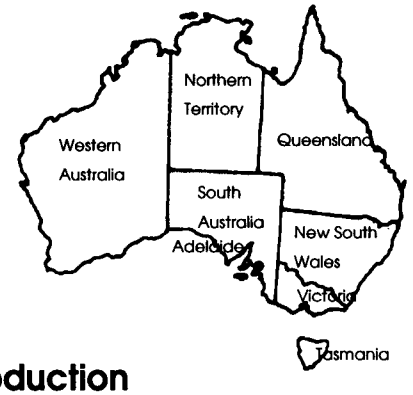
The Australian Journal of
INDIGENOUS EDUCATION

What Does the Literature Say about Computer Literacy and Indigenous Australians' Language?

Tangi Steen
Computing Lecturer
University of South Australia, Adelaide



Introduction

The word *culture* is defined by Singer, 1988: 6) as:

> a pattern of learned, group-related perceptions —including both verbal and non-verbal language, attitudes, values belief and disbelief systems, and behaviours — that is accepted and expected by an identity group ... each identity group has its own language or code, each group may be said to have its own culture.

It is obvious from this definition that each one of us belongs to one culture or another, each culture encapsulating a totality of a way of living, expectation and behaviour that is specifically unique to that group. Culture is constituted in our daily lives, in our negotiations and adjustments to experience day-to-day existence.

Singer's definition of culture clearly indicates that language, both verbal and non-verbal, is a major component of a culture. According to McCormack (1992), even before the development of agriculture, each cultural group had their own traditional language. With the advent of agricultural societies, traditional languages were replaced by a common language used mainly for administration purposes; hence two types of languages were used, traditional and the administrative (*cum* official) language.

With the development of industry in Europe rural people were forced into factory cities to find work and the resulting industrial societies encouraged the use of national languages, e.g. German and French, for communication. Thus, new, national languages replaced traditional languages with many traditional languages being either totally lost or becoming almost non-existent.

Immigration to another country may also mean learning another language for communication. However, in a multi-cultural society like Australia's more and more people are becoming bilingual, with the skills to communicate using both the official language and a traditional language. This has resulted in a desire amongst various Indigenous communities in Australia to rekindle their traditional languages and hence assert, or reassert, their traditions and identities.

Information technologies, especially computers, are used by many Indigenous communities as tools for re-learning their own language, or to improve their literacy skills in the official language. The intention of this paper is to inform readers, and especially educators, of the limited availability of literature in this area. A list of articles is annotated here with reference to the use of computers to assist Indigenous Australians in literacy (the ability to read and write) programs in a variety of educational settings. The major issues raised in the literature are summarised at the end of the annotation.

Annotated Bibliography

The literature here is arranged in chronological order for two purposes. One is to get an historical perspective on the work being carried out in this area, and the other is to see whether literacy among Indigenous people has improved with the use of computers.

Descriptive Study of Computer Education in the Northern Territory Aboriginal/Pastoral Schools: Results of the 1983 Survey

Planning and Research Section, NT Department of Education.

This report lists the number of schools in the Northern Territory with computer equipment, in addition to the issues raised by staff of those schools in relation to the significance of computer education, especially in literacy and numeracy programs. Of the 52 schools surveyed, 85 per cent had no computing equipment at all, although some had future plans to purchase computer equipment in the near future. Of the 15 per cent of Northern Territory Aboriginal/Pastoral schools which had computer equipment, most hoped to continue upgrading their equipment in the coming years.

The report highlights the importance of the introduction of computers to schools and the advantages experienced by schools with computer equipment. In particular, staff at Ali-Curung School observed that amongst many advantages, students made remarkable progress in learning and retaining number facts and tables. Computers provided immediate feedback on students' work, its repetitious nature was found suitable to the learning styles of students, e.g. students found the interactive and uncritical aspects in the Computer Assisted Instructions (CAI) positive, and they overcame the 'shame' aspect normally associated with failure to perform in front of the class.

