on-the-job, then we are dealing with this area of overlap. For our purposes, in this paper these on-the-job types of materials will be limited to the reading requirements of the technician -- that is, the individual who operates, installs, maintains, repairs and generally keeps in running order the machinery and other devices of modern technology.

Our research into the English of this field began with an interest in the reading needs of foreign students studying to become technicians. It soon became apparent to us that these needs would be similar to but not the same as the needs of students studying to become scientists or engineers. It also became apparent that even more than the student of science and technology, the student technician had very special problems to overcome in learning to read in his field. And, again even more than the student scientist or engineer, the student technician could not hope to be prepared for his professional work by being exposed only to 'general' or 'classroom' English. (1) Further, his academic preparation is considerably less.

We also found as we worked with what we might call "technician" discourse that we would clearly be unable to cover all the types of reading materials met by the students studying to be a technician or even by the technician learning to read technical materials in another language while on the job. Therefore we limited our research to those materials the student technician will ultimately have to read in order to perform his job; that is, we limited ourselves to a study of technical manuals.

We chose this area because our experience has shown us quite clearly that, especially in many developing countries, more students will go from school into industry than will go to University. Up to the present, a fair amount of work has been done in English for Special Purposes courses and materials aimed at preparing the foreign student for University studies in English or in helping him with his specialized needs in English while he is at University. (2) However, far less has been done in preparing students--even those who are in technically oriented secondary schools--to handle the kind of English they will need on the job. We are not speaking here of a non-native speaker of English coming into an English speaking environment to work; but of the student going into industry in his native country and there being faced with having to read the technical manuals which accompany the technical materials exported from English-speaking countries.

It is also because of the great volume of such technology spreading throughout the world that we chose the area of technical manuals. There has been virtually a flood of such literature into almost every country, and especially into the developing countries. In one way or another, many of the people who will work with these manuals--the technicians--will have to learn to read the very specialized English they contain.

The fact that manuals use a very specialized form of language became obvious early in our work. We found ourselves faced with three inter-related questions that clearly need answering before we could do a satisfactory job either of preparing courses or, especially, of preparing teaching materials. These questions were: 1) What are the special characteristics of the English of technical manuals? 2) Are these characteristics sufficiently different from those of scientific English or "general" English to warrant detailed study? If so how do they differ? 3) Finally, are the differences great enough to require special types of teaching materials?

First, I would like to take up the implications contained in the third question. Our research has definitely shown that the English of technical manuals displays rhetorical and grammatical and lexical features sufficiently different (in degree more than in kind) from both EST and general classroom English to account, at least in part, for the gap between the learner's response to created or adapted classroom materials and his response to prose written for native speakers of English.(3) Students trained on standard classroom reading materials often find themselves unable to cope with "untreated" textbooks or other non-adapted materials. This becomes especially true when the learner leaves the rather spoonfed atmosphere of the classroom and goes into the professional world--in the case of users of manuals, into the world of technicians, operators, and others who deal with machinery.

To a degree this inability of the learner to cope with "untreated" materials may be due to the ways in which classroom texts are often prepared; that is, sometimes the person preparing the materials has deleted the very rhetorical and grammatical features which the reader must have to understand the professional text (the manual, the advanced textbook written for native speakers of English). Another factor is, of course, that in preparing classroom materials we are often seeking to drill the learner on a particular area of grammar or vocabulary whereas the "genuine" material has no such purpose. Put another way, we teach reading as part of the process of learning a language when, in most cases of English for Specialized Purposes, we should be teaching reading as a functional tool--as an end in itself, not as a vehicle for providing drills..

This particular point is especially important in relation to the preparation of materials for Occupational English. For that reason, I would like to look at it in more detail and from a slightly different perspective.

The reading passages in beginning and elementary textbooks for teaching English to non-native learners are so often composed of the selected vocabulary and grammar that the student has been taught, with perhaps a little new material that will be explained and worked over as soon as the passage has been read. These passages then serve the purpose of exemplifying for the student and allowing him to practice already familiar language.

When unsimplified passages are introduced and the student is expected to come to terms with new language as he reads, these passages are usually chosen from imaginative literature and/or materials illustrating the culture of the new language or the history of its people with some (very little as a rule) popular science or history of science. There is unlikely to be any genuine technical text. Even in this less controlled English, moreover, most students are still reading to improve their English rather than to gain a command of the subject matter, and so it is likely to be more important for them to remember a new idiom than to clarify a difficult point in the content.

However, the student learning Occupational English must shift quickly to a mode of reading where full understanding of the content is dominant and where linguistic features of the text are of interest only insofar as they enable him to grasp the content more fully and accurately. He does not expect to need to produce idiomatic and natural speech or prose, but must recognize idiom, grammar or rhetorical organization insofar as they aid in his grasping the subject.

MANUALS

To return to the first question we posed ourselves--What are the special characteristics of the English of manual writing? In attempting to answer this question, we examined a broad range of materials prepared for technicians assumed to have varying levels of background knowledge. We found that all of these materials have one factor in common: they all are written for the native speaker of English (in fact, all that we have are written for the native speaker of American English). Further, the majority of them share a similar attitude toward their readers: they make little concession to his pre-professional background. That is, they explain a small amount of theory when it relates to upper level knowledge, but they assume, with very few exceptions, that the reader has a knowledge of the basics of whatever the field might be.

Despite these similarities we found that the term 'manual' covers a wide range

of written discourse. The literal meaning of the term relates to the use of the hands. In fact, the term "handbook" was at one time more common than manual. Now it seems limited, in America at least, to "Handbooks of English" (that is reference books of grammar).

But whatever the term, the content of manual still relates to use of the hands. A former head of the Manual Writer's Division of the Boeing Airplane Company said that "manuals form one-way communication links between the builder of something and the user of that something." (4) He could also have defined "user" as ". . . the installer, repairer, and maintainer of that something." Manuals concern themselves with these types of information; in fact, they limit themselves to telling someone what to do with, most commonly, a piece of machinery, and to giving such information as is necessary on why certain things must be done and what happens if they are not done properly. In other words, manuals are both instructional and informational. These are keyterms: we will focus on them frequently.

Some manuals are all one or all the other: that is, they provide lists of activities or they provide large units of information. Most, however, combine the informational and instructional in such a way that the user is given the knowledge he needs when he is ready to apply that knowledge.

We can also classify manuals as training aids (informational), performance aids (instructional) and reference aids (storage of information that is neither necessary nor desirable to remember: parts lists, specifications, etc.). (5) We find these types in separately bound manuals or as sections in a single manual. Whichever way they are constructed, each is characterized by somewhat different types of information and by somewhat different ways of presenting it. (See Examples 1,2,3,4, and 5.)

Example 1 illustrates the type of manual that contains operation and maintenance (instructional), introductory information and theory (informational), and specifications and a parts list (storage) bound in a single volume. It also shows the nature of the topics covered. (This, by the way, concerns an electronic device known as Voltage/Current Calibrator.)

Examples 2 and 3 are excerpted from the same manual. Example 2 is taken from the section on Operating Instructions. Note that in addition to instructing the user, it provides him with essential information--first in the form of a chart, to enable him to locate quickly important parts of the unit and to understand what their functions are; and second in the form of descriptive information (Section 2-5; NOTE; and CAUTION). The instructions themselves are, for the most part, given with the verb in the second person imperative. Example 3 is taken from the section on Maintenance. It also contains a chart for quick reference; however, in contrast to Example 2, it contains little descriptive information; rather it is almost exclusively instructions given in the second person imperative . . .

In contrast to Example 2, Example 4 illustrates "operations" with little if any information inserted into the instructions. It is from a different manual but again one that contains several parts in a single volume. As with a majority of Operating Instructions, Example 4 does not define the terms but refers the reader to an illustration (unfortunately not available to us); however, it is not assumed that the illustration will provide the user with all necessary information. In this case, he is supposed to come to the act of operating having already learned the basic principles. As we can see, the manual uses second person imperatives with almost no exceptions.

Example 5 is from a manual of a quite different type and for a user assumed to have considerably less theoretical knowledge of the subject. This manual covers the repair and maintenance of air pollution control devices installed--by law--on automobiles driven in the United States. This section is strictly informational. Typical of manuals aimed at a reader with only a little theoretical knowledge of the subject, this one relies on a mixture of language and diagrams to make its points. Despite the assume minimal technical level of its reader, the manual is not simple in its use of language or structures--as will be discussed later.

I feel that from these examples--and from others we will present--it is possible to draw some generalizations as to the ways in which manual writing differs from other types of English expository discourse--and the ways in which they are similar, of course. From these generalizations we may be able to come to some con-

clusions as to the most functional ways to approach the problems of teaching and of preparing classroom materials for this area of occupational English.

I would like to draw the generalizations from the following three linguistic areas: rhetoric, grammar, and lexis. Each of these areas, we have found, has certain distinct features which are worth examining in detail.

RHETORIC

Rhetorically, manuals employ many of the same functions and the same techniques found in scientific and technical English and, of course, to a different degree, in other forms of English. Thus we find commonly the rhetorical functions of description, definition and classification, and the rhetorical techniques of time order, space order, and causality. In addition, manuals have two rhetorical features found less commonly in scientific and technical writing: the interpretation of illustrations and the rhetoric of instruction. This does not mean that other rhetorical features are not found in manual writing; it does mean that these are the most prominent and frequent and, therefore, are of the most concern for teaching and materials preparation.

The difference between the way these rhetorical features are used in manuals and in scientific and technical discourse (textbooks, articles, etc.) seems to be mostly one of degree rather than of kind. For example, both instructional and informational manual writing makes very heavy use of the three types of description--physical, function, and process. Description is, in fact, the primary way in which manuals present information. Because it is so widely used, we also find many instances of the rhetorical techniques of space order (with physical description), time order (with function and process description) and cause and effect (with function and process description).

Physical description has the primary task of telling the reader 1) the names of the essential parts of whatever is being described; 2) in what way the parts relate physically to one another--locationally, for example; and 3) how they fit together to form the whole.

Function description has the primary task of telling the reading 1) what the purpose of a part or the whole is; and 2) how the parts work together to achieve that purpose.

Process description is usually defined as that type of function description which describes a series of stages, each of which is partially or wholly dependent on the previous stage (or stages). This type of description then stresses the way in which activities relate to another to achieve a pre-determined goal.

We seldom find physical or function description in isolation: as a rule, they are mixed together in the same sets of statements. Example 2 provides an illustration of this in paragraph 2-5. In the first sentence, the user is given the names of two parts of the apparatus: heat producing transistors and heat sinks. He is told in locational terms what their physical relationship is. In the second sentence, he is given another physical element--lower perforated chassis cover--and he is told one of the functions of this cover. Later on, he learns that there are rubber supports (physical) and what their function is.

Example 3 gives us a rather long but clear process description in instructional form. If we follow point f, in column 1, through the 23 steps listed, we will have accomplished the process of checking the operation of the Current Limit Range and Current Limit controls.

Most informational presentation in manuals can be likened to a degree to technical textbooks. Those on the elementary level (See Example 6a) introduce the learner to new terms; to, often, more complex structures than he learned before; and certainly, to new concepts. Those on more advanced levels assume previous basic technical knowledge and a knowledge of most of the lexical elements. (See Example 6b). When a new term is introduced, it is frequently presented in the form of a formal or semi-formal definition or as a definition which is part of a statement of classification. Example 7a defines those terms (in large letters)-- some of them are defined by physical features and/or purpose; others, by function. In Example

7b, the term "Anchor Windlass" is defined in terms of purpose and then, under the heading TYPES, is classified. This is a fairly sophisticated classification as it covers two levels of generality. The manual then goes on to discuss each type of windlass as classified by 'drive'. (Not exemplified here). In the discussion is a listing of the essential parts; that is, a partitioning of a windlass. This is illustrated by Figure I.

The relationship of the text materials on "Windlass" and the illustration is an example of another very important rhetorical area found frequently in manuals--the rhetoric of interpreting illustrations. This relationship is found, of course, in other types of specialized purposes English, but whereas in, for example, many scientific and technical texts it takes the form of providing the reader with supplemental information that substantiates a claim or clarifies a point, in manuals illustrations are most frequently integral parts of the informational and the instructional functions.

The illustration of a vertical anchor windlass in Figure I not only supplements the partitioning seen in Example 7b, it adds additional important parts and even indicates certain functions. It also shows the location of the windlass in relation to the ship's deck and of some of the windlass' parts.

Illustrations function for different purposes and on several levels; that is, they assume different amounts of technical background on the part of their readers. A number of these levels and purposes are shown in the following figures. Although most of these are shown in isolation, all do have text with which they integrate. And in respect to teaching and materials preparation, it is important to note that accompanying text seldom carries the full weight of presenting the information: the user is required to interpret from the illustration. Thus the learner should be aware of the function of a schematic or a flow chart or a block diagram or any of the numerous types of illustrations found in manuals. He should be able to organize in his mind illustrative information in such a way that the result will provide him with at least as much essential information as a paragraph containing the same information.

Like the above, Figure 2 is informational. This figure is an example of a block diagram showing the relation of the major parts of a digital plotter. As do most block diagrams, this shows relationships in terms of which element activates which other element. By starting in the upper left hand corner and following the arrows, we can get a generalized picture of the order in which events occur. This type of "flow" is not quite the same as that represented on a flow chart, such as Figure 3. Note that the flow chart gives somewhat more detailed and precise representation yet does not show details of each event; it shows only generalities.

Figures 4 and 5 show another way in which drawings are related so as to provide greater depth of information. Figure 4 is a vertical section drawing, which allows the user of the manual to get a particular perspective on a nuclear reactor system. However, it cannot show the kind of detail needed to grasp the physical arrangement of the various elements of the system. This information is provided by Figure 5, which, however, by itself cannot provide the perspective that Figure 4 does. In other words, neither of these drawings would give enough information to be completely functional alone.

The final area of rhetoric I wish to discuss is one which is far more common in manual writing than in scientific and technical writing. If we label those parts of scientific and technical texts that give instructions (how to perform experiments etc.) as a form of manual writing embedded in scientific texts, then we can say that this rhetorical feature--in the form in which we find it in manuals--is unique to manual writing. I refer to the rhetoric of instructing or of giving commands. And here we find that, as is so often the case, once the writer has made a decision to use a particular rhetorical function or feature to express his ideas, then he is forced into a limited pattern of grammatical usage. (6) In the case of the rhetoric of instructing, we find that some command form of the verb must be used--either a direct command or an indirect command.

GRAMMAR

I would like to look briefly at this grammatical feature of command forms as

well as two of the other grammatical features found most prominently in manuals: articles and tense. As in the case of rhetoric, grammatical features differ from their use in other types of English more in degree than in kind.

One of the most noticeable grammatical features of manual writings is the ways in which the writers choose to give their commands. The most common method found in "direct" instructional writing is, as we have noted before, the second person imperative. However, many writers seem to prefer using indirect command forms, especially when they are mixing information and instructions. Thus we find passive modals commonly used to give instructions in manuals.

Examples 3 and 4 provide standard samples of second person imperative instructions. Example 8 shows a very common use of "must" is the same as in other forms of English, the use of "should" and "may" are often closer to "this must be done" than they are to their usual interpretations of "mild obligation" and "possibility" respectively. For example, in the statement "Steel weld backing should be sufficiently thick so that the molten metal will not burn through the backing", the modal is clearly more than a suggestion: it is a command. We can paraphrase this as follows: "If steel weld backing is not sufficiently thick, the molten metal will burn through the backing." Or, "The steel weld backing must be sufficiently thick to avoid burning through the backing."

The same is true of the frequent use of "may." Often it has the force of a command rather than a possibility: that is, it seems to tell the reader that he has a choice of actions, one of which must be made: In Example 8, we find: "Various methods may be employed in preparing the edges for welding. The edges may be machined by shears, planers, lathes, etc.", but one must be chosen. And in Figure 8a, we have, "The remote tilt sensor (BOP tilt sensor) may be mounted on any horizontal surface . . ."; however, if you don't mount it on a horizontal surface it won't function.

In all of these methods of giving instructions, and especially in those that use the second person imperative, we find a phenomenon that may well be closely related to teaching and materials preparation decisions. I refer to the inconsistent ellipsis of the definite article. In Example 2, we find in Section 2-7b: "Connect + SENSE terminal to + OUTPUT terminal . . ." And in Section 2-7c: Connect the ground terminal to the + OUTPUT TERMINAL, the - OUTPUT terminal . . ." This type of inconsistency in similar constructions seems to be a feature of manual writing. It is found to some degree in virtually every set of instructions.

The final area of grammar I would like to touch on is that of tense--specifically, continuous versus simple tense forms. In teaching "general" English, the continuous present is virtually the first verb form to be learned since beginning English normally stresses conversation and continuous tenses are, of course, extremely common in conversation. Technical manuals, however, are not conversationally oriented. Basically, they provide the reader with sets of generalizations, whether they are instructional or informational or a mixture of both; and generalizing is not a function--as a rule-- of the continuous. This non-use of continuous forms in manuals will be discussed shortly in relation to teaching and materials preparation.

LEXIS

Before turning to teaching and materials preparation, I would like to look briefly at the vocabulary of manuals. Specifically, I would like to discuss technical terms and abbreviations.

Little needs to be said about the highly technical terms. Each field has its own--so much so that often an electronics technician and a motor mechanic have difficulty talking to one another on the "job" level. It is true that there is also a "bank" of technical terms from which all technical disciplines can draw; but these as well as the specialized technical terms are usually learned by contact. That is, the student learns them as he studies his technical subjects. This does not mean that these terms should be ignored in planning teaching and materials; it does mean that they need not be learned wholly in the classroom. Almost all of the Examples contain some of these highly technical terms.

Two areas of vocabulary which may need extensive treatment in the classroom are what J.R. Cowan (7) has called "sub-technical vocabulary" and technical compounds.

Sub-technical terms are those common words that have taken on special meaning in certain scientific and technical fields. A quick glance at the examples reveals many of these terms: control, operation, current, ground, sense, positive, contact, lead, coil, folder, flux. Examples commonly given are those such as "base", "plate," "assembly." The special meaning of words of this type are often learned with difficulty since in many cases the student must reject the common meaning. This is especially true when the "new" word functions differently from the "old". For example, the term "control" is a verb in its primary (common) function. However, in technician work, the most common form is that of the noun. A term such as "plate" in most uses remains a noun even though it undergoes meaning changes in various fields: for example, ceramics, dentistry, electronics; but in metallurgy it shifts in function to a verb.

Technical compounds create a different kind of learning problem for the user of manuals. First, they are not a common lexical structure in many languages. Second, they do not all yield easily to a literal translation or to turning into simple phrases--even to the point of often confusing the native speaker of English. It is this second problem that I would like to discuss briefly. Compounds are sometimes called 'noun strings' even though in technical discourse they often include adjectives and, occasionally, adverbs. By definition a compound is a series of words (two or more) which represents a single concept. We have all had experience teaching the compounds of "standard" English: doghouse, tabletop, hairbrush, etc. These short, fused compounds cause little trouble as most of them yield to literal translation and to turning into simple phrases. (Those few that do not, such as "bookend" seem to be quite easily learned.) However, this is not the type of compound often found in technical manuals. As a rule they contain sub-technical or highly technical compounds, many of which create very real difficulties for the foreign learner. As is the case with technical and sub-technical terms, compounds in this type of discourse are either specific to a given field or common to several fields. Both types have in common that they are often fairly long--three or more words in the string--and they cannot always be turned quickly into simple phrases or clauses. In Example 1, Subsection 4-20 has the compound "Driver Frequency Response." To "translate" it into understandable language, the learner usually first applies the standard rule for reversing compounds; that is, turning them into phrases. The result would be "response of the frequency of the Driver"; actually however "Driver Frequency Response" refers to the frequency response activity of the device known as the Driver.

A final lexical problem worth mentioning is that of technical abbreviations. It is often not enough for the student to learn the technical and sub-technical terms and compounds of his field, he must also learn the abbreviations used for many of those terms and compounds. Unfortunately there is little general agreement as to the "correct" abbreviation. As a result, different manuals, even those covering technology in the same field (e.g., electronics), have different sets of abbreviations.

MATERIALS PREPARATION

I would now like to look at some of these rhetorical, grammatical, and lexical problems from the perspective of teaching and materials preparation. Before looking at them in detail, I would like to repeat what has been said before: the materials we choose to teach in the reading of technical manuals should be genuine. We can alter them; in fact, for beginning and elementary levels, we must do so. But to make up our materials from the beginning as can be done in teaching "general" English a) is a good deal of effort wasted since there are available perfectly adequate materials, and b) is a guarantee of inaccuracy unless we have had previous manual writing experience or have studied them in depth, and c) is likely to be the basis for that common complaint of students: the lack of reality met in the classroom and the 'shock' when reality is encountered.

We believe that when preparing our teaching and our materials, we should ask ourselves the following general questions. (Please note that here we are concerned with the learner in the classroom, not the on-the-job trainee, who presents quite a different set of problems.)

The questions that come to mind first are:

- 1) How much adapting should we allow ourselves; that is, how much can we change real materials without taking away the quality of genuineness?

- 2) Which problem areas should we stress: in rhetoric, in grammar, and in lexis? (Obviously we cannot cover every possible problem in a given course.)
- 3) How much writing should we ask of the student? (Writing can help fix difficult points in the learner's mind. On the other hand, it can be time consuming and it call for a somewhat different approach to language learning than does reading.)
- 4) Is it necessary to require the student to do in English all his work in learning to read manuals: Can we allow him a certain amount of "translation" into his native language. (That is, can we allow openly-- and thus make use of--what the student usually does clandestinely?)

I would now like to turn to some suggested examples of materials preparation.*

1) A type of comprehension exercise that can be very useful is one in which the student is required to extract certain types of information from a paragraph of rather complex structures and cast them into a more simplified form; for example, a chart or table.

2) Relating diagrams and text can be useful in drilling the student in essential vocabulary (including compounds) and in comprehension, both of the diagrams and of the text material. For example, the following operations can be performed:

a) The student is given a paragraph which describes a device physically. He is also given an unlabelled diagram of that device. He is asked to take the required information from the paragraph to label the diagram correctly.

b) The student is given a diagram labelled incorrectly and its paragraph containing the correct information. The student is asked to make the changes necessary on the diagram so that it agrees with the paragraph.

c) Small groups of students can be given unlabelled diagrams (a different one for each group). If they are familiar enough with the subject to label the diagrams without an accompanying text, then they should do so; if they are at an elementary level, they can be given the necessary text. The procedure here is to ask each group to mislablel their diagram. This done, the groups exchange diagrams and try to find the errors in the diagrams they have received.

d) If writing practice is desired, the student can be asked to write a paragraph of text to accompany a correctly labelled diagram or, if he is sufficiently advanced, he can be asked to first create the diagram, then label it, and then write a paragraph of text to accompany it.

3) Using a text of the type found in paragraph 1, Example 6a, the student can be asked to make a flow chart showing the stages of the process described. In the case of Example 6a, a three stage cycle which disposes of engine vapors is described

4) Translation of compounds can be approached by having the student relate the compound to the text in which it occurs. One possible source of compounds and their related texts is a Table of Contents as in Example 1. In Section II, OPERATING INSTRUCTIONS, sub-sections 2-19 and 2-20 contain typical technical compounds. An exercise can be developed by asking the student to read the page of text on which these compounds occur and then determine a) whether the compound Auxiliary Voltage Regulator means a regulator of auxiliary voltage or an auxiliary regulator of voltage; and b) whether the compound Constant Current Operation means the operation of a current which is constant or the constant operation of a current.

A simpler version of this exercise can be made from Example 6a, which ex-

*An excellent source of exercises that can be adapted to the needs of the student learning to read technical manuals can be found in such texts as NUCLEUS (Longman) and the ENGLISH IN FOCUS series (OUP)

plains the compound Activated-Carbon Canister System very clearly and makes it obvious to the reader that a system of canisters filled with activated carbon is the meaning of the compound.*

To return to the questions asked earlier: 1) We find that we adapt more by extracting passages from larger units of text than by rewriting, although occasional simplifying may be necessary for elementary classes. This enables the student to work with genuine materials while allowing the teacher to have a certain amount of control over these materials.

2) The areas that our research indicates should be stressed early in teaching technical manuals are a) in rhetoric: first, all three types of description, second, learning to recognize instructions whether they are in the second person imperative or not, and third, interpreting illustrations; b) in grammar, comprehending passives and modals and recognizing the various ways causality is expressed should take priority. On the negative side, the present continuous should not be given much time since, as we mentioned earlier, it is seldom found in manual writing; instead, the several uses of the simple present stating general truths, scientific facts, generalizing, etc. should be stressed; and c) in lexis, sub-technical terms and compounds are the largest areas of vocabulary for the student to master and therefore should be stressed.

3) The student's writing exercises should be limited to those which help him understand the more difficult areas of technical manuals. Also, even though the reading matter is often complex, the student's writing should usually be in note form or very simple sentences.

4) Our research has not yet provided us an answer to this question, but we feel that the student studying in an English speaking environment should be required to do most or all of his work in English. On the other hand, a student studying and planning to remain in a non-English speaking environment, may usefully use his own language to show his comprehension of a complex passage of English, or if he has not yet learned how to read diagrams, he may be taught this skill in his native language before going on to interpret them in English.

CONCLUSION

The research detailed above is only a first step. All areas discussed need further investigation as does the efficacy of various approaches to teaching and to preparing materials for this area. Some topics have not been touched on at all here, and these clearly need investigating to determine whether they need to be considered. Among these are nominalization, verb complementation, full and short forms of relative clauses, and connectives, just to name a few in one area.

I am sure that many of you can see the potential of incorporating some of the new materials presented at this seminar - such as those prepared at the University of the Andes and the Metropolitan University, Mexico -- and published materials such as the Nucleus and Focus series.

*A COURSE IN BASIC SCIENTIFIC ENGLISH by J.R. Ewer and G. Latorre (Longman) contains some excellent exercises designed to drill the student on changing simple technical compounds into their phrasal or clausal forms.

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2. See among other, NUCLEUS by Martin Bates and Tony Dudley-Evans, Longmans, 1976; the ENGLISH IN FOCUS series, edited by J.P.B. Allen and H.G. Widdowson, Oxford University Press, 1973, 1974, 1975, 1976; A COURSE IN BASIC SCIENTIFIC ENGLISH by J.R. Ewer and G. Latorre, Longman, 1969; WRITING SCIENTIFIC ENGLISH for John Swales, Nelson, 1972; and THE STRUCTURE OF TECHNICAL ENGLISH by A.J. Herbert, Longman, 1965.

3. Reference 1, Op. Cit.

4. "Writing Technical Manuals," by Matthew Thornton, a paper presented at the 9th Annual Short Course on Technical Writing, University of Washington, College of Engineering, September 1969.

5. Ibid.

6. "Technical Rhetorical Principles and Grammatical Choice", John E. Lackstrom Larry Selinker, and Louis Trimble, TESOL QUARTERLY, June 1973.

