Flexible delivery in vocational education and training: implications and issues for Aboriginal students and communities.

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Flexible delivery in vocational education and training

Implications and issues for Aboriginal students and COMMUNITIES
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Views and Opinions

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While culture has not been shown as a specific priority program, this does not suggest that cultural issues are not important. The Regional Council sees cultural considerations as key elements of all program areas.

Victoria River Regional Council
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EXECUTIVE SUMMARY

In vocational education and training in general, and in Aboriginal education in particular, open learning strategies and flexible delivery practices have been in evidence for some years. Because there are more and more varied Aboriginal groups seeking access to such programs, and perhaps a greater national sense of urgency in this matter, it has been appropriate that issues and recommendations be presented as an early perspective on the impact of such strategies for Aboriginal students.

Generally, moving to a client-centred approach for the delivery of post-secondary education and training appears to be particularly important in the cross-cultural context of Aboriginal education, because it enhances the opportunity for Aboriginal people to exercise greater self-determination in the way post-secondary educational services are delivered to them. Similarly, the client-centred approach gives official approval and support to many of the flexible techniques such as venue flexibility; competency-based training; flexibility of assessment; and choices of course, content or sequence that Aboriginal educators have employed historically to help make education and training viable for Aboriginal people.

The speed of the reform process raises some questions about the cultural appropriateness of curriculum because of the need to rapidly write and accredit or alternately acquire and customise curricula. Nonetheless, so long as there is continued support for the development of culturally appropriate curricula, and ways are found to increase Aboriginal participation in the curriculum development and customisation process, the introduction of accredited curricula appears to be laying a clear basis for standards, comparability, and portability in Aboriginal education as it is in the mainstream.

In terms of the attitudes and learning outcomes which are the specific focus of this study, open learning strategies combined with flexible delivery appear to be significantly compatible with Aboriginal learning styles. In particular, flexible venues sanction the well known preference of Aboriginal people for education to be delivered in their remote or urban communities. Flexible and multiple entry/exit are being used in a variety of ways to allow Aboriginal students to accommodate cultural obligations without compromising or sacrificing their studies.

Technological enhancement adds to the delivery of education and training in new ways that many Aboriginal people find attractive and, in some cases, at costs which are not beyond the reach of ordinary college budgets. Compact Disc Read Only Memory (CD ROM) and Interactive Book provide more enhanced interactivity than distance education materials and therefore allow self-paced learning packages based on these technologies to be used where normal print-based learning materials would be inappropriate. Telematics and satellite TV are providing new ways of delivering face-to-face real-time teaching at a distance. The decreasing cost of computing power combined with the increasing availability of optical fibre telephone connections will make these technologies increasingly attractive even though they are relatively costly today.

Those wishing to implement course delivery to meet the needs of an Aboriginal clientele should take full advantage of the choices made possible by venue flexibility, and consult with the Aboriginal community they are serving to determine the best delivery site or sites. Providers should be sensitive to the strong possibility that many of their Aboriginal students will have a much stronger group focus than mainstream students and will often want education and training delivered to a particular group and location. Block release programs have proven their ability to bring post-secondary education and training to traditional people without them having to leave their communities for unacceptably long periods.

Where appropriate services are available, technological enhancement such as CD ROM, Telematics, Interactive Book and satellite TV provide a variety of new avenues to keep students actively involved in learning while they are at home. In general, the use of computers should be seriously considered with both traditional and urban clients. For a variety of reasons discussed in more detail in the section below, Case Studies of Effective Programs, Aboriginal people often exceed expectations in their ability to learn using computers in sophisticated ways, not just to learn computer skills but any subject presented interactively using computer technology. For those needing to reach maximum numbers at minimum cost, the South Australian Study Centre model which uses older telephone and fax technology can deliver to remote communities for as little as $8.00 per credit hour.
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The employment of a Support Worker in each community is a critical factor in the effectiveness of the Study Centre methodology and may prove very useful in other distance education situations with Aboriginal people. In institutions where the capacity to produce learning packages already exists, Interactive Book technology is a cost-effective way to move traditional print-based material into the world of interactive computer-based, self-instructional material at about one quarter the cost of CD ROM production.

Advantages of open entry/exit such as portability and continuity in the Aboriginal context are exemplified by the implementation of the Certificate of General Education for Adults (CGEA) across the Western Australian Technical and Further Education (TAFE) system. A small-scale example of how open entry/exit can increase cost efficiency, reach more students, and lower the frustration levels of both students and teachers is provided by the Pundulmurra College Open Computing Lab. Finally, Ranger Training at the Cairns campus of the Far North Queensland Institute of TAFE is an example of 'two way' education which combines traditional Aboriginal knowledge of land care with Western conservation knowledge.

RECOMMENDATIONS

Aboriginal/Contextual

1 That the guiding principles for Aboriginal vocational education and training be understood to be cultural sensitivity and perceptiveness on the one hand, coupled with administrative and service diversity on the other.

2 That widespread consultation with Aboriginal people be undertaken in relation to course content and delivery process for all activities related to Aboriginal vocational education and training.

3 That consultation with and participation by Aboriginal people be encouraged in the planning and preparation of curriculum and course materials noting that these are likely to be, at least to some degree, community specific.

4 That a discussion paper be developed outlining, in broad principle, traditional educational practices that have contributed to the maintenance and reinforcement of Aboriginal cultural values, with a view to examining any possibility of transition, under the rubric of vocational education and training, towards accredited status, for example in the areas of art, language and dance.

Cultural/Aboriginal Education

5 That providers of education and training to Aboriginal people recognise the cultural values relating to non-competition with peers and the history of experience encountered by Aboriginal students in traditional classrooms, and provide culturally appropriate instructional procedures and variable access strategies, including self-pacing.

6 That teachers in training be provided with a substantial background in cross-cultural awareness, with a particular understanding of the role of Aboriginal culture in Australia, and with the education practices likely to be of most value in an Aboriginal setting.

7 That the development of curricula specifically for Aboriginal communities be undertaken as closely as possible with the clientele served.

8 That, when adopted, mainstream curricula be customised in consultation with Aboriginal clients.

9 That, while it is recognised as highly desirable that any national curriculum be developed with employer input, it is also recommended that resources be made available to customise these curricula through input by Aboriginal people.
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10 That course providers understand the importance of, and accommodate, literacy and numeracy, not only in formal programs but in related workplace programs.

11 That, as a further aid to program planning, special funding be allocated to support the collection and maintenance of labour market data on Aboriginal communities in remote areas.

12 That a collaborative working party undertake the task of gathering and maintaining this data so that the interests of Aboriginal groups, which may overlap the operational jurisdiction of particular institutions, can readily be accommodated without duplication or omission.

13 That cross-cultural awareness workshops be made available for employers who regularly recruit Aboriginal employees and contractors in order to foster increased mutual understanding of their respective work ethics.

14 That providers of vocational education and training for Aboriginal people encourage and support the development of a special nurturing relationship where industry partnerships are established.

Program: Structure and Administration

15 That course materials be provided in the form of self-pacing modules so that the greatest degree of flexibility can be enhanced.

16 That the Aboriginal Tutorial Assistance Scheme (ATAS) or a similar program be maintained in situations where it can effectively support education and training.

17 That other forms of local support for students and student groups be investigated, and that the possibility of introducing Support Workers based on the South Australian Study Centre model be more extensively trialed in Western Australia.

18 That, given the history of success of the Study Centres in South Australia, the history of experience with Community Education Centres in the Northern Territory, and the frequent discussion within the Education Department of the potential which Community Learning Centres could have in Western Australia, a working party be formed to establish appropriate guidelines and the implementation of Community Learning Centres in a number of Aboriginal communities.