Of all the schools with computer equipment, the advantages of using computers is best summed up by the statement:

> The computer fits into the learning style of the Aboriginal student — it is endlessly patient, repetitive, individually interactive, positively reinforcing, sets short term easily apparent goals to reach, provides instant rewards for success, provides further explanation free of negative comment, allows the child to progress at his or her own rate and frees the child from peer pressure of conformity to the average standards of the group (1983: 37).

Aboriginal Women and Girls in a Technological society ...?

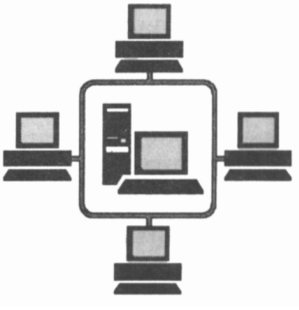
Dolman, S.E. (1984)

Dolman stipulates that the Industrial Revolution in Australia started when the white people stepped into the lives of Aboriginal ancestors. Since then, she believes, technology has dictated the lifestyles of Aboriginal people, hence there is an urgent need to educate Indigenous people to adjust to technological changes. Dolman sees computers as a major part of the technological changes which will continue to influence Indigenous peoples' choice in employment and education.

Dolman establishes that the major problem facing (and in some instances still facing) Aboriginals in the Australian education system is 'its lack of relevance to their everyday lives' (1984: 54). She states that one of the many reasons for non-participation and failure in formal education is the that learning styles imposed by educational institutions are quite different to the learning styles of Aboriginal students.

Five recommendations are made to improve the learning environment for Aboriginal people. These are:

- computer studies should be used as a core unit in TAFE and other Aboriginal access courses
- non-Aboriginal teachers of Aboriginal students should be encouraged to reassess their attitudes towards Aboriginal children and their cultures
- discussion groups must be set up on a national level to encourage participation by Aboriginal women in the use of computers
- educational institutions must provide special entry into computer-oriented courses to allow Aboriginal access
- newly developed educational units should be encouraged to include computer courses in their curriculum planning.



Computers and Aboriginal Literacy

Darval, K. (1986)

Darval outlines two approaches to the use of computers at the Weilmoringle State Primary School, NSW. One develops the Weilmoringle Readers as part of the Wytaliba Aboriginal Studies Project by children, and the other develops the Wytaliba Word Lists consisting of local dialect words. Once a word list was established, children were encouraged to use their own vocabulary in written and spoken forms within the school.

Before the computers were introduced to the schools, Darval found that normally most children would make 75 per cent or more spelling mistakes in a spelling test, and their reading skills were rated far below the average for their age group. Computers were used at Weilmoringle by children to write their own stories using their own word lists. The stories were then incorporated into the Weilmoringle Readers for use by the children in the literacy program. The Readers were also sent home for parents' feedback.

Darval found that children who had difficulty with spelling and reading were able to read and enjoy their own stories and others, even though language used was at a higher level. Stories were written about the children's social and cultural backgrounds, e.g. 'Going Emu Eggs Hunting', and because they were writing about what they had experienced and knew already, the stories generated a lot of interest amongst themselves as well as their teachers and parents. Darval believed that the driving forces for the improvement of literacy were the use of local knowledge by the children together with their own experiences, and use of computers, both as a tool for learning and as a platform for social interaction. The literacy aspects stimulated the children to succeed, and the children's attitudes toward reading and writing changed because they were doing something that they enjoyed. As a result, children developed high self-esteem and a more positive view of themselves and of others within the school and community.

Darval suggests that with any Aboriginal literacy program parent involvement should be targeted. The parents witnessed their children's enjoyment of their stories in the Readers, they themselves became interested in their children's stories and progress, and therefore started developing their own literacy skills to help their children at home.

Computers and Computer Assisted Learning (CAL) have offered an alternative approach to learning and have proven to play a significant role in the literacy program at Weilmoringle. Computers were seen as a means to publish stories, and as a means to learn weekly word lists. Moreover children viewed computer work as enjoyable work — not seen as school work.

Computers and Aboriginal Students

Fryer, M. (1987)

When removed from formal computer studies and computer literacy, computers can be used in a variety of ways for language teaching and special education. Fryer establishes that computers can be successfully used for teaching Aboriginal students basic numeracy and literacy skills, since some elements of Computer Assisted Learning (CAL) are congruent with the preferred Aboriginal style of learning. In his paper, Fryer describes the background to a study where computers were used in literacy and numeracy programs for Aboriginal students in South Australia.