7. "Lexical and Syntactic Research for the Design of EFL Reading Materials," J.R. Cowan, TESOL QUARTERLY, December 1974.

DISCUSSION

Anamaría Harvey asked for a clarification about the areas of overlap between an EAP and an EOP situation in reference to instructional language. Professor Trimble was of the opinion that the main area of overlap would be in the rhetorical and grammatical structure, as well as in the use of some information transfer type exercises.

Fernando Castaños pointed out that a distinction must be made between transfer of information and coordination of information. Some graphs, pictures, etc. are only used for illustrative purposes; these are easily translatable into text and can be found translated. Others, however, are extremely difficult to translate; they are in a way part of the text and they convey essential information.

Returning to the question of overlap, Guillermo Latorre remarked that there is a large area of overlap between the vocabulary used in authentic manuals and the lexical items included in basic scientific vocabulary as it appears in Ewer & Latorre's A Course in Basic Scientific English. Professor Trimble acknowledged this fact.

John Moore raised a point on the presentation of authentic instructional manuals to EOP students which may result in a certain degree of boredom: "Given that 1) what is important in this area is rhetoric, grammar and lexis and 2) that the only one of these which depends on the subject of the text is lexis, and 3) that specialized lexis can be got in the subject instruction, or privately, would it not be a good idea to avoid boredom by teaching mainly through non-subject-specific texts, and reserve specific subject texts for the final stage?" Professor Trimble did not entirely agree with this suggestion, since it is also a question of the level of the subject content, which must be preserved.

Tom Jupp considered that it would be important to investigate the discourse situation of manual, man and machine. Since people do not read manuals for their own sake, it is important to find out how they are used rather than read. This would provide interesting information on reading comprehension, since there is little gap between the reading and its application.

Fernando Castaños took up the point raised by Mr. Jupp in trying to explain certain inconsistencies in the use of the definite article in a manual examined in the course of Mr. Trimble's presentation. According to Mr. Castaños, the presence of the "machine" might explain the inconsistent use of the article, which seems to be optional and selected at random. Professor Widdowson carried this point further by saying that the inconsistency might well suggest that manuals are meant to be read in a different way from other kinds of discourse and that, although information is coded often in syntactically complex ways, this complexity may often be ignored since the reader brings a good deal of information to his interpreting task. So the information is there in the manual in full to provide the already known context as reference for the new information which the manual user needs to acquire.

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WARRANTY

CIRCUIT DIAGRAM

EXAMPLE 2

OPERATING INSTRUCTIONS

2-5. Heat producing transistors in the 382A are mounted on heat sinks in the rear of the instrument. Cooling air for these heat sinks enters through the lower perforated chassis cover and leaves through the top. Care must be taken to ensure that the air flow is not restricted by covering the chassis perforations. The instrument is supplied with rubber supports for bench use. If the supports are removed, the chassis must be raised by other means to provide the necessary airflow.

2-6. Before the instrument is turned on, verify that the SENSE terminals are connected to the OUTPUT terminals at either the front panel or rear terminal strip. Also, verify that the jumper between terminals 6 and 7 on the rear terminal strip is in place.

2-7. SEQUENCE OF OPERATION

a. Connect line plug to a 115 volt AC power source. If instrument has been wired for 230 volt operation, connect to 230 volts AC.

NOTE

This instrument is equipped with a 3-wire line cord, one lead of which is connected to the metal chassis. Connection to a properly wired outlet automatically connects the chassis of the instrument to earth ground. An adapter is furnished with the cord to permit connection to a two-contact outlet.

If this is used, the green lead extending from the adapter should be connected to a good earth ground.

b. Connect + SENSE terminal to + OUTPUT terminal, and connect - SENSE terminal to - OUTPUT terminal. This is usually done with the shorting links provided on the front panel terminals. When using the rear terminal strip for output connections, also use the rear terminal strip for sense connections.

c. Connect the ground terminal to the + OUTPUT terminal, the - OUTPUT terminal, or leave the instrument floating for constant voltage operation, as desired. The shorting link on the front panel may be used for this purpose. When using the rear terminal strip for output connections, also use the rear terminal strip for grounding.

CAUTION

Be sure output is sensed at only one location: otherwise, the 382A may not be within specifications. To avoid excessive ripple, be sure the + OUTPUT terminal is not grounded during constant current operation.

d. Set the CURRENT LIMIT RANGE switch to the range which will provide the required output current.

e. Set voltage limit and current limit controls as desired. (Refer to paragraphs 2-13 thru 2-18.)

f. Set V-A range switch to desired constant voltage or constant current range.

EXAMPLE 3

MAINTENANCE INSTRUCTIONS

f. Check the operation of the CURRENT LIMIT RANGE and CURRENT LIMIT controls as follows:

(1) Set CURRENT LIMIT RANGE to .02A.

(2) Set the meter range switch to A.

(3) Set the decade controls to 000000.

(4) Connect an 8.2K, 10%, 1W resistor across the OUTPUT terminals.

(5) Set CURRENT LIMIT to mid-range.

(6) Set the decade controls so that the panel meter indicates 5 milliamperes (approximately 41 volts).

(7) Reduce the CURRENT LIMIT control until the UNCALIBRATED lamp illuminates.

(8) Parallel the 8.2K resistor with a 100 ohm, 5%, 1/2W resistor. The panel meter should indicate 7.5 milliamperes or less. Remove both resistors.

(9) Set the CURRENT LIMIT RANGE control to 0.2A.

(10) Set decade controls to 000000.

(11) Connect a 2.2K, 10%, 2W resistor across the OUTPUT terminals.

(12) Set the CURRENT LIMIT control to mid-range.

(13) Set the decade controls so that the panel meter

indicates 20 milliamperes, (approximately 44 volts).

(14) Reduce the CURRENT LIMIT control until the UNCALIBRATED lamp illuminates.

(15) Parallel the 2.2K resistor with a resistor of 100 ohms, 5%, 1/2W. The panel meter should indicate less than 35 milliamperes. Remove both resistors.

(16) Set the CURRENT LIMIT RANGE to 2A.

(17) Set the decade controls to 000000.

(18) Connect two 470 ohm, 10%, 2W resistors in parallel across the OUTPUT terminals.

(19) Set the CURRENT LIMIT control to mid-range.

(20) Set the decade controls so that the panel meter indicates 200 milliamperes (approximately 47 volts).

(21) Reduce the CURRENT LIMIT control until the UNCALIBRATED lamp illuminates.

(22) Parallel the two 470 ohm resistors with a 10 ohm, 10%, 2W resistor. The panel meter should indicate less than 350 milliamperes.

(23) Remove the three resistors and set the POWER switch to off.

4.0 OPERATING INSTRUCTIONS

- 4.1 Preparation for Use (See figure 2-1.)
- 4.2 Perform the following operational checks and adjustments prior to using the breathing apparatus.
 - a. Lay the breathing apparatus on a clean work surface.
 - b. Remove canister assembly (7) from back plate (18) by removing cylinder spreader bar (24), disconnecting control block to canister hose (15) at air inlet block (16), and unthreading hoses (25 and 26) from breathing bag and vest assembly (17).
 - c. Remove regulator assembly (13) and control block assembly (14) from the back plate by disconnecting pull rod (27) and loosening regulator yoke assembly (22).
 - d. Recharge cylinders (9) with the proper gas

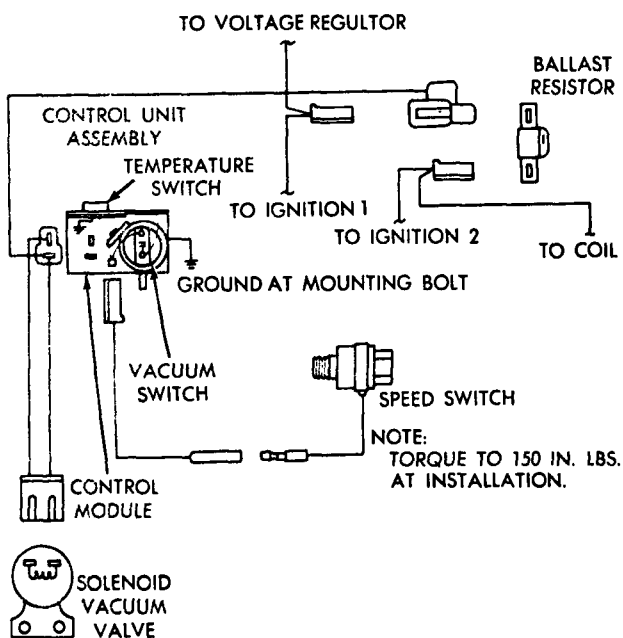
WARNING

Avoid all contact with oil and grease. Oil coming in contact with high pressure connections may result in an explosion. Mixed gas cylinders should be treated the same as oxygen cylinders, USE NO OIL.

- (2) Connect charging line assembly (3) to manifold valve assembly (4).
 - (3) Slowly open valve of high pressure gas source and fill cylinders to desired pressure (3000 psi maximum).
- mixture selected for dive as follows (See figure 4-1.):
- (1) Open manifold shut-off valve (1) to bleed off any gas that may remain in cylinders (2).

EXAMPLE 5
INFORMATION MANUAL

AIR POLLUTION



Schematic wiring diagram of the NO_x system used with an automatic transmission.

Following the schematic wiring diagram, you will note that whenever the ignition key is turned ON, the system is powered from the B⁺ terminal of the ballast resistor. The circuit (current) passes to the solenoid vacuum valve, through the coil, and to the thermal switch. This switch must be closed for the circuit to continue. Therefore, if the temperature in the plenum chamber is below 70°F, this switch will open-circuit and the circuit will be broken, leaving the system inoperative and the engine with normal vacuum-spark

advance. When the temperature is above 78°F, the switch will close and the circuit will continue to the transmission-position switch.

If the transmission is in any gear other than high, the switch will be closed, completing the circuit to ground. This will energize the solenoid vacuum valve, which will move to shut off the vacuum line, canceling out normal vacuum-spark advance. When high gear is selected, the circuit is broken by the open circuiting of the transmission switch, which de-energizes the solenoid vacuum valve and restores normal vacuum-spark advance.

This means that whenever the temperature is above 70°F, there is normal vacuum-spark advance in high gear, but not in any of the lower gears. Whenever the temperature drops below 70°F, the system becomes inoperative so that there is normal vacuum-spark advance, regardless of the gear selected.

Automatic Transmission

The Chrysler NO_x control system for a vehicle with an automatic transmission consists of a high overlap camshaft and a 185° thermostat in addition to a speed-sensitive switch, control unit assembly, and a solenoid vacuum valve.

The speed-sensitive switch is mounted in the speedometer cable and it contains governor weights which move out at 30 mph to close the circuit. Below 30 mph, the switch is open circuited.

The control unit, which is mounted on the firewall against the plenum chamber, contains three parts: a control module, thermal switch, and vacuum switch. The control unit senses ambient temperature and intake manifold vacuum to determine whether or not vacuum should be directed to the solenoid vacuum valve. Later models do not have the vacuum switch.

6b

ACTIVATED-CARBON CANISTER SYSTEM

This system is known as an adsorption-regeneration system. In it a canister of activated carbon traps the vapors and stores them. Later, fresh air is passed over the carbon, stripping it of the trapped vapors. These vapors are then fed into the engine for burning in the combustion chamber. This burning takes place at times when engine operation would not be adversely affected by the enriched mixture.

To say that the vapors are adsorbed means that they form a layer on the surface of the carbon. This is different from absorption. When a substance is absorbed it soaks into another substance, beyond the surface. To regenerate means to restore or renew. When the vapors are stripped away from the carbon, the canister is ready to adsorb more vapor. This is the regeneration phase. Ford, General Motors, and some American Motors vehicles use the carbon-canister system to control evaporative losses.

6a

5-44 For output current measurements, the current sampling resistor must be treated as a four terminal device. In the manner of a meter shunt, the load current is fed to the extremes of the wire leading to the resistor while the sampling terminals are located as close as possible to the resistance portion itself (see Figure 5-9). Generally, any current sampling resistor should be of the low noise, low temperature coefficient (less than 30ppm/°C) type and should be used at no more than 5% of its rated power so that its temperature rise will be minimized. The latter, reduces resistance changes due to thermal fluctuations. It is recommended that the user obtain a duplicate of the sampling resistance (R54) that is used in this unit for constant current checks.

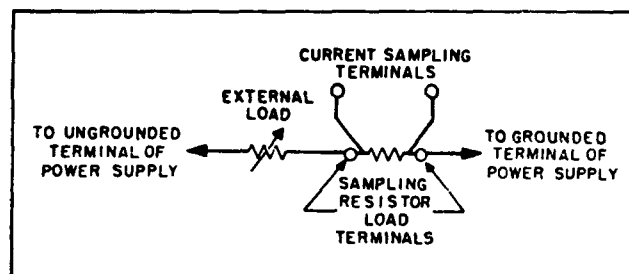


Figure 5-9. Current Sampling Resistor Connections

EXAMPLE 7

DEFINITION & CLASSIFICATION

REMOTE CONTROL PANEL.—This unit contains the necessary meters, electrical circuits, and controls to enable an operator to monitor all degaussing coil currents and to control manually by Three-Course Emergency the degaussing coil currents normally controlled automatically by the AUTODEG control unit.

AUTOMATIC DEGAUSSING — CONTROL UNIT.—This unit, by utilizing a signal from the ship's gyro compass system (heading only) or (heading, roll, and pitch) varies the ampere turns with changes in heading, or heading, roll, and pitch automatically. This equipment incorporates a "Three-Course Emergency" control and generally an additional manual control.

ANCHOR WINDLASSES

Anchor windlasses are installed on ships primarily for handling and securing anchor and chain used for anchoring the ship. In addition, most windlasses are provided with capstans or gypsy heads for handling line and for mooring and warping operations.

Windlasses are located in the bow of the ship for handling the bow anchors.

Landing ships capable of beaching and retracting from the beach are provided with a separate anchor winch to handle the stern anchor used during these operations.

TYPES

Two general types of windlasses are installed on Naval ships. These are the horizontal shaft type and the vertical shaft type. These types are subdivided into classes depending on the power source. These classes include the following:

- a. Electric hydraulic drive
- b. Electric drive
- c. Steam drive
- d. Hand drive

The essential parts of a windlass, regardless of type and class, are the prime mover, gear transmission, chain wildcat and brake, head for handling line and control means.

Horizontal shaft windlasses are usually made as a self contained unit with the windlass and prime mover mounted on the same bedplate.

Vertical shaft windlasses have the power source located below deck with only the wildcats and heads showing above the deck.

TEXT FOR ILLUSTRATION

Differential Riser Angle

The installation method for the Riser Tilt Sensor is also limited to mounting to the riser with the furnished clamp assembly. The remote tilt sensor (BOP tilt sensor) may be mounted on any horizontal surface perpendicular to the BOP vertical axis that will allow interconnection of the tilt sensors with the 15-foot interconnect cable. The mounting method is shown in Figure 2-12.

PASSIVE AND MODAL USE

Steel weld backing should be sufficiently thick so that the molten metal will not burn through the backing. In most cases the steel weld backing is fused to and remains a part of the weldment.

One of the best nonfusible weld backings is copper. Copper backing should be of a sufficient mass or liquid cooled so as to readily dissipate the heat. For steel thicknesses other than gage material, approximately 10 gage or thicker, a relief groove in the copper may be necessary. The depth of this relief groove may be as little as .02" or as much as 1/8" or more, depending upon the thickness of the work-piece and the amount of weld reinforcement required on the bottom side of the weld. The width of the relief groove usually varies between 1/4" and 3/4".

Submerged arc welding flux may serve as a backing by placing it in the bottom of the groove to support the molten metal. If the flux is encased in a sausage-like paper tube, it may be forced against the bottom side of the weld by various means. A common method is by expanding a fire hose with air pressure.

EDGE PREPARATION

Particularly for heavier weld sections the edges of the metal must be prepared for submerged arc welding. A bevel edge preparation is usually necessary on thicknesses greater than 1/2". Various methods may be employed in preparing the edges for welding. The edges may be machined by shears, planers, lathes, etc. Flame cutting with oxygen-fuel gas is a most satisfactory method. Metal cutting or grooving can also be accomplished by the carbon-arc method.

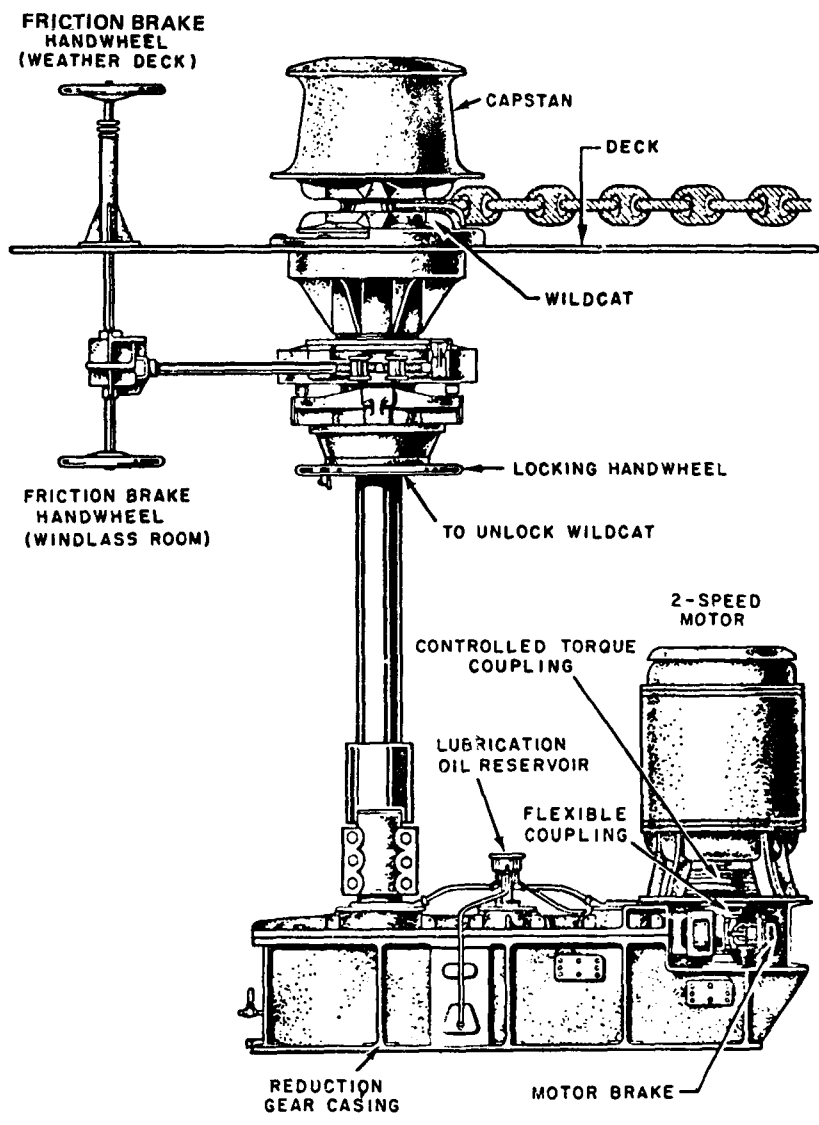


FIGURE 1 Vertical Shaft Windlass

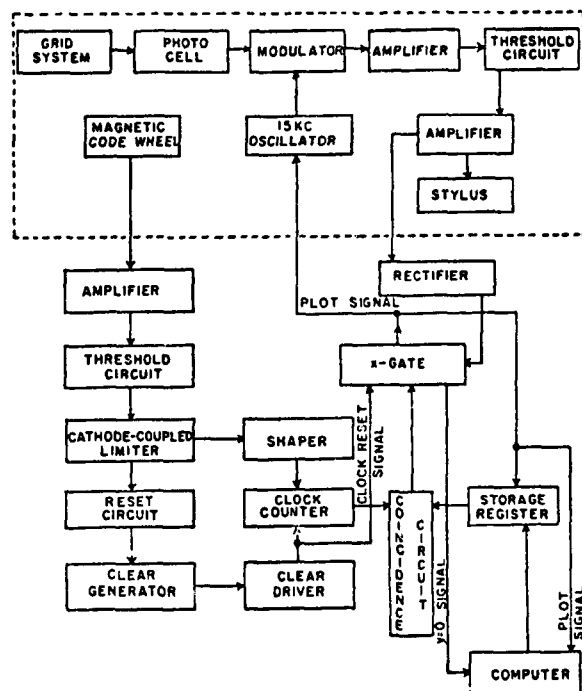


Figure 2. Complete system block diagram of medium-speed digital plotter shows relations of major parts. (Courtesy of Aberdeen Proving Ground.)

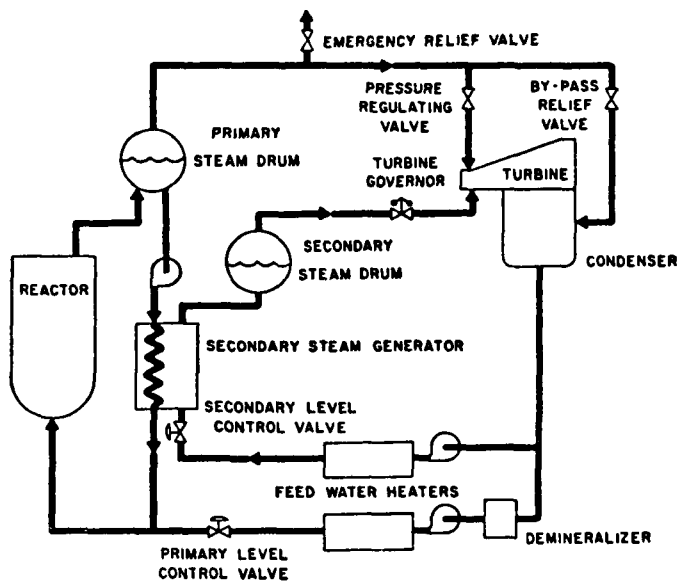


Figure 3. A simplified flow chart clearly indicates the path of action. The parts are merely symbols identified by notation. (Courtesy of General Electric Co.)

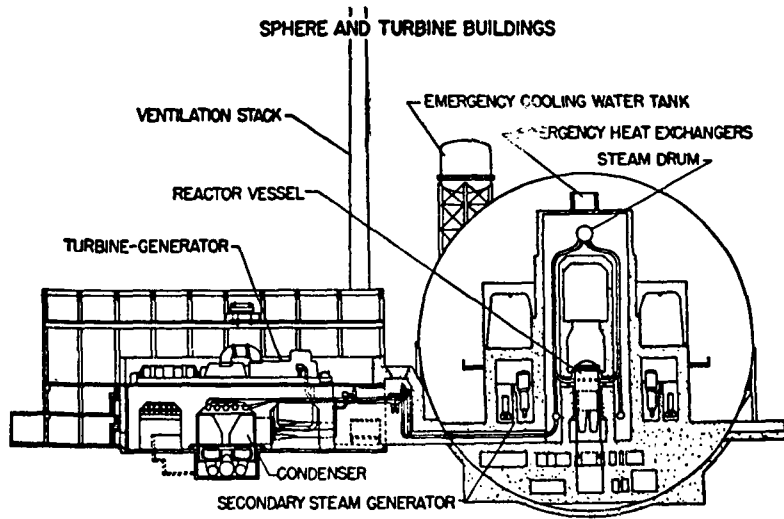


Figure 4. Vertical section drawing shows the heart of the system. It corresponds to general level of description. (Courtesy of General Electric Co.)

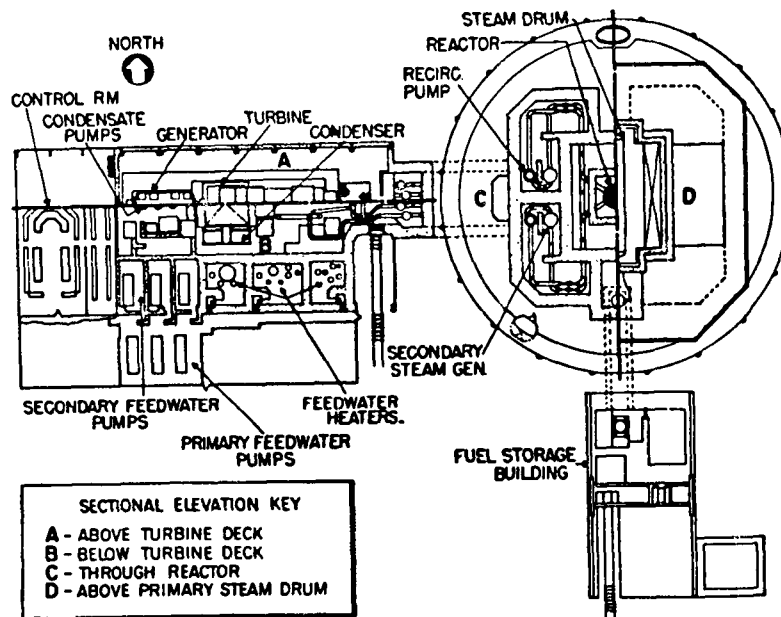


Figure 5. Plan view shows physical arrangement of equipment that cannot be seen in Figure 6. (Courtesy of General Electric Co.)

SOURCES OF EXAMPLES AND FIGURES

EXAMPLES

1. INSTRUCTION MANUAL, Model 382A Voltage/Current Calibrator, Fluke Manufacturing Co., Seattle, USA 1964
2. Ibid.
3. Ibid.
4. Extracted from AUDIENCE ANALYSIS FOR TECHNICAL WRITING, Thomas E. Pearsall, Collier-Macmillan, 1969.
5. GLENN'S EMISSION-CONTROL SYSTEMS, Regnery, Chicago 1972
6. Ibid.
- 6b. REGULATED DC POWER SUPPLY, 6267B, Hewlett-Packard Company, 1969
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8. SUBMERGED ARC WELDING, Process and Applications, Hobart Technical Center, n.d.

FIGURES

Figure 1: See Example 7

Figure 2: Excerpted from TECHNICAL WRITING, Daniel Marder, Macmillan, 1967

Figure 3: Ibid.

Figure 4: Marder, Op. Cit.

Figure 5: Ibid.

6.4. DEVELOPING SKILLS AND RESOURCES FOR TEACHERS IN AN E S P SITUATION

with particular reference to
English language training for
employment needs

T.C. Jupp

National Centre for Industrial Language Training,
Southall, London.

Contents

1. Acknowledgements
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3. Wider Skills and Broader Context of the Teacher
4. Understanding Students Background and the Teacher-Student Relation in the Communicaitve Classroom
5. Teaching-Materials Planning
6. Provision of a Teaching-Staff Development Programme
7. The Organization of a Language-Teaching Resource Centre
8. Notes
9. Appendices

1. Acknowledgements

I am only one contributor to the work or in-company English language training in Britain which this paper reflects. In particular, I have drawn upon our two years' experience with a teaching staff development programme and the building up of a resources centre.