Flexible Delivery

19 That course providers match the provision of entry flexibility with a similar provision of assessment flexibility noting the need for differentiated assessment packages where Aboriginal students may be concerned.

20 That the success of flexible delivery strategies in Western Australia be evaluated in the immediate future, in view of the difficulties faced by staff members with limited resources and support in providing flexible delivery, and the administrative burden of monitoring more expertly the participation and progress of Aboriginal students.

21 That each institution, perhaps through its Academic Board, examine the quality of its courses and the quality of resource materials provided to students to ensure that, despite under-resourcing and the pressures of time on staff members who produce such materials, no reduction in quality has occurred.

22 That the costs of service provision which traditionally fall outside college budgets continue to be supported by DEETYA, including community-based tutors, teachers who travel to communities, traineeships, short-course programs and retraining courses.
Open Learning

23 That computers and other forms of technology designed to assist learning and training programs be introduced only in full consultation with key members of the community, and only where sufficient funds are available for the maintenance, care, and possible replacement of the equipment when necessary.

System Administration

24 That staffing ratios be re-examined with a view to making more generous provision, in light of the comprehensive and emerging roles now expected of teaching staff in organisations providing education and training to Aboriginal students.

25 That budget programs be provided with a more extended duration so that some degree of continuity can be anticipated as a basis for the most appropriate planning.

26 That the extraordinary nature of service provision in institutions whose student population includes substantial numbers of Aboriginal people be recognised by the provision of a more generous ratio of ‘nominal hours’, so that more appropriate levels of funding and resource support can be forthcoming.

Staffing

27 That more extensive provision be made for the professional development of staff on appointment to service providers in this field.

28 That the professional development programs include cross-cultural awareness and curriculum development as a priority.

29 That a working party be established to examine the intellectual property rights of staff members who develop courses and course materials under these conditions.

30 That a working party examine the new role of teachers in service provision of this nature and, in particular, the complementary roles of teacher and community support worker. At the same time, it should examine the scope for para-professionals to support teaching staff, and the appointment of curriculum resource specialists to support professionals.

31 That all service providers in this field be required to establish a professional development policy which provides exposure to cross-cultural understandings and skills where Aboriginal communities are concerned, for all new staff members and, on a continuing basis, all staff members, this being undertaken in liaison with Aboriginal people.

32 That an independent process be established for the purpose of evaluating the effectiveness of Aboriginal vocational education and training and making recommendations to Government on those future directions and funding proposals which warrant the greatest support.
INTRODUCTION

One of the major initiatives of the National Training Reform Agenda (NTRA) is to encourage innovative techniques and increased flexibility where the delivery of vocational educational and training programs are concerned. In order to strengthen the vocational skills necessary for Australia's economic strength and development, the NTRA seeks to encourage greater involvement by those whose family or employment circumstances, or indeed their general inclination, inhibits their full participation in programs of interest and importance to them.

Pundulmurra College is the only West Australian independent college with a direct commitment to providing vocational education and training for Aboriginal students and communities across the state. The College has two distinct client groups: Aboriginal people living in or near urban centres such as Port Hedland and South Hedland, and those living in more isolated communities in remote regions of the state. These client groups experience different constraints to access and often have markedly different education and training needs.

Since its inception, the College has offered full-time on-campus courses and part-time external courses usually supported by block-release sessions on campus. Through its Open Learning External Studies Centre, external courses are supported by print-based and audio and audio-visual packages. The College uses both mainstream flexible delivery strategies such as flexible assessment, as well as culturally specific techniques such as the endorsement of a course by community elders as a preliminary step towards gaining community support.

As with adult learners generally, family commitments and other responsibilities make it difficult or impossible for town-based Aboriginal students to attend scheduled classes. Cultural demands often result in extended periods of absence. For students enrolled in conventionally structured classes, these conflicts usually result in failure. At the same time, Aboriginal people in remote communities throughout Western Australia find it difficult to obtain high quality training delivered in a culturally sensitive manner for their communities. While the College has long been aware of these general problems, the advent of the National Training Reform Agenda, with its emphasis on open learning/flexible delivery and a learner-centred approach, has provided a major opportunity to significantly improve the way the College services the education and training needs of Aboriginal people. Staff have moved quickly to put the National Training Reform Agenda into practice because it so clearly suits Aboriginal learning styles.

They have implemented many of the innovative techniques encouraged by the National Training Reform Agenda such as open entry/exit and assessment on demand, and in other cases have simply been able to continue what has long been the College's practice in terms of effectiveness and appropriateness.

This project was intended:

a) to document the attitudes of Aboriginal people towards open learning and flexible delivery modes, venues and practices; and

b) to review various models of flexible delivery already in operation, in terms of access to and the attainment of anticipated learning outcomes.

It had been anticipated that the project would identify those elements of flexible delivery which appeared to be most culturally appropriate in the delivery of education and training to urban and community-based Aboriginal people. Finally, it was anticipated that the project would provide direction to the management of Pundulmurra College, and to other training providers, in relation to the implementation of best practice models with Aboriginal clients.

It has readily become clear that these outcomes were far too ambitious given the time frame and resources involved. More importantly, there were two underlying principles which were to have been exercised in the development of the project: extensive consultation with Aboriginal people and representatives of Aboriginal communities; and the development of sound research evidence as a substantial basis for the conclusions and recommendations to be provided. It cannot be said that the level of consultation with Aboriginal people has been as intensive or as wide ranging as the Steering Committee had expected. Neither can it be said that the research activity has been sufficiently comprehensive or sufficiently rigorous to support the findings in an absolute sense.
As a consequence, many of the assertions made in the report may have to be accepted with a degree of circumspection. Notwithstanding this qualification, the report does serve a major purpose in identifying a series of highly relevant issues related to open learning strategies and flexible delivery procedures for the provision of vocational education and training. Further, the report raises a substantial range of questions related to open learning strategies and flexible delivery procedures in the context of vocational education and training for Aboriginal students. These questions involve key principles for consideration by providers of education and training. The report serves a significant purpose both in crystallising them and in offering beneficial directions for their future examination.
PROJECT APPROACH

The project was intended to review and evaluate the wide variety of open learning strategies and flexible delivery modes of provision, including flexibility of venue and practice, in the context of post-secondary Aboriginal vocational education and training. It sought to identify those strategies which appear most effective as measured in terms both of Aboriginal student attitudes and learning outcomes. A key aspect of this project was to provide insight into the most appropriate application of these strategies for Pundulmurra’s particular client population. Beyond this process of identification, the project will try to examine the broader implications of such approaches to Aboriginal education.

The project team endeavoured to explore the impact of such strategies on Aboriginal student attitudes, and the educational outcomes that may be achieved as a result of these initiatives. Methods included surveys cataloguing such approaches in other centres across Australia, augmenting the surveys with interviews and discussions in both urban and remote settings with teachers, students and administrators. The material resulting from this fieldwork was explored to gain a better understanding of the implications of flexible delivery strategies for Aboriginal people. Finally, the research team has made recommendations to educational providers on the principles which should be observed in implementing open learning and flexible delivery practices for remote and community-based Aboriginal students.

Flexible Delivery: A National Framework for Implementation in TAFE

At this stage it is appropriate to indicate the underlying definitions upon which the project approach is founded. The following extracts from the National Framework for Implementation of Flexible Delivery in TAFE, March 1993, serve to meet this need:

Flexible delivery is the use of a range of client-oriented learning strategies which allow training systems to become more customer driven, to expand cooperative links with industry, and to respond more rapidly to client need. It promotes use of a range of delivery modes, (self-paced, resource-based, technology advanced, etc.) and delivery venues, (workplace, home, learning centre, etc.) which can be adopted separately or together to meet the needs of learners. It promotes practices which encourage responsiveness to learner needs, including the assessment of prior learning, assessment on demand, open entry and exit points, and the flexible arrangement of course components.

