

INFORMATIVE TECHNICAL LANGUAGE

by W.D. Maxwell-Mahon

*We but teach Bloody instructions, which being taught return
to plague the inventor.*

(Macbeth: I, vii, 8–9)

Those who do the world's work in factories, mines, and transport tend to leave the niceties of the English language to teachers, academics, and compilers of dictionaries – 'harmless drudges', as Dr Johnson called them. But indifference to the use and abuse of English can have painful results for eminently practical men. Witness the unfortunate blacksmith who, placing a hot metal bar on his anvil, said to his young assistant: 'When I nod my head, hit it'. Hazards of this sort proliferate among the peoples of the Third World grappling with the intricacies of an industrial way of life that is as foreign to them as English technical instruction. It is for these newcomers to the Machine Age that Clive Brasnett's teaching manual is designed.¹

Brasnett spent three years with his colleagues Abdul Hadi Abla, Muhammad Mohie ed-Deen, Abdullah Hassoun, and Teyssir Kamleh teaching English to students of the Technological Institute of Damascus. Drawing upon this practical experience, he has compiled passages for reading, many with accompanying diagrams, from texts dealing with the applied sciences. The passages are grouped under headings such as 'Communications', 'Petroleum', 'Motor Cars', 'Metals', and 'Welding'. Words and phrases found to cause difficulties of interpretation have been printed in bold type; a glossary of these terms follows each passage and an Index at the back of the manual lists their first appearance in the text itself.

In linguistic phraseology, syntagmatic and paradigmatic relationships refer to the combination and selection of words in a

¹ Brasnett, C.: *English for Engineers*. Methuen, London, 1976 (reprint). Paperback.

language. Using English, for instance, involves placing a word in a context with relation to other words in the same context; before locating a word in this way, we have selected it from sets of words with related meanings which it has displaced in the particular context used. Brasnett employs these linguistic concepts in compiling the exercises that follow the passages for reading. Students are required to choose technical terms or phrases to insert in 'gapped' sentences thus constructing statements both grammatically and factually correct. The selection and combination exercises are followed by questions that involve a description of processes and principles first explained in the selected reading material.

Those using Brasnett's manual are assumed to be familiar with, or to be undergoing training in, some aspect of engineering or technology. What about the bulk of the labour force outside these areas of knowledge? What about the workers (to echo Mr Harold Wilson) for whom English is also not a home language but whose understanding of its technical usage is fundamental to their job situation? Problems associated with communication among indigenous and migrant workers of this class are not restricted to Third World countries. Britain has about 3 million Asian, African, and West Indian artisans who must be proficient in technical English. The teaching program used at the Pathway Further Education Centre in Southall during 1970 to achieve this type of proficiency is set out in book form by T.C. Jupp and Susan Hodlin.²

The Pathway educational program is an example of theory and practice in functional language teaching. As such, it exemplifies the application of a further linguistic concept viz. the distinction between the language system we use to generate discourse and the individual utterances of that discourse. The distinction is basically between language competence and performance and may be likened to knowing the rules of a game and playing a game under those rules. The advantages of studying the English language system or grammatical rules *per se* are undeniable. Nevertheless, the primary consideration for the foreigner in an English medium environment is the functional aspect of the language – its actual usage in real-life situations. The authors of *Industrial English* have made this functional aspect the guide line in teaching their subject matter.

Obviously, the thing to do when arranging to teach the functional use of technical language to non-English speaking

² Jupp, T.C. and Hodlin, Susan: *Industrial English*. Heinemann Educational Books, London, 1975. Boards.

workers is first to find out how and when this kind of language is used. Jupp and Hodlin did just that. They recorded the verbal pattern of a typical working day in a British company employing Asian immigrants to make plastic electrical fittings. The pattern obtained indicated the requirements for the course eventually established at the Pathway Education Centre.