I would have chosen to write this paper jointly with Elizabeth Laird, had circumstances permitted, because she has had the major hand in this aspect of our work. As it is, I would like to acknowledge Elizabeth Laird's contribution to the ideas in this paper and that of other colleagues at NCILT, at the Pathway Further Education Centre, and at a number of other centres in the country.

2. INTRODUCTION

My concern in this paper is with in-service teacher training programmes. I shall examine some aspects of English in a specific purpose situation in order to appreciate the teacher training needs which arise, and in so doing I shall describe and take my examples from my own work in industry in Britain

with Asian immigrants who need to improve their English communication skills in relation to their jobs. I shall not concern myself with the initial training needs common to all English language teachers, such as the understanding of language form and usage, and the mastery of general classroom techniques.

This paper by the nature of the subject - teacher training - is bound to be concerned with the practical and the possible. But I consider that the general principles which we have evolved over the last two years for our teaching-staff development programme could be applied quite widely in the field of ESP because they have arisen from our attempt to base our English language training projects on the specified communication needs of particular groups of learners. It is this principle which is at the centre of many current attempts to evolve language programmes for academic and employment purposes.

I start by stressing two important characteristics of the ESP situation for the teacher. First, he has to leave the security of the subject-based approach. Instead of "This is the English Department, so we teach English", he finds, "This is a natural gasfield and some of our technicians need English to work with their supervisors. Your job is to make them more effective in their work". This in turn means that the English language teacher is often a comparatively isolated specialist. He works alone or as part of a small team in a comparatively isolated situation where his status may be uncertain and his organisational and resources requirements not apparent to others. The new skills demanded of the ESP teacher are often practical ones which can only be learned by exposure to the work itself. Thus an in-service training programme (linked into the job) is often an essential support for ESP projects as well as a way of overcoming the teacher's isolation and meeting the need to share teaching materials and data collection, if only for reasons of economy.

There is a natural reluctance on the part of many teachers to accept the need for the new skills and knowledge which arises from an ESP approach. This attitude must be respected, and is only likely to be modified through an in-service training programme of a high professional standard and backed by adequate resources and finance so that teachers are not expected to attend in their free time. However, there is also the need for teachers taking on ESP jobs to be presented with proper job specifications and to go through appropriate recruitment procedures which enable the teacher to recognise the job he is undertaking so that teachers come into the work with a commitment to learn new skills for a new type of language teaching.

In this paper I shall look first at the distinctive skills and knowledge called for in ESP language teaching situation. These can be summarised as:

- (a) Participating in, understanding, and being accepted in the wider environment (outside the language classroom itself) where communication in English is needed, and taking responsibility for the English project making an effective contribution to it.
- (b) Understanding the needs and the background of students.
- (c) Creating classroom methods which allow participation and fully respect the students' experience, knowledge and own learning strategies.
- (d) Being able to analyse relevant communicative transactions, and investigate the reality and costs of communication breakdowns in English in the target situation.
- (e) Being able to construct a syllabus and impose it upon whatever teaching materials, equipment and classroom practice already exists.

On each of these points I will seek to draw teacher-training implications as I proceed. I will then look at how we have organised a teacher-training programme to help the teacher acquire this skill and knowledge. I see no point in seeking to generalise on how an in-service training programme can be organised, so I shall simply summarise our experience briefly.

3. THE WIDER SKILLS AND BROADER CONTEXT OF THE TEACHER

I want to begin by looking at the additional non-classroom demands which an ESP situation makes upon the teacher. These arise in two main respects:

1. The requirement for the teacher to investigate the target language-use situation, and to analyze his students' learning needs in relation to this, and in relation to their previous experience.
2. The requirement to link classroom learning to opportunities for real practice in communication outside the language classroom in the target situation if the course is to have credibility and if the unique advantage of the EOP situation is to be secured.

Both of these necessitate the teacher emerging from his classroom and from his library. He has to become an accepted and effective professional in the context where communication in English forms part of a much wider academic, commercial or industrial enterprise. He has not only to understand this enterprise, but to integrate his work into it, with all that implies in terms of personal acceptance and negotiating skills.

I have deliberately chosen to focus on this area of the teacher's skill first because it is easier to concentrate for teacher training purposes upon the questions of methodology, course design and classroom techniques and overlook the skills and techniques needed beyond the classroom and the teaching materials.

Let me start by describing this process of involvement in an industrial enterprise where English is needed to carry out aspects of the job. My example is taken from a food processing factory in Britain where an English language training programme was set up for Indian immigrant operatives and supervisors whose English was inadequate for their work. (Appendix One (see Page) illustrates the communication network and daily routine of an Indian worker in this factory and provides some background to the work outlined below.)

There are seven main areas of work:

Firstly, the pre-course investigative work and data collection:

1. Observing and understanding the work and organisation of the factory, This will be best done by a mixture of explanation to the teacher by management, supervision and other workers and by the real participation in the target situation by the reader.
2. An investigation of when and how communication in English is required in the course of the work (role, situation, purpose, etc.). This is done by a process of asking people when English is needed, by observing when it is used, and by recording actual examples of use. This work should also cover instances of communication breakdowns, how communication in English can be avoided, and how communication between two native-speakers of English is carried on in the same circumstances.
3. An assessment of the level of English of potential trainees in relation to 2.
4. Discussions with relevant members of management and supervision responsible for organising and making use of the training, and trade union officials. Discussions with native-English speakers who have to communicate with the language trainees in order for the teacher to judge attitudinal and cultural factors.

This investigative work will be written up as a report, some or all of which will be shared with the company.

Secondly, during the language training course the teacher has to maintain links with the target situation:

5. The organisation of opportunities for language trainees to use their new language in the target situation during the course. This will require co-operation from management and supervision.

6. Briefing and background sessions for English-speakers to improve their ability to communicate across the barriers of language and culture. This includes their participation in the language classroom situation.
7. Organisation of an evaluation process which involves the target situation (as opposed to mere validation of linguistic performance in the classroom).

Parallels can easily be drawn for a technical site overseas where there are expatriate English-speaking managers, supervisors or technicians; for a language training programme preparing technicians for further training and industrial experience overseas in an English-speaking country; for a financial or commercial organisation which needs executives who can negotiate and establish social contact with English-speaking customers or suppliers; for an area of the curriculum in a school or university where English is required as a study skill; and for many other ESP situations.

It may be argued that the investigation and data collection work (1 - 4) is a once and for all process which only needs to be done initially to identify the profile of language learning need of students and the real points of behaviour and communication which a language training course will seek to modify. This may be true in the fullest sense of an investigation, but some such process is needed to induct any teacher into a project and in order to make him professionally acceptable and effective with his students and the staff of the company.

A teacher requires a range of skills and techniques to undertake these seven areas of work successfully - which he is unlikely to have acquired on a TEFL programme or as a result of his experience of English language teaching.

An in-service training programme should, therefore, provide exercises and guidance with each of the following types of skills. Again, my examples are specific, but I consider the skills will be generally needed in EOP contexts.

<u>Activity</u>	<u>Skills and knowledge</u>
1. Observing and understanding the work and organisation of the target situation (e.g. factory, university, faculty, etc.)	An appreciation of e.g. "How industry thinks" - culture, context roles, attitudes to teachers or Language teachers Techniques for acquiring this information.
2. An investigation of when and how communication in English is required and the nature and consequences of communication breakdowns in English.	Techniques of observation, of interviewing non-students, and data collection and analysis.
3. An assesment of: (a) the level of relevant communication skills in English and in the Ll of potential students, (b) command of English structure and form.	Testing and assessment techniques.
4. Organising classes in company (place, time, shifts, arrangements for release.)	Access to guidelines and experience.
5. Discussion, negotiation with, and training for management and other key interlocutors in the target situation.	Negotiation and presentation techniques appropriate to industry/ institution. Running of training/discussion groups (etc.) on the content and use of the ESP project.
6. Evaluation in terms of: (a) Language objectives (b) Behaviour objectives	Techniques of validation and evaluation.

7. Preparation of reports (investigations, recommendations, evaluations). Report writing skills, "model" reports.

I will briefly discuss two objections to this demand for wider skills. It has often been suggested to me that it is unnecessary to involve ourselves in the target situation in this way. Language teachers (the arguement goes) should simply offer a service in English language learning to employers because we are experts in English. But how can we decide what service? I see the language trainer in industry as having two clients:

- (a) the organisation as a whole which needs English language skills amongst some of the employees.
- (b) individual learners as members of the wider organisation.

It is, therefore, the teacher's job to understand and be effective within the wider environment he is seeking to service. The same argument exactly holds when offering English as a service subject in academic or technical higher education.

The second objection I have heard is that the skills described depend on the personality of the teacher; the right person will just acquire them. This second line of argument is tempting, particularly as many teachers regard the opportunity to be involved in the real world where their learners need English as a fascinating and challenging opportunity. But it is not sufficient to regard a vital aspect of the job as a matter of personality and challenge. Sooner or later even those with the "personality" will go wrong because they have not really understood the nature of the skills they are using.

I have seen many teachers on EOP projects become frustrated and anxious because they have lacked the skills to manage their wider environment and as a result they have suffered lack of reliable organisation, absence of data, inadequate status from students and management, and missed opportunities for follow-up and reinforcement. In these circumstances the whole project suffers. Equipping teachers with the type of skills and knowledge suggested is particularly important, bearing in mind my earlier remarks about the comparative isolation of many teachers on ESP projects, particularly when involved in in-company EOP work.

The teacher acquires from this work the necessary understanding of the target situation and can create opportunities for student reinforcement in it. He also gains an appreciation of the students' real priorities on a language course of limited duration. Language courses are always of limited duration (perhaps 100 hours in a year), but within the walls of an academic department the teaching of English all too often proceeds at a speed which seems to assume that limitless time is available. The teacher who understands the target situation will appreciate the pressures which limit the time available, as well as having a basis for choosing priorities.

4. UNDERSTANDING STUDENT BACKGROUNDS AND THE TEACHER-STUDENT RELATIONSHIP IN THE COMMUNICATIVE CLASSROOM

We have looked at the information and skills a teacher requires in relation to the target communication situation. The learner is equally central to the task of designing an appropriate methodology and syllabus in a communicative approach to language learning. The teacher must identify learning needs and methods partly in terms of learners' backgrounds, and he must cease to see his role as the fountain-head within the classroom. We require "a pedagogy of participation" rather than "a pedagogy of imposition."² These aims require the teacher:

1. to study the background of his learners in the fullest sense
2. to respect his learners' knowledge and experience, their communicative skill and learning strategies within the classroom.

I have already touched upon the need to assess the learner's language skills

in English if he is not a beginner. This process needs not only to assess grasp of linguistic code, but also communicative skills in relation to ultimate behavioural objectives. This is a most difficult sort of testing and one which requires research attention. But this language and communication skills assessment is only the first and most obvious way of investigating the learner's needs. His educational and employment in English which he must seek to understand are even more important. The tasks and different depending upon whether the teacher is a native English-speaker or shares the background of his students, but in either case it is equally demanding. The teacher who shares a common background with his students needs to spend less time in understanding this and more time in analysing the norms of language use and other relevant aspects of behaviour required in English. Understanding students' backgrounds is another aspect of the investigative work (already discussed) and some of it would be carried out in the course of the preliminary work in the target situation.

Examples of training needs:

Again I shall draw my examples in this discussion from experience with language training projects for Asian immigrants in British factories.

1. The background and culture of students before settling in Britain with particular emphasis upon mother-tongue, education, fundamental social and cultural values, experience and attitudes relevant to target language-use situations.

Training:

(a) Acquisition of general background knowledge:

- general reading in appropriate social anthropology
- access to special studies and presentations by language teachers who have visited the country of origin. (Background Studies).

(b) Detailed studies of illuminating points:

- case studies in depth of individual students as a model for teachers to produce their own.
- contrastive study of specific narrow areas of language and social behaviour. For example: forms of address; strategies of approach; styles of negotiation.

Materials for this second type of training have to be drawn from a special resources centre.

2. The socio-economic reasons for students being in their present situations and their need to learn English. Example: understanding economic reasons for immigration to Britain and the position of immigrants in employment; the relevance of English to e.g. training, promotion and trade union participation.

Other examples might be the significance of English in a multinational company, in particular industries and technologies (e.g. electronics and oil), in academic subjects (e.g. medicine); as well as more broadly in relation to the politico-economic position of a country (e.g. Sweden).

Training: On the one hand teachers need to be provided with examples of current theories and studies; and then to match them to the experience and situation of individual students.

3. Techniques of interviewing and assessing students and participant observation alongside students (e.g. working in a factory and observing the daily programme of an individual and all instances of his needing to communicate in English). The teacher will also appreciate as a result the extent to which his students are professional and expert in their own fields.

Training: interviewing and observation techniques.

4. Understanding the students' point-of-view in relation to personal motivation for learning English, expectations in the English language classroom, reaction to particular classroom methods and student evaluation of courses.

Training: Seminar with former students and chaired and led by non-teachers who have some common background with students. Language teachers observe and

provide a minimum of comment and information. Seminar can include video of language classes for discussion. Such discussion can be recorded and teacher-participants required to write up only the comments of non-teachers. Another useful approach is for teacher to compile case histories of individual student progress.

I shall now turn to the classroom situation. Within the classroom the teacher-student relationship should reflect both the background of the students and the intention of teaching communicative skills. This requires a radical change in the style of pedagogy and the cultural assumptions of the teacher. It would be pointless to draw up a hypothetical inventory of the skills and techniques by which a teacher might achieve this, when in reality this relationship can only be the unique product of the situation and the individuals in it. I will, however, briefly discuss two facets of the relationship.

A teacher needs to recognise what students bring to the language classroom; and a recognition of this will make for a more equal and creative relationship:

1. Students are normally more expert in the content of their work or subject of study than the teacher. Therefore, the students should be encouraged to contribute information on the technicalities of their subject and explain things to the teacher. The teacher's job lies in communicative skills in English, not trying to be master of a subject or type of work not his own. Another implication of this is that the teacher does not need to spend time creating "authentic" situations and content as an introduction to the language work when the authentic situation is already understood and familiar to students.
2. Students already understand discourse and language-communication in their own language. They require help with the expression or comprehension in English of language functions and skills already familiar to them in their mother tongue.
3. Most ESP students, particularly in EOP projects, are adults. Adults have developed their own strategies for learning. They may be introduced to new ones, but they must be allowed to use and develop existing ones which are effective for them. This can be encouraged through group work and individualisation.

I shall examine just one area of classroom methodology. One of the most important classroom methods on an EOP course teaching spoken language skills is role-play or simulation.³ Much work in the classroom has to be controlled, artificial and exclusive of the unpredictable. But in reality very little discourse is predictable (except where it is situationally controlled and both parties want the same thing, e.g. buying a railway ticket) even though it takes place within definable variables. It is, therefore, important that some classroom work is done which enables students to process discourse and participate in discourse. Role-play seeks to do this. Students have to take part in a transaction (first with the teacher and then with each other) within a situation they fully understand and where "there is an initial divergence of interest between the parties which must be resolved to their mutual satisfaction".³

"The challenge to be totally and spontaneously involved in the interchange lies at the heart of this method. We are demanding that the student be constantly on the alert to respond and initiate appropriately, to focus more on communication than on language, while gradually acquiring more subtle and accurate forms of language with which to do this."³

Total and spontaneous involvement implies real communication which can only occur in an open classroom where a teacher relaxes his formal role and at times attaches more importance to communication and fluency than to accuracy. Again, I believe teachers have to experiment with their own techniques. But first a teacher needs the self-confidence of feeling he can turn real communication (genuine discourse), whatever mistakes occur in it, to a learning purpose. To feel a self-confidence in doing this, a teacher needs skill and practice in discourse analysis. Since any speaker of a language has this skill subconsciously, it can be practised fairly easily using authentic spoken and written exercises in training sessions.

One of the great advantages of role-play is that students reveal their own weak-

nesses in language skills and functions in the process of trying to communicate. The teacher can then develop language practice work which he knows to be appropriate to the needs of his students rather than simply based upon an analysis of discourse for a given situation without reference to what any particular learners know or do not know already. Help with role-play teaching techniques should first be given through micro-teaching sessions between groups of teachers, and then through some team teaching with an experienced role-play teacher.

5. TEACHING-MATERIALS PLANNING

There is a danger in this work of making unrealistic demands upon teachers, and this is particularly true in relation to teaching materials in this field because so little published or accessible material exists. It would, therefore, be logical (and attractive in what is still a pioneering field) to discuss how we train teachers to write their own courses. But this would be unrealistic and very wasteful; I already have the impression that teachers on ESP projects are metaphorically reinventing the wheel daily.

Teachers do not require the ability to write a complete course from scratch each time. But they do require the ability to analyse the communication needs for the target situation and the background and learning experience of their students, which is why I have given so much attention to training needs in these two fields. It is the specification of needs which must be unique to the situation and from which a teacher must be able to plan a particular syllabus. Given a syllabus, the teacher can then make the most economic use of existing materials as they stand, whether by adaptation, or by the addition of new items. All too often the teacher's attention is focussed upon the problem of materials before he has decided either his methodology or his syllabus.

The communicative approach demands (in whatever field it is applied) that the syllabus is first conceived in terms of the communication skills required in extended language transactions or discourse. Another requirement for the teacher, therefore, is that he has real skill in discourse analysis; understanding how speakers use language to interact, and what influences their use of language. This is an extensive subject and one about which there is an increasing and useful amount of academic writing.³ We should remind ourselves that this is essentially a practical skill possessed by any user of the language and one which we can therefore become conscious of fairly easily through role-play and tape analysis exercises, as well as through more specific techniques.

In order to understand the complications of trying to teach the skills of discourse, teachers need to do a range of exercises from analysis of relevant and typical native-speaker discourse to analysis of language teaching items contained in traditional English language textbooks. In our teacher-training programmes we have used the following kinds of taped material for spoken discourse analysis exercises designed to help teachers identify language skills and functions which they would wish to include in their syllabus:

1. Spoken conversation recorded in relevant situations at work between native English speakers. This type of material is used both to help understand how conversation works and to help identify specific skills and uses of language which students will need help with.
2. Spoken conversation between English people and fluent Indian speakers of English in situations of negotiation or stress.⁴ This material can be used to pinpoint cross-cultural linguistic confusions. Communication breakdowns are analysed which arise from linguistic features which are used with different meaning and significance by the two speakers. A mixed group of Indian and English speakers is required to do this type of exercise. The causes of the breakdowns may be obvious or they may only emerge when the analysis of the English and Indian people present is compared. There appear to be discourse features used by different ethnic and cultural groups which are not recognised as linguistic failures or differences, but are wrongly interpreted as indicators of attitude and hostile behaviour.

3. Communication breakdowns in work situations: Spoken conversation between English people and Indian-speakers of English where there is total breakdown of communication arising from obvious lack of English vocabulary and forms. Teachers are asked to work out the language needed by the Indian speaker, and how his successful use of English would in turn have modified the English person's use of language. This type of exercise highlights practical student needs in a very obvious way, as well as bringing out the distortions of power and relationships which result from lack of appropriate English in the workplace. (See Appendix Two for an example of such an exercise).
4. Role plays of typical communication situations at work⁵ made by English people who work there themselves. The role play would be quite unscripted but would be briefly discussed beforehand. Appropriate material of good quality can be far more easily obtained this way and is far more accessible for analysis. This material can first be used for discourse analysis and then for planning teaching items based on the same language skills and functions.
5. Language teaching items which aim to teach particular communicative skills can be analysed by teachers and they can decide how far they measure up to aims and needs analysed in earlier exercises or investigative work.
6. Language teaching items taken from structuralist textbooks are examined to decide how far they are relevant to needs and can be used.

These last two types of exercise bring me to the subject of the use and evaluation of existing teaching material.

I would turn again to my earlier point that the priority is a syllabus based, in the first instance, upon the communicative needs of the learners defined in terms of verbal purpose, context and role, which also takes into account the learners background and experience as well as the constraints and opportunities of the teaching situation. It is a common misunderstanding about "communicative" or "functional" syllabuses that they somehow represent a new language teaching method; a new alternative to first, the grammar/translation method and more recently, the structural/behaviouralist method. But our purpose is not to throw out any of the great range of techniques and methods which have been proved useful. The aim is quite different: it is to establish a broader framework of objectives based upon language use and, within this, to adopt an eclectic and broad approach to methods and techniques which respects proved experience. The essence of language teaching is to "focus" on a particular aspect of the language at any given time. A broader communicative syllabus therefore implies that the different aspect of language, which in reality operate concurrently, at times have to be separated out and that within the overall syllabus (defined in terms of participation in discourse contexts) there are a number of sub-syllabuses operating.⁶

We have found the following system of classification a simple and useful one for teacher to apply:

Classification of teaching materials: A question of focus⁷

1. Broad syllabus specification

In terms of communicative transactions defined by context, roles and medium(etc)
 Examples: Sorting out a personal need at work (e.g. a day off)
 Reading a set of operating instructions for a machine.

2. Four sub-syllabuses

These four aspects are present in any piece of language learning material. The writer's purpose and the teacher's skill is to "focus" in a given teaching item on one aspect.

2.1 Functional

In terms of communication 'moves' or functions (e.g. greeting, apology, etc.) and communication skills (e.g. logical connectors, sequencing, etc.). Meaning here has to be defined by reference to transactions in 1.

2.2 Structural

In terms of grammar and phonology

2.3 Situational

In terms of lexis and particular setting

2.4 Informational and cultural

In terms of information required by learners (e.g. leave of absence procedure, the quality required from a machine) and the cultural norms of behaviour (e.g. saying 'sorry' when you touch someone by mistake).

In terms of syllabus construction 2.2, 2.3 and 2.4 arise from and relate back to 1 and 2.1. In any teaching items all four sub-syllabuses will be present, but the teacher will focus for learning purposes primarily on one (e.g. the functional, the structural, etc.). We have not found a "notional" sub-syllabus (in terms of the basic concepts used in verbal communication) an aspect of language which we can successfully apply in syllabus description and design.

I have examined this matter of sub-syllabuses because access to existing materials for use and adaptation depends upon an adequate descriptive classification of any existing material being available to the teacher, or his ability to apply one relatively easily. It is, after all, the simple and clear descriptive labelling of structural courses which makes them so accessible and usable by the teacher and interchangeable. The proliferation of supplementary materials which are also described by the same structural labels (e.g. structural readers, composition and oral practice books) underlines this point. The ESP teacher's task is more difficult because he has to design his own syllabus, but he needs training in doing so with descriptive sets and sub-sets which are generally and widely used so that he can then relate to and select from existing materials.

How much material already written is potentially useful to the ESP and "communicative" teacher? One would like to answer: all materials which have proved successful in the classroom. But there are great difficulties in using complete general English courses which have been designed primarily on a structural syllabus. Firstly, if the language use in teaching items in the courses is analysed (as suggested in the discourse exercise type 6 (page)), the language turns out to be either highly contrived or unusual and not very useful in terms of context of situation and roles. Generally, therefore, as might be expected these courses can only offer teaching items for structural "loops"¹ in the syllabus. These items may need a good deal of adaptation in terms of sub-syllabuses 3 and 4 to avoid the extra amount of vocabulary and background explanation from making their use uneconomic. Structurally designed materials and exercises published for supplementary use are likely to be far more accessible and usable.

This is particularly the case when the supplementary books are dealing with the skills of reading, writing, speaking and listening. These books often have some sort of overt "structural syllabus", but this need not interfere radically with their treatment of discourse in relation to the skill dealt with.

But I shall now turn to the much more important and long-term matter of making use as widely as possible of published material for ESP. As yet there is not much available (particularly outside EAP), but I have come across an alarming tendency to quickly reject material on the ground of linguistic level, subject matter or ordering of the syllabus of the book. These objections are unrealistic and unnecessary since they presuppose that teachers can continue to be served pre-packaged lessons in an ESP situation which contradicts the first principle of a syllabus based upon the learner's situation and needs. Certainly in the field of English for employment it is unrealistic to think of courses which simply consist of pre-packaged lessons and I doubt that they can be produced to any great extent in the field of academic study. But published or accessible materials need to be labelled and described under the type of headings I have suggested, and teachers require training in the application of descriptive labels to syllabuses and the adaptation of existing material. The task of adaptation can be broken down under the headings of the four sub-syllabuses outlined earlier.

6. THE PROVISION OF A TEACHING-STAFF DEVELOPMENT PROGRAMME

So far in this paper I have described aspects of what the ESP teacher needs; the distinctive skills and knowledge called for in a communicative approach to language teaching. I have only thrown out passing suggestions on how training can help the teacher acquire the knowledge and skill.

I propose now to look at the question of how more fully. First, we need to appreciate that to achieve what I am suggesting demands "a cultural revolution" on the part of the teacher. The teacher has to see himself in a radically different cultural, social and economic setting from the authoritarian and classical traditions of classroom language teaching which have remained, in most parts of the world, untouched by the changed educational and vocational demands of their societies, no matter what has been written into official statements of principle and aim.

At NCILT we, therefore, identified teacher training and continuing staff-development as the most important task in our programme. It will be clear that in our field of in-company language training, the right teaching materials (whilst necessary) were certainly not sufficient to achieve the type of language learning required. Generally, I believe materials are important, but it is a delusion to consider they determine what happens in a classroom.

We have approached in-service staff training in the following ways:

1. A programme of staff training seminars
2. The development of staff training manuals (self-study modules for use on the job)
3. Other means such as a period of participant observation by the teacher in the target situation, and attachment to other language training units.

Our staff training seminars programme is outlined in Appendix Three. There are three parts to this. The first is a one-year induction programme linked to staff training manuals and working papers. Secondly, there are a series of small groups to which all members must contribute in a practical way. Thirdly, there is a programme of larger events intended to bring important new ideas to staff and stimulate new developments.

I shall describe our approach to the training of new staff in some detail to illustrate the general principles which have emerged. Our new teachers are usually qualified or have some experience in EFL or ESL. There are three main components.

1. Watching and working with someone who knows the job

This is done in several ways. First, there is a short period of attachment to another unit (2 or 3 days) whenever possible. Secondly, the new teacher is never given complete responsibility for a course or project, particularly on the investigation, when starting, but works as a number two. It is a general principle that there are two teachers involved on a course anyway, and once a fortnight they should teach together.

2. Formal training on seminars away from the job (at the National Centre or regionally)

The programme consists of five seminars (see Appendix 3). Each seminar lasts for two days which we find the most effective period for intensive work, and has up to ten members. It is difficult to summarise the training methodology we use - and in any case, it varies considerably for the different subjects. But generally formal lecturing and discussion of theory without exemplifications is an absolute minimum. All formal sessions include visuals and tape recording (tape, video and slides). The major activities on the seminars are various sorts of practical exercises and assignments. These are done in groups of three or four and then discussed collectively.