In more detailed form the Overview provides the following definitions and characteristics:

Flexible delivery is an approach to vocational education and training which allows for the adoption of a range of learning strategies in a variety of learning environments to cater for differences in learning styles, learning interests and needs, and variations in learning opportunities.

Flexible delivery is characterised by:
- flexibility in terms of entry, program components, modes of learning and points of exit
- learner control and choice regarding the content, sequence, time, place and method of learning
- appropriate learner support systems
- the application of learning technologies where appropriate
- access to information on courses and services
- access to appropriate learning resources
- flexible assessment processes.

Flexible delivery finds expression in many ways including:
- the delivery of learning at a variety of locations including the workplace, the community or neighbourhood and the home
- resource-based learning with tutorial support
- the application of technology to enhance delivery or improve access opportunities
- the extension of educational opportunities through access programs, literacy programs, second and third chance opportunities for obtaining qualifications and bridging courses.

In any study of contemporary Aboriginal education, the transition from a policy of assimilation of Aboriginal people to one of self-determination remains a central issue. Because education and
Flexible Delivery in Vocational Education and Training

training are basic tools by which any group acculturates its own children, a multicultural society committed to pursuing a policy of self-determination with its indigenous population must find ways of coming to terms with the cross-cultural issues which arise when one culture provides education to another. Hampden Turner (1975) argues that 'Authentic education is not carried on by "A" for "B", or by "A" about "B", but rather by "A" with "B". (C Hampden Turner 1975:69, cited in Sykes 1986:54).

Within the National Training Reform Agenda, it is a client-centred approach rather than the mechanics of flexible delivery which connects open learning, flexible delivery and self-determination and which drives the potential for these strategies in post-secondary Aboriginal service provision.

Moving away from a provider-centred approach means that mainstream educators must question their own cultural assumptions more seriously. Listening to and acting on the culture of the clients becomes a central and obligatory part of the educational process. Unexamined structures such as timetables, classrooms, semesters and terms which consistently alienate and marginalise Aboriginal people are broken down by the determination to provide increased access through open learning. Byrnes (1993) argues that:

For many years programs have been instituted in Aboriginal communities primarily by non-Aboriginal people, which have not worked as intended. This suggests that the process of program development has been flawed because both the intended outcomes (the objectives) and the teaching methods were based on false assumptions. They were based on the values of non-Aboriginal culture rather than the values of Aboriginal culture. It would appear therefore that the process of program design and development in cross-cultural settings needs to be fundamentally reconsidered.

Once a client-centred approach is adopted, the specific techniques of delivery known as 'flexible delivery' become tools in Aboriginal education by which cross-cultural issues can be addressed.

This report actively seeks to identify practical ways in which the National Training Reform Agenda, with its emphasis on open learning and flexible delivery, begins to address these issues in significant ways at a national level. It does so by examining specific examples of the implementation of these strategies with Aboriginal people at several sites around Australia. Although the project is national in scope, neither time nor budget permitted an exhaustive study of how such practices are being implemented with Aboriginal people. Places where innovative work was known to be occurring and places which were uncovered during the course of the research were visited wherever possible. Because the project is based at Pundulmurra College in South Hedland in Western Australia, it views the national scene from both a Northern and a Western Australian perspective.

Questionnaire
A questionnaire was developed to identify open learning strategies and flexible delivery modes and practices in use with Aboriginal students. The questionnaire was designed to be administered both to entire institutions and where appropriate to individual programs within institutions. It is likely that the lateness of the data-gathering process in the educational year has contributed to the low level of response. While it was distributed to approximately 60 practitioners across Australia, the responses have not been substantial and findings resulting from the questionnaire must be viewed with some caution.

Consultation with Practitioners and Students
The researchers interviewed practitioners and students in a selection of remote, urban, and semi-urban sites. Starting with Pundulmurra College, visits and interviews with educators and students were conducted in Western Australia in the Pilbara and the Kimberley regions, primary catchment areas for Pundulmurra, and in TAFE colleges with significant numbers of Aboriginal students in Perth. Major interstate sites using open learning and flexible delivery strategies with Aboriginal people were identified. Batchelor College, the Indigenous People's Unit (Southbank Institute of TAFE Brisbane), Cairns TAFE (Far North Queensland Institute of TAFE), and Port Augusta TAFE (Spencer Institute of TAFE) were visited with a view to identifying good practice in the use of open learning strategies and flexible delivery with Aboriginal students. These examples have been analysed primarily in terms of Aboriginal attitudes and learning outcomes as identified in the project brief.
Review of Literature
Readings in the literature on Aboriginal culture and its interaction with Western education and training, as well as recent literature on open learning and flexible delivery were undertaken. Overseas examples were sought but were found to be quite limited. These readings formed the basis of discussions among the research team, with colleagues at Pundulmurra and elsewhere, as well as with members of the Steering Committee. Initially, the review helped the research team develop a clearer direction for the research: for example, to decide that it was more appropriate for the research to emphasise formative and qualitative rather than summative and quantitative aspects. The readings, along with the practical experience of staff at Pundulmurra, made it possible to develop a practical view - both historically and in the current reform context - of the interaction between Aboriginal culture and open learning and flexible delivery strategies.

Note on Terminology
The research team made the decision to focus on studying programs involving Aboriginal people while not excluding Torres Strait Islander programs when encountered. This decision was taken because Pundulmurra College, by its location in the Pilbara region of Western Australia, is primarily experienced in the provision of education and training for Aboriginal groups and communities. The research team felt it important not to make generalisations about indigenous people of two distinctly different cultures when it was only familiar with one of them. At the same time there was no intent to exclude Torres Strait Islander people and the research team hopes that the material contained in the report is useful to all indigenous Australians. The term Aboriginal and Torres Strait Islander is used where the research team knows that the area or program under discussion specifically involves Torres Strait Islander people. The term 'indigenous' is used in the report in contexts where Torres Strait Islander people may be involved and the researchers have reason to believe that the material under discussion may well apply to both groups.

Cross-Cultural Considerations in Post-Secondary Aboriginal Education
While it is beyond the scope of this research to exhaustively investigate the many cross-cultural issues in Aboriginal education, the research does specifically include the impact of open learning/flexible delivery on the attitudes of Aboriginal students, as well as the learning outcomes being achieved. Because attitudes are often a direct result of cultural mores and belief systems, they can seriously impact on learning outcomes, particularly in cross-cultural situations.

Attitudes are often difficult to elicit in brief interview situations typical in short term research such as the current project and would require the longer term methods of ethnographic research where weeks and even months are spent in a single area. However, the responses of Aboriginal students and their teachers elicited during the present study can be seen in the context of commentaries by Aboriginal people and experienced Aboriginal educators. Taken together, they can provide insight into the cross-cultural processes which have made it difficult to achieve equitable results in Aboriginal education, and provide a basis from which to see how open learning/flexible delivery interact with these cross-cultural processes. There is significant repetition and convergence in these commentaries - both Aboriginal and non-Aboriginal - and even though many of the writers are non-Aboriginal, it is clear that what is being said is heavily influenced by what Aboriginal people are saying about cross-cultural education.

Sykes (1986) in her reporting of Aboriginal views of achievement or successful outcomes of education for Aboriginal people identified the following elements:

- Survival of Aboriginal people as the greatest achievement to date
- Ability to retain Aboriginal identity
- Remaining in the community
- Self-control
- Restoration and management of land.
Hughes (1987) refers to an ‘Aboriginal epistemology’ or ‘world view’ comprised of the following characteristics which impinge on learning styles:

- Group rather than individual orientation
- Spontaneous as opposed to structured approach to learning
- Learning by imitation and repetition rather than questioning
- Uncritical rather than critical approach to learning and information
- Personal versus impersonal
- Listening rather than verbalising
- Indirect questions in preference to direct questions.