In terms of obtaining the basic skills of literacy and numeracy using computers and/or computer assisted programs, Fryer believes that Aboriginal students work coherently and study well together in small groups, if given the opportunity.

The study involved 50 Year 7 and Year 8 Aboriginal students attending numeracy and literacy classes of 30-40 minutes duration, four or five times a week. Students were encouraged to work in groups, and the teacher became the helper. Every attempt was made to use computers to support existing curriculum, and programs of study were negotiated with the teacher.

Fryer found that the benefits of Aboriginal students using computers include:

- developing independence, thus the Aboriginal students felt in control of their learning situations

- developing a relationship structure that is conducive to learning and different to the teacher/student relationship in a formal classroom setting (teachers are seen as helpers or facilitators of information)
- reducing the teacher-whole group interaction, and increasing the one-to-one interaction, thus building self-esteem and confidence in abilities.

Fryer envisaged that the problem with this approach, of teacher/student interaction in computer classes, would lie in the inappropriate and unreliable equipment often found in Aboriginal schools, together with the lack of quality software specifically designed for use by Aboriginal students in literacy and numeracy programs.

Introducing Computers to Schools with Aboriginal Students

Fleer, M. (1987)

Fleer urges educators of Aboriginal students to realise that where cultural and social pedagogy are found (and considered significant), these will have an important impact on the process of implementing computer education in the school context. According to the National Aboriginal Education Council (NAEC), all Indigenous people of Australia can be classified into four main communities, which are neither discrete nor static. These are: traditional, rural, urban and urban dispersed communities.

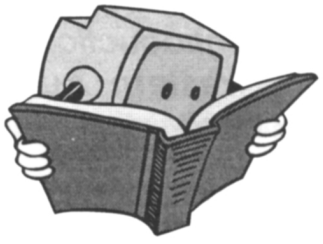
Fleer warns, in reference to the implementation of computer education for Aboriginal students, of the use of inappropriate software. She states that:

> software used in the mainstream schools may have limited applicability in a variety of Aboriginal contexts where language use, styles of communicative interaction, and preferred learning strategies may not only be very different from the mainstream, but may also vary extensively amongst themselves (1987: 115).

Fleer strongly supports the notion that computer education must be culturally and socially appropriate, and must take into account Aboriginal students' community backgrounds.

Can Aboriginals Really Use Computers?

Coldwell, R. (1988)



Coldwell established that Aboriginal people, or Indigenous people of any country, can learn to really use computers as a result of his years of teaching non-white South Africans how to use computer-aided drafting systems and his study of computer training for Aboriginal people which included Indigenous and non-Indigenous Australians of the Northern Territory and Queensland.

A major problem, according to Coldwell, concerning Aboriginal peoples' capacity for computer literacy and education doesn't lie within 'the technical qualification of individual students for computer use or, further, of their specific cultural groups, but more of the sympathy and lack of differentiation of their socio-educational context' (1988: 16). The example he used was the comparison of the social situations of South Africans and their Apartheid policies, and that of Queensland with its segregationist policies. Where South Africa's cultural groups have access to computer education, Queensland's social prejudices meant that Aboriginal people doubted their own ability when it concerned computer education.

Coldwell concluded that Aboriginal people can really learn to use computers, provided that:

- computer systems and terminologies are explained in terms that Aboriginal people are familiar with; for example explanation of a computer system can be made in terms of, say, an automobile system
- technical jargon must be avoided, and computer language is riddled with this
- sympathetic teaching of appropriate issues related to the social and cultural backgrounds of Aboriginal people is undertaken in computer education.

A Programme for Excellence — But for Whom? An Ethnographic Study of the Introduction of Microcomputers in Western Australian Aboriginal Schools

Fleer, M. and Klich, Z. (1988)

This study examined the factors involved in introducing computer technologies in selected Western Australian Government schools with a majority of Aboriginal students. The introduction of such a program of study, according to the National Advisory Committee (NAC) on Computers in Schools, must emphasise 'the need to make special provision to encourage access to the program by groups such as girls, Aboriginals, disadvantaged students and the disabled' (1988: 3). One would naturally assume that provisions are made for specialised groups (as identified by the NAC) to ensure computer education access and equity. However, study outcomes found that, although provisions were made, several factors were not even considered when implementing computer education in some Aboriginal schools in Western Australia.