3. On-going advice and instruction while doing the job

This is supplied by means of a Staff Training Manual⁷ (and a tape to go with it). The manuals are linked to the formal seminars. They consist of a series

of background sheets which are followed by practical exercises which can be done as part of someone's job. The use of the manual is best supervised by a more experienced teacher, but it can be done entirely on a self-study basis as the important point is reading it and doing the exercises. The background sheets containing the main ideas are each confined to one page.

Overall, the induction programme aims to train staff by exposure to the job, by practical training activities linked to this, by support from colleagues in a team situation, and by creating standards and group pressures to achieve and uphold them.

7. THE ORGANISATION OF A LANGUAGE-TEACHING RESOURCES CENTRE

There is a direct link between ESP and the need for resources banked in convenient centres. A Resource Centre can range from a national institution to the product of four teachers in one college. A resource centre is not by definition expensive. It requires little in terms of equipment; the defining characteristic is that teachers put in and take out materials which have simply arisen in the course of their work. In other words a resource centre is essentially a frame of mind; a willingness to share experience and materials.

Our resource centre has grown with material of two main sorts: background materials and teaching materials. The organisation and content of the NCILT resource centre is summarised in Appendix 4. As the centre has grown, the cataloguing and accessibility of items has become an increasing problem. Much more use is made of materials which are well catalogued and described. We discourage people from making copies of materials unless they are definitely going to use them. We prefer them to read, look at, or listen to them on the spot.

We regard the resources centre as not only an essential way of pooling experience and making the best use of teachers' effort, but as also an aspect of in-service training. Teachers need time and opportunity to come and examine materials and read them, and we would like all teachers to spend one day a term keeping up to date with the new materials.

8. NOTES

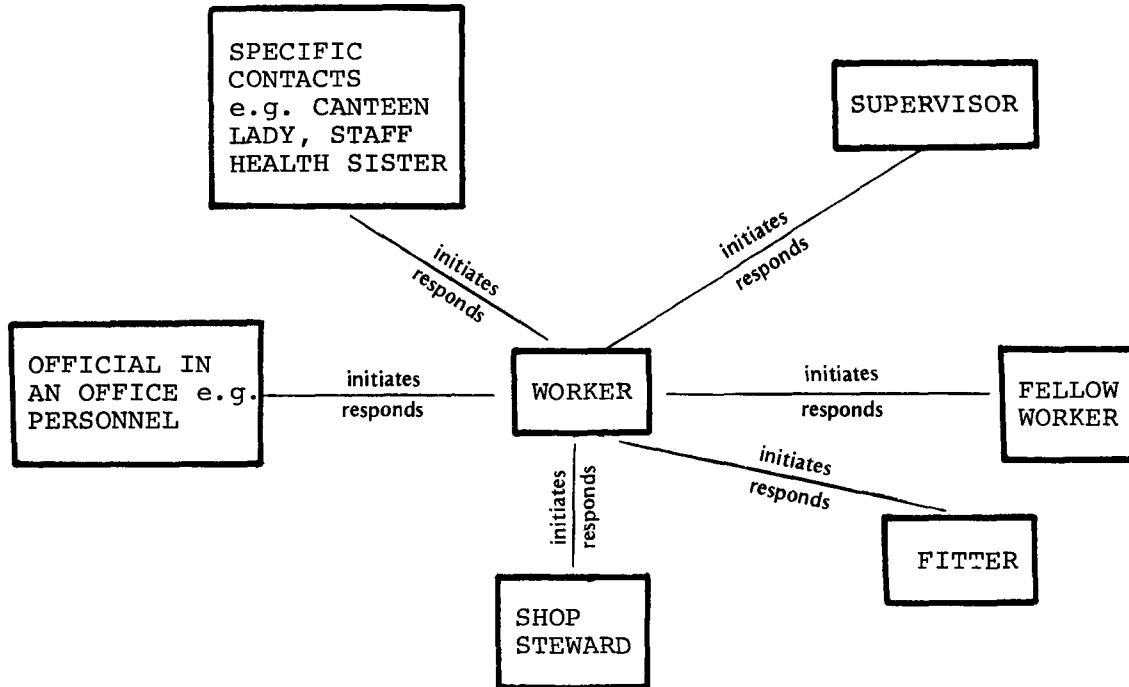
1. A much fuller account of this work will be found in the first part of T.C. Jupp and S. Hodlin Industrial English (Heinemann 1975). The second part of the book seeks to provide an exemplification of the communicative language teaching approach in an EOP situation.
2. I have borrowed these phrases from Henry Widdowson, as they seem to me to sum up very well the methodological implications of the communicative approach.
3. I have based this brief description of the role-play methods on Denise Gubbay The Use of Role-Play (mimeo: National Centre for Industrial Language Training 1976).
4. This type of exercise has been developed for us by John J. Gumperz (University of California) in relation to his important research into rhetorical features in inter-ethnic discourse. Some of the ideas Gumperz is now working on are contained in: John J. Gumperz: The Sociolinguistics of Interpersonal Communication (Centro Internazionale di Semiotica e di Linguistica, Università di Urbino No 33 April 1974 Serie C)
5. This type of teacher-training and teaching material has been developed by my colleague, Celia Roberts, as part of her work on Post-elementary language training materials for employment (forthcoming).
6. The problem of separating out the different components of discourse for teaching is usefully discussed in C.M. Candlin: Communicative Language Teaching and the Debt to Pragmatics (paper read at Georgetown Roundtable)
7. This classification is outlined in greater detail in Elizabeth Laird: In-

9. APPENDICES

Appendix I

THE LANGUAGE LEARNER'S SITUATION IN A FOOD COMPANY IN BRITAIN

1. Here is an example of the communications network in the food manufacturing company. Each relationship in the network may involve different roles, contexts, media and types of language transactions.



2. Here is the daily timetable of a packer the company, pinpointing situations where English is used. (Different industries and companies will differ enormously with respect to this kind of timetable).

- 8.00 am. Arrives. Clocks on. Takes coat off in locker room. Goes to the packing department chatting with others. Supervisor gives instructions and sets up work for the day.
- 10.30 am. While checking, the supervisor finds a fault and explains what to do.
- 12.00 am. Lunch. Time for general chat in the rest room. A lottery organised.
- 12.30 pm. Back to work. Shop steward comes round with details of a meeting organised.
- 1.10 pm. A problem with the machine. Needs to fetch supervisor to report it. The fitter comes. Tells the fitter what is wrong.
- 3.00 pm. Called by supervisor to sort out the holiday schedule.
- 3.10 pm. Returns to work for finishing off and clearing up.
- 4.00 pm. Goes off to locker room amid chat. Clocks off. Out to the bus with the others.

Appendix 2

AN EXAMPLE OF A COMMUNICATION BREAKDOWN IN A WORK SITUATION

The following actual dialogue was recorded in a catering organisation between an English supervisor and an Italian employee. The employee walked up to the supervisor and stood there holding his pay-slip:

RECORDED

INTENDED

S = Supervisor

E = Employee

- | | |
|---------------------------------------|--|
| S. What's your problem? | E. Can you spare a minute? |
| E. Is my rest day, no pay | S. What's your problem? |
| S. For when? | E. There isn't enough overtime on my payslip. |
| E. Sunday. All day - off | S. How many hours did you work? |
| S. You weren't off, or you were? | E. My rest day, that's 16, and my day off, that's 12. |
| E. And off, and my rest day, 16 hours | S. Oh yes, that's 28, not 21
Give me your slip and I'll check the clock card. |
| S. You worked 7 days? | E. Thanks a lot. |
| E. Yes, 7 days. And off . . . | |
| S. You were sick one day? | |
| E. Yes. | |
| S. O.K. then. | |
| E. No sick. | |
| S. I thought you said | |

Appendix 3

OUTLINE STAFF DEVELOPMENT PROGRAMME

National Centre for Industrial Language Training 1976/77

BASIC INDUCTION TRAINING FOR NEW STAFF (6 - 12 MONTHS)

This should be linked to supervision from a more senior colleague and to the practical assignments contained in the Training Manuals for Teaching Staff (as indicated below). Each seminar is for two days (about 12 hours in total each seminar).

1. Introductory Seminar
covering aims, student needs, new teacher expectations, assessing needs, materials and course design.
(linked to Training Manual 1.)
2. Language Learning Materials and Methodology
classroom demonstrations and videos, discourse analysis exercises, data collection, grading and development of a syllabus, selection of teaching items.
(linked to Training Manual 3 - planned)
3. The Backgrounds and Needs of Students
Background and experience in Britain
(linked to Background Studies 1 - 4 and Manual)
Communication needs and language learning case studies. (Organisation of seminars for Management and Supervision.)
(linked to Training Manual 2).

4. Investigation and Assessment of Language Training Needs
Data collection, Testing, Analysis, Writing up and reports (linked to Working Papers 1 and 2)
5. Presentation of objectives to Industry
Aims and objectives (defining character and environment), industry's outlook, principles and practice in presentation and negotiation.
(linked to Training Manual 4 - planned)

WORKING-GROUPS

One day meetings of smaller set groups with on-going practical objectives. These group meetings plan and lead to occasional larger seminars (1 or 2 days)

Examples during 1976/77

Post-elementary course design
Evaluation of language training projects
Students' work books
Trade Unions and English language training
Policy and organisation of Industrial English Language Training
The training of new teaching staff

OPEN PROGRAMME OF SPECIAL EVENTS (1 or 2 DAYS)

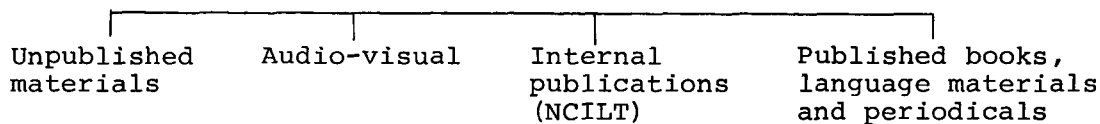
These are major events usually with outside directors or contributors and the aim is for all staff to attend at least one such event each term. These seminars bring important relevant outside developments into the training programme and make them accessible to staff.

Appendix 4

RESOURCE CENTRE

National Centre for Industrial Language Training

1. OVERALL



2. UNPUBLISHED MATERIALS

Language Teaching Materials

1. Complete courses for particular employers
2. Language teaching items or sequences of items
3. Student notes

Reports on Projects

4. Investigations
5. Evaluations
6. Follow-up studies of students

Background of Students

7. Materials on places of origin
8. Materials on employment of immigrants in U.K.
9. Case studies (for teaching and seminar use)
10. Learning experience and progress of individual learners.

Industrial English Language Training

11. Lecture and seminar notes (for employers, educationalists, etc)
12. Teacher-training materials

Relevant practice and ideas from other fields

13. Various papers, handouts, etc.

3. AUDIO-VISUAL

1. Tapes - for published and unpublished language courses, particular projects, role-plays, authentic, student assessment, background, student cassettes.
2. Slides - teaching series, particular employment situations and jobs, background sending areas, and immigrants in Britain.
3. OHP transparencies - (for management and teacher training)
4. Realia - pictures, maps, letters, etc.
5. Film and video - own products and purchased or video recorded (For teacher training)

4. NCILT PUBLICATIONS (INTERNAL)

1. Working papers - from in service training seminars and from working groups on materials development projects
2. Training Manuals for Teaching Staff and Background Studies
3. Information Sheets
4. Publicity leaflets

5. PUBLISHED MATERIALS

DISCUSSION

In terms of teacher training and how "needs might affect the profession", three major points were discussed:

1. the status of the teacher within the overall teaching environment.
2. problems affecting relations between the areas (departments) of specific knowledge and the service English departments.
3. the distribution of materials which would serve as aids to teachers in adapting or changing over from EFL to ESP/EOP programs.

Language level and the means of adapting otherwise adequate materials was the principle concern of the second area of discussion. Lack of materials in general and the resulting necessity to modify existing ones was discussed, as was the possibility of developing learning modules.

In discussing methodology, the implication of the changed relationship between teacher and learner was mentioned. There was a suggestion providing simulated experience for students, and comments on changes in classroom environment and the resultant change in the behaviour of the student.

In the last area, concerning research in communication breakdown, several research projects were mentioned, and their sources given.

7.1 NEEDS

A fundamental question in English for specific purposes is how to ascertain what purposes any particular group of learners needs their English for. The first paper we include in this section (Ruíz and Larsen) considers the use of questionnaires to discover a student profile to be used as a basis for designing instructional materials. This theme was given a similar treatment by Sally Richards who described the work of the CELE in Mexico. She quoted the results of a needs survey in the Faculty of Veterinary Science which indicated that for undergraduate students a reading knowledge of English is a desirable bonus rather than a necessity. (This conclusion was also drawn from a similar survey in the Universidad de los Andes, Bogotá). CELE had also noted the importance of the attitudes of the science teachers towards bibliography in English and of their contribution in making needs felt by the students themselves. Another conclusion of the CELE surveys was that students considered the needs for English of less importance than did teachers. CELE had looked critically at the type of information which is really required to assess needs as well as how to obtain it. For example, a reading list might contain titles which are out of print or merely peripheral. However, it is possible that questionnaires, structured interviews and informal discussions might not reveal any more than mere consultation of the reading list. Research into really felt needs, it was pointed out, requires a wide variety of approaches.

One of the questions raised on the seminar was to what extent the needs analysis depends on an analysis of language data. We therefore include in this section Fernando Castaño's paper in which he puts forward a list of argumentative functions (rhetorical acts) found in scientific discourse and suggests how this list can form the basis of an EAP syllabus.

The third paper included in this section is a timely warning of the dangers of introducing ill-conceived ESP at a secondary school level. Some of the arguments in Maria Celani's paper are that secondary school pupils are not motivated by long-term professional needs and in any event 'At the secondary school level it would be next to impossible to foresee what the learners' needs will ultimately be.'

A number of sessions were, in fact, devoted to secondary level or pre-vocational ESP and reports were presented from Venezuela and Perú. José Ochoa Sandoval described the work of the Instituto Nacional de Cooperación Educativa which trains middle level personnel for public and private industrial and commercial organisations. It was suggested that INCE should contact firms which send employees for English tuition and attempt to discover the students' communication needs.

It was pointed out that the needs researcher's role is not only to obtain information but in some cases to make clients aware of needs. The account given by Enrique López and Aida Walqui of the new Escuelas Superiores de Educación Profesional in Perú impressed all who heard it by the energy and vision with which the project is being pursued. We regret that a full account of this project was not received in time for inclusion in this Report.

7.1.1 CONSTRUCTING AND APPLYING A QUESTIONNAIRE

Margarita Ruíz Rocca & Mary Ann Larsen Pusey
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INTRODUCTION

Instructional design is not only an instrument which serves to determine the structure for optimum learning, but is also a systematic procedure which gives a series of tools to effectively confront the teaching task, one of which is the questionnaire. The instructional design must be based on the needs of the population and then be oriented towards the individual differences found in that population, both found in the entering behaviour of any given population.

In this study the basic steps are presented which are to be followed in designing instructional material to be used within a planned educational module, that of course of reading comprehension for the first level of Service English in the National University of Colombia. Within the module, the characteristics of the population to whom the material is destined will be described, as well as the environmental conditions which affect the given population and the procedure to follow in analyzing the necessities. The importance of the questionnaire or survey in designing the module will be dealt with more extensively in the workshop presentation.

Based on the analysis of the necessities of the population and on the information elicited in the surveys, an instructional program along with the instructional objective will be formulated in terms of the definition of the different abilities included in the instructional objective, the determination of the required entering knowledge and the proposition of remedial materials for students who do not have the required entering knowledge. All of these aspects will be developed keeping in mind the techniques of the structural analysis of learning.

The instructional design must bear in mind that the university is an institution highly projected into the community and that English is one of the languages most widely used in the fields of science and research.

II. DESCRIPTION OF THE POPULATION

In addition to the definition of the needs of the population it was also felt that there were certain important variables which would affect the individual student's learning. Therefore the material should be based on a careful description of the population. Some of these data could be gathered by means of a questionnaire given to the students; however, other data would be gathered by means of other instruments.

Some of the variable kept in mind are discussed below:

A. Age profile:

By means of the questionnaires to be applied upon entrance to the random sample of students enrolled in Service English I, the average age as well as the oldest and the youngest will be determined.

B. Sex:

By means of the questionnaire to be applied upon entrance to the random sample of students enrolled in Service English I, the percentage of men and women will be revealed, as well as which sex is more numerous.

C. Socio-economic level:

Due to the delicacy of this variable, this information will be requested from the admissions office of the National University of Colombia to determine which percentage of students belong to each of the different social classes defined: upper, upper-middle, middle, lower-middle and lower class.

D. Former academic preparation:

By means of the entrance questionnaire to be applied, the percentages which know the basic structures and vocabulary, as well as those who can read a short paragraph with a given level of comprehension will be detected.

E. Motivation:

By means of the entrance questionnaire, the percentage of students with a positive attitude and the percentage of students with a negative attitude will be detected in order to determine the percentages with positive and negative motivation toward the subject of English.

F. Interest in the acquisition of different linguistic abilities: By means of the entrance questionnaire it will be shown which percentages of students are interested in reading, in correspondence, in grammar or in production within the English language.

- G. Educational level in their own career:
By means of the entrance questionnaire, it will be shown what percentage belong to the respective semesters, first to tenth, in the different departments and careers, since the amount of material the student has seen within his own speciality will determine in large measure his identification of his linguistic needs as well as his interest in specific kinds of instructional materials.
- H. Environmental characteristics:
By means of the entrance questionnaire, the number and percentage of students coming from the different regions, urban, rural or semi-rural, will be detected, keeping in mind that the geographic origin of the person could reflect vast possibilities of differences in academic preparation.

III. DESCRIPTION OF THE ENVIRONMENTAL CONDITIONS

- A. The learning situation:
By means of the entrance questionnaire, the number of students who study and work and the number of those who only study will be determined.
- By means of an unstructured interview with the Director of the Student Medical Service, the variable of health was detected.
- B. Resources and Restrictions with which to work:
1. Class room: It was found by means of a personal visit to each of the classrooms, that the place where classes will be taught have blackboard, seats and illumination and lack chalk, eraser, windows in good conditions and a lock on the door.
 2. Professor: to determine the variable of personality, the MMPI Test and Techniques of group dynamics will be applied to the teachers. The attitude of the teachers toward their students will be determined by means of observation techniques. By means of the questionnaire to be applied to the teachers of Service English I in the Department of Languages of the National University of Colombia, the academic preparation of the teacher will be detected.
 3. Time: to carry out the instruction, each group will have five hours of class weekly for 15 weeks, subject to the unplanned interruptions caused by disturbances which occur in the University.
 4. Economic resources: to carry out the study, the University has not made available extra funds.

IV. ANALYSIS OF NECESSITIES

In order to obtain the most complete and objective information possible as to the real necessities of the population, several surveys will be conducted: talks with teachers and directors of different faculties and departments of the University along with direct observation of the conduct of the students in the Service English courses in the University. The instruments to be used will consist of two kinds:

- A. Unstructured interviews with the Student Medical Service and with the admissions office.
- B. Questionnaires:
1. Questionnaire #1 applied to secondary school English teachers. It would be difficult to call this a real survey; it would rather serve as a simple feeler to detect what secondary school teachers of English think that their students know when they finish sixth year. 10 teachers answered the questionnaire: 7 from private schools and 3 from public schools.

This same questionnaire also tried to detect what aspects of the language are dealt with principally, how many hours per week are dedicated to English and what the academic level and experience of the teachers at the secondary level are.

2. Questionnaire # 2 to be applied to service English teachers at the National University of Colombia. The questionnaire will be given to the total population since it does not exceed forty. In this survey, the attempt will be made to obtain basic information as to the training and experience of the teachers with reference to the English language or with other subjects; as to the orientation that should be given in Service English courses, as to their attitudes toward the subject; as to their reactions to instructional materials presently used in the department; and in the event that a change of materials be contemplated, as to how this change should and could be evaluated.
3. Questionnaire # 3 to be applied to Deans and Directors of the different faculties and departments of the National University. The questionnaire will be given out to the total population which includes the following faculties: Medicine, Agronomy, Arts, Sciences, Social Science, Dentistry and Law. By means of this questionnaire an attempt will be made to determine which departments and careers require English of their students and which do not; if in their opinion the present courses in Service English meet the real needs of their students or not; if they consider it necessary to require English of their students; in what way(s) English will serve the students while they are studying and later in their professional lives; and finally, to give bibliographical data from their speciality which is required of their students in English.
4. Questionnaire # 4 to be applied to a random sample of students total enrollment in Service English I. With this questionnaire, the characteristics of the population: present study status, age, sex, attitudes toward English, their career and semester in it, where they come from, their previous studies both in English and in other areas, the aspects stressed in their previous studies of English, why they are studying English, if they feel it is necessary and what for, the contacts they have with the language, its importance in relation to other languages and the knowledge they have of English will be determined.

CONCLUSION

As you can see from this study, the questionnaires will reveal the present situation as well as the ideal situation, in part. The questionnaire as part of the instructional design will enable the researcher to prepare material to bridge the gap existing between the two situations.

7.1.2 TOWARDS A CODING SYSTEM FOR THE ARGUMENTATIVE FUNCTIONS OF LANGUAGE

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A basic assumption present, implicitly or explicitly, in the development of English for Science programs is that scientific English is different from everyday English. Investigation of the extent to which this is so is not a trivial problem. To illustrate the considerations that need to be made, a few uses of the verb can are presented in the sentences below.

1. "He can't see." (Because he is blind)
2. "I can't hear." (Because there is too much noise)
3. The ball can pass through hole A or hole B, but not through C.
4. We can see that $X = 7$.

In sentence 1 the verb can is used to express incapacity depending on intrinsic factors. In sentence 2 can expresses incapacity depending on extrinsic factors. In sentence 3 can expresses possibility. In the last sentence, which is not uncommon in science, can is used as a device to signal that $X = 7$ follows logically from previous assertions. Often, in sentences of this sort, it also means that one or several steps in the argumentation have been omitted.

The examples seem to suggest that:

- I. The meaning of can depends on the context it appears in and the 'internal logics' of the argumentation it forms part of.

II. The meaning of can in each sentence could be derived from a general common meaning, that of capacity.

III. Even if II was true, the fluent use (production or reception of can in each case, and specially in 4, could not be expected from a person who encounters it for the first time.

In other words, reading a meaning of can seems to depend in part on understanding what the sentence it appears in is doing in a piece of discourse, what its function is. But the function of a sentence depends in turn on the structure of the discourse itself -and, of course, on the meaning of its constituents, which shows the complexity of the matter.

The nature of language functions in scientific discourse is, thus, crucial to our preoccupation. It is with problems in the identification of the communicative functions of argumentation that I wish to deal with in this paper. I will begin by presenting some considerations concerning the act of definition.

In previous works (Castños a, Castños b), I have compared definitions from three scientific disciplines, physics, biology, and mathematics. I have found that entities, for example "molecule", "particle", "scalar product", are defined for different purposes. For this reason, definitions can be realised differently content-wise, i.e. an entity to be defined can be associated with different distinctive characteristics, thus making possible different definitions for the same entity. Consider, for instance, the following definitions of molecule: "1) A combination of two or more atoms bound together; 2) The smallest particle of a chemical compound or substance that exhibits the chemical properties of that substance."

The purpose of a definition depends on the purpose of its context, which in turn depends on its place within a unit of discourse. The purpose of a unit of discourse depends on the purpose of the science it forms part of and on the purposes of science in general.

In the works referred to above, the following set of characteristics was also found:

- A. The entity being defined is considered for the first time in the sense defined.
- B. A definition associates the entity being defined with a set of distinctive characteristics.
- C. A definition classifies the entity being defined.
- D. A definition establishes the category of the object being defined.
- E. The set of associations entity-characteristics can be considered as a set of axioms.

These characteristics 'explain' the different formal realisations of the act of definition. Different forms focus on different characteristics. Consider, for example:

- 1. A neutron is a subatomic particle which has no charge and a mass approximately equal to that of the proton.
- 2. The neutron, on the other hand, has no charge and a mass approximately equal to that of the proton.
- 3. . . . the proton, with positive charge, and the neutron, with no charge.
- 4. If a particle has no charge, it is a neutron.

Form 1, "(X) is (Y) which (Z)", is 'nearly ideal' in so much as most characteristics of the act are represented in it. Form 2, "(X) has (Z)", focuses mainly on characteristic B. Form 3, "and (X), with (Z)", focuses mainly characteristics B and D. Form 4, "If (Y) has (Z), it is (X)", focuses on characteristic E; it is interesting that it does so in an indirect manner. Although it is possible to refer to characteristic E directly by introducing the word "axiom", as when number systems are defined, it is more common to use the 'style' of logical argumentation used in contexts where precondition E is focused. (We will later consider this form in more detail.)

The characteristics also explain the coherence of a definition with a subsequent act, like the proof of a theorem (which will refer to E) or an identification (which will refer to B). They are, thus, analogous to the preconditions that explain the realisation of the act of ordering and its coherence with other acts, like rejecting the order or accepting it (see Labov, 1972). I, therefore, believe that it is justifi-

fiable to call A, B, C, D, E the preconditions of definition. Incidentally, due to precondition A, the use of paralinguistic features, like inverted commas or italics, also makes sense; strictly speaking, the entity defined is not part of the vocabulary of the science at the moment the definition occurs.

A consideration of the preconditions of definition leads us to the discovery of a phenomenon that could be called ellipsis in definition. It seems to me that there are two types of such ellipsis. In one, not all the "sub-functions" (characterization, classification, . . .) that constitute a definition are marked explicitly. Some instances of this type of ellipsis might be explainable in terms of conventional textual ellipsis.

In the other type of ellipsis, one act performs the function of two. In mathematics, for example, definitions often take the form of implications. Generally, in this field much is made of the fact that implication does not mean logical equivalence ("A if and only if B" means "A if B" and "B if A"). Therefore, in derivations or equivalence the implications in both the "senses" required by equivalences are presented. However, this is not the case with definitions.

In a definition, as the characteristics are distinctive, they imply the entity; as the entity is a category, it implies the characteristics. When the definition takes the form of an implication, this is not made explicit, e.g. in: "DEFINITION 6.2. A linear programming problem is said to be non degenerate if every $m \times m$ submatrix selected from the $m \times (q + 1)$ augmented matrix (A, B) is nonsingular. (Beaumont, 1963) The implication in one sense means implications in both senses (equivalence). This type of ellipsis cannot be explained in terms of textual ellipsis. For the cases where no textual explanation for ellipsis is possible, I propose the term ellipsis in discourse*.

The study of the preconditions of definition provides some insight into the nature of comprehension of scientific language. It seems that it would be erroneous to say that scientific language is completely different from common language. It would not be sensible to say that in everyday conversation people do not define; they do so to agree on what they are talking about. However, the intricate interrelation of argumentative acts, the different types of purpose operating simultaneously at different levels of generality, the intimate relation between context and argumentative function, and the phenomenon of ellipsis in discourse with its peculiarities suggest a high degree of refinement and complexity in scientific language.

