PROBLEMS OF INADEQUACY IN THE READING SKILLS
OF INDIGENOUS STUDENTS

Pamela M. Riley

Lae Institute of Technology

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The indigenous students on whom this paper is based are those studying at the Institute for Higher Technical Education in Lae, studying surveying, various branches of engineering, accountancy and business studies. All have passed the Territory School Certificate, some have completed one or more additional years at a high school such as that in Rabaul, others have had at least one year of additional secondary education in Australia. Thus they are among the educated minority, and, with students in other tertiary institutions, probably read more efficiently than most of their countrymen. Most of the students have heavy time tables, weighted to science and mathematical subjects, so the reading problems which arise are derived from the demands made by intensive rather than extensive or recreational reading. A survey of staff opinion was carried out to assess the extent to which inadequacies in various skills hindered the students' progress in particular subjects. From the responses it was clear that most of the students had not mastered the skills considered necessary for success in tertiary studies, the main comment being that they read very slowly, with limited comprehension.

The reading skills examined include intensive reading, both oral and silent, for a wide range of purposes; reading involving a variety of techniques, including consulting reference books and using the library effectively, the ability to make a critical evaluation of material read, verifying information, assessing arguments, sifting irrelevancies, recognising fact and opinion and assessing the writer's attitudes and purposes.

Intensive Reading for Comprehension

Foreign language students often show verbal deficiencies in their oral reading, not only mispronouncing words, but stressing or emphasising incorrectly, or
weighting every syllable equally in a colourless monotone. On the other hand, most of us have despaired over the student who reads a passage aloud with emphasis and conviction, achieving a meaningful communication with his listeners and is unable to recall anything about it at all. This "barking at print" is yet another aspect of the reading problem, not, of course, confined to those reading, as our students are, in a second language.

Far less easily detected is silent reading disability. The basic goal of all reading is understanding or comprehension, and reading is essentially a mental process. One reads for a specific purpose, be it functional or recreational. The reading method adopted should depend on the purpose for which the material is read; the complexity of the material; and the extent to which it is familiar or can be related to past experience.

For students in a technical institute, most required reading is study reading, and comprehension depends on grasping concepts and selecting relevant parts to concentrate on. The purpose of reading may be to acquire a broad outline of the topic, to select and understand the main idea of the passage, to understand a principle, to solve a problem, or answer specific questions, to note and recall detail, subordinate ideas or a sequence of events, or to follow directions. Each involves understanding the relationship of ideas, and following the organisation of the author's plan, a skill which most of our students have not mastered.

Exercises in noting topic sentences and tracing the plan of a paragraph or passage, and writing passages on a similar plan, have been given in an attempt to help the students become aware of the importance of the relationship of ideas. Recognising the logical connection of ideas and following the steps of an argument present problems to most of our students. It is easy to blame the schools for not teaching them to think. Attempts to help them to think logically, at least in my classes, have had disappointing results. For example, a series of lectures devoted to argument assessment resulted in most of the students detecting fairly obvious illogical and unsubstantiated arguments in short extracts. One would hope this would transfer into the reading of longer passages, advertisements, editorials and articles promoting a particular point of view, but unfortunately this was a vain hope.

Parallel to this is the difficulty students have in drawing a conclusion from facts or experiences presented to them. For students in Western cultures this is
strengthened outside school experiences, from radio, television and motion pictures, as well as from books, newspapers and magazines. Most Territory students have cultural backgrounds of an entirely different type with few opportunities to make the judgements and decisions our form of education requires. Sifting evidence, forming conclusions from printed material and reading for implied meaning are techniques which are foreign to them - yet these techniques are taken for granted in education at the tertiary level. Related skills such as determining cause and effect and sifting out relevant detail are equally necessary in scientific studies.

Note taking and outlining are two of the most useful ways of study reading to direct concentration and help students to isolate relevant facts and are skills needed by the students in most subjects. Their difficulties in grasping the main idea of a passage, noting the details and organising them hinders their understanding, and makes recall extremely difficult. While the English department attempts to teach and have the students practise these skills, the time that can be spent on them is minimal in terms of the obvious need.

**Reading Techniques**

If the students are to use the library effectively and study independently they need a variety of reading techniques. Finding the information required is the first stumbling block. Although most students have used dictionaries and encyclopaedias - from which many copy verbatim - they need practice in using indexes, consulting tables of contents and generally surveying a book or article to determine its relevance for their purpose. More complex bibliographic skills, such as consulting catalogues and files must be demonstrated as part of library orientation.