Christie (1988) is particularly useful in reviewing the impact of open learning/flexible delivery because he focuses primarily on the process of cultural interaction as it applies to education rather than on a social or political agenda. He presents the attitudes of Aboriginal people he works with in three key areas of cross-cultural difference between Aboriginal and European based culture which, because they involve implicit, assumed knowledge and ways of doing things, often interfere heavily with the effective delivery of education to Aboriginal people by Western based educational institutions.

- In genuine Aboriginal education, our first and most basic educational goal is to teach the harmony and unity of Aboriginal life. Any focus on individual achievement which ignores the meaningfulness of the Aboriginal group is unacceptable.
- As Aboriginal people, a basic educational goal is to preserve our continuity with the past, the land, the people. Progress for its own sake is not our goal. We only want progress if it helps us to retain our Aboriginal identity.
- The most fundamentally valued way of doing things in Aboriginal life is responsiveness to the total environment, physical and social. The preferred white approach of planning and control is the exact opposite of this and in fact prevents it.

The relatively greater importance of the group in Aboriginal culture was immediately apparent in this research. Pundulmurra itself is an expression of the desire of Aboriginal people of the Pilbara for their own college. Even though Hedland College is less than a kilometre away from Pundulmurra and far newer and better equipped, the local Aboriginal people powerfully resist any attempt to amalgamate or close down Pundulmurra. Likewise in visiting the urban centres of Brisbane and Perth, there was a clear preference by many, not all, Aboriginal people to study as part of an Aboriginal group. This preference was formally acknowledged in Brisbane by having an Indigenous People’s Unit within the Southbank Institute of TAFE. In Perth the largest groups of Aboriginal students at Thomle, Fremantle, Balga, Rockingham, and Midland TAFE colleges were studying basic literacy and numeracy as a group in the CGEA (Certificate of General Education for Adults). Both the staff and students at these institutions saw this group as part of the urban Aboriginal community in their respective geographical areas. Students typically spoke of the importance of feeling comfortable because they were studying with other Aboriginal people whom they knew and to whom they were often related.

Some of the most revealing comments came from students in Port Augusta in South Australia who had a clear choice between learning in a Study Centre on campus and in a similarly equipped Study Centre in their community. The two centres were within walking distance of each other and yet the preference was strongly for the centre in their community. When asked why, they said they felt more comfortable at home. Specifically, one unusually candid student said that he didn’t have to dress up for the whitefellas and could wear what he liked at home. Similarly, interviewing a group of Aboriginal Development Managers at a statewide conference in New South Wales, the persistence of Aboriginal group identity both in urban and rural New South Wales was emphasised by the group. What stood out in all contexts visited was the strength of the preference.
Staff reported that the group identity was far stronger in these Aboriginal classes than in a mainstream class. The group wanted to move through the course as a group. The faster achieving individuals would stop attending while slower members caught up so the group could move on to the next phase of the course together. It should be pointed out that not all Aboriginal people want or need to study as part of a group. These students move into and through the mainstream system as individuals - much as mainstream students do. Nonetheless, for a significant number of both urban and remote Aboriginal people, the principle reported by Christie, that 'Any focus on individual achievement which ignores the meaningfulness of the Aboriginal group is unacceptable', is clearly operative in these situations. The preference by Aboriginal people for education and training being delivered in their own communities - whether easily identified remote communities or less visible urban communities - appears to be, at least in part, an expression of the need to maintain Aboriginal identity and group unity.

Seeing the general importance of these cultural values expressed in a variety of ways by Aboriginal people in urban and remote areas reveals the critical importance of the inclusion of venue flexibility as a flexible delivery strategy. Historically, educators have responded to requests by Aboriginal people for delivery in their communities by using the block release concept from apprenticeship training. That is, students spend most of their time in their own communities and come to intensive classes on campus as a form of block release. Both Batchelor and Pundulmurra Colleges have used this technique in response to the difficulty traditional Aboriginal people experience in remaining away from their communities for periods longer than a week or two. An important distinction has developed at Batchelor College between courses where little or no study takes place when the student is in the community, and those where the community phase requires active work by the student.

The second area of open learning/flexible delivery which interacts well with Aboriginal culture is flexible and multiple entry/exit (usually involving some form of self-pacing), which allows Aboriginal people to meet their cultural obligations without severely disrupting their education. Less obviously, the high value placed on responsiveness and spontaneity by Aboriginal culture often runs counter to the high value placed on structure and planning in Western culture. It is important to note, however, that even something as planned and structured as a National Training Reform Agenda need not come into conflict with Aboriginal culture in this regard precisely because it has inbuilt structures, such as self-pacing and open entry/exit, which make genuine allowances for cultural difference. The balance between spontaneity and consistent achievement is still a difficult one, but examples of successful strategies to cope with this area were encountered and are detailed later in the report.

A third approach which is highly client-centred but not usually mentioned as part of open learning and flexible delivery is called 'two way' or 'both ways' education. This approach is also called negotiated curriculum because it involves negotiating the content of the curriculum of a particular course from both mainstream and indigenous cultural perspectives. A clear example of accredited, competency-based two way education in the post-secondary sector is given in the case study on Ranger Training. The curriculum includes elements of traditional Aboriginal knowledge on land care and Western science-based conservation knowledge.

In addition to these broad areas of interaction between the National Training Reform Agenda and Aboriginal culture, there are several areas where Aboriginal learning styles interact with elements of flexible delivery making certain approaches or technological enhancements particularly culturally appropriate. Quite apart from the relationship between open entry/exit and cultural obligations, self-pacing is generally liked by Aboriginal students. The reason most often put forward by teachers is that following the experience of failure in primary and secondary school where the pace is generally externally driven, self-pacing provides adult Aboriginal learners with a feeling of empowerment and control over their work.

Aboriginal students interviewed expressed similar ideas, but what came across most clearly was the intensity of the feeling with which students expressed their liking rather than the reasons for it. Even a relatively externally driven approach like the South Australian Study Centre Methodology has enough flexibility built into it so that students do not feel pressured and drop out - as the 75% retention rate testifies. The case study shows that students feel they have adequate control over the pace and suggests that the presence of the support worker, who is not an authority figure, really does work to make students feel supported and that when they get into a time conflict they are not on their own, perhaps as they were as children in school, in dealing with the teacher.
Flexible Delivery in Vocational Education and Training

A related area that appears to be important is a preference for a resource-based approach. Again teachers feel that students respond well to both print and computer-based materials because they provide an experience which is in sharp contrast to previous experiences of traditional classroom teaching. In addition to such materials being self-paced, they also give a greater sense of control because the teaching/learning process is physically in the hands of the student. The student can look ahead to see what is expected and what is coming next. The process is demystified; the student is empowered. In the face-to-face classroom, when an Aboriginal student does not understand what the teacher is saying, the student has to overcome strong cultural inhibitions, usually invoking shame, to question the teacher in front of the group. When the learning is resource-based, the teacher—in the role of helper or facilitator—can be questioned semi-privately and individually with a greatly reduced risk of embarrassment.

Technological enhancement is particularly important in indigenous education because it is the obvious way to improve both the effectiveness and cost of distance education delivery to remote communities and even semi-urban and urban communities. Computer technology and upgrading of the telecommunications network to optical fibre are expanding remote delivery options rapidly. Real progress has been made already and several of the case studies included in this report describe successful application of technology by indigenous people which would not have been possible a few years ago.