Sophistication, which I think will not necessarily exist a priori, is a nearly essential difference between common and scientific languages in the sense that its lack could well result in incomprehension of scientific language. Intuitively, I propose a model in which common and scientific language are sets that intersect in a broad area and in which the elements specific to scientific language depend on the common elements; the former are built upon the latter. It is the task of a person learning scientific language to do the construction.

To solve the problems of how different scientific language is from common language and how different are the languages of the different sciences, systematic comparisons between them are needed. At present, we have tools to make the comparisons at the levels of lexis, structure, and text, and some such comparisons are being made. However, it seems to me that to interpret the results of such comparisons properly, results concerning the discourse level would be required. As Widdowson has pointed out, ". . . a knowledge of how the language functions in communication does not automatically follow from a knowledge of sentences." (Widdowson, 1972).

Comparisons of the type we are interested in require a coding system for the communicative functions of language, specially the argumentative ones (definition, classification, generalization, etc.).

It seems that most expressions relevant to an argumentation are associations of an entity with characteristics. Distinctions between these two parts of expressions

* Here I am taking Widdowson's text / discourse distinction further than in Widdowson, 1972. Ellipsis is not only a feature in text, but also a discourse.

have been made. In grammar they have been called psychological subject or theme and predicate or rheme (see Halliday, 1970.) In logic they are simply called subject and predicate.)

In general the subject has the referential value. However, in a definition the reference lies in the predicate, in the set of characteristics associated to the object being defined. If we omit the predicate, we do not know what the author is talking about. However, if we omit the subject we do know. This distinguishes a definition from any other act.

I believe operational definitions for most argumentative functions will be possible in terms of referential and truth values. That is, by considering what an expression refers to (an object of the world, an abstract one, one previously referred to, etc.) and how true (logically and observationally) it is at the moment it appears, we will know which act it is performing. Moreover, it will not be detrimental if we cannot do this for all functions, if we have to define some in terms of others. If we have defined at least one independently, the system will be consistent.

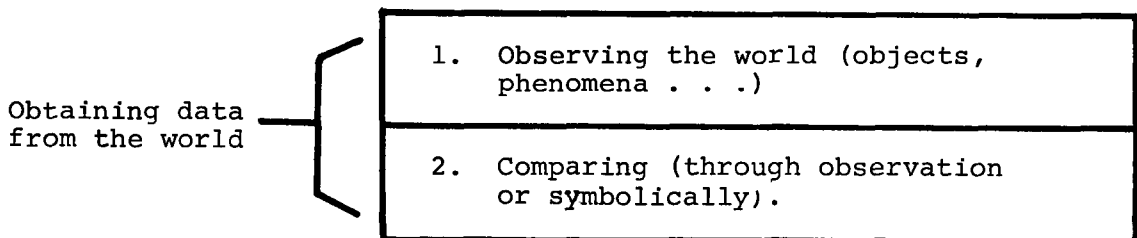
It may seem that we have defined definition objectively as an expression whose reference lies on the predicate (see Castaños b). The fact is that in a definition the subject-argument does not have the reference that the theory it is going to be part of requires. For example, air usually means "that which we breath". This may be insufficient for theory that requires careful measurements of air and a replication of those measurements; a definition in terms of its components will be required.

We are, thus, confronted with the question: How do we know what degree of precision a scientific theory demands?, which partly means: By which mechanisms are the preconditions of a definition set up? When we have answered the question, the characterization of definition in terms of referential value will be operational. Sometimes the word "defined" expresses the need to define an entity. However, this is not always the case. The author may be establishing criteria for defined entities, defined x rather than X being the object of the definition. Further, the word does not appear always; consider for example what Selinker, Trimble, and Trimble call "implicit definitions" (Selinker et. al., *ibid.*). This means that before we attempt any counts of even this simple act, we need at least a general understanding of other acts and of the whole structure of discourse.

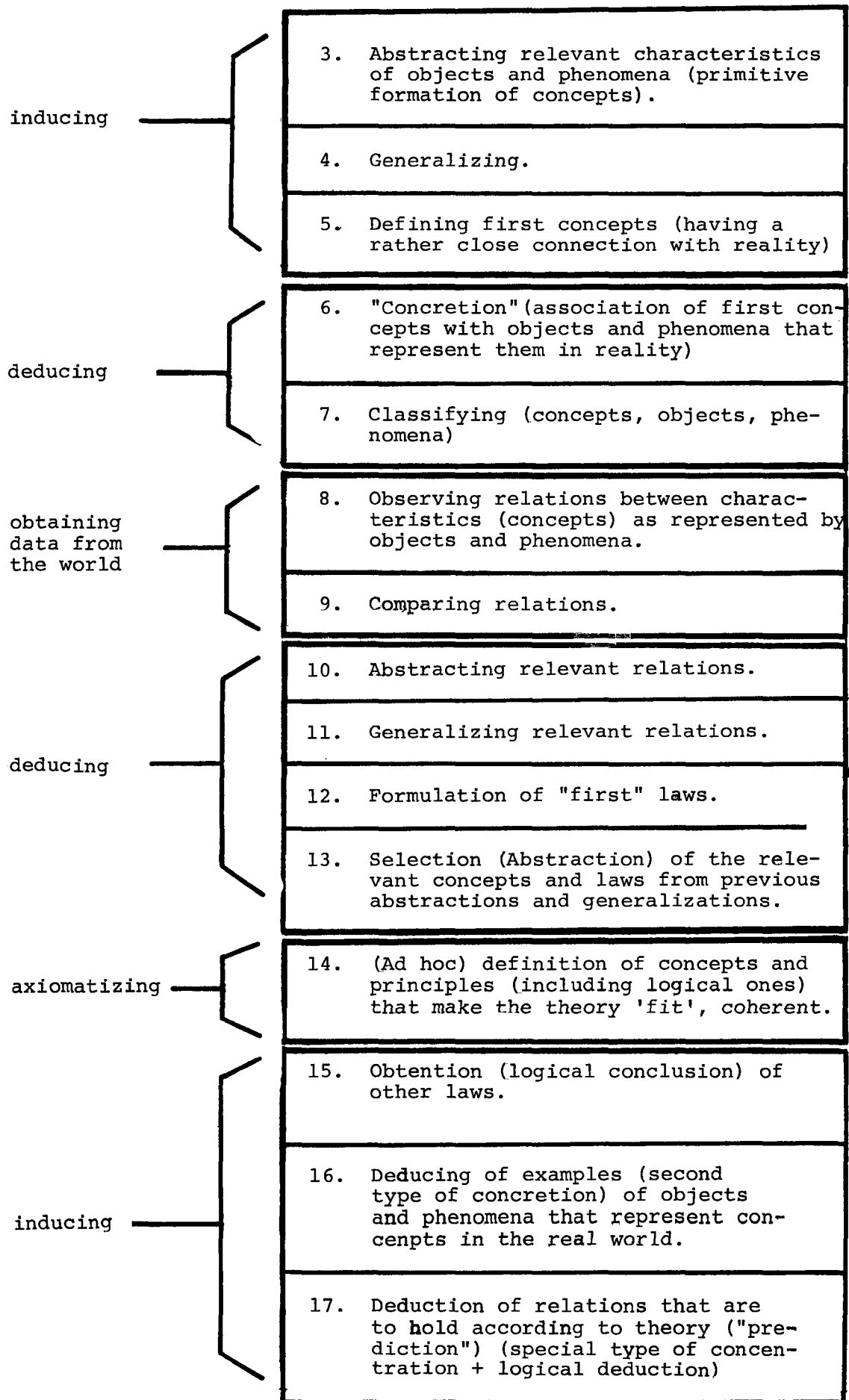
In the second part of this paper I will present a rather schematic account of the development of science incorporating different aspects that philosophy of science has considered. From this account we will obtain a list of argumentative functions and a general picture of scientific discourse, which I hope will be the basis for the coding system needed. I will, finally, present a few considerations that could be useful in syllabus design for EST.

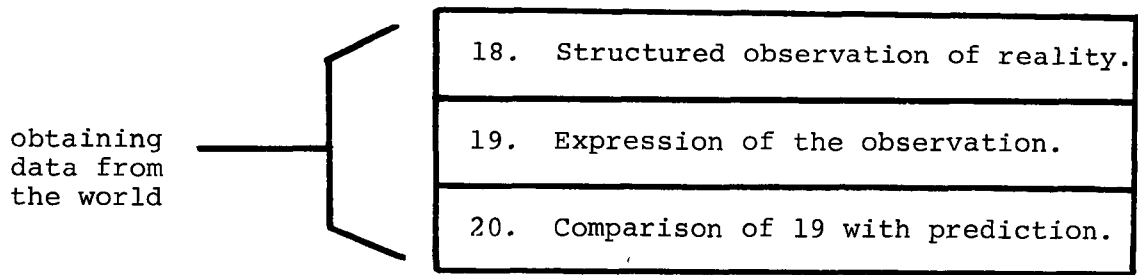
The first stage in the development of a branch of a science is an observation of the aspect of reality to be studied. Then, an abstraction of the relevant features (variables, characteristics, etc.) takes place. In the next step, a theory to account for the phenomena of the aspect of reality under study is formulated. The theory consists of basic concepts, basic principles, empirical consequences and an intended range of application.

On the basis of the account presented, it is possible to produce another in terms that will be useful for language researchers and teachers. I present below a "linearised" model in diagrammatical form*:



* The terms here are being used without precision.





From this diagram, and making the assumption (idealization) that the definitions, classifications, etc, in the different parts of it are essentially the same, we obtain the following list of argumentative functions: Expression of an observation, Comparison, Abstraction, Generalization, Definition, Classification, Concretion, Logical conclusion, Prediction. It seems that, due to the way it was obtained, the list will serve to code the argumentative level of scientific discourse nearly comprehensively.

Other levels, e.g. that of value systems (how elegant a theory is, etc.) and that of "pedagogical" devices (example, summary, etc.) will require other categories. I, thus, believe that we will have obtained most of the categories of a coding system for the argumentative functions when we have specified, in addition to an informal definition, preconditions and operational definitions to each of the following functions:

	INTUITIVE DEFINITION	PRECONDITIONS	ATTEMPTED OPERATIONAL DEFINITIONS
Expression of an observation	Association of an object with characteristics/considered to be observationally true		
Comparison	Finding similarities and differences in the amount and type of characteristics (symbolic)		
Abstraction	Selection of (type of) characteristics relevant/considered worthwhile studying		
Generalization			
Definition	Grouping characteristics to be considered in sets/naming the sets		
Classification	Allocation of objects under categories already (defined/"identification" (symbolic)		
Concretion	Identification of objects in the world that represent concepts because they have characteristics/"looking for reference"		
Logical conclusion	Obtention of valid assertions from others considered accepted		
Prediction	Rendering concretion + logical conclusion in testable (falsifiable) terms.		

It seems to me that these functions belong in the same rank, although it is not as clearly delimited as ranks in other coding systems, e.g. Sinclair and Coulthard's (197). Provisionally calling this "rank X", other ranks of scientific discourse might be:

Rank X + 1:

Obtaining data from the world/
inducing/axiomatizing/deducing

Rank X + 2:

Gathering and processing data/
constructing a theory

Rank X - 1:

Associating entity to characteristics

Rank X - 2:

Referring

The system could serve as a basis for syllabus design even at this intermediate stage of its development. We would have to reconsider some of the aspects of the diagrammatical model that have been omitted, like phenomena, relations and laws. It seems to me that the best way of doing so would be to produce a taxonomy of the categories in the system. We would obtain subcategories such as: Abstraction or a relation, Abstraction of a phenomenon, Logical conclusion of a relation, Prediction of a phenomenon, etc. It is interesting to note that the first term in the name of a subcategory would be a function and the rest a notion. At present, EST courses tend to concentrate their attention on either functions or notions, the FOCUS and NUCLEUS series being prototypes. A syllabus focusing on the type of subcategory suggested above (pure function + notion) would pay fair attention to both functions and notions. It would contain lessons on, say, Expression of observation of location of an object, and Prediction of (future) location of an object.

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7.1.3 THE TEACHING OF ENGLISH AND ESP AT SECONDARY SCHOOL LEVEL

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It is the purpose of this paper to present some problems which have been worrying some of us involved in teaching English and in teacher training in Brazil, as to what regards the position of English and ESP at secondary school level.

In Brazil, the last tendency seems to emphasise the need for ESP to be taught at secondary school level. The present chaotic situation is to a large result of a change of policy in education, which claims to be more realistic and which envisages secondary school education as training in skills leading to early professionalisation.

Although it is true that through several official recommendations and resolutions the federal educational authorities have tried to make it clear that the new law, in spite of its insistence on a predominately technical kind of education at secondary level, did not mean a break with a humanistic tradition, it is also true that the interpretations given to the law by authorities, ranging from Offices of Education to individual teachers have been extremely varied. One sad fact remains, however. Foreign languages have been excluded from the common core of the curriculum and have been made optional subjects to be added or not at the discretion of the State educational authorities or of the schools themselves.

A great deal of confusion has resulted from this situation, affecting the position of foreign languages in the secondary school curriculum and favouring false interpretations of what the role of foreign languages in general and English in particular should be in the context of the Brazilian secondary school system.

To what extent this has happened and what my particular views on the subject are I tried to set forth in a paper read at the 9th IATEFL Conference held in Oxford last January.

For the purpose of this paper, let me sum up here what the situation is like today as far as teaching English at secondary level is concerned.

In practice, since 1971, several different types of curricula have been developed: those which include no foreign languages, those which include two foreign languages and those which include only English. The latter are the most numerous. The length of courses also varies, ranging from 2 to 7 years, depending on the school. State schools, in the State of Sao Paulo, all follow a similar pattern, offering 5 years of English, although there are some indications now that the teaching of English will start 2 years earlier, extending thus to 7 years.

In spite of the present stress on offering professionalisation at secondary school level, there is a large number of schools, which, disregarding the official recommendations, go on offering a more academic type of education. In many of them, as far as English is concerned, the results are disappointing because the aims are too high and do not take into account the reality of the learning situation. The majority of syllabuses, however, and this seems to be the official position of the Sao Paulo educational authorities, are trying to emphasize the pragmatic role that English is to play in the school curriculum in what seems to me an unjustified and unrealistic way. Particularly for the last 3 years of secondary school, the recommendations are that emphasis should be put on what is generally described as "instrumental" English.

Even if one were prepared to endorse a particular view of secondary school education consistent with assigning a purely "instrumental" role to English in the school curriculum, it would be a fallacy to assume that in Brazil the learning of special purpose English would be advisable and/or attainable at secondary school level. The reasons for this are various, and they are not only of an educational nature. In the Brazilian school system, English is generally introduced at the age of 11-13. I believe that there are strong obvious psychological and pedagogical reasons which make it unadvisable to teach special English in that particular situation. The psychological reasons are specially linked with motivation. Being told that English will be essential in some jobs, is not enough to convince the majority of our school adolescents to apply themselves diligently to the study of that language. In this case, the age of the learner requires the teaching to be centered on immediate interests rather than on long term needs.

In the case of the Brazilian adolescent, although there would not be any justifiable reasons to expect any integrative motivation to learn English, there has always been a general desire to identify with the culture of the United States and more recently with what has been described as "swinging London". The vast majority of Brazilian adolescents are raised in a world of undubbed American films, English and American pop songs and commercial products with English names. There is more English close at hand in the Brazilian social setting than it is first apparent to the unsophisticated eye. I have tried to suggest elsewhere (1976)² to what extent it

is possible to capitalise on that fact and how it should be teacher's job to make good use of the favourable external factors in his classroom activities so as to give some meaning and purpose to the learning of what might otherwise be seen either as just one more school exercise or as the imposition of unacceptable patterns of behaviour.

Although quite justifiable in themselves, the foregoing psychological reasons are not the only ones to make it unadvisable, within the secondary school context in Brazil, to teach special English, linked to professionalisation. There are also very sound pedagogical reasons to take into account. At secondary school level it would be next to impossible to foresee what the learners' needs will ultimately be. Even in the final years, when the learners' needs begin to be more easily definable, they are still too general to justify the setting up of special courses. It is true that the most immediate objective for a large number of school leavers, -90% as quoted by an unofficial source, is in a sense a pragmatic if not a professional one, namely to pass the University Entrance Examination. This examination is, however, a fairly general one, as far as English is concerned, concentrating on grammatical competence and general reading comprehension. This examination is also general in the sense that it is the same for all students, regardless of the field of study the candidate is applying for. Furthermore, given the general conditions for English learning in Brazil, with large heterogeneous classes, insufficient number of hours allotted to English in the curriculum, unsatisfactory teacher education and training, and generally deficient teaching materials, the level of attainment in English at the secondary school is still inadequate for any special English course in a strict sense. At that level we are still dealing with the teaching of general English, unless one sees the kind of English required to pass the University Entrance Examination as a kind of special purpose English. It is true that the term "instrumental" has been used ambiguously even in official documents. For example, in Interpretation (Parecer) No. 478/75, "a minimum of achievement" in foreign language teaching is defined as "at least a reasonable development of its 'instrumental objectives': understanding the spoken language, speaking, reading and writing". It seems justifiable to interpret "instrumental", as defined above, as general and not as special purpose English. But I do not think the same was meant more recently by the Sao Paulo educational authorities when the teaching of "instrumental" English at higher secondary school level was recommended.

What seems to emerge from this confused state of affairs is a need to clarify the meaning of labels such as "instrumental", but above all there seems to be an urgent need to try to come to a better understanding of what is involved in teaching a foreign language such as English in the Brazilian secondary school context.

This has inevitably to take into account the characteristics of the learners-- their general and specific interests, their educational and social backgrounds, their previous experience as language learners. It has also to take into account the learning situation. As has been indicated earlier on in this paper both the learner and the learning situation do not make it possible at lower secondary level to aim at much beyond elementary general English, focusing on developing general and limited communicative ability at that level. As the students progress and move on to the so called "second grade", i.e. the last three years of secondary school, there comes the time for a shift in focus in the priority given to particular language skills. From a psychological point of view, with students within the 15-18 age group, it should be easier now to treat English as a school discipline rather than as an activity. So, still keeping the course fairly general, as far as the objectives are concerned, priority should be given to reading in the last years of secondary school. This will serve a number of purposes. It will be the indispensable groundwork to allow students aiming at higher education to meet the requirements of the Entrance Examination, heavily geared towards testing the reading ability. It will also be indispensable groundwork for students aiming at getting a job soon after leaving school. It seems appropriate to focus on the development of the reading ability at this level, as I do not think that it could be seriously disputed that for a considerable number of our learning population reading will be the only ability they will ever be required to put into practice. For the majority of our students written English will be the language of international communication. Through it a good number will be able to pursue their courses of higher study and their research; through it they will be kept up-to-date as to the newest developments in science, philosophy, economics, literature and art. On a lower but not less important level, a large number of technicians will need the ability to read English so as to be able to operate their equipment efficiently. Only a relatively small proportion of Brazilians will in fact seriously need the ability to communicate orally in English, or even write in English.

So it seems clear at this point that much could be gained if the goals to be attained at each level of secondary school be clearly and realistically defined and also be made clearly apparent to the students. In the initial stages these goals should be set in terms of skills which would provide meaningful experience, no matter how limited it might have to be, in learning to communicate in a foreign language. It does not matter if this experience will probably be very restricted, given the material and human limitations. It is essential, however, for the students to have some feeling of achievement, of success, at the end of each step. It is essential, for the teaching to have achieved its goal, at the end of the first stage, for the students to have developed at least the capacity to look out of the window into the wider world, to have accepted as natural the fact that different peoples may use different languages for communication, and to have developed a desire to become more proficient in the language they are learning.

At the end of the second stage, the goals should be set in terms of knowledge and skills such as the reading skill, which will provide a basis for later development of special purpose requirements. A basis has to be assumed in special purpose programmes. Without such a basis the success of any future special purpose course is likely to be jeopardised.

It seems, therefore, safer to see English teaching at secondary school level as a time for laying the foundations so that ESP proper, which a large number of students will undoubtedly need, can be taught later, when the needs of the learner will be clearer and the motivation will be higher.

REFERENCES

1. M.A.A. Celani "Communicative Competence vs. English for Special Purposes".
2. M.A.A. Celani "Comentarios sobre un certo tipo de contacto linguistico e possiveis applicacoes ao de ingles como lingua estrangeira". Creativity Centro de Linguistica Aplicada, Instituto de Idiomas Yaziqi. Dezembro 1976.

7.2 SYLLABUS DESIGN

The papers included in this section naturally span needs and how they form a basis for syllabuses and materials.

Mark Todd's contribution, tentative as the author explains it to be, shows how the language and skills content of a course can be determined according to the situations for which it has been discovered that students, this time in an occupational setting, need English. It will be noticed that Todd proposes grading according to 'logical priority and grammatical dependency of items' and raises an issue of considerable importance to syllabus design: the danger of 'segmentalising' language.

María Horzella, concerned with EAP, describes a modular course, based on a reading component, where the modules correspond to the uses to which English is put by medical professionals. The modular concept is seen as a way of avoiding the isolation of the reading skill. Another feature of the course is the attempt to 'bridge the gap between highly informal spoken language at school and very formal language in academic texts' by the simplification of authentic texts..

The third paper in this section, that by Veronica González, describes a reading programme in which testing plays a crucial role by providing 'dynamic' feed back to the student, teacher and course designer.

7.2.1 AN APPROACH TO ESP COURSE DESIGN AT SENA, BARRANQUILLA

M. S. Todd
British Council Category IV Lecturer

1. Background

1.1 SENA

SENA is a non-profit making organisation that was set up by an act of parliament in 1957 to promote and develop the resources of the country by training young people, running complementation courses and providing information to firms on how to set up training courses. It is not intended to be the sole training establishment, but rather to provide intensive training to supplement and complement that which the apprentices obtain in their firms. It is financed mainly by a 2% tax on the wages bill of all Colombian industry with a payroll of more than 10 or a capital of more than \$50,000. The firms are then entitled to send to SENNA a number of apprentices each year, the number depending on the amount of money that they pay in taxes. National corporations and the armed forces also pay this tax and they send apprentices to SENNA every year.

The courses are full time and cover a wide range of trades, commercial skills and agricultural skills. The apprenticeship courses are for periods of 12 to 15 months. They include a theoretical introduction to the subject of study and the practical application of the theory in the workshops where skills are developed. They also include general physical and ethical training.

1.2 SENA Barranquilla and the Aviation Centre

The aviation apprentice training centre at Barranquilla was opened in 1971. Apprentices spend 18 months training in the centre and 18 months training with the firms who sponsor them (patrocinadores). Recently, with the help of a British team of experts and British aid, SENNA has adopted the British Airways apprentice training scheme. It was presented with the training modules from British Airways for the basic first year of training, and these are being adapted to the needs of the apprentices in Colombia. Much of the equipment needed for practical exercises has also recently arrived and is being installed in workshops that have been extensively rebuilt and extended to accommodate this equipment.

For the first year the apprentices cover a basic training course and in the last six months of their time they specialise in electronics, instruments, motors, or structures. The first year is at present divided into two semesters of 22 weeks each. Each week consists of 40 hours tuition time. In the third semester the students are divided and two groups come in the first semester of the year and two groups come in the second. In the initial year there are four groups of apprentices and in each group there is a maximum of 25 students. Thus, at any one time, there are 150 students divided into six groups in the centre.

Since the inception of the aviation centre, SENNA, the companies who send apprentices and the members of the British team have always laid emphasis on the importance of English language teaching. This is to some extent due to the fact that the majority of planes and helicopters in Colombia are of American manufacture, and the repair and service manuals and service bulletins are all published in English. These are not translated into Spanish and so the technicians must, at least, be able to read and understand these if a high standard of safety and maintenance is to be achieved. A request was therefore made for an English teacher to be made available to develop a course to run in conjunction with the training scheme. The setting for teaching English is therefore different from that in which much English for Special Purposes work has so far been concerned. English is not needed for taking part in the course at SENNA but for when the apprentices go back to their companies. In many ways the setting is a classic English for Occupational Purposes situation at a very practical and basic level. The following section shows the general approach to the problem.

2.1 Situation

2.1.1 The setting

- (i) SENNA
- (ii) English in Colombia - language policy
future language policy
training of teachers
status of teachers
- (iii) Attractiveness of English to the learner
- (iv) Importance of English to companies who send apprentices to SENNA.

2.1.2 Resources

- (i) Time
- (ii) Resources for the production of materials (a) hardware, paper, duplicator, etc.
(b) source material
- (iii) Teachers

2.1.3 Language

- (i) Differences between the L1 and the Foreign Language
- (ii) Use - what the foreign language will be used for i.e. the 'situations' in which it will be used.
- (iii) The types of foreign language e.g. U.S. English v British English (social situations)
U.S. Technical English v British Technical English

2.1.4 The Learner

- (i) Age
- (ii) Educational level
- (iii) Language learning experience in (a) language to be learned
(b) other languages
- (iv) Learning strategies already realised - not only in a foreign language where there will possibly have been translation, rote learning, exercises etc., but also in other subjects e.g. use of and familiarity with iconic devices, group work, note-taking techniques etc.
- (v) Aptitude
- (vi) Attitude towards English
- (vii) Relationship between the teacher and the student.

These sections cannot, in fact, be seen as clear units; the information inter-relates and flows between them. However, for the purpose of finding information and clarifying areas in which information might be useful and easily obtained, they are proving very useful.

2.2 Objectives, syllabus and material

The information gathered will be used to develop a set of objectives. These objectives are to be thought of as situations in which the learner needs to use the language. The materials and the teaching of them should enable the learner to react appropriately in a given situation i.e. they should provide him with the vocabulary, the ability to use the vocabulary along with the various socio-linguistic factors -- he must be provided with the criteria for successful performance in a situation. A 'situation' in this context is not considered as solely speaking/listening face-to-face contact, such as making requests for tools on the shop floor or asking where something is kept, but rather as any time a person is required to use the language. For example, if asked in Spanish how to repair a rotor blade, the technician might have to go and read a manual in English and then report back in Spanish. The reading of the manual is a 'situation'. The factors involved in any situation are extremely complex: however by understanding these I feel that much more successful material could be written.

Once the situations have been identified the content of each needs to be analysed. At one level the function areas and the forms associated with these can then be worked out. At a further level the semantic requirements will be identified which are not simple vocabulary items but a lexico-grammatical complex. This should show an ordering for teaching due to the logical priority and grammatical dependency of items. The danger that must be avoided is not to segmentalise language, one situation may only be a part of another e.g. instruction may form part of a description which may be part of a report. In this case the way these interrelate becomes important and so the language of interrelation must be identified and taught.