The outcomes of the study were as follows.

- **Environmental constraints were not taken into consideration**
  - — remoteness of most Aboriginal and community-based schools resulted in infrequent visits by computer support personnel
  - — inappropriate physical set-up for computers, e.g. classrooms in small schools are often made up of transportable units accessed only by a set of stairs, and therefore limiting the transportation of the computer equipment (often wheeled around on a trolley) from one transportable unit to another.
- **Computer studies didn't form part of the teacher training course**
  - — graduate teachers are less prepared to implement computers in the classroom
  - — teachers complained that in-service training for teachers in remote communities is scarce.
- **Support structures not in place**
  - — the task of co-ordinating computer education is often an extra load on the normal duties of a teacher. The need to consult the co-ordinator, so as to maintain the continuity of the computer class, often resulted in disruptions to the co-ordinator's class
  - — in cases where Aboriginal Education Workers (AEW) are used instead of a co-ordinator, computer education was found to be more successful.
- **Inappropriate software**
  - — most software was text-oriented and found not to be congruent with the reading abilities of Aboriginal students
  - — lack of appropriate software with graphics, stories and characters which are familiar to the people in remote communities
  - — few made use of computers for language development, due to the unavailability of appropriate software.
- **Staff continuity**
  - — staff turnover was high, hence access to continual use of computers limited
  - — it was suggested that an AEW be appointed as the computer co-ordinator since most AEWs are members of the local community.

Is It Hand-on or Hands-Off? Research into the Availability and Accessibility of Micro-computers for Aboriginal School Children

Fleer, M. (1989)

Fleer reviewed major studies and reports relating to computer education in Australian schools. The paper is presented in two parts: i. Computers in Aboriginal schools; and ii. Computer teaching styles in Aboriginal schools.

i. Computers in Aboriginal schools

The investigation into the use of computers for Aboriginal children is an area of neglect

and only one study has been reported (*Commonwealth Schools Commission Report*, 1985: 29). The findings indicated that computer education for Aboriginal children is useful since it allows individual students to advance their level of performance in knowledge and skill areas in a culturally accepted way. It further emphasised that to guarantee Aboriginal students are given adequate learning opportunities, culturally suitable software must be developed to enhance their education.

An unpublished study by Bowman (1985-88) in the Ali Curung community in the Northern Territory dealt with the effectiveness of the use of a computer laboratory for Aboriginal students' acquisition of literacy and numeracy skills, using Computer Assisted Information. The findings suggested that students' learning was speeded up and that they were keen to use the computers. It also recommended that computers are effective when used as an addition to, and reinforcement of, the learning program offered in the classroom.

A study of the Aboriginal Post-Primary Education project (APPEP) was conducted by the Department of Education in South Australia, due to increasing concerns about poor attendance by Aboriginal students in secondary schools. Aboriginal students involved in the study were withdrawn from normal classes in their metropolitan schools and given 30 minute lessons in numeracy and literacy, four or five times a week, in a computer laboratory.

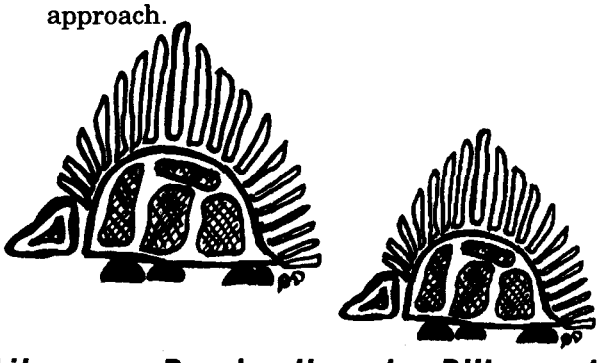
It was found that students who were classified as 'low achievers' in their normal classes had the greatest improvement in academic ability and mastery of computers. It was suggested that the improvement was perhaps brought about by the absence of preconceptions about failure to achieve. It was found that the use of computers in schools was well suited to the Aboriginal students' learning styles because of the use of visual and repetitive forms and it was a non-threatening situation as opposed to the public social shame associated with incorrect answers in the classroom situation.