The basic requirements for technical English usage by students attending the Pathway course were defined as recognition and understanding of letter lists, numerals, colours, and time records. These basics were taught by means of object sets, cards, and slides. Accompanying the initial training was instruction in possessive determiners, and the meaning of orders and directives transmitted by verbs like 'put down', 'pick up', 'hold', 'get back', and 'touch'. Glove puppets were utilised to present a lively two-sided dialogue so that students' communication problems could be played out and discussed. Subsequent stages in acquiring a technical vocabulary involved learning terms for weighing and measuring, specifying operational stages in a manufacturing process, and describing the overall factory system.

The Appendices to *Industrial English* are an integral part of the teaching and testing methods. The relationship between language form and function is mapped in a chart; the pragmatic nature of this chart can be seen from an extract:

Language functions

Instructions for a simple manual job

Language forms

vocabulary: immediate job
 present simple tense in affirmative with
you
 determiners: *the, your*
 short answers with *do* present simple
 tense: third person
 questions: *where? when? what?*

The pressing need for training schemes in technical English usage, particularly where large numbers of foreign workers are employed, is economically self-evident. Less evident, perhaps, is the point made by Jupp and Hodlin in discussing communication breakdowns at factory floor level viz. the ability to communicate in English depends on much more than a knowledge of the linguistic forms of English. They illustrate this point by the story of the Indian graduate, well versed in English grammar, whose first job in Britain was in a bakery. Every hour or so the supervisor would walk past, shout 'All right?', and put his thumb up. Each time this happened the Indian imagined he was being told to work harder; by the end of the shift he was a nervous wreck.

The functional use of technical English by Third World trainees or immigrant workers is one thing; its informative use by qualified engineers and technicians is another. Informative usage may involve the writing of reports, the compilation of design projects, instruction manuals, and the like. In general, engineers and technicians manage to cope with the problems of this communication situation reasonably well.³ But they are often called upon to speak extemporaneously about technical matters before management committees and company boards or to read a paper to their institutes. The presentation of information in this way can be an ordeal for both speaker and audience. A few suggestions about oral delivery of technical information might make the ordeal less trying.

There is a difference between delivering a talk about technical matters and presenting a technical paper – which everybody knows and most people forget. A talk is basically an attempt to convey a personal point of view to, or create an attitude of mind in, an audience and to do so with a minimum of formality. The type of audience, whether expert or generally knowledgeable, will influence the choice of diction and approach to the subject; in principle, however, it is best to use short, direct sentences, to reduce dependent clauses, and to avoid highly complicated terminology. Because of the strong personal element in talking *to* an audience (in contrast to reading *before* them), a speaker will try to create the impression of relaxed self-confidence. Perhaps it will help to remember the dictum: 'the art of effective speaking is the ability to be ill at ease naturally'.

In presenting a paper, the purpose is to disseminate information on a subject in a formal and systematic manner. This entails precise definition of terms, co-related research data, and a well-structured argument. You should begin by explaining the reason for what has been written and pointing out the selective nature of the material. During your reading, pause at times to summarize the various steps in the argument and repeat statements whenever necessary to ensure that the audience understands the issues in question. Every paper should grow to a conclusion derived from, and be the culmination of, the ideas that constitute its logical structure. An apt quotation often sums up the essence of the paper. The following, by an anonymous writer, was used by Harold G. Cassidy, Professor of Chemistry at Yale

³ See 'Report Writing' in *English Usage in Southern Africa*, Vol. 6, No. 2, 1975 and Vol. 7, No. 1, 1976.

University, at the end of his discussion about the presentation of scientific papers:

In promulgating your esoteric cogitations or in articulating superficial sentimentalities, philosophical profundities or psychological prognoses, beware of platitudinous ponderosity. Eschew jejune babblement and asinine affectation. Let even your extemporaneous discantations and unpremeditated expatiations have vivacity and intelligibility without rodomontade or thrasonical bombast. Sedulously suppress any polysyllabic propensities, paraphrastic euphuism, psittocaceous vacuities, ventriloquial verbosity and multiloquial bravardage. Shun double-entendre, prurient jocosity, and pestiferous, ingustible, or turgid profanity, whether obscure or apparent. In short, speak clearly, plainly, simply.⁴

⁴ Cassidy, Harold G.: 'The Professional Presentation of Scientific Papers', *Journal of Chemical Education*, July, 1963, pp. 373-376.