An analysis in this way will provide the input for the syllabus which represents a series of decisions on What to teach When. The syllabus is not a list of grammatical items which must be taught, but an ordering of the situation and their accompanying language requirements. As a result of this the development of materials should be

easier as more of what is needed will be understood. The materials should aim to 'teach' a point as defined in the syllabus, extend existing knowledge and give practice in the use of the language.

Hopefully in the situation as it might develop in Barranquilla, the language teaching that is started at SENA would be continued in the firms. This would mean that the objectives could be extended and the situations become more complex.

2.3 Psycholinguistic factors

If some of the processes involved in the listening, reading, writing and speaking in the L1 could be discovered, then these could be used in teaching the foreign language. They should provide the material writer with information on some of the strategies already known by the learner which he could then use to help to teach the foreign language.

It might also prove useful if the ways in which the learner develops and relates concepts and the way in which the foreign language is fitted into the scheme could be analysed. This could provide information which might account for certain learning difficulties.

3. Information Obtained

3.1 Setting

In conversation with people in the companies it has become apparent that there is a very real need for technicians who can understand fairly complex reports. A knowledge of English is also an important consideration when promotion for the technicians is being considered.

3.2 Resources

The maximum time allowed for teaching English is three hours per week in the first two semesters and only two hours in the second. These hours fall as one session of two hours and a further session of one hour. In effect, due to change over of classrooms etc., they work out as 50 minute sessions. The general resources for production of materials are good apart from minor organisational problems. There is a film projector and a slide projector. Source material should not be a problem as there are copies of the British Airways training units in both Spanish and English, aircraft textbooks, and other institutes have kindly given access to their libraries.

The problem of finding adequately trained teachers is acute and the possibility of being able to train a full-time counterpart who will continue with SENA is not an immediate possibility. A part-time teacher without formal teacher training experience will probably be appointed and for these reasons very close collaboration will be needed. Material will be accompanied by clear instructions on how to use it in both English and Spanish. Close monitoring of reaction to the material by both students and teacher will be needed.

The situations in which the foreign language will be used are probably the most important single items about which information is needed. This will provide:

- a) the minimum language requirement.
- b) the input for situations in which English can be practised and taught.
- c) the relative importance of the modes listening, speaking, reading and writing.

This information is being gathered:

(i) from a questionnaire which has been sent to the British experts, the Colombian instructors in SENA and to all the firms who send apprentices to SENA. These have the same basic format but differ in complexity. The information I hope to obtain is which modes and functions are considered to be most important, the situations in which English might be used at work, the interrelationship between these and also examples of material that technicians might be required to read. The information from these has not yet all been received and the process of analysis has only just begun. However there are already certain patterns emerging. Receiving and understanding instructions, description of materials, equipment, processes, structures and forces, generalising, exemplifying, asking for materials, information and understanding ques-

tions have already emerged as areas of use. Reading and speaking are showing as the modes of greatest importance.

(ii) through visits to firms sending apprentices to SENA. From these, it has been possible for me to see at first hand what the technician needs to use English for. All the workshops have manuals that are constantly used for reference purposes and all these are in English. This is the main concern of the managements that I have talked to. All the firms also have American advisers and several times it was stressed that these do not usually speak Spanish. The technician therefore needs to be able to listen to and understand English and also be able to ask questions if he is to take full advantage of their expertise. The bigger companies (Avianca and Aerocondor) have stations outside Colombia in English speaking countries. So far as I could tell there is no need for the technicians to have a command of written English.

(iii) by speaking with the experts in the British mission. The general feeling is that English is not immediately important but will become more so when the apprentice completes his training. In SENA English is not the medium of teaching and it will not be used until the apprentice has finished his training and workshops.

(iv) by reading manuals and bulletins. The majority of the manuals are of North American origin and use N. American technical terminology which differs from British technical terminology, just as British English differs from North American English. It is thus important to check that the correct terminology is being used e.g. in electronics, in British English a number of wires is referred to as 'a loom', whereas in U.S. English it is called 'a bundle'. This is also an important factor when considering the type of English used in face-to-face situations and levels of formality. North American rather than British English needs to be taught.

3.4 The Learner

Most of the apprentices come to SENA between the ages of 14 and 20 after having completed a minimum of 4 years of the 6 year 'bachillerato' course. They are of varying academic levels. One of the main complaints from the other experts is that the basic intake level is low and many apprentices come without sufficient mathematical knowledge to participate in the first units of the British Airways training scheme which involves measuring and working out. This also extends into other areas e.g. they find it difficult to write and read in Spanish. All the British Airways teaching has therefore had to be modified as no previous knowledge can be assumed.

I am now teaching one of the groups for two sessions per week. This has given me an insight into the ability and language knowledge of some of the apprentices. Most have studied some English at school for between 2 and 4 years. All lessons were given in Spanish and little or no opportunity was given to practice orally or aurally. Most of the apprentices should therefore have a knowledge of English before starting at SENA, but in reality this is minimal in most cases and in other cases it is very much a case of remedial English. In other subjects it is very difficult to find out what methods were used to teach. However, it seems that little use has been made of the diagrams and they find it difficult to label and draw these in the workshops, when required to do so in English. Note-taking has certainly not been developed.

The attitude to English is difficult to gauge yet. There is interest at the moment, but how much of this is novelty value is difficult to assess.

It is hoped that some kind of test can be devised for the apprentices to take before they start the course, to ascertain how much English they know. This will then be used as information for what should be taught, the types of material they are familiar with and whether they can make use of simple iconic devices. It will probably be found that the apprentices are of very different levels and could best be taught at two or more levels. This is however only possible in the long term.

APPENDIX

Whilst the information is, by no means complete and a long-term syllabus has not been constructed I have had to start teaching one group of apprentices. I felt that it was important to introduce them straight away to the English and vocabulary they would be using later, on the assumption that this would provide a groundwork for longer pieces of reading comprehension, situational and skills attainment prac-

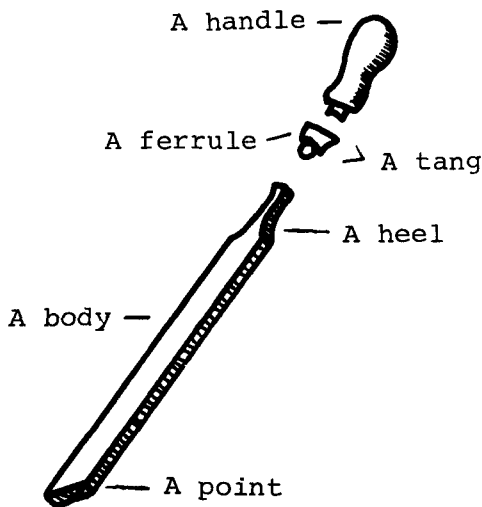
tice. Some of this material, taken from weeks 3 and 5, is appended with comments. It is by no means all going to be used again, nor was it all successful. Some has been slightly revised already and a general criticism is that too much has been introduced too quickly. However, it does demonstrative the way in which I am, at present, approaching the problem. The subject matter of the material has already been covered by the instructors in the workshops in Spanish; therefore none of it is new to the apprentices. The material does not reflect the detailed analysis of any situation due to lack of time, but on a purely subjective level it seemed logically best to start with naming things and then to continue with description and classification. In writing the material certain general principles have been applied:

- (i) to give sufficient practice of items, not only in one lesson but in further lessons so that items become part of the apprentices' long-term memory.
- (ii) the separation of items into form and function rather than teaching by contrast.
- (iii) variety of material and pupil activity.

Although the presentation on the handouts is all in English, much of the actual lessons have so far been in Spanish. This is a compromise and hopefully before too long enough English will be known for this not to be necessary. Each session some time is spent in explaining each section, then the work is attempted in groups (4) with me checking and helping. Finally the groups 'report back', each writing an answer on the board etc..

Although writing has not been indicated as a very important mode I feel that it forms an important part of helping students to learn e.g. by completing a table they have to read something a number of times. The time actually spent in writing is very short compared with reading and discussion time.

CLASSIFICATION



A file consists of _____

The file is used for _____

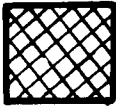
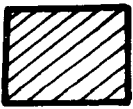
1. The type of cut
2. The shape of the file

To identify a file we use

1. The type of cut
2. The shape of the file

Types of cut

single double rasp



The shape may taper in width and thickness.



thickness width

a) Read this description



Compare it with the table.

1. A flat file is used for general filing work. Both faces are double cut and both th edges are single cut. It is tapered in width and thickness.

b) Now complete the table and draw diagrams as for the flat file.



2. A ward file is used for filing in narrow slots. Both faces are double cut and both edges are single cut. It is tapered in width but not in thickness.



3. A hand file is used for general surfacing work. Both faces are double cut, one edge is single cut. It does not taper.



4. A pillar file is used in narrow slots. Both faces are double cut. One edge is single cut. It does not taper.

c) Now using the information in the table write a description of the round file, rasp, and the square file and draw diagrams of each.

d) Listen to the descriptions of these files and complete 8, 9, and 10 of the table. Now write a description of each.

The types of cut are:

1. _____
2. _____
3. _____

Descriptions adapted from The Industrial Training Board Handbook, Part A, First Year Training of Engineering Craftsmen and Technicians.

KEY

- F = Face
 E = Edge
 FL = Flat
 H.R. = Half Round Side

NAME		TYPE OF CUT			SHAPE OF BLADE		USE
		SINGLE	DOUBLE	RASP	WIDTH	THICKNESS	
1. FLAT	F ₁		✓		TAPERS	TAPERS	GENERAL SURFACE WORK
	F ₂		✓				
	E ₁	✓					
	E ₂	✓					
2.	F ₁						
	F ₂						
	E ₁						
	E ₂						
3.	F ₁						
	F ₂						
	E ₁						
	E ₂						
4.	F ₁						
	F ₂						
	E ₁						
	E ₂						
5. ROUND		✓			✓	✓	OPENING OUT HOLES.
6. RASP				✓	✓	✓	FILLING SOFT METALS OF WOOD
7. HALF ROUND	FL		✓		✓		GENERAL SURFACE WORK
	HR	✓					

Conversation

Can you give me a please?

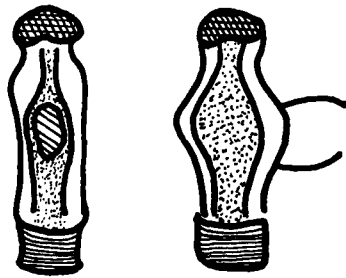
Yes which type do you want?

A please.

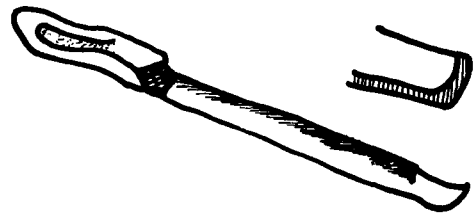
O. K. here you are.

Put the names of files in the spaces.

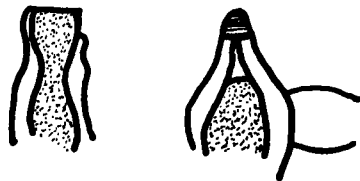
Now ask similar questions using different tools e.g. a hammer, a chisel or a scraper.



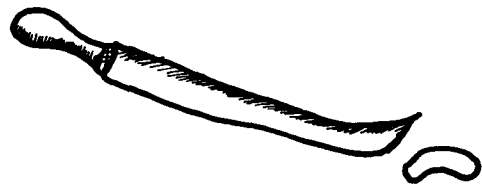
ball pein



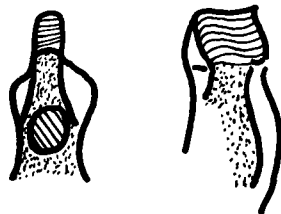
flat scraper



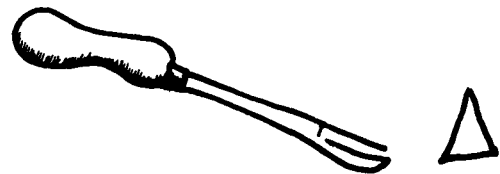
cross pein



half round scraper



straight pein



three square scraper

7.2.2 RESEARCH AND DEVELOPMENT FOR AN ENGLISH COURSE FOR MEDICAL STUDENTS

María Horzella, University of Chile

Preliminary Consideration

In 1971 our Department was requested to prepare a course in English for Medical students. Consultations were held with academic authorities to elucidate these important points:

- Determination of the status and the placement of the course within the curriculum in addition to the number of hours allotted for the course. The course was given full academic status by making it compulsory for all first year students during the second term. 72 hours were allotted which were distributed into 54 teaching hours plus 18 study periods. An informal description, of the institution and student population was also obtained from which we could get an idea of the courses taught, the academic load and the mode of instruction. This information was later complemented with visits to the libraries, laboratories and the teaching hospital.

- Request for a reasonable provision of time and facilities for research which would include: consultation with specialists and if necessary, short seminars or talks, revision and try-outs of drafts both by native speakers of English and doctors. Our proposal was accepted and 1971 was scheduled for research and experimentation. In 1972 we produced the first module in draft form which was immediately subjected to a pilot test with first year students. Doctors and teaching staff indicated the times when they would be available for consultation, showing interest and willingness to cooperate with the project at all times. This proved to be a valuable arrangement because we could constantly check the accuracy and the validity of the materials. After the first draft had been used experimentally in 1972 we had a request from the medical staff and students of the last years to give them the English course, which they had missed when they were students. This was an experience which increased our prestige enormously.

- Request for the provision of ancillary facilities for photocopying, typing or reproducing materials together with easy access to libraries, realia and any other equipment which could be used in the English class. Our request for museum pieces, wall-pictures and realia has proved to be an added bonus, as anatomy instructors constantly suggest interesting ideas and serve as a link by referring students to excellent text-books in English.

Course Design

To specify the needs of the medical students we used three main procedures. First we examined the programmes of the various courses to find references or bibliographies in English. Recommendations were checked with the librarians to ensure that books or periodicals were available and were used by the students. Secondly we held interviews with academic authorities, teaching staff and a sample of interns and students from first to sixth year to enquire what they felt they most urgently needed or believed the students needed, and to ask them what they assumed a one-term English course could provide. Thirdly, we prepared a questionnaire to ask fairly directly what the same persons mentioned before considered as the most frequent and necessary uses to which they put English in their studies or profession. As could be expected we received opinions ranging from the need to use English for all purposes to no need for English at all. The great majority, however, felt that the need to read medical books, articles, journals and other medical publications was paramount at all levels. For all purposes we were faced with a problem for which no one at that time had a ready solution. It was evidently a case of deciding if an English course in which one skill, reading directly in English, could be developed or at least initiated in one term. We realized that there were several drawbacks in this approach; the first was that our students were beginners in the medical sciences, next that in secondary schools the same students had been trained in the oral approach which relies heavily on the spoken language, and finally that we felt that the reading skill isolated from the other communicative skills might cripple attempts at more global communication. After careful deliberation an external-internal compromise was reached. We decided to use a modular approach, which in essence puts forward the same ideas developed at length by both Ewer (1) and Bung (2) in the "Modular Approach

to E.S.T. Courses" and the "Delta Diagram" respectively. That is, externally we would have a sequence or combination of modules in our course, roughly corresponding to the uses to which English is put by medical professionals* (see Fig. 1). Internally we decided that the reading module, which would be the first to be prepared, would be a kind of platform course including all the basic elements that would be required at a minimum survival level in the other modules envisaged at that time. Emphasis was decidedly on reading, all tasks specified requiring reading even when this purpose was not made overt, but all other ancillary activities in which writing or listening or explaining were requested also had a wider, more ambitious - though no so tightly controlled, purpose.

Once the modular approach had been agreed upon, the next step was the specification of the objectives of the first module in a more precise and restrictive form. But before going into the details of the reading module I would like to mention two kinds of tests which contribute to our analysis of aims and to exempt or route students. The combination of these two tests - a diagnosis test and a proficiency test - provides on the one hand a linguistic diagnosis of students' achievements and weaknesses prior to their incorporation to the course and also their readiness for the second module in the course. These tests show clearly by means of their matrix arrangement which students require linguistic remedial treatment and for what specific problem e.g. deficient word-formation techniques, poor command of structures, narrow scope for visualising relationships due to want of knowledge of connectives, etc.

We began this section by referring to our informants in the process of determining needs. It is only fair that before passing to the next section we should mention the necessity of also informing the participants in our course and the authorities who are the guardians of academic study of the aims and the contents of the course in the form of a Course Programme. Our course programme specifies: prerequisites, length of course, skills, contents, mode of work, evaluation, bibliographies and teaching staff. The programme is distributed at the beginning of the term together with a calendar of activities.

Syllabus Design. (Method used for the design and development of the platform-reading module: "English for Medicine").

As was mentioned earlier the ability to read directly in English was unquestionably the first priority for all informants. Consequently we had then to tackle the task of collecting our raw data, which in this case would be the text-books, periodicals, journals, abstracts and other published medical material available locally. A second major decision had to be made at this stage. A random sampling of books and journals in the faculty libraries made this fact evident: a reading module to satisfy all reading needs at all levels was unattainable. Authentic all-level materials made excessive demands on the students' conceptual, linguistic and rhetorical capacities. To be of real use to first year medical students the corpus for study and materials preparation would need to be textbooks used in the first two years and a few journals where information would not be excessively specialized.

With this consideration in mind we examined about 20 textbooks of biology, anatomy, physiology and general medicine, roughly 20000 words, in addition to a sample of 50 articles of a general medical nature comprising approximately 100 pages and a few books on medicine for the layman. Having verified that the chosen sample was conceptually adequate with the help of professors and senior students, we then proceeded to conduct lexical and structural counts of a sample of the corpus; these were later checked against other studies already conducted for frequency validation. (3) Although our corpus was general medicine, with the exception of purely medical terms, we found a positive correlation between the studies mentioned and our sample. It also became evident at this stage that a special provision would have to be made to introduce and carefully teach the non-cognate basic medical terms.

Our corpus met the test of conceptual difficulty and linguistic appropriateness but there still remained a problem which we - at that time - only dimly glimpsed and rather loosely called 'the organisation of the information' - in modern terminology: 'the rhetoric of the message'. To tackle this problem we designed a simple diagram of what we conceived might be the forms a reading text might take. Our

* Feasibility of incorporating modules to form a multi-purpose course would depend solely on number of hours that could be made available for English and on a reasonable number of candidates requesting the modules.

simple model helped to visualize the types of tasks or questions the students could successfully perform in pursuit of the internal structure of a text. The reading text diagram and an unpublished work "Developing Reading Comprehension Skills" (4) together with a check list for writing multiple choice questions for reading passages proved an invaluable help when later designing students' tasks.

Satisfied that we had selected an adequate sample we considered the adaptation or simplification of the authentic materials which were exceedingly long for language teaching purposes in terms of one or two class periods. We felt that the most appropriate method would be to write a new abridged paraphrase of the authentic passage because in this way an important conceptual and rhetorical consideration would be maintained namely: development and modification of ideas. We hope that the materials have bridged the gap between highly informal spoken language at school and very formal language in academic texts.

After rather lengthy considerations of data collection and corpus analysis we need to recapitulate on the fundamental aspect of needs to proceed to pedagogical implications.

The basic need or main objective of the platform-reading module was to develop the skill to read in English directly, in this case slightly modified medical texts. Concerning this aim we realized that this skill was the result of several minor processes which needed to be clarified and specified. Tentatively we tried to specify a linguistic component formed by the basic general lexis and a syntax. We relied heavily on cognate and international terms - the syntax already learned at secondary school, would require only rapid, incidental revision. From a purely psychological point of view students would need to acquire confidence in themselves when approaching a reading task. To give the students confidence we decided to include a box at the beginning of each unit which would include approximately 10 to 20 non-cognate new words. This mini-glossary would be completed with students and teacher collaboration after which there came about 10 lexical exercises to activate the lexical items. It was only after this task had been completed that the students read the new unit finding that it had lost a great deal of its foreign puzzling impact.

Pedagogically the topic centered units were divided into:

- a Vocabulary section which introduces the new non-cognate vocabulary and word formation techniques. Calculated guessing of unknown words by the intelligent use of clues in the context is also included in this section.

- a Comprehension section formed by two types of questions, a direct questions part which demands detailed, full comprehension of the concepts presented in the unit and another set of questions using varied techniques aimed at the comprehension of the organization of the text.

- a General Activities section that serves to integrate all the aspects taught in the previous sections in new situations. In this section we want to encourage the students to take an active interest in furthering their knowledge of their discipline and to exchange information and ideas with their fellow students. We want him to perform communicative acts. The activities owe much in conception to the projects suggested in J.R. Ewer's "Catenized Vocabulary Units" and in the Supplementary Readings in Ewer/Latorre's "A Course in Basic Scientific English".

The platform-reading module has been in operation continually for five years. Checks and revisions have been incorporated and should appear in a revised version in 1978. Word of the success of our English Course has spread in Chile to other medical faculties where our course is currently being taught. In order to guide our colleagues or to solve any problems that they might have when using the book, we wrote a set of Teacher's Notes.

A final consideration after having completed module one was to examine the relationships that might exist between this module and any other future ones. Module Two: "Reading Texts and Study Skills Exercises for Medical Students" was prepared with the double purpose of giving practice in reading authentic medical texts of the type that any doctor or senior student might need to consult and of introducing and manipulating some study skills that are useful for university students.

The guiding principle in preparing this module has been the necessity of searching for ways to systematize and synthesize the enormous amount of information that students have to study and learn. To this end a wide range of tables, outlines and diagrams has been included in addition to presenting different ways of making summaries.

Acknowledgements: I want to express my gratitude to my colleague Angela Labarca with whom we wrote "English for Medicine" and the Teacher's Notes. She was also the first to use the material experimentally in class, suggesting modifications that have contributed to course improvement.

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FIGURE 1

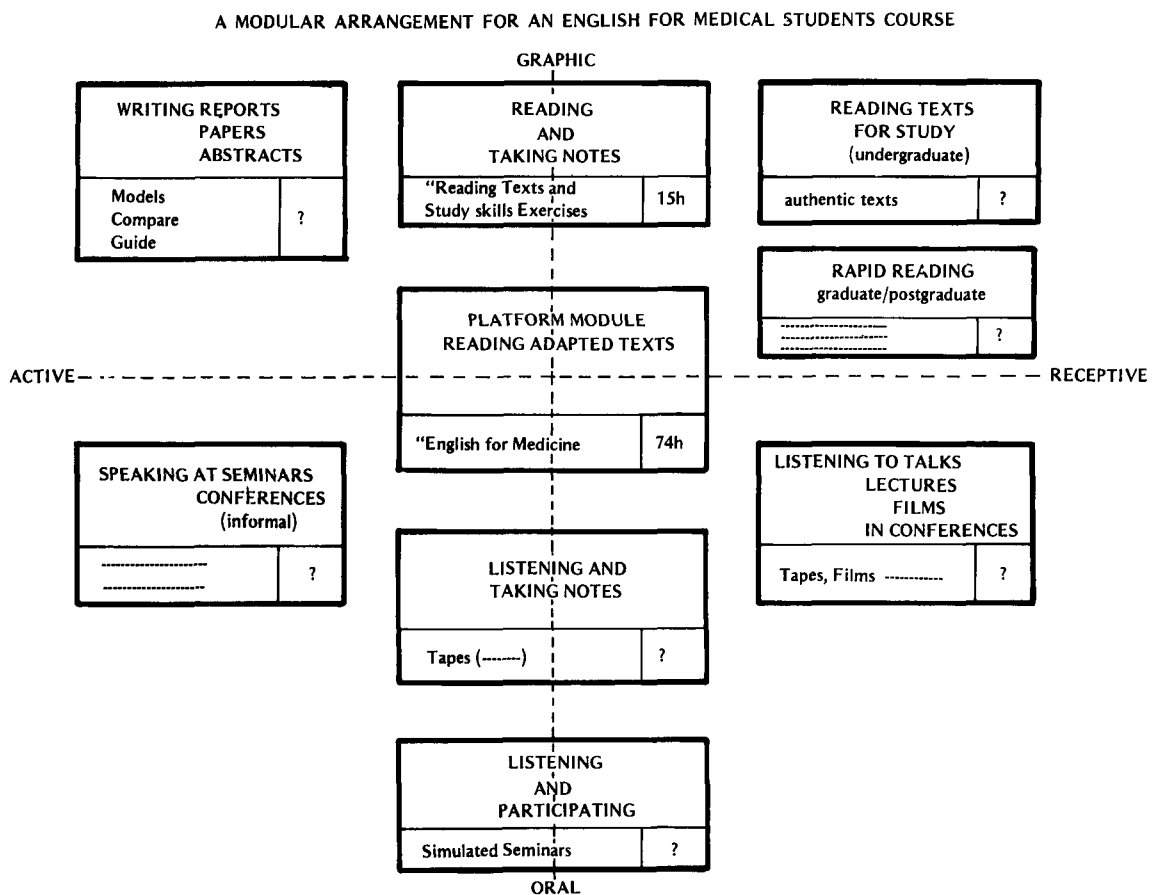
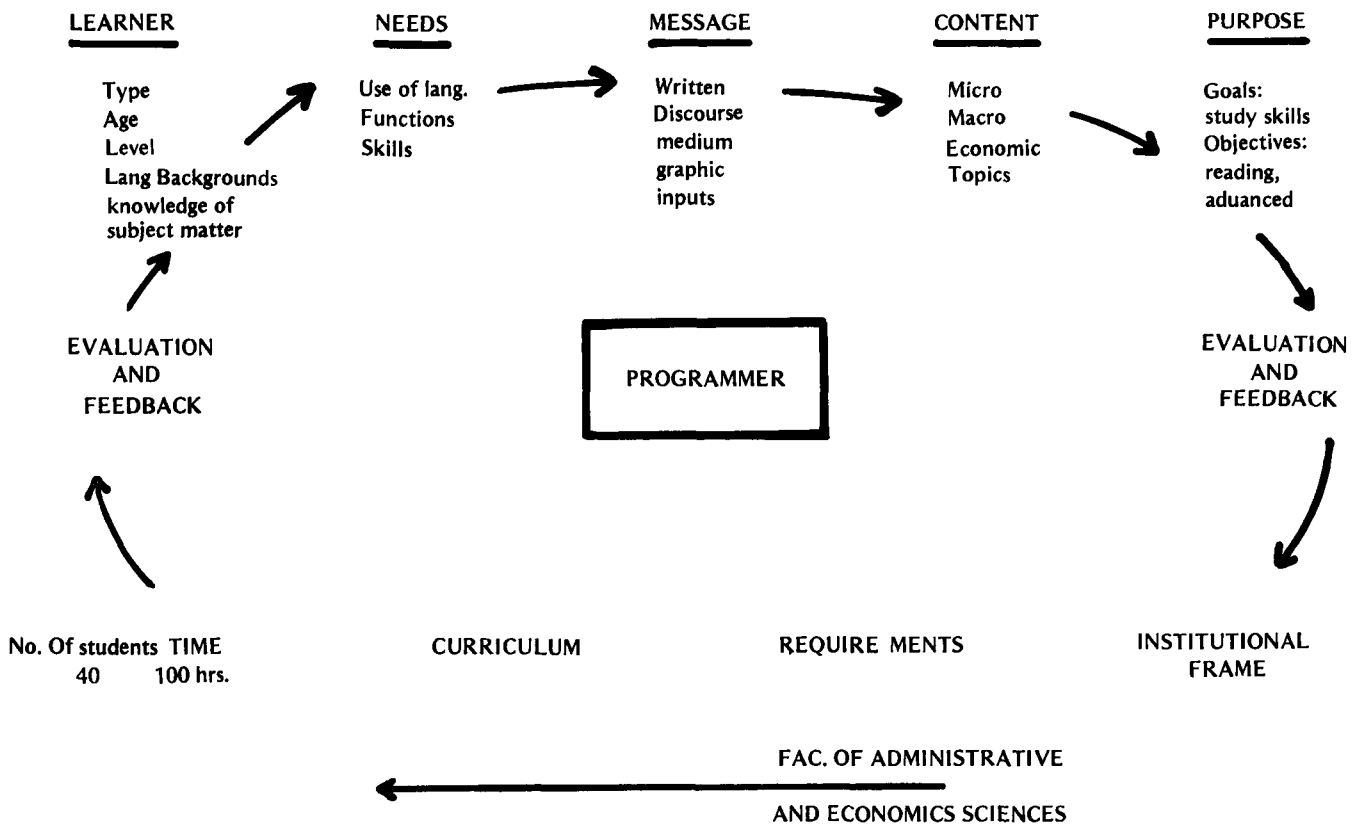


FIG. 1



7.2.3 READING COMPREHENSION: A DYNAMIC PROCESS OF INSTRUCTION IN AN EAP SITUATION

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A needs survey revealed that most of the students and teachers from the three Divisions coincide on the following:

- (i) A high percentage of scientific bibliography is available in English only.
- (ii) Curricular and reference bibliography in English is given at the first quarter and increases as the courses advance.
- (iii) Reading for information is the specific skill needed.