The case studies on CD ROM, Interactive Book, Telematics, and the use of an Internet Web page for discovery learning demonstrate the remarkable impact of technological delivery of education and training for indigenous people. Nor does the latest technology seem to be culturally inappropriate. Aboriginal people, in a variety of circumstances, have demonstrated that they like and are prepared to use the latest technology. There was no resistance to computers reported by students or staff in any location visited, only complaints about lack of access.

It was seriously doubted that Aboriginal students at the Pajinka Wilderness Lodge at the tip of Cape York would be able to handle their Telematics equipment without technical support but they have done so without serious problems for a year, after brief preliminary training. Students in the most remote communities in Western Australia use CD ROM packages from Cairns TAFE with minimum support from the local educators. Aboriginal people in the Northern Territory use Satellite TV as an alternative to travel to conduct family and cultural business. Teleconferencing and faxes have been used routinely in South Australian community study centres, in Western Australian Telecentres (located in colleges), and in Queensland to support distance education in communities. Electronic Mail (E-mail) facilities are being installed and extended to indigenous communities in Broome and Cairns. Over the next few years, the equipment to produce and use these enhancements will become less expensive and optical fibre will raise the quality and quantity of all services involving phone connections.
CASE STUDIES OF EFFECTIVE PROGRAMS

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INTRODUCTION TO CASE STUDIES

The case studies that follow have been selected from around Australia to illustrate a variety of applications of flexible delivery in Aboriginal and Torres Strait Islander vocational education and training. The information is current at the time of the site visits in late 1995 and has been presented primarily for the purpose of suggesting possible approaches which might prove useful to other practitioners in the TAFE sector. Detailed contact information for the individual practitioners connected to each program appear separately in the appendix. The case studies are not critical in the sense that they were subjected to any rigorous evaluation. The comments of practitioners and students were taken at face value unless contradictory evidence was encountered. All sites were visited by the research team with the exception of the Tanami Satellite Television Network in the Northern Territory.

The first three case studies which follow have been selected more because they illustrate quite evolved examples of cross-cultural education than because they are particularly striking examples of mainstream flexible delivery techniques. In this category is the Ranger Training program from Cairns TAFE which is an example of 'two way' education, a concept also adopted at Batchelor College, which involves incorporating material in the curriculum from both indigenous and Western cultures. The Pundulmurra Indigenous Australian Languages programs demonstrate the kinds of culturally appropriate approaches that develop when the curriculum is predominantly Aboriginal. The Tanami Satellite TV Network is included because it shows that when Aboriginal people own and control a major media resource they put it to uses which are important from an Aboriginal point of view. It is discussed because it was felt that the broad concept of indigenous ownership of media facilities illustrated an important aspect of the principle of self-determination.

The next four case studies represent the application of technology to the difficulties of delivering education to remote Aboriginal communities. Historically, the challenge has been to find ways of delivering cost effective education to remote communities. In the past printed learning packages have been the primary means, but now a variety of other channels are emerging which considerably enrich the options available. It is interesting to note that the approaches taken at Port Augusta TAFE and Cairns TAFE were both developed in response to falling Aboriginal enrolments in the late 1980s. The Study Centre Methodology, developed at Port Augusta TAFE, is particularly noteworthy because it uses relatively simple, readily available technology (i.e., conference phones and fax machines) as part of an overall strategy that has proven to be cost effective and is well liked by Aboriginal students. Cairns TAFE took a much more technological and more expensive approach by committing themselves to producing courses on professionally-produced CD ROMS. They have several courses developed and more under development and have demonstrated that the approach is viable and that Aboriginal people respond well to a highly interactive multimedia approach. The Interactive Book, developed by a private company in South Australia, presents a less expensive way than CD ROM to develop interactive materials as well as a way to make traditional printed learning packages more interactive and accessible to students with low literacy and numeracy. Telematics (also known as Audiographics) uses a conference phone and two computers—one for the teacher, one for the remote students—running software which allows the teacher and the student to communicate by typing, drawing or putting prepared graphics and photographs on the screen for the other to see. Although it is currently a fairly expensive way of delivering real-time teaching to remote sites, it appears to have genuine potential to simulate face-to-face teaching at a distance.

The case study on the Certificate of General Education for Adults (CGEA) illustrates how open entry/exit and self-pacing are being used on a state-wide basis to accommodate Aboriginal cultural factors and learning styles. The Open Access computing program at Pundulmurra College is included because it shows how a single teacher can take advantage of the opportunities presented by flexible delivery to move into the role of facilitator while increasing enrolments and cost effectiveness. Finally, the electronic discovery learning environment, although it will not be operational until later in 1996, is included because it is the boldest, most experimental use of technology with indigenous people encountered in the course of this research. The program proposes to use the Internet to present courses to remote students in Web page format as well as integrate the resources of the Internet into an electronic classroom environment at the Indigenous People's Unit at the Southbank Institute of TAFE in Brisbane.
Taken together, these case studies form the core material of the project on which the findings and recommendations are based. Many other sites were visited where excellent work in flexible delivery within Aboriginal education was under way. All these sites are listed in the appendix. Exclusion of individual programs or even entire institutions does not imply that they are less worthy. For example, Batchelor College, which is a national leader in indigenous education, is not represented because many of its programs are tertiary, and the TAFE-level programs it is running were just being converted to a competency based format when the research team visited. Similarly, time and budget did not permit an investigation of the use of flexible delivery with indigenous students in the two most urban and populous states, Victoria and New South Wales.
Indigenous Australian Languages Program
Pundulmurra College
(Learning Packages - Block Release)

Summary
The Indigenous Australian Language Workers Program is noteworthy as an example of a client-centred approach with a high degree of flexibility meeting particular elements of Aboriginal culture and, in turn, attracting high student numbers. Its delivery in external block release mode caters for students living in remote communities who do not wish to travel. In addition, it integrates course work with students' jobs in language centres, schools, and community-based language programs such as interpreter centres.

The program also seeks to redress disadvantages of former practices and provide greater access to education through the development of culturally appropriate curriculum and resources. These features of the program are extremely appealing to non-literate language speakers who have previously been excluded from participating in almost every aspect of the wider community. The course has allowed Aboriginal people to do well in subjects to which they can relate, further develop skills they already have, investigate higher education alternatives, and increase employment opportunities.

Background
The course has its origins in 1988, when it was recognised that there was a need to train Aboriginal people in the maintenance of their own languages and that the best people to teach Aboriginal languages were the speakers themselves. The program was initially supported through the Aboriginal Education Strategic Initiatives Program (AESIP) and has supported school oral and other bilingual programs through the training of Aboriginal Language Workers. From Pundulmurra's perspective, it is very important in an Aboriginal college to have a course, such as the Aboriginal Languages Program, which is not primarily mainstream but relates directly to Aboriginal lifestyles and topics of interest because it demonstrates how a fundamentally Western institution—a college—can serve to maintain Aboriginal culture directly.

Course Detail
The Indigenous Australian Language Workers Program consists of two stages:
Stage 1 - the Certificate in Aboriginal Language Work
Stage 2 - the Advanced Certificate in Aboriginal Language Work.

The Certificate in Aboriginal Language Work consists of six core units and seven electives. A minimum of four electives is required.

The Advanced Certificate in Aboriginal Language Work consists of six core units and seven electives. A minimum of four electives is required.

Students can choose their electives according to the type of language program they are working in or wish to work in and according to their skills and knowledge of Aboriginal languages.

Each unit is made up of one or more related modules. A module is a discrete, integrated package of information and skills which deals with closely related topics of a unit.