Both studies established that Aboriginal students perform better in a non-threatening learning environment, where the relationship with the teacher reflected a co-operative learning approach, side-by-side, in a one-to-one or small group situation.

ii. Computer teaching styles in Aboriginal schools

Some studies have indicated that the learning styles of Aboriginal people are best suited to that of computer teaching styles. An unpublished study by Woodside (1985) called 'Aboriginal Learning Styles and Computer Teaching Styles — A Study in Compatibility', found that most educational software supports characteristics such as imitation, observation, trial and error, persistence and repetition; characteristics which prevail in Aboriginal traditional communities.

Woodside also suggested that since Aboriginal people commonly share learning experiences in small groups rather than as individuals, software should be designed that is appropriate for the sharing of information between individuals in groups. He also found that computer use breaks down the traditional teacher focus and establishes a task-oriented approach.



Literacy Production in Bilingual Schools in Central Australia

Czerniejewski, R. (1989)

Czerniejewski started off his paper by defining bilingual education as that which 'aims at teaching Aboriginal children to read and write in their own language before developing English literacy skills' (1989: 216).

The issues Czerniejewski raised were concerned with the difficulties of producing literacy teaching material in bilingual education in Central Australia. The difficulties that he saw in the

bilingual schools in Central Australia, which greatly hindered the progress of literacy programs, were: the unavailability of reading material in the main community language, the process of producing and creating literature using a community language, and the lack of commitment by the parties involved in the production of literacy material.

Among his recommendations was the use of computers for production of literacy material, where the commitment and involvement of the teacher-linguists, students, Aboriginal literacy workers, Aboriginal artists and the literacy production supervisor is called for to form an efficient network of people in the production process. The use of computers as tools for production of literacy training material would require the people involved to become computer literate, thus the computer would not only be used for production purposes but as a tool for interactive participation among those involved in the production and bilingual education.

Another recommendation that Czerniejewski proposed was the desperate need to share resources amongst established bilingual schools with similar background where literacy materials can be modified to suit the needs of different language groups and communities.

Czerniejewski concluded that unless the difficulties outlined above were resolved then teaching a literacy program in a bilingual school would continue to be problematic because of the unavailability of the appropriate training material.

A Pilot Survey of Calculators and Computers Used in Aboriginal Community Schools of the Northern Territory

Stanton, R. (1992)

The purpose of the survey was to provide curriculum developers with information on the current and future availability and use of computers (and calculators) in Aboriginal community schools which had established a link with the Teacher Education Program at Batchelor College.

Stanton found that with regard to computers, Aboriginal schools are well resourced. He reported that 80 per cent of computers in schools are located for direct pupil access, and there are plans for further expansion in the future. Schools that were under-resourced are planning to upgrade equipment, funds permitting. It was noted that the inclusion of computers in the curriculum implies 'that there be a strong support policy with regard to the provision of the necessary machines and software ...' (1992: 14)

Why the Aboriginal Child Succeeds at the Computer?

O'Donoghue, R.R. (1992)

O'Donoghue, based at Kununurra in Western Australia, worked as a Resource Colleague for seven Aboriginal Schools in the East Kimberleys. Computers are used in small community schools throughout the region as a means to improving the literacy and numeracy skills of students. He documented the reasons contributing to the success of Aboriginal students at the computer.

Computers, as tools:

- appeal to Aboriginal strengths in visual and spatial memory skills since these concepts are elements of Aboriginal cultures
- release the child from what is sometimes seen as the negative influence of teachers, who most often use high level English that cannot be understood by students
- allow the tactile skills of students to be exploited
- are a patient medium allowing students the freedom to make and correct mistakes in their work
- give students instant results and pleasure
- present programs which are enjoyable, fun and capture the interest of students, while at the same time teaching them aspects of literacy and numeracy.