Those who didn't think that learning English was an actual need did consider that reading texts in English was very useful to acquire a better professional level. After obtaining the data of the needs analysis project, we concluded that our courses should be: Academically Oriented Towards Reading Comprehension Skills.

Most educational programs include testing as a main factor, where students' performance is extremely important in order to continue with the language courses or even with their curricula, but little is done with testing in terms of research to suggest practical and relevant ways for designing reliable and valid tests.

Mexico is an example of the importance of testing since students have to show their competence in terms of tests that either fail or pass them. At University level though English is not part of the curricula, it is a requirement for some of the majors, and again testing takes an important place as a rejecting or accepting tool. Hence, the reason for our concern with the teaching of reading comprehension in E.F.L. classes within a substantial and cohesive unit of instruction where testing takes an active place.

It is our purpose now to examine in common-sense terms some of the recent psycholinguistic views of the reading process from which we have drawn some implications for our instructional programs.

We should distinguish reading to identify words from reading for comprehension; their processes have characteristics in common but their actual outcomes are rather different. Reading for comprehension is too complex to define accurately. For the moment we will define it as reading for identification of meaning. We should also distinguish two forms of reading for comprehension, mediate and immediate. The former demands as a prerequisite the identification of words, while immediate reading goes directly from the graphic features to meaning. Immediate reading for comprehension is a common activity of competent readers. To what extent it is accomplished depends, among other factors, on the knowledge the reader has accumulated throughout his reading experiences. His past experiences help the reader to reduce the alternative number of possible meanings in a sentence. This skill which enables the reader to reduce uncertainty about the alternative number of possibilities is called prediction based on redundancy in a text. The fluent reader may be unaware of his constant use of redundancy or of other sources of information such as the frequency of words in a particular context or their interaction with other words. The point we want to make here is that the identification of meaning does not only depend on the identification of visual configuration but also on the ability of the brain to process information.

Our main interest in the cognitive - linguistic theory is that it instructs us in the abilities and limitations of the interaction between the eye and the brain.

This can be clarified by distinguishing between visual and non-visual information (Smith 1973). Visual information is that derived from the printed page and non-visual information is that which the reader takes to the act of reading.

It is exactly the non-visual information as described by Smith that the L2 teacher should be more concerned with, since it includes the language knowledge, that is the rules of the language system and how the system is employed in order to communicate information in the written mode and the prior knowledge of the subject with which the text deals. Clearly, the non-native reader not only makes use of the visual information to comprehend the written material, but also of the non-visual information in the knowledge of the content of the text. Therefore, we cannot think of teaching reading to non-native speakers separated from that of the language knowledge.

The progress of the beginner foreign reader will be shown in terms of the types of cues he will be capable of using. These cues will change as his familiarity with and knowledge of the language increase. We have seen that the student often does not rely on his ability to read in his native language, making immediate linguistic transfers. Instead, there is a great reliance at the beginning upon the processing of letters and syllables. From a word-by-word decoding approach the student will progress to process larger units of language, relying less and less on the smaller units and more on features of textual cohesion and discourse. But unless the language foundation at the lower levels is sound, there can be no development towards the steps employed by a mature L1 reader, because the language knowledge essential for their functioning does not exist. This point will be illustrated when we describe our levels of instruction.

As a result of considering (i) that students have to be tested, and (ii) the implications made from the psycholinguistic perspective of the reading process, we have focused on testing as an important part of what we call a dynamic process or unit of instruction. By dynamic, we understand that as part of the instruction, students and teachers receive feedback from both what has been learned and what has been taught.

Continuing with this idea, we can distinguish among the different ways of integrating the process of instruction. In our case we consider that at a given point of the process of instruction, decisions have to be made for which information is needed. This information must come from a test which is the means of communication about the student to the decision maker. In such a case, the student who enters a course receives instruction and is tested according to the goals of the course; his performance will be taken into consideration in order to make the decision of whether he meets the goals of the course or not. If not, then he is sent back for further practice.

This process becomes more of a communicative one in our terms as compared to those where students enter the course, receive instruction and leave the course without giving or receiving information about the teaching / learning activity, because they were only given a fail or passing grade. The test procedure as has been described can become more complex depending on the type of information that is sought.

The way in which we have constructed the units of instruction is by organising the language knowledge and the reading skills in different levels pedagogically divided. For this reason, the nature of the tests is such that they will provide us with valuable information on the relationship of elements of instruction to reading comprehension, our main goal.

The feedback received by the test designer, teacher and didactic materials producer from a test is valuable in different aspects:

- (i) for the test designer, it shows if the tests are reliable and correlate with what they were intended for.
- (ii) for the teacher, it gives information on the students' performance and how the materials were taught.
- (iii) for the materials producer, it confirms if what has been taught is relevant to the students' needs.

However, we cannot forget that in this communicative process the student has an active and important role in which he not only learns what has been taught but also must apply his knowledge in the form of tests which make the process of instruction a dynamic one.

We want to define objectives which will integrate skills as much as possible right from the beginning, in order to test them in this context, to verify that the main goal is being accomplished. J.B. Carroll divides the elements into two: 1) knowing the meaning of a given linguistic element, and 2) understanding the total meaning of an utterance. This division has the virtue of simplicity, and helps us to further define our objectives, by saying we want our students to have a firm base in the structures of the language, as well as to be able to relate the structures to their context in order to increase their level of comprehension. Learning to read in English as a foreign language implies that the language is both an objective in itself, and a means to another objective: comprehension of texts. We cannot, nor would we want to, separate these objectives. But this leads us to the necessity of setting goals in stages, which we divide as follows:

- (i) The first stage must necessarily concentrate on the language skills-though never out of context of the actual reading situation, in which the process of interrelation begins.
- (ii) The objective of the second stage is to emphasize to the student intersentential relationship of language structures, without which the comprehension of a text cannot occur.
- (iii) A third stage, and a third objective, is to expose the student to reading itself as a means of acquiring information, a situation which most simulates his real need of the language.

Underlying these three broadly-stated objectives, is the assumption that the student brings with him a considerable knowledge of the world, specifically in the area of study where reading in English is important to him. Thus our task must comply to a long-term objective of integrating the students' knowledge of the world with each stage of learning, so that his knowledge will provide maximum input and thus facilitate the process of reading comprehension in a foreign language.

Another underlying assumption is that the instructional unit is pedagogically organized from simple to complex, choosing items which have the highest degree of re-applicability. Our aim is to give the students tools, be it on the language-knowledge level or the discourse level, which they can apply by their own mental processes as they approach each new text.

At this point, we will discuss our three levels of instruction in relations to the objectives mentioned, and show briefly how we go about teaching and testing each level. We hope to show their vital interrelationship in the process of teaching reading comprehension to L2 readers.

Level 1: Practice

Our first objective was to establish a base of language skills, that is, to teach the student the basic structures of the English language. These include lexical and syntactical structures, and the students are given exercises related to a reading passage, but focusing on aspects of morphology such as identifying common affixes and applying them to a controlled group of words, or recognizing cognates and their orthographic transformations from Spanish to English. Paraphrasing is a common exercise which forces the student to go back to the text to find the similar meanings, thereby expanding his ability to make relations between words and phrases. By paraphrasing, the habit of relating affixes to their meaning is explicitly exercised, as, for example, "the insecurity of capital investment in the project" when the student is asked to find the phrase expressing "the fact that it is not entirely safe to put money into the project." The student learns then to build meaning "to the affixes "in", and "-ity" (insecurity) or economical expressions like "capital investments", also practising the valuable pattern of word collocation in English. Other exercises in collocation include a free list of articles adjectives and nouns which students are asked to put together in as many likely and meaningful groups as they can recognize.

Word meanings are practiced simultaneously with their syntactical categories, as in a text of scientific instruction to an experiment: "Put water in a container and measure its level" which in exercise is transformed to a description with a paraphrase stimulus "Water is placed in a container and its level is read" which the students replace with words from the text "is put", "is measured." Controlled exercises practicing word order are given on the sentence level, where noun phrases and verb phrases are put in separate lists, and students match them by virtue of their meanings. A similar exercise asks the student to provide the verb between two noun phrases.

Even at the most elementary level, language skills are presented in relation not only to specific (simplified) texts, but also as they fulfill discourse functions. Thus, the verb "to be" is presented simultaneously with the idea of sentences which are definitions. Here three columns require the student to choose a class for a given word, an X is a Y, joined by "which" to the definition. Or, to teach cause and effect relationships, two phrases are given and the student must join them with "causes" "results in," etc.

The exercises seek to give the student the chance to use all the clues he will use while reading: semantic, word order, syntactic, rhetorical, in order to draw meaning from a passage.

Testing

This 1st level is tested throughout our program, but since this unit of instruction bears as its objective the acquisition of language skills, feedback must be provided to justify proceeding to the next level, as well as to identify what areas need more practice. From the very beginning, we reject the idea of totally discrete item testing. Structures are tested in a larger context. Consider for example a viable test of the idea of comparative relationships. The student is give a chart to which he must refer in order to verify statements like "X was produced more than Y in 1970," or "Product A was exported in the same quantities as Product B." Or, to test the use of the negative, the elements are given in jumbled order, as, for example "doesn't / aircraft / countries / other / export / to / Mexico".

Another helpful test at this level is the paraphrase of entire sentences, where a sentence is given, with four choices of which the student must determine which best expresses the meaning of the original sentences.

A controlled gap-fill is another useful test, using a complete paragraph, and leaving gaps which signal features we have been emphasizing. The possible

items may be given in jumbled order by the side or at the end of the paragraph. This kind of test also trains the student in the skill of prediction and accustoms him to the format of the cloze test which is included at a higher level.

At the elementary level, especially, we try not to test the student in productive skills such as writing in our case, but give him the chance to show his recognition of words as they are used to construct meaningful sentences in English academic texts. From the beginning we also incorporate comprehension tests based on simplified texts. The questions draw on both the student's linguistic knowledge and his ability to make inferences in order to obtain information from a test.

One of the reasons we separate reading comprehension testing from the language skills testing at this level is to be able to find correlations between the skills designated in each unit of instruction and the long-term goal of reading comprehension. To date we are still in the process of validating our tests on which such a correlation can be based.

Level 2: Practice

As students begin to show strength in the elementary lexical and syntactical patterns of textual English, we move to our second level, the objective of which is to relate these linguistic elements to the totality of the utterance. It is here that we make use of a cognitive process of prediction based on redundancy in a text. There is a rich interplay of vocabulary and syntax at the inter-sentential level of which we want to make the students aware, therefore our exercises on this level of instruction are geared towards making conscious in the reader what is unconscious in the majority of L1 readers.

For many L2 readers, vocabulary items represent the biggest barrier to understanding a text. While this is partly justified, we attempt to minimize that barrier by indicating the ways in which a text itself gives clues as to what the unknown word might be. Beyond morphological, paraphrasing and collocation exercises, the student should be on the alert for such textual clues as: "i.e.," "or", "for example" which clarify at least, and often explicitly define, the meaning of a term. At this stage we encourage students to guess: suppose there were a blank there instead of the unknown word - what would a plausible fill-in be? This can be done in the native language at first, to facilitate transfer of the skill of predicting.

Another strategy which is practiced is that of recognizing hyponymic and synonymic relations as they exist in the text by virtue of the author's own writing techniques. Although a paragraph must repeat the same concept several times, it is unlikely that the identical word will be used in each case. Since English language discourse, especially in academic texts, follows a logical sequence it is not difficult to point out which noun or verb phrase relates to the other in a text.

Another way the writer avoids repetition in a text is by using pronoun substitutes in one sentence referring to a certain concept in a previous one. In this respect students are trained even from the first level to make immediate relationships, so that by this level it is only checked on, and the process actually phases out to prevent slowing the student up as he or she becomes a more competent reader.

It is at this level of teaching how the linguistic elements relate to the totality of an utterance, that the concept of discourse arrangement is more explicitly taught. At the first level it served as a vital background; here we bring it into active play by virtue of teaching first of all the variety of rhetorical relationships: cause-effect, exemplification, definition, contrast, inference, generalization. Incorporating these categorizations into the student's awareness has no great value in itself, but only as his understanding of these inter-sentential relationships aids in the process of prediction which, as in the case of lexical items, may be an unconscious cognitive process in the minds of L1 readers.

By making these relationships immediately conscious in the L2 reader, we hope to speed up the process of competency by giving the student more elements to work with simultaneously.

We begin by working with explicit textual clues: connecting words like "if - then", "for example", "however", "therefore" which may signal the relationships we've just mentioned. In the physical sciences, time relationships, so important in

describing processes, are also emphasized. The student is trained to manipulate the whole concept of textual organization, either by asking him to fill in appropriate signallers, or to re-arrange a group of 4-5 sentences into a coherent paragraph. Here the student expects to find an example following a definition or generalization, an inference following a generalization, an effect following a cause, etc.

Testing

For objective test feedback at this level, a stricter adherence to the traditional cloze tests is used, deleting every 5th - 7th word, and supplying alternatives. Thus, language skills are again tested, randomly with inter-sentential relationships which rely primarily on the elements of redundancy and logical sequence. We use a modified cloze, giving the alternatives, on the basis of several factors. First, we want students to concentrate on the recognition, not the production, of linguistic features, especially at the beginning. Also Oller (1963) mentions the fact that cloze scoring with non-native readers is more valid when any plausible item is accepted.. The L2 reader simply hasn't developed his language resources sufficiently to be able to predict the most appropriate term which may be based on very subtle factors. Thirdly, adapting multiple choice items to the cloze, we are able to distinguish between cases where only one item can be covered (grammatical items) and where the most acceptable item according to the text is correct (lexical items).

The logical relationships are also tested separately, by way of asking the students to join two sentences which are not necessarily presented in their true order, with the indicated linking word or words. At this level we are also interested in finding the correlation between the ability to identify logical relationships and reading comprehension, so the test is divided into a cloze section, with mixed skills, a section or sections emphasizing logical relationships, and 2-3 reading passages in the student's area of study, with objective comprehension questions following as mentioned in the first level. During the unit of instruction, lexical, anaphoric and logical inter-relationships were taught and practised. The comprehension questions draw upon these implicitly, by virtue of the transformations and substitutes suggested by Bormuth, expecting the student to apply his skills in the task of reading.

Level 3: Practice

The student enter the third and final level when the first two level have indicated sufficient reading competence in English to enable him to benefit from a reading skills course, where the emphasis is on reading itself. Language skills are not forgotten at this level, but only dealt with as problems arise relating directly to a misunderstanding of the function of specific linguistic elements. Inter-sentential relationships are dealt with in their increasing level of subtlety and variety of forms. This process is facilitated by designating classes on the basis of the student's areas of specialization. At the first level, a social science student is taught in the same class as an engineering student; at the second level all social science students are together. At the third level, where exposure to reading is the objective, readings are selected in the various areas, as for example, business administration and law.

Here the roles of the teachers, as well as specific discrete skills-training and testing are minimized. Since reading comprehension is the material and the goal, the subjective element underlying comprehension becomes predominant, as discussed at length by Frank Smith, J.B. Carroll, and others. Significantly, few students enter this level of our courses. They simply don't feel the need. They are getting constant exposure in the assigned bibliography which prompted their study of English, and hopefully they are applying the linguistic and cognitive skills practiced in the first levels.

Our unit of instruction here consists in choosing readings which will practice techniques which are used by all readers depending on their purpose for reading: specifically, scanning, skimming, receptive and responsive reading. Authentic texts, both from journals and text books, are chosen. By scanning we mean asking the student to locate a predetermined piece of data rapidly, using organizational clues in the text to expedite the process. In skimming, we expose the student to the realistic situation of the necessity of obtaining overall features of a text, for the purpose

of deciding whether to read it or how to read it on the basis of its organisation. By receptive reading we mean a careful step by step reading which enables the reader to receive accurately the information presented by the author. In responsive reading, the student is asked to reflect, make implications and applications to the information given in the text.

The reading techniques are practiced in a variety of ways, depending on other elements which are incorporated from the former levels: word studies, complex syntactic constructions, etc. We also introduce the element of time, especially in skimming and scanning techniques. Because of the highly subjective nature of the reading task, we use each reading to observe individual behaviour. Each student's barriers to fluency thus are more easily detected, and treated individually. The student evaluates his own level of comprehension himself, by simply affirming or not that he understood the text. For objective feedback, reading is tested according to the purposes mentioned, with specific instructions which lead the student to skimming, scanning or more intensive reading in order to obtain information. We have yet to prove the validity of testing these reading skills.

Conclusion

We mentioned earlier the importance of distinguishing between our teaching exercises and the test, both of which form part of the students' activity in the unit of instruction. As we see it, there are four inherent differences between the exercise and testing activities.

- (i) In exercises, the student is practising the language and/or reading skills as part of the unit of instruction, which is integrally related to reading comprehension itself. In testing the language/reading skills, the student also is asked to put reading to use as a tool. The test will show that the immediate goals have been reached, thus signalling a "go-ahead" for the next level of exercise which will build skills for a more proficient level of reading, and so on in a continuous inter-related process of mutual feed back throughout.
- (ii) The purpose of exercises is to spell-out strategies for the students; thus their explicit nature. These same skills, on the other hand, are implicit in the items on a test, that is, they are part of the language itself instead of being drawn out of a text. For example, where exercises of co-reference ask the student to specify the antecedent of a particular pronoun, the test would operate on the basis of that relationship which must be understood.
- (iii) Along the same lines, the function of exercises is to break down the skills; focusing in on them, either individually or in relation to a similar skill. The tests must necessarily integrate the skills in order to indicate the student's firmly-based advance. The test thus serves as well to push the student ahead by challenging him to read on the basis of what he has been practising all along.
- (iv) Exercises encourage the student to predict; feedback from exercises confirms his predictions, or when it doesn't, the confusions are discussed in the group. This part of the instructional unit serves to build confidence in the students, which in turn encourages them to predict on the tests. Thus there is another constant interplay between the role of teaching and testing exercises, based on prediction → confirmation → confidence → prediction.

In summary, we have tried to demonstrate the importance of setting objectives in teaching reading comprehension in an EAP situation. These objectives should correspond to elements of instruction pedagogically organized to lead the student from the level of language skills to reading skills. At each level, exercises are incorporated which will oblige the student first of all to practise a skill, then to demonstrate his acquisition of the skill. The former is a teaching exercise, the latter a testing exercise.

The purpose of testing reading comprehension, aside from its evaluative feedback on the progress of the students, provides the teachers with needed information on the efficacy of the units of instruction. On the basis of analyses of these testing each trimester, we obtain specific information as to how to change our units of instruction: items to be emphasized or omitted as test results indicate the degree of validity of these items as correlated with general reading comprehension items.

7.3 MATERIALS

The paper which we publish in this section was, because of shortage of time, not presented at the seminar. This perhaps is an indication of the considerable amount of high quality work being done in Latin America, only a small proportion of which we were able to bring to the surface during the seminar.

As Jo Barnett pointed out in his keynote address, a large (and perhaps excessive) proportion of ESP activity is devoted to materials production. However, to some extent this can be explained by the need in ESP for materials tailor-made to fit specific groups of learners as well as by the fact that materials occupy the central place in an ESP operation. In many programmes the crucial learning communication is between the student and the material - with the role of the teacher consequently being more discrete than in traditional language teaching methodology.

Tom White describes the work of a group of Chilean teachers in designing reading comprehension material based on discourse analysis and attempting to provide material which was intellectually stimulating for the adolescent age group.' (Readers might like to consider this claim in connection with the observations of María Celani on student motivation in secondary schools).

Two contrasting approaches to reading comprehension materials production were illustrated by Maurice Broughton and Juan de la Cruz Rojas. Broughton described material for senior professionals in the field of economics which, according to the designer, is purely pragmatic, being based on improving reading efficiency, not on any linguistic theory. An interesting feature of this course was the use of the overhead projector which provides the teacher with increased control over students' reading. One of the main features of the material was its economy - it was designed to make the maximum use of the limited time and energies that could be spent by busy professional people and to minimize the amount of materials production necessary by the adoption of a blueprint for comprehension exercises applicable to each text.

Juan de la Cruz Rojas presented the programme of the Universidad del Valle, Cali, Colombia, which is based on theoretical considerations of how semantic relationships are expressed by surface syntax. It is worth noting that this programme eliminates oral and written student participation in English and that 'classes are conducted as workshops in which the role of the teacher is to assist the students in the identification of a particular (semantic) structure by means of a careful analysis of its elements.

Another 'pragmatic' set of materials was described by Mike Potter of the Sociedad Brasileña de Cultura Inglesa. ESP in this context is only a minimal part of the society's activities so is introduced as a supplement to general courses, in the form of specialized packages in a listening centre. The fields covered are: commerce, airlines, engineering, medicine and town planning and the materials are mainly adapted from existing course books.

7.3.1 A PRE-UNIVERSITY COURSE IN READING COMPREHENSION

T. C. White
English Language Officer, Chile

1. INTRODUCTION

In 1976 a group* of teacher and teacher-trainers got together to plan and implement a reading course in English for Chilean secondary-school students. The development of reading skills is the main objective of the third and final years of

* Hereafter referred to as 'the group'. Individual members are listed at the end of this paper.

ELT in the Chilean secondary system; the emphasis being on oral skills during the first four years of exposure to English. The main reason for planning a new reading comprehension (RC) course was the general dissatisfaction with current performance of school-leavers, voiced by University English Departments and other departments where the teaching of "instrumental English" (EAP) is a requirement. Materials currently in use in secondary schools are outdated and strongly structuralist in nature, the typical passage being short and "difficult" and accompanied by a long series of exercises ranging from direct questions on the information contained in the passage to 'drill'-type exercises practising individual structures. An estimated 90% of the time supposedly devoted to reading comprehension is in fact spent on study or revision of language system rather than language use.

The motivation for a new look at reading comprehension problems came from a British Council Overseas Course in April 1976 conducted by R. V. White of Manchester University: "ESP Materials Production for Chilean University Students". One of the follow-ups for this course was a paper given by T.C. White (British Council ELO Chile) to the Chilean Asociación de Metodólogos de los Idiomas Extranjeros (AMIE) in May 1976: Teaching RC without the use of questions. This led to a workshop for FL teachers at the University of Chile Sede Occidente, Santiago, during which the ideas in the paper were elaborated and a plan of action for RC materials writers was sketched out. The pilot project materials are being tried out in schools in the Santiago area.

2. Theoretical basis for the project

The group wanted to explore the possibilities of training secondary school students in RC skills through the discourse analysis and processing methods demonstrated by R.V. White during the course. They agreed that means should be devised for helping a reader in his progress through a text, and that appending questions to a reading text did not provide such help but merely tested in a rather unsatisfactory way whether reading with comprehension had been achieved.

The most important language consideration was the relationship of language forms with language functions within a stretch of text. The group accepted that there was no point in waiting for a description of language-in-use from the linguists and then inventing a methodology to teach RC based on such a description.

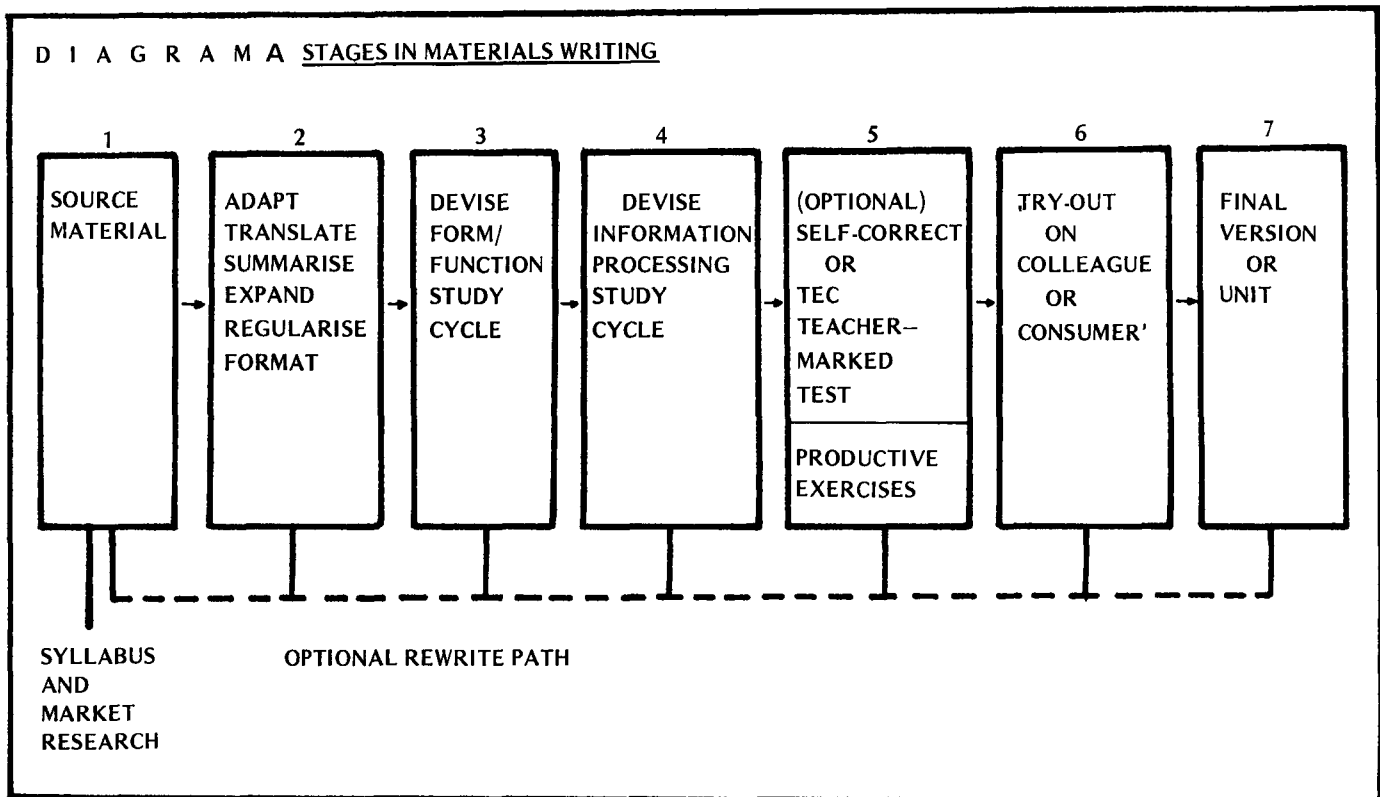
In this we were much in agreement with Widdowson (1975) who argues that although there is as yet no adequate linguistic description of English use in discourse, this should not prevent teachers from developing means of guiding their students towards acquiring knowledge of it.