Once they have located the book or article, the students need to skim in search of specific information, or to scan the article to gain a general impression of its content, to establish an order of priority in reading, or to decide against reading it. These skills are widely used in Australian society - skimming for telephone numbers, checking addresses or lottery results, looking for T.V. programmes, scanning magazines or newspapers before buying - but play little part in New Guinean society.
Previewing or surveying the material, selecting certain aspects to concentrate on, revising what has been read to relate it to past experience all involve these search skills. Problem solving and seeking answers to specific questions often depend on the ability to locate and recognise the relevant material. Both skimming and scanning are inadequately mastered, and many of our students laboriously read every word, and, unable to find what they want, give up in frustration, often having spent several fruitless hours.

Speed of Reading

Efficient reading involves a variety of techniques and a variety of reading speeds. If the students are to master their studies and keep reasonably well informed of the developments in their particular field, they will need to read quickly and efficiently, varying their reading speed according to the demands of the material. Earlier in the year most of our students read everything, irrespective of content or their purpose in reading, at the same speed, rather slowly. The class average in one group was 133 words a minute, and as most claim they read a passage at least twice, this slowness was considered a major handicap. Practice was given in various types of silent reading, including timed reading of extracts of 1000 words of comparable difficulty, and most students increased both the speed of their reading and the comprehension. How much carries over into other subjects is questionable, but the students were made aware of the progress they had made and the necessity for practising faster reading. Even if they are not handicapped in class, slow readers are restricted in what they can attempt in preparation and assignment work in the time available.

Efforts to increase reading speed stressed better comprehension and mechanical skills. Surveying or pre-reading material to grasp the main idea, noting headings and sub-headings, becoming aware of linking or contrasting words or phrases helped to direct the students' thinking about the material being read, and reduced the regressions necessary for them to understand it.

As mentioned earlier, our students tend to read everything at a uniform slow rate. To assist them to break the tempo at which they read, the mechanics of eye movements, visual span, fixation and regression were explained to them. When made aware of the physical process of reading, most students made conscious efforts to read smoothly, sweeping their eyes along the page and taking in meaningful units, reducing
the regression. A tachistoscope controlling the time for fixation should be valuable to increase word recognition and eyespan. Pacing machines or reading rate controllers of various types could be used effectively to increase perception and limit regression; but unless the students read actively and purposefully, thinking about the material, these mechanical aids will have little lasting value.

A study by Rosaline Langsam with American College freshmen found the following factors to be important in good reading, "a verbal factor characterised primarily by its reference to ideas and meanings of words; a perceptual factor which is a function that appears to be a facility in perceiving details; a word factor which seems to have as its principle characteristic a fluency in dealing with words; a factor tentatively identified as seeing relationships: possibly involving logical organisation and selection of pertinent ideas."

Concept formation, perception of relationships and organisational ability are thus as important in governing speed of reading as general word knowledge. Like many of my colleagues who have spent countless hours on vocabulary extension exercises, with classes of a variety of standards and in a variety of situations, I am sceptical of over-insistence on "teaching" vocabulary, even in its context. The most we can hope for is that students will recognise the word or phrase when they meet it again, and it will facilitate rather than hinder their understanding of the idea expressed. Exercises in word recognition will undoubtedly assist the students to increase reading speed; increase in reading efficiency will depend on comprehension. From the complexity of the material and the purpose for which they are reading the students should determine at what speed to read the passage.

**Critical Reading**

To make a critical evaluation of what they are reading, students should be able to verify information, recognise fact, opinion and prejudice, assess the worth of an argument, sift out irrelevancies and recognise the writer's attitudes and purposes.

Verification of information depends (partly) on the ability to relate material to past experience, and the past experience of our students in the fields in which they are studying is extremely limited. Cultural deprivation is a stereotyped phrase much bandied about, but in the sense of restriction or limitation of Western cultural experience,
cultural deprivation certainly handicaps Papuan and New Guineans in assessing the worth of what they have read. There is little to which they can compare the material with which they are dealing. Consulting various texts on the subject is the obvious way in which this will be overcome, but quite apart from the motivation, their reading disabilities alone would prevent their so doing. Thus, to employ another cliche, the vicious circle continues - inefficient reading and poor reading skills prevents their gaining information to improve their reading efficiency.

Recognition of fact and opinion, verification of information and comparison and evaluation of conflicting ideas are relatively sophisticated skills. In a technical institute our students do not employ these skills often in their classwork - apart from English and General Studies classes. Physics and Chemistry lecturers recoiled in horror from the question, "Can the students compare and evaluate conflicting information?" and assured me the students were not presented with conflicting information - it was difficult enough to teach them the material in the course, and the students had neither the time nor the sophistication to dwell on conflicting scientific theories - a view to which all Territory teachers will be sympathetic.