Learning Technology Programs in an Isolated Region: Classroom Applications of technology

Hughes, C. (1993)

Hughes described the use of computer and distance education technologies in the South Western Educational Region of Queensland — a region characterised by isolation, small schools, high staff turnover, student mobility, staff inexperience, and pockets of social and economic deprivation, where a majority of students are of Aboriginal descent.

The study outlined ways of overcoming disadvantage caused by isolation and distance, and aimed at providing opportunities for country students in terms of knowledge and skills that can be appropriately used in their communities. To counteract some of the disadvantages, the Queensland Department of Education Learning Systems Project funded the advancement project in the South Western region. The project encompassed the establishment of business education centres in secondary schools focusing on the use of computers and business technologies, establishment of electronic learning resource centres in both primary and secondary schools, introduction of a practical computer methods course in years 11 and 12 curriculum, establishment of telelearning centres in remote areas, and the provision of professional development courses both for classroom teachers and school communities.

The project achieved the following:

- a change in the relationship between and students — teachers were seen as helpers and facilitators
- computer usage improves students' performance in literacy, language, art and music
- more involvement in school activities by school communities
- reduction in staff turnover, so there is definite continuity of service to students
- the use of communication and computer technologies saw an increase in the curriculum options of students in remote areas
- learning and teaching styles were adapted to suit the needs and demands of school communities.

Summary of the Major Issues Concerning Indigenous Language and Computer Literacy

It is clearly evident from the annotated bibliography that issues of concern need to be addressed with respect to the use of computers in Aboriginal contexts for literacy and numeracy programs. The major findings of the articles are summarised below under the categories: learning styles, resources, and support structures for Aboriginal students.

Learning styles

All studies confirm that the use of computers enhances Aboriginal styles of learning language and number facts. According to Woodside (in Fleer 1989), Aboriginal learning styles are characterised by the use of visual and graphic aspects, repetitive and interactive tasks, instant rewards in a non-threatening environment, absence of preconceptions and learning by co-operation.

O'Donoghue (1992) agreed that the learning styles used in literacy programs must take into consideration the cultural elements of Aboriginal communities. Coldwell (1988) and Fleer (1987) called for educators to be aware of the social and cultural backgrounds of Aboriginal students, according to the NAEC classifications of Aboriginal communities.

Dolman (1984) and Darval (1986) found that formal education learning styles are different from Aboriginal learning styles, and stressed the importance of educators of Aboriginal students adopting teaching styles in literacy and numeracy programs which relate closely to the learning styles of Aboriginal people. Dolman, in particular, stipulated that the major cause for non-participation of Aboriginal people in education is its lack of relevance to the social and cultural environments of Aboriginal people.

Another learning style that should be implemented is the use of group work as opposed to individualistic instruction. Fryer (1987) and Fleer (1989) in reference to Woodside, both upheld the view that a teacher-oriented approach must be modified to a task-oriented one where individuals in a group contribute to the outcomes of a project or task.

Resources

Many studies (Fleer, 1987, 1989; Czerniejewski, 1989; O'Donoghue, 1992; Fryer, 1987; Fleer and Klich, 1988) indicated the need for suitable software, CAI or CAL packages which are culturally appropriate and relevant to Aboriginal students in literacy programs. The software design must take into account the learning styles of Aboriginal people, have more graphics and be less text-based, be self-paced, with instant rewards and have an absence of negative remarks.

Czerniejewski (1989) felt that there is a desperate need for all Aboriginal literacy programs to share training resources; resources which are easily modified to suit different community needs.

It was indicated that there is a need for the design of software that takes into account group activities, since Aboriginal students work and perform better in small groups, reflecting their social and cultural background.

Support structures

Fleer and Klich (1988), Stanton (1992) and Hughes (1993) found that appropriate support structures must be in place when computers are used for literacy programs. A strong support policy should be enforced to deal with problems of computer support in remote areas, when high staff turnover and inexperience contribute to existing problems.

Reference

Coldwell, R. (1988) 'Can Aboriginals really use computers?' *ACS Bulletin* Sept: 14-16.