Flexible Delivery Strategies
Because the course is designed to cater for people skilled in Aboriginal languages, entry requirements are very flexible and take students' prior learning into account. Oral assessment is used instead of written assessment, when appropriate, to open the course up to Aboriginal people with low literacy levels in English. While most units have been written for external delivery, some need supervision, expertise and facilitation, and access to resources and technology. Although each module has a nominated duration period, there is no time limit and participants are allowed to go over time to complete the specific tasks. In previous years tutors have been available to students who are having difficulties completing course requirements.
Students can enrol at any stage of the year if they intend to complete the course in an external mode. If students wish to enrol as external part-time with block releases, they can commence the course when a block release for their particular area is scheduled. Block releases are set up to cater for students working on different parts of the course—in particular those who require additional facilitation and support. While block release is used in many Aboriginal courses so that the students can study without having to leave their communities for long periods, the Aboriginal Language Workers Program's use of block release is highly flexible in its responsiveness to Aboriginal culture. First, block releases are regional so that they bring people of closely related language groups together as well as reducing travel expenses. Second, the actual content and duration of the block releases are negotiable so that students get the specialist help they need in areas where they are having difficulty. Material not covered in the block release as a result of this flexibility is then made available through learning packages. From time to time, lecturers are also placed in the position of negotiating block releases to accommodate students' cultural commitments such as 'sorry' business or law business. Lecturers are also required to regroup students from time to time to take avoidance practice and kinship relationships into account.

The program is also notable for the degree of flexibility it uses in encouraging students to combine their assignment load with their work in language centres, government, Catholic or independent Aboriginal schools, or other organisations. Starting with whatever the student is working on—a Language Other Than English (LOTE) program in the schools, an oral history, or family history project—the program will try to support the student's work in a particular language and cultural area in order to lighten the demands on the students' time. More broadly the program provides support for the direction that the student has chosen to pursue, whether career, academic or personal.

Overall, the Indigenous Australian Language Workers Program illustrates how the fairly defined strategies of mainstream open learning/flexible delivery can change when they are thoroughly integrated into a program that is predominantly Aboriginal in its institutional location, course content, staffing and student participation. Just as Aboriginal people use the space in Western designed houses differently from people of European origin, so elements of Aboriginal culture change a Western educational paradigm to accommodate Aboriginal priorities and values. Christie's second and third principles, relating to the preservation of Aboriginal identity and the responsive nature of Aboriginal culture, could be seen as strong factors in the operation and development of this course.

Technological Enhancement
Technologically the Aboriginal Language Workers Program is a relatively conventional open learning program based on printed learning packages.

The program is seriously considering the introduction of some form of interactive media both to extend the current learning package approach and to teach specific languages. College staff have developed skills in desktop publishing in order to produce learning packages and, as the technology becomes more affordable and accessible, it may be possible to undertake increased local production of the interactive materials required.

Learning Outcomes
By the end of 1996, after three years of formal operation (and two years of pilot operation) approximately 120 students with speakers representing 26 language groups will have had face-to-face contact with lecturers. About 30 students will have received a Certificate or Advanced Certificate.

At least two graduates have gone on to further linguistic studies and two others are considering doing so. Many other students have been able to gain some form of casual work including:

- Interpreters for the Department of Social Security
- Project Liaison Officer with the Education Department's Languages Other Than English (LOTE) project
- Poster development, using language skills, for the Aboriginal and Torres Strait Islander Commission (ATSIC) and the Rural Access Program
- Consultants for ethno-botanical and oral history projects
- Setting up and teaching community language classes.
Cost Benefit
The current staff student ratio is approximately 25 to 1 and the lack of availability of experienced teacher-linguists puts heavy demands on the present lecturing staff. The course operates on a low budget and lecturers are often placed in the position of supporting projects and activities outside their job descriptions to increase existing resource allocations. While increased student participation and retention rates can be largely attributed to external student support programs such as the Department of Employment, Education, Training and Youth Affairs (DEETYA) Aboriginal Tutorial Assistance Scheme (ATAS), the actual provision of support by such government programs and institutions to students while they are doing course work in their own communities has been minimal. In sharp contrast, the support from Western Australia's Aboriginal Language Centres has been excellent at every stage of development of the program. Language Centre linguists have worked with Pundulmurra language lecturers to develop course material, provide tutorial support, lobby key government ministers regarding funding, and assist in the ongoing monitoring of the program.

Student Attitudes
Students are highly positive about the language courses because the content of the course is Aboriginal and more specifically is actively engaged in the preservation of Aboriginal culture. Overall, student enthusiasm and positive attitudes have been the driving force behind the success of the program and at the same time contribute to the high morale of the lecturers.
Implications and Issues for Aboriginal Students and Communities

Ranger Training
Cairns Campus, Far North Queensland Institute of TAFE
(Flexible Venues - "Two Way" Approach)

Summary
The Community Ranger Training program addresses several cross-cultural issues by combining an unusual use of flexible venues with a series of block releases in different Aboriginal communities. It is also notable because it is a very clear example of 'two way' education, which combines traditional Aboriginal and Torres Strait Islander knowledge of land care with Western scientific knowledge in the same area. The course is taught by Aboriginal and Torres Strait Islander senior custodians on their own land as well as by Westemers with scientific knowledge.

Background
In 1988, a workshop on Aboriginal Ranger Training convened by the Aboriginal coordinating council confirmed the need for Rangers to work on community lands to carry out a wide range of duties including site protection, traditional land management and natural resource management. The workshop requested Cairns TAFE to establish a training program for Community Rangers. With the assistance of Aboriginal Rangers from the Department of Community Services, and funding support from DEETYA, TAFE carried out a consultation program which revealed the following concerns of Community Councils and residents in relation to Ranger Training:

- That training take place in communities wherever possible
- That time away from communities for field trips and similar activities be kept to a minimum
- That the content of the training course reflect the real need for land, natural resource and cultural heritage management of the lands
- That Community Rangers be able to proceed through the course at their own pace
- That other members of the communities be able to participate in parts of the course delivered in their community
- That culturally knowledgeable senior members of the communities be employed as teachers for parts of the course relating to traditional land management and other aspects of cultural heritage
- That the qualification at the end of the course be widely recognised, enabling graduates to proceed to further studies in natural and cultural heritage management.

Course Detail
Three courses—Certificate, an Advanced Certificate and Associate Diploma—are offered in the Community Ranger Training Program. The Certificate of Aboriginal and Torres Strait Islander Natural and Cultural Management consists of eight modules completed over one year part-time, and equips the student to be an operational Ranger or Guide. The emphasis is on practical skills with the option to do all assessment orally if necessary. Nonetheless, literacy skills are developed concurrently within the program so that students have the opportunity of proceeding to the Advanced Certificate.

The Advanced Certificate involves an additional four modules to be undertaken over one year part-time, and involves advanced skills and knowledge relevant to the work of Rangers or Guides. Written literacy is required at this stage.

The Associate Diploma of Applied Science (Aboriginal and Torres Strait Islander Natural and Cultural Management) is a tertiary level qualification of equal standing to the Associate Diploma of Conservation and Heritage Management awarded by other Australian universities and colleges.

Pundulmurra College
Flexible Delivery Strategies
Block release is used to conduct a series of workshops in Aboriginal and Torres Strait Islander communities with students pursuing their studies between block releases in their own communities. The unusual feature of the program is that the block releases do not involve all the students coming into Cairns to the college, rather they meet at a different community each time. In this way students are exposed to a different community with its unique traditional and scientific characteristics. The senior custodians in each community are able to pass on their knowledge, while retaining control of it, to those who are entitled to receive it in the places it needs to be taught. Tutors are also used to support individual students while they are studying in their communities.

Technological Enhancement
Computer based interactive multimedia packages are available on hard disk and are in the process of being put onto CD ROM. Video conferencing has been trialed at one community and plans exist for connecting up to 10 centres in this way. Teleconferencing is used to keep staff and tutors in touch and students send and receive work by fax.