Above all it was strongly felt that purely linguistic considerations, even if we could achieve a consensus on these, ought to take second place to motivational ones: we were not teaching a subject or subjects, and in an important sense we were not even setting out to teach 'new language'. Reading is rarely undertaken to learn something new about language. But we do read to learn something new, however ephemeral, frivolous or superficial. The group therefore attempted to provide material which was intellectually stimulating for the late-adolescent age group and to make the didactic element as discreet as possible, or if overt, as far as possible intrinsically interesting. To see how far we were successful we will have to await the end of the trial period and the expected 'consumer feedback' from teachers and students.

3. Materials Preparation

What we hoped to avoid was structuralism in a new guise. There was therefore no preconceived inventory of discourse structures which we had to weave into reading passages in order to illustrate and practise them. On the other hand we found that certain language forms occurred quite regularly in association with language functions (describing, narrating, reporting etc.) and we devised exercises which pointed out these regularities. Usually these exercises were fairly mechanical and undemanding, and we assumed that the part of the study-cycle associated with them would be readily and quickly completed by the majority of students, thus providing them with the opportunity of reading the texts thoroughly several times without getting bored, because they were looking for different things each time.

From the materials writer's point of view, however, there were certain 'facts of life' which cropped up again and again. The first was that there was a subtle interplay between the text to be read and the exercises to be done on it. This frequently involved a sequence such as the following:



From source material in either English or Spanish: press article, textbook, TV programme, 'pop-science' book, diagram, statistical table (box 1), a reading unit of two or more texts was devised (box 2). However, in the work of translation and adaptation, the writer was already looking forward to the third and fourth steps in the production sequence - how was the material to be taught? If the text described a process, for example, would there be enough steps in it to make a useful flowchart? This would often provide a clue as to what expansion, contraction or regularisation of the source material would be needed to provide a satisfactory unit. Now it might seem at this point that we are reverting to the old 'illustration of structures' reading passage, and obviously there is a danger of loading a passage unnaturally with a particular discourse structure in order to provide convenient exercises in the study-cycle. It should be remembered however that we are not dealing with authentic EST or even general texts in this project. The aim is to motivate students to read with attention and interest and to accustom them to various types of discourse structure which they will meet in authentic form during their University 'instrumental English' reading.

The second problem we repeatedly encountered was that an exercise which worked perfectly well with one type of text could not automatically be adapted to fit another different type. We were learning as we went along which type of exercise suited which texts. For example, a table with three columns --part: material: function -- was widely applicable to description of how something works, but could not be adapted to fit a text where the main discourse feature was an account of an industrial process. The latter called for a flow-diagram with 'boxes' corresponding to different stages in the process.

Thirdly, the reworking of units (optional path from box 6 backwards in diagram A) was frequently undertaken by the group or by pairs of colleagues when intuitions or actual experience indicated one or both of the following problems:

- excessive language difficulty
- excessive conceptual difficulty

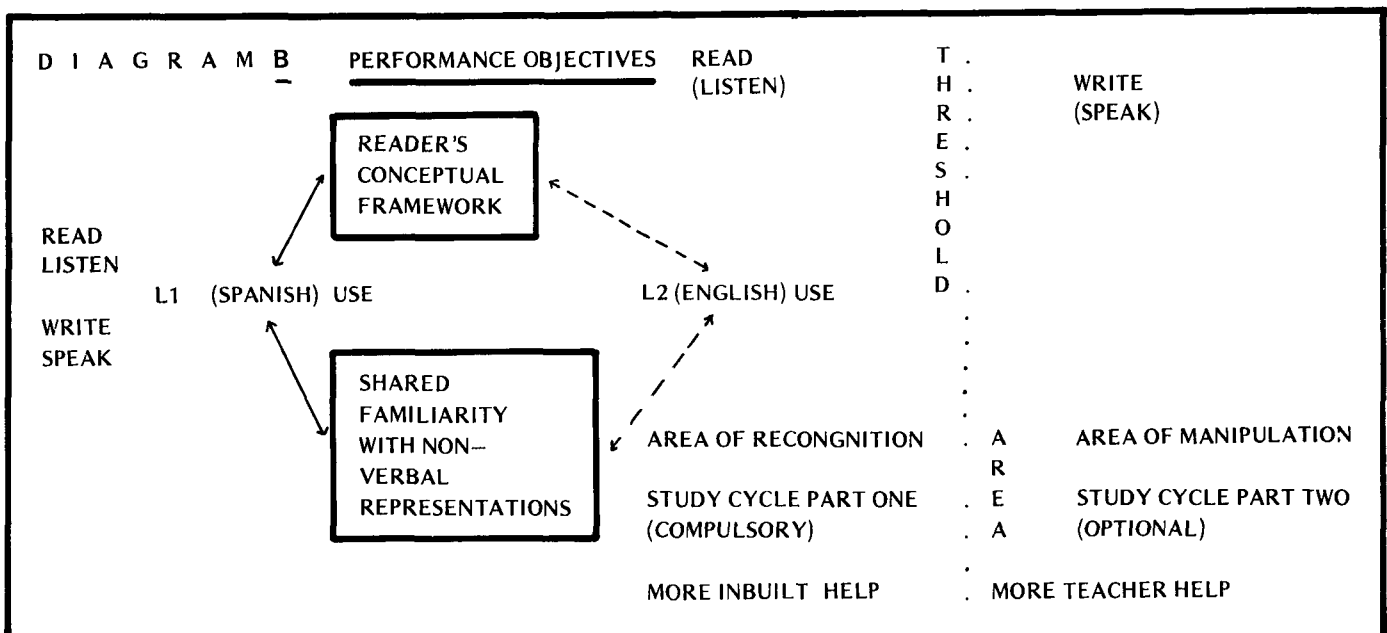
Trial solutions to the problem of language difficulty involved further work in stage 2, i.e. one or more of the following:

- remodel sections of the passage to break up complex sentences
- lessen frequency of occurrence of anaphoric reference
- use cognates for unfamiliar vocabulary wherever possible
- eliminate stylistic idiosyncrasies or rare structures
- re-order or re-group the data contained in the reading passage
- insert intermediate stages in the study-cycle
- provide more help in completing tables, labelling diagrams, etc.

Trial solutions to the problem of conceptual difficulty involve rewriting texts and parts of the study cycle to

- make explicit assume background knowledge
- provide paraphrase for concepts expressed in compressed (e.g. mathematical) form
- draw attention to key concepts or stages in an argument
- disambiguate
- indicate writer's intention in presenting his data in a particular way

3. Methodology



From this diagram, which moves from what is known towards what is to be learned, it is evident that we assume L1 knowledge of concepts and non-verbal representations (graphs, formulae, tables, diagrams, maps) and link the L2 RC texts to these. The first part of the study cycle is intended to help the student read the text by instructing him to underline key statements, circle certain typical verb-forms, draw arrows from relatives to antecedents, etc. These are mechanical aids to following the paths of messages through the information-processing part of the study cycle. Students are instructed to devise or complete graphs, tables, flow charts etc, or label diagrams or maps. This provides training in useful information-storage techniques.

Next come exercises designed to train students in retrieving information from their completed 'store'. Often these are 'self-test' slot-filling texts or modified cloze procedures. Some units then provide a second stage in the study-cycle involving re-interpretation of the information store or a language production task. This goes beyond the minimum requirement of reading with comprehension and therefore beyond what we have called the 'threshold area'. These additional exercises are useful in teaching mixed-ability groups, liberating the more advanced students from the teacher who can thus spend time with students experiencing difficulty earlier in the study-cycle. An attractive aspect of some units is the freedom given to students to choose their

own way to diagramatise data. All units should be adaptable to self-study but it is expected that some revision of the study-cycles to make the steps involved clearer will be needed after the results of the trial are known. We have tried to emphasise the study-aid aspect in these materials and minimise the element of testing, in the belief that enjoyment is the major motivator towards successful reading among adolescents. The satisfaction in successfully completing a study-cycle which has allowed individuals to use their own ways of storing and classifying information is also expected to increase motivation.

An element of teacher training is inseparable from this RC project, and to date this had been done informally through personal communication with school-teachers by individual materials writers. Thus fragments and units have been tried out in accordance with stage 6 of diagram A above. The full-scale trial is scheduled for the second half of 1977 and a seminar will be organized in May-June for the teachers who have been selected to try out the materials over a full semester. The group is preparing to tackle the following problems:

- tendency to 'over-teach' the language of the RC passages (i.e. concentrating on language system rather than language use)
- worries about the level of difficulty of vocabulary
- unwillingness to allow independent work at individual rates of progression (a 'teacher role' problem related to the ingrained assumption that all new knowledge should travel from the teacher (omniscient) to the class (ignorant))
- amount of work involved (-the students will be reading about five times as much text as they normally do, without increase in number of hours allotted)
- the time needed to prepare the lessons
- how to supervise a large class of individuals working at different speeds
- what help to provide in cases of difficulty
- how to evaluate what has been learned

Here follow some sample Units:

XVI UNIT: LOOKING AT FIGURES

TABLE: SOURCES OF ENERGY IN THE UNITED STATES 1850 - 2000 (%)

RESOURCES	1850		1910	1940	1970	2000
COAL				48	22	13
OIL					37	
GAS			2	12	30	
WOOD		60		9	4	2
WATER			3	5	5	3
NUCLEAR						14

In 1850, the major source of energy in the United States of America was wood, which accounted for 90% of total energy consumption. Coal was a distant second with 10%, and power from water, oil, gas and nuclear energy was non-existent.

Thirty years later the pattern had changed. Coal now supplied 38% of energy needs, and the use of oil was just beginning. In 1880, oil provided just one-fiftieth of US energy needs. By 1910, the exploitation of the country's vast coal resources had reached a peak when three-quarters of the country's energy was supplied by coal. Although still a significant energy source, wood had dropped to 15% of the total. Oil supplied one-twentieth of energy needs, and water and gas appeared in the table for the first time.

The figures for 1940 show that coal had declined considerably although it remained the major energy source. Oil had jumped to 26% of the total, and gas had overtaken wood to become the third main source of energy. By 1970 consumption of oil and gas had increased still further and these two fuels provided two-thirds of power supplies in that year. For the first time, nuclear energy had entered the table, providing a minute 2%.

It is estimated that by the year 2000, oil will increased its share to 45% of the total energy consumption of the United States. Gas will have declined to 23% and coal will have fallen to fourth place, just behind nuclear power.

XVII

STUDY CYCLE:

1. Read the text.
2. Look at the table and read the text again carefully. The figures in the table are not all mentioned in the text. The writer mentions figures which he thinks are important and significant. He selects these figures from the table.
3. Complete the table with the figures you find in the text. Remember that you must change fractions, e.g. 3/4 to percentages e.g. 75 (%).
4. Read the second and third paragraphs and circle all verbs in the form HAD + STEM + ED. These verb-groups usually accompany a time expression. Underline the time expressions which go with these verb-groups. Draw an arrow from each time expression to the verb-group which accompanies it. Now complete table 2.

TABLE 2:

TIME	SUBJECT	HAD + STEM + ED	VERB ADJUNCT OR OBJECT
(for) 1940	exploitation (of coal)		a peak
			to
			considerably
	consumption of oil and gas		to
			wood
			still further
		the table	

5. Read the fourth paragraph. Circle the verb-groups WILL + STEM + ED. This verb-group also occurs with a time expression. The writer is making a prediction of the facts at a time in the future. Underline the time expression.
6. Now read the following text.

Figures are often arranged in tables to emphasize certain points. Sometimes the statistician guides our attention to these points by underlining the important figures. Sometimes he uses strong, black letters or figures, to make us notice them. Or he can group the figures in a certain way to make a contrast.

The energy resources listed in the table fall into two groups. One group consists of fossil fuels, and the other consists of replaceable energy resources. Fossil

fuels contain very high concentrations of energy which can be used easily to produce heat, light or motive power. But there is only a limited quantity of these fuels, and once the reserves have been exhausted they cannot be replaced.

Replaceable energy resources, on the other hand, can last indefinitely. Hydro-electric power from rivers, dams, and the tides of the oceans and seas, fuel from wood, gas from the decomposition of organic materials, and even nuclear power come into this category. Modern nuclear reactors produce more usable fuel, in the form of plutonium, than they consume.

XVIII

It is estimated that if no new oilfields are found the earth's reserves of oil will have been exhausted by the year 2000. Coal will last only a further 100 years. Other non-replaceable resources such as metals will not last indefinitely. New technology is needed to re-cycle the valuable materials which are wasted whenever we throw things onto the rubbish heap.

7. Look back at the table at the beginning of this unit. You will see that it has been divided into two parts. This is to show the difference between the two sources of energy described in the second paragraph section 6 above.
8. Made a new table or a graph to show:
 - a) the percentage of renewable resources
 - b) the percentage of non-renewable resources consumed by the United States in the years listed.
9. Look at your table or graph and fill in the blanks:

In 1850, the United States obtained of its energy from only one source -wood. Wood is a source of energy, provided new forest are planted to replace the wood which is cut down. It was not until the period from to that the emphasis changed from reliance on renewable resources to ones. The proportion of renewable resources in total US energy consumption declined steadily until, when only came from wood, water power and The trend is slowly moving back towards the use of replaceable, and in the year 2000 it is calculated that nuclear power, wood and hydro-electricity will provide a total of of US energy needs.

10. Read the third paragraph of section 6 above and complete the following table:

SOURCE		TYPE OF POWER
	▶	

7.4 TEACHER TRAINING

The paper by Harry Hawkes is of special value in the context of the seminar as a whole, if only to illustrate the difficulties of introducing new materials and new methods. As Hawkes explains, many teachers are suspicious of ESP and any training programme in the techniques of handling ESP materials will come to nothing unless the teacher believes in the value of the materials and methodologies he is using.

Hawkes concludes, perhaps a little pessimistically that 'linguistic theory and the classroom methodology is running far ahead of the human resources.' It is to be hoped that one of the contributions of the seminar will have been to suggest ideas for bridging that gap. After all, language teaching, like technology, has to be, at least in the wider sense of the term, appropriate.

7.4.1 ATTITUDES TO TEACHING AND LEARNING ESP2

Harry Hawkes
National University of Trujillo, Perú

Introduction

The comments in this paper relate to the writer's work in ESP and teacher training in the Department of Language and linguistics of the National University of Trujillo, Perú. They are made from the point of view of a teacher who actually presents ESP material to science classes in the university and who wants to encourage or train teachers inexperienced in this field. Some of the comments made will perhaps seem rather critical of the attitudes of teachers towards new developments in ESP; however, they are honest criticisms. The writer would be interested to know the opinion of those present on how far these comments are applicable to ESP teachers in other South American universities.

The final section of the paper will suggest some ideas for a training seminar to encourage a more positive attitude on the part of teachers towards new ESP materials.

The Service Courses in Trujillo

A wide variety of specialised courses, from Chemical Engineering to Law, are serviced by the language department. The basic pattern is a first-year "grammar grind" course of two semesters (to bolster the knowledge of English gained from secondary school), followed by a varying period of instruction in which reading skills are taught, usually by reading passages judged by the teacher to be relevant to the speciality. Understanding is generally tested by multiple choice questions. Some faculties such as Medicine, allow only the two semesters of the "grammar grind" for the service English course and thus miss out on ESP work. The length of the service course is determined by the different faculties.

Student reaction to new ESP material

The writer has taught groups of Chemical Engineers and Pharmacists using the material in the "Focus" volume, "English for Physical Science" and has had very favourable reactions from students who consider that the course content bears directly on their speciality and presents the language work in an unusual and interesting way. Students in other specialities have asked for such material to be used in their courses. A questionnaire answered by the chemical engineers and pharmacists after their one-semester course on "Focus" indicated that they thought this kind of language work was more interesting, more intelligible and more easily mastered. Individual comments added by students asked why such materials were not used from the beginning of the service courses.

The "reading comprehension" emphasis of ESP materials allows large classes to be handled more easily and gives students with a meagre knowledge of spoken English more chance to digest what is communicated in a text. Spanish was used to discuss the information in the text and the manner of its presentation; and as understanding of the language jigsaw puzzle improved, students became more confident of their ability to read and comprehend.

The "Focus" material was used in the very last semester of the service courses - the last English teaching the students would ever receive in the university. Reaction was so favourable that it is planned to introduce such material in semester three (after the "grammar grind") and develop further material, which will be subject-specific, for semester four.

Students, then, present little problem. Their interest and enthusiasm for well-prepared and well-presented language materials is evident.

Staff reaction to new ESP materials

The key to maintaining student interest is in the expression "well-presented".

As is always the case, good materials die a natural death at the hands of inexpert or uninterested teachers.

There are, I consider, significant reasons for these negative attitudes toward ESP and the reasons must be frankly faced. To consider the reasons is to begin to evolve some ideas necessary for re-training teachers to handle this work.

- (a) Apart from the writer, staff teaching service courses are part-time and have other commitments outside the university department; this may compel some to give less weight to university English teaching;
- (b) adopting new ESP approaches means rethinking of teaching techniques, perhaps too radically for some; it is easier to continue with old materials (for which a bank of multiple-choice tests are sometimes already available) than to struggle with new texts;
- (c) the content (both scientific and linguistic) of new ESP materials may be daunting for some; it demands an understanding of a variety of fields - chemistry, biology, mechanics, economics, etc. - or at least the capacity to acquire such an understanding fairly quickly. (It is not good enough, I feel, for a teacher to say that he is only there to teach the language, leaving the students to unravel the specialist content of a text; if the teacher cannot master this content, he must at least show himself willing to try, otherwise his credibility as a teacher must suffer);
- (d) the problems of conceptualising information may also be daunting - extracting information from a paragraph and converting it to the tabular or diagrammatic channel is not everyone's forte, but a teacher should be able to understand how this is done in case he has to explain the transformation in class;
- (e) the change in methodology (from oral emphasis to reading) is unsettling for some, I fancy. The new ESP materials do not seem to "do" anything because the usual paraphernalia of chorus pattern drills, pronunciation practice and oral substitution exercises is not there - the teacher doesn't hear so much English and so feels that nothing is being learned;
- (f) the change may also seem unreasonable. When the audio-lingual approach became the rage, many foreign teachers of English were discovered to lack oral mastery of the language and there was a boom in courses for pronunciation, conversation etc. How we tell the teacher that his (in some cases) hard-acquired oral skill can be put into mothballs and instead he has to learn how engineers write, or what "sp² hybridisation of ethylene molecules" is. Some teachers are perhaps understandably reluctant to do this;
- (g) being satisfied with their lot, some teachers may be also reluctant to listen to someone proselytising on behalf of ESP; they certainly don't want him poking around in their classrooms watching their lessons; and they will not bother to observe his lessons.

The general picture seems to be that linguistic theory and the classroom methodology is running far ahead of the human resources. The problem is to entice the leopard into the cosmetic surgery necessary to change his spots; and this is an encouraging way suitable for people who are free agents and not obliged to take an interest in new ESP techniques: the monthly salary cheque will arrive regardless of whether they embrace the gospel of Dr. Widdowson or prefer reading aloud round the class with multiple choice to follow.

II

Assuming that the enticement can be accomplished, we will need a training programme suitable to influencing the teacher towards the new approach. Some suggestions are set out below, which may be the basis of discussion.

Elements in a teacher (re-)training course for ESP

A. Subject-specific training

1. Practice in handling simple problems, presented in English, related to the subject taught, e.g.
 - (a) setting up simple apparatus for an experiment;
 - (b) conducting a simple experiment;
 - (c) following a set of instructions in the subject, such as concocting a medicine from a pharmacopoeia (for pharmacy) or operating a machine (for engineering).
2. Practice in handling the different channels in which information may be presented, e.g. transferring written information to the form of tables, diagrams, graphs, sketches (and vice versa).

B. Language training

1. A resumé (with discussion) of different approaches to language teaching.
 - grammar/translation, structural/grading, situational, notional, discourse analysis
2. A resumé (with discussion) of the different needs of different students. general language courses and the four skills oral/aural skills - telephonists, interpreters etc. reading/writing - research workers
3. Comparison of different materials already published at different levels in order to see how they differ and why (in relation to aims and needs).
4. Discussion of presentation techniques for materials - how much can be visual? how much can written exercises help in reading comprehension? how much bilingual presentation can be used?
5. Expanded discussion on discourse analysis; investigation of how 'rhetorical devices' work in a passage; group work to analyse existing materials on this basis and to investigate new passages liable to be met by students in textbooks/journals.
6. Preparation of teaching notes for a lesson, followed by micro-teaching and subsequent discussion on the lesson.

COMMENT: meant to help the teacher maintain his credibility with students; also to give him some idea of the thinking processes involved in the science so that he might appreciate the problems of students in comprehending the English - the intellectual traffic thus becomes two-way.

Co-operation of the science department will be necessary.

COMMENT: the emphasis would be on the interdependent of approaches, with no one approach being totally "right". The teacher's proficiency must extend to an ability to balance techniques against skills to be developed.

8. CONSIDERATIONS ON AN ESP CENTRE FOR LATIN AMERICA

T. C. White, Chile

1. Introduction

Valuable personal and professional contacts set up during the seminar can be maintained and developed through a documentation centre for gathering and disseminating information on ESP to individuals and institutions within and outside the region. ESP is a relatively new development in ELT and it is growing rapidly into a body of knowledge under a great deal of pressure from the 'customers' of specific-purpose English courses. This pressure has resulted in a proliferation of specially designed courses, most of which are unpublished and little-known beyond the immediate environment in which they are taught. The danger is that much of this individual effort will be wasted if there is no way of retrieving and preserving the teaching materials, surveys of needs, questionnaires and papers which have been produced to solve specific problems in universities, schools and institutes in the region.

2. Functions of a Centre

Perhaps the most valuable function of a Latin American Documentation Centre for ESP (LADCESP - CEDLAI) would be to make available to any ESP teachers or materials producer, information, materials and reports of work in progress elsewhere in the subject areas in which he is involved, so that bilateral contacts can be initiated. The ability to do this would depend on a steady flow of reliable and up to date information to the Centre. The staff of the Centre would select from this information items likely to be of general interest (major projects, seminars, publications) and include them in its periodic publications. The centre would, however, in retrievable form, via a card-index available for consultation or for response to individual enquiries.

The Centre would also attract information and documents from sources in the UK and USA and comparable regional centres elsewhere in the world. It would supply, via its newsletter or periodical review, information on developments in ESP in Latin America to institutions outside the continent.

Besides these broad functions of receiving and emitting information and preserving 'perishable' materials in retrievable form, the Centre could initiate information-gathering activities via questionnaires and surveys on different aspects of ESP. Ideally it would cooperate with information centres in the individual countries where these already exist, and might provide an important stimulus towards setting them up in countries where as yet no national centre exists. As John Munby has mentioned there is a wealth of information located in ETIC Archives in London. The proposed Centre could make information from this and other sources generally known and obtain photocopies of the items relevant to ESP for reference, consultation and dissemination, on request, through the region.

It is to be expected that the Centre would be in regular contact with publishers of ESP materials, receiving review copies of all newly published courses. It is possible that publishers might help with the printing of the newsletter or periodical produced by the Centre.

3. The Centre, its Location and Staffing

It might be necessary to eliminate for the time being, on financial grounds, the highly desirable functions of running regular courses and seminars, providing for research and study attachments, and designing and implementing research and experimental teaching programmes. However, a centre based on an existing University involved in teaching and producing ESP courses would already have access to the basic reprographic and library/archive facilities, and the necessary editorial staff on a part-time basis. It would need the services of a secretary/typist and funds for printing and postage. There are obvious advantages for a location which is close to an Institute or Cultura teaching EOP courses to complement the EAP orientation which a University would presumably have.

It might be asked whether this was a service which the British Council might be able to provide for the region and there seemed no reason why it should not be lo-

cated in London. Objections to this view are that the Council, through its English Teaching Division, already provides a world-wide service and would not be able to fund a separate operation geared to the realities and needs of a particular region such as Latin America. Nevertheless the Council, through its English Language Officers in the region, would be able to provide valuable support for the Centre, once it was set up.

An alternative view is that continuity, and full relevance to the ESP needs of the region, could only come from a Centre staffed by long-serving and practising teachers and materials-writers likely to remain in Latin America for most of their working lives. This suggested the gradual expansion and internationalisation of an existing country operation, with as much help and funding from outside sources as might be necessary.

4. Conclusion

Mr. White's sketch of this project produced various immediate offers of support. Other sage voices, however, expressed caution and discouraged the idea of premature action. The general sense of the meeting, under the Chairmanship of Controller ETD, can be summed up as follows:

1. There would be very great benefits from such a form of organisation, which should most probably be attached to a University with access to EOP schemes. The eventual location of such a centre and the facilities available would influence the scope of possible activities.
2. For the time being all participants should return to their own countries and 'put their houses in order' (i.e. find out about, and coordinate, information about ESP activities in their own territories). They should then consider what kind of facilities and support they could offer towards the establishment of such a Centre.
3. A further international LA ESP Seminar should be organised in a year or 18 months' time (hopefully with British Council support), at which a representative Working Party, on the basis of offers then received, might work out firm details of a Centre.

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