Czerniejewski, R. (1989) 'Literacy production in bilingual schools in central Australia. *UNICORN* **15**(4): 216-220.

Darval, K. (1986) 'Computers and Aboriginal literacy'. *The Aboriginal Child at School* **14**(4): 3-8.

Dolman, S.E. (1984) 'Aboriginal women and girls in a technological society...?' Paper presented at a workshop session at the *Fourth Women in Education Conference, 5-7 July, Perth, WA.*

Fleer, M. (1987) 'Introducing computers to schools with Aboriginal students'. *UNICORN* **13**(2): 115-116.

Fleer, M. (1989) 'Is it hands-on or hands-off? Research into the availability and accessibility of micro-computers for Aboriginal school children'. *Australian Aboriginal Studies* **1**: 31-36.

Fleer, M. and Klich, Z. (1988) 'A programme for excellence — but for whom? An ethnographic study of the introduction of microcomputers in Western Australian Aboriginal schools'. In Alp, P. (Ed.), *Australian Computers in Education Conference, Golden Opportunities. Conference Proceedings.* WA: Educational Computing Association of Western Australia.

Fryer, M. (1987) 'Computers and Aboriginal students'. *UNICORN* **13**(1): 54-55.

Hughes, C. (1993) 'Learning technology programs in an isolated region: classroom applications of technology'. *Rural Education Issues: An Australian Perspectives. Key Papers* **3**: 185-199.

McCormack, R. (1992) *The World of Work: A Reader for Adult Basic Education.* Canberra: Department of Employment, Education and Training.

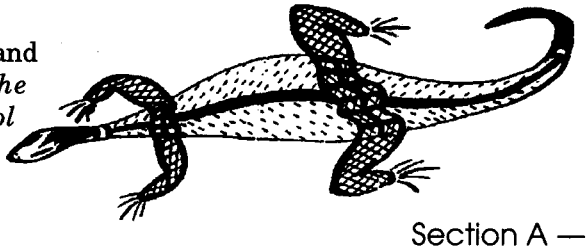
O'Donoghue, R.R. (1992) 'Why the Aboriginal child succeeds at the computer?' *The Aboriginal Child at School* **20**(4): 48-52.