Learning Outcomes
Both Aboriginal and Torres Strait Islander culture and Western culture are taught and validated by the course and students learn to combine the two ways of relating to the world in a manner that impacts on issues from both cultures. For example, both sets of procedures for caring for land are taught side by side in the course. In terms of qualifications both indigenous and mainstream qualifications are obtained. The mainstream designation of Ranger or Guide and traditional role as Custodian is built up in consultation with Aboriginal and Torres Strait Islander Senior Custodians so that the roles complement each other rather than force students to be one or the other.

Cost Benefit
This program immediately raises an issue regarding the cost of plane fares for students so that they can participate in a series of block releases in communities on a round-robin basis. The DEETYA policy of paying students' fares but not lecturers' fares benefits this program, but obscures its true cost. While this research project encountered several programs in which student travel was funded by DEETYA, only in this program is there a substantial increase in the knowledge obtained by the students because of the locations involved. In this case it is the traditional knowledge which the senior custodians in each community are in a position to share and which they must teach on their own land.

Student Attitudes
Students were not available for direct consultation at Cairns TAFE because the students are dispersed in communities. However, the program conducts extensive post-course evaluations with students and these are reported by staff to have been very positive.
Implications and Issues for Aboriginal Students and Communities

Tanami Network
Central Australia
(Satellite Television)

Summary
The Tanami Network is a satellite television network covering remote communities in the Northern Territory. Although the research team was unable to visit it, it is included here because it is an example of the use of advanced technology controlled by Aboriginal people, and is used to conduct family and cultural business as well as for mainstream educational purposes.

Background
In 1991, members of the remote communities of Yuendumu, Lajamanu, Willowra and Kintore committed $300 000 of community funds to install a six point videoconferencing network to interconnect their communities as well as Alice Springs and Darwin. The motive for creating the network arises from the fact that the concentration of people in communities over the past 50 years has seriously disrupted the traditional network by which family and ceremonial business was conducted. Motor vehicles, radio, telephone, fax and the creation of outstations, have all been used to try to re-establish the network. Videoconferencing was trialed in 1990 and was deemed to be a viable way to conduct family and ceremonial business, but it was recognised that the network would have to be put to other uses to justify the cost. Time on the network could be sold to such potential users as educational providers for course delivery to remote communities, to government and non-government service providers as an alternative to travel to communities, and to enterprises wishing to conduct commercial transactions.

Course Detail
Cairns TAFE and Batchelor College use or have used the network for adult education course delivery in the areas of teaching, adult education, health worker training, trades and community management. The Northern Territory Education Department uses the network for the delivery of secondary courses and the in-servicing of teachers. The Health Department also uses the network to deliver in-service and support to remote staff, including remote diagnosis. Many Northern Territory agencies use the network to communicate with remote communities as an alternative to staff travel. Nationally, the network is attempting to draw support for the formation of an Aboriginal open learning network which can deliver courses and offer Aboriginal knowledge to courses in linguistics, anthropology and social sciences. International links include contacts with the Sioux and Navajo peoples in the United States, the sale of art to buyers in the United States and Europe, and contacts with the Lapp Parliament in Sweden.

Flexible Delivery Strategies
Videoconferencing is one component used in a mixed mode approach to the delivery of adult education which also includes teacher visits, on-site tutors, telephone, fax and computer links.

Technological Enhancement
A turnkey technology package was negotiated with AAP-Communications which is made up of Codec units integrated to Hughes satellite earth stations and delivered through a national transponder on AUSSAT 3. The network uses the Confernet system which combines satellite and videoconferencing technology. The system can operate in three modes: point to point, multipoint, and broadcast mode. In point to point there is a two-way audio and video link between two sites. In multipoint there is a two-way link among up to six sites. In broadcast mode one site broadcasts to some or all of the other sites, or to sites outside the Tanami Network.

Learning Outcomes
The Tanami Network makes a major contribution to the education of adults in areas of employment such as teaching, community management, health work, and trades. The greatest impact is, however, in the secondary education area, because the remote Tanami communities were virtually excluded from this level of education with only a handful of students out of 250 in the age group undertaking secondary studies by boarding away from home.
Cost Benefit
The high initial costs—around $300,000—could not be justified by any single use such as education or conducting cultural, family, or government departmental business over distance. Taken together, however, the savings involved can support the network.

With the Tanami project, the issue of cost benefit was addressed by spreading the cost as widely as possible among many types of users, including educational users.

Student Attitudes
Because the network is owned and controlled by Aboriginal people and used for a variety of cultural purposes, Aboriginal users are very much at ease when using the technology. The novelty of the technology did not get in the way of conducting family and cultural business; even at the initial trials spare time available outside the formal trials was used by Aboriginal people for this purpose.
Study Centres for Remote Communities in Outback South Australia
Port Augusta Campus
Spencer Institute of TAFE

Summary
The Study Centre is essentially a distance education methodology based on traditional, printed learning packages designed specifically to be effective with Aboriginal students in remote and semi-urban communities. The study centre itself is a room in the Aboriginal community equipped with tables and chairs, a fax, and a conference phone. The lecturer telephones into each study centre’s conference phone daily at a prearranged time to answer questions about the learning packages. In each centre a support worker, as distinct from a tutor, helps students with organisational problems, but refers all teaching questions to the lecturer.

Background
The development of the Aboriginal Study Centre Program began in 1990. During that time, the Aboriginal Education Section of the then Port Augusta College of TAFE (now the Port Augusta Campus of the Spencer Institute of TAFE) was offering five full-time classroom-based, certificate courses to Aboriginal students.

At the end of 1990, student numbers and enrolment enquiries for the following year were diminishing. Despite efforts to inform Aboriginal communities in the northern region about TAFE certificate courses, enrolments for 1991 were low. Discussions revealed that the student numbers were low because of the following factors:

- Students from remote northern communities could not afford to relocate to Port Augusta
- There was a lack of housing in Port Augusta for students relocating from other communities
- Face-to-face classroom teaching did not suit all students
- Child care was a problem for some students.

In addition, many Aboriginal communities were asking if certain certificate courses could be offered in their communities.

The initial target audience was the South Australian Aboriginal population. Study centres are located at 22 centres, and four prison sites also provide access to courses on a part-time basis. The study centre support worker is someone accepted by the local Aboriginal community—in many instances an Aboriginal person.

The Aboriginal Study Centre Program was developed at the request of, and in consultation with, Aboriginal communities throughout the north and west of South Australia. An opportunity was seen to initiate an open learning methodology for the delivery of certificate courses to Aboriginal students in a variety of locations, and trials were begun in 1990. The first two certificate courses developed as open learning packages were written solely by lecturers in Aboriginal education with some assistance from the Centre for Applied Learning Systems at the Adelaide Institute of TAFE. The Centre’s instructional designers provided advice for the layout, type, and structure of packages.

It is important to note that a decision was made early in the planning process that technology would not determine the methodology used.

Course Detail
The following six TAFE accredited certificate courses designed specifically for Aboriginal people are currently being delivered through the Study Centre Program:

- Certificate in Aboriginal Community Administration
- Certificate in Arid Lands Horticulture
- Certificate in Aboriginal Community Management
- Certificate in Community Services (Introductory)
- Advanced Certificate in Community Services (Youth Work)
- Certificate in Aboriginal Primary Health Care.
Flexible Delivery Strategies
The Study Centre is a specialised example of flexible venues with Aboriginal clients using mostly orthodox print-based distance education packages with some key enhancements to client support. The support worker provides the regular local human contact which is usually absent in distance education situations. The non-teaching, non-tutoring role of the support worker is critical to the success of the Study Centre Model. The authority figure aspect of a teacher or tutor is not present, allowing the support worker to act as a go-between or advocate for the student. In addition, because the support worker refers teaching questions back to the lecturer, both student and lecturer are obliged to work out the problems as they occur and before they become too large and discouraging for the student. The use of the conference telephone to make daily contact with the lecturer at scheduled times builds a regular relationship between the lecturer and the group, as well as providing a powerful but novel structure to encourage regular attendance. The presence of a fax machine allows written material to be passed efficiently between lecturer and Study Centre.