Recognising prejudice and bias and assessing the writer's attitudes and purposes and drawing inferences are likewise sophisticated skills not exercised in technical subjects.

However, the students' reading when they leave the Institute and are established in their professions as engineers, surveyors or business magnates will centre around newspapers, magazines and journal articles, and they will be subjected to propaganda and advertisement. While they can assess the worth of the "nine out of every ten film stars prefer Zeiss theodolites", or "Wouldn't your office look better with an elegant streamlined Remington accounting machine?" advertisement, they are unskilled in detecting the slant given to such articles as "In Papua-New Guinea, one methodological aim of Australians has been to replace the intertribal and intra-tribal violence of the inhabitants with the institutionalised violence of the white administrators". Obviously, "reading between the lines" must be extremely difficult to those having difficulty reading what is actually on the lines but being able to assess the purpose behind a passage of writing is a skill our students should attain.
Reading is affected by the attitude of the reader as well as the attitude of the writer. We comprehend by a process of selection and organisation and what and how we "select" depends on our own judgement, our values and attitudes. To be meaningful, new experiences must always be related to existing ideas, patterns of thought, and behaviour. As Charles Darwin wrote, "All observation must be for or against some view." That the reader's attitude to the material determines what he gets out of it was illustrated in an experiment reported in Manya and Eric De Leeuw's book, "Read Better, Read Faster". After discussion with a group of foremen about likes and dislikes, the authors prepared a written statement containing some of the things they evidently liked about their work, and all the things they seemed to dislike. One foreman was asked to read this and then write down what he remembered. His statement was passed to another foreman, and the procedure repeated until the last foreman had his statement, which contained all the things they liked about their work that had been contained in the original statement, as well as many things they liked that had been deliberately excluded. Most of the things they disliked had been forgotten. Attitudes, therefore, are powerful and selective. Awareness of the effect the reader's attitude will have on material read may help to break down prejudices and give a more balanced judgement, but those of us who readily detect prejudice in others rarely see it in ourselves. "I'm firm in my opinion; You're obstinate and he's pig-headed", is too true to be funny.

The students' attitudes will colour how they read and what they see in their reading. If they approach material expecting that the work will be too difficult and that they won't understand it, this negative attitude must effect the efficiency of their reading. An awareness of their reading inadequacy should motivate them to attempt to improve their efficiency, and if they can see a decided improvement in their own performance, I think it will motivate them.

Students have difficulty in varying their reading speed and technique according to their purpose and the complexity of the material; in relating what they are reading to previous experience; in following a plan or sequence of ideas; in seeing the relationship between ideas in what they read; in verifying and evaluating material and in assessing the purpose behind the writer's ideas. They have difficulty in detecting the main idea in a passage, in selecting relevant detail and following an
argument, and in distinguishing fact, opinion and prejudice. They have difficulty in distinguishing cause and effect, in generalising, and in drawing inferences or reaching conclusion. They do not use the library or reference books effectively to find material; and if they have found it, they are unable to use it wisely. They have the constant frustration of reading slowly, and rarely having enough time to do what they would like.

Research which defines specific problems at all levels may help to provide ways of helping the students to acquire the skills they need.

Mechanical reading faults such as head movements, pointing at words and vocalisation, fortunately rare at the tertiary level, are easily detected. Sub-vocalisation and faulty eye movements are less easily detected and less easily cured. An examination of the role of auditory perception, acuity, listening comprehension, auditory discrimination and retention in the teaching of reading to Papuans and New Guineans may point to some solution to the problem in primary and secondary schools. Studies of visual perception and word recognition at all levels should direct attempts to help students enlarge reading vocabularies and improve verbal deficiencies. Studies of concept formation, mental perception and association of ideas should direct the teaching of intensive reading.

The results of such research would provide a valuable basis for a developmental reading programme from the elementary school through to tertiary studies, so those who had been educated would be functionally literate to the standard they need.

In dwelling on the inadequacy of the students' reading skills this paper may seem unduly pessimistic. One can rationalise by showing that many students in universities all over the world have reading problems, but it is the magnitude of the problem here which makes it so important. Most of our students lack most of the skills necessary to cope effectively with reading at the tertiary level. I believe this is their major handicap.
1. Anderson, A. W. Speed up your Reading, University of Western Australia, 1960.