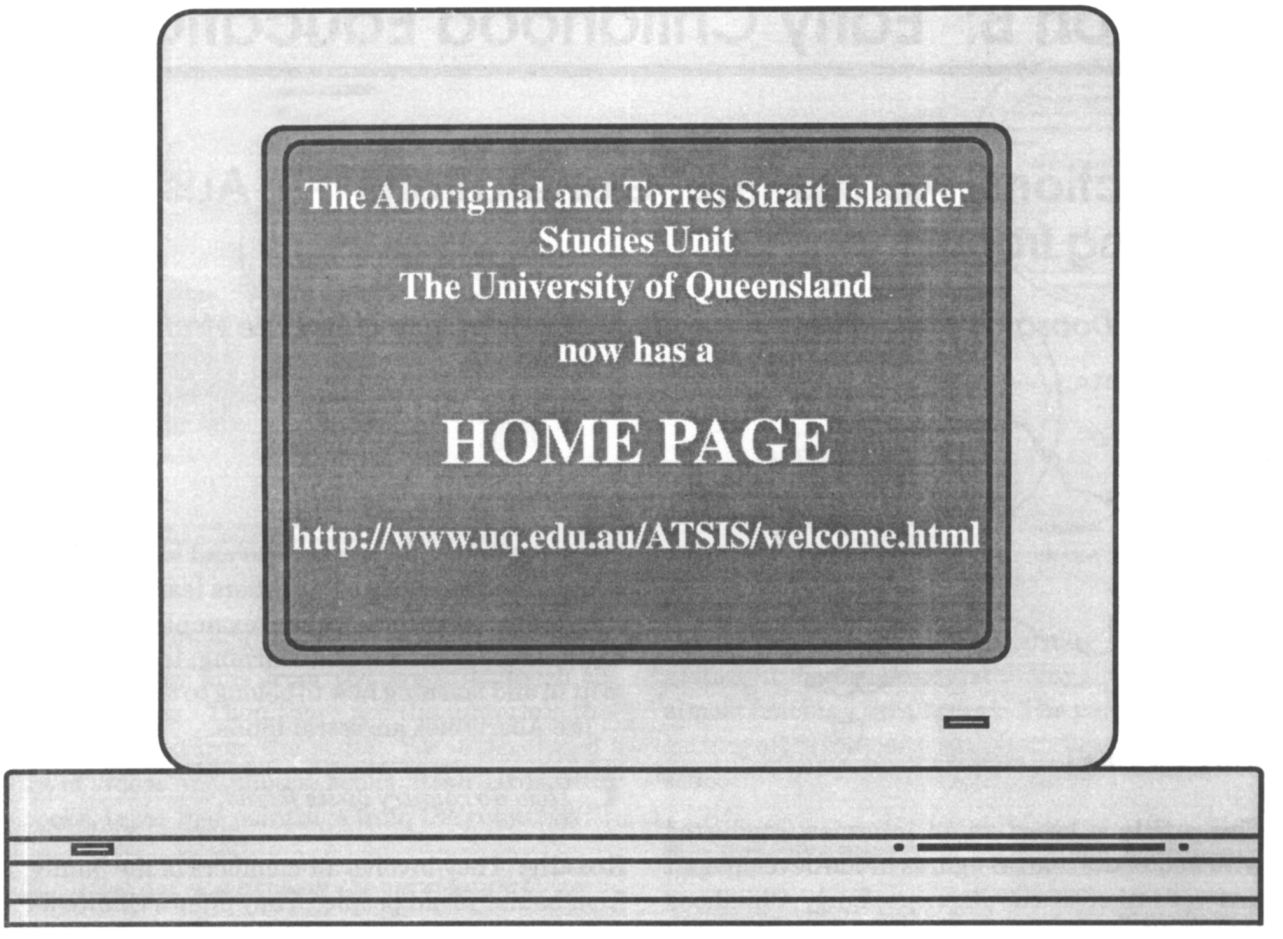
Northern Territory Department of Education (1983) *Descriptive Study of Computer Education in the Northern Territory Aboriginal / Pastoral Schools. Results of the 1983 Survey.* Darwin: Northern Territory Department of Education.

Singer, M. (1988) *Intercultural Communication.* Englewood Cliffs, New Jersey: Prentice Hall.

Stanton, R. (1992) 'A pilot survey of calculators and computers used in Aboriginal Community Schools of the Northern Territory'. *The Aboriginal Child at School* **20**(3): 13-32.

Tangi Steen is a Computing Lecturer in the Unaipon School, Faculty of Aboriginal and Islander Studies at the University of South Australia, Adelaide. □





These Web pages have been prepared by the staff of the Aboriginal and Torres Strait Islander Studies Unit to bring together relevant information for Aboriginal and Torres Strait Island people who may want to become students at the University of Queensland, for students who are interested in taking courses in Aboriginal and Torres Striat Islander Studies and for people interested in Aboriginal and Torres Strait Islander cultures and issues.

The University of Queensland's Aboriginal and Torres Strait Islander Studies Unit has two major functions. Firstly, it provides Aboriginal and Torres Strait Island students with academic and personal support before, during and after their time at the University of Queensland and administers the various programs that the Unit has initiated for students. Secondly, the Unit oversees the University of Queensland's Aboriginal Education Strategy.

The Aboriginal and Torres Strait Islander Studies Unit liaises with other departments within the University to develop and implement Aboriginal and Torres Strait Island perspectives within their various courses. The Unit also co-ordinates a comprehensive program of Aboriginal and Torres Strait Island Studies that includes subjects specifically concerned with Aboriginal and Torres Strait Island perspectives and approaches to knowledge, as well as subjects drawn from a wide range of University departments. Another priority of the Unit is to provide Aboriginal and Torres Strait Island students with the opportunity to undertake postgraduate studies or research.

For information about Publications:

http://www.uq.edu.au/ATSIS/pubs.html

- *The Australian Journal of Indigenous Education* (formerly *The Aboriginal Child at School*)
- *Ngulaig* Monograph series
- Aboriginal and Torres Strait Islander Studies Unit Research Report Series