Technological Enhancement
Study Centres established in local communities have teleconferencing equipment and a fax machine. One three-tiered in/out basket for organising learning packages is provided for each course taught.

Learning Outcomes
In Semester One, 1992 there were 104 enrolments, while it is unlikely that more than 16 students would have enrolled in conventional face-to-face classes. By semester One, 1994, 274 students were enrolled in 27 Study Centres. The program has a pass rate of over 75% in each subject, and a retention rate that far exceeds that of previous face-to-face classes. Generally, the Study Centre Program enables Aboriginal people to achieve independence and educational status at the level of non indigenous students by:

- increasing the access of Aboriginal students to vocationally oriented TAFE accredited courses;
- providing equitable educational opportunity to rural, remote and other Aboriginal communities through the establishment of Aboriginal Study Centres; and
- providing a planned, cost-effective and prescribed learning methodology.

Cost Benefit
The cost per student hour has been calculated at $6.54 for the State. When visiting Port Augusta in 1995, this researcher was quoted a current cost of approximately $8.00 per student hour. Establishment costs for a Study Centre vary from $2,000 to $3,500. In addition to these costs, each certificate requires a lecturer/coordinator and each Study Centre requires a certain number of hours per week for the employment of a support worker (typically 12 hours per week). 25 students is the upper limit which any one lecturer can handle. When enrolments exceed 25 a second lecturer must be engaged and this situation is reported to be less elastic than in typical classroom situations because of the high marking and record-keeping load intrinsic to the methodology. Lecturers using the method were extremely well-organised and had a complete, up-to-date progress record for each student in front of them as they made their daily calls. Materials development and the editing of packages are a major one-off cost. Generally, a range of certificate level courses can now be delivered to centres where it would not be economically viable to deliver even one full-time certificate level course using face-to-face teaching methodology.

Student Attitudes
Students like being able to study in their home communities and most would not travel to a TAFE college to attend the same courses. Some typical comments recorded by staff from Port Augusta and also by the current research team were:

'It is quiet and peaceful.'
'We can work at our own pace.'
'There is always someone to help us when we need it.'
'We have contact with our lecturer daily.'
'We are not constantly being interrupted by phone calls and visitors.'

On the negative side, students sometimes ask for more information in the learning packages, and for more visual materials such as videos and other resources. The only resources routinely provided are a dictionary and thesaurus.
A more lengthy written comment from one student demonstrates the degree of flexibility students are able to find within what first appears to be a quite structured methodology: 'If I can't get in to the Study Centre on a Monday (my chosen study day) ... I can use the Centre on a Thursday or a Friday (catch-up days), or I can go in on a Tuesday or Wednesday, but do my Monday subject and the support workers are there to help me. If I need to be at home on a Monday, I can do the work there and either ring in to my lecturer, or go to the Study Centre for the link-up.'
Interactive Multimedia
Cairns Campus, Far Northern Queensland Institute of TAFE
(CD ROM)

Summary
Located close to many traditional Aboriginal and Torres Strait Islander communities, Cairns TAFE (now the Cairns campus of the Far North Queensland Institute of TAFE) has invested in the production facilities and highly skilled staff to produce quality interactive CD ROMs as a primary medium for course delivery in these communities. Starting with a teacher education course, Cairns TAFE has put major elements of four other courses onto CD ROM, thereby reversing falling enrolment figures and increasing completion and retention rates.

Background
Like Pundulmurra and Batchelor Colleges, Cairns TAFE recognised by the mid 1980s that only a small percentage of traditional people were prepared to go away from their communities to study. The demand for training in communities was clear and strong and it took until the late eighties to adopt what is now called a 'flexible venues approach'. In addition to developing courses which required only small amounts of on-campus attendance, Cairns TAFE has also developed interactive multimedia - primarily in the form of CD ROM. To support the effort, Cairns TAFE developed its own media production facility with the professional staff and equipment necessary to produce high quality media work. Teachers work with the production team to see that educational and cultural values are maintained. The curriculum is also developed locally through the Aboriginal and Torres Strait Islander Curriculum Consortium located on the Cairns campus.

Course Detail
Cairns TAFE offers several courses supported by interactive multimedia. The first course to be treated this way was the Off Campus Teacher Education Program (OCTEP) course in 1991. The other courses which use this delivery mode are Ranger Training, Primary Health Care and Community Management. The response to flexible delivery in the OCTEP program has been positive as shown by its increasing enrolments. Prior to 1991, TAFE was running a teacher education program but was not attracting many Aboriginal or Torres Strait Islander students. Starting in 1991, 47 OCTEP students completed Year 1; 29 completed Year 2; and 27 went on to James Cook University to complete their teaching qualification. Enrolment has increased with 80 students in first and second years in 1995.

Flexible Delivery Strategies
The underlying strategy used is the provision of flexible venues in response to Aboriginal and Torres Strait Islander requests for training in their communities. The programs are resource-based and use self-paced materials in the form of printed materials enhanced by interactive multimedia. Support systems are used to provide feedback to students in remote localities, including fax, teleconferences and telephone, and electronic mail.

Technological Enhancement
CD ROM carries the major burden of the teaching while printed learning guides act as road maps through the material by specifying related activities. The compact disk substitutes for much of the written material which would otherwise be on paper.

Learning Outcomes
Broadly the use of CD ROM has enhanced the overall strategy of Cairns TAFE to deliver more effective education in indigenous communities. Falling enrolments have been reversed and the technique has been extended to other courses where it has also worked, showing that the use of CD ROM is a generally valid approach. Because CD ROMs are used to carry the main burden of instruction supplemented by written material rather than the reverse, the approach taken by Cairns TAFE represents a significant departure from education which depends largely on print. The Cairns CD ROM project also demonstrates how powerful an educational tool CD ROM is, even in its early stages of implementation. While audiovisual educators have advocated this level of visual education for many years, it is only with the advent of CD ROM that there has been a reasonably priced way to produce and distribute interactive courseware which is characterised by visual representation.
Implications and Issues for Aboriginal Students and Communities

The use of CD ROM in remote communities brings high quality self-paced interactive material to people who have been previously severely disadvantaged. When the research team visited Billiluna community in remote Western Australia, the local teacher stated that students used OCTEP CD ROM material without needing constant support. Because literacy levels were low in this situation the teacher did point out that the material escalated in difficulty too quickly for most local students. As the program is building toward a full teaching qualification, this increasing difficulty must occur at some point in the course; it was not clear if this comment was cause for concern in other settings.

Cost Benefit
The cost of CD ROM production is initially high. $20,000 for 50 hours of instruction and $10,000 for 20 hours was mentioned by the staff of Myriad Multimedia. Given that exotic and relatively expensive technologies come down in price to consumer level fairly quickly, colleges will find the hardware to produce CD ROM becoming readily available in the near future. However, there should be no illusions about producing full multimedia CD ROM cheaply and well. If production quality is important, some professional photographic and graphic art skills will be needed to produce material of reasonable quality. If the CD ROM is used for audio recording, still photographs and simple graphics only so that it is the equivalent of a slide tape, then useful materials may be produced by teachers without the assistance of graphic artists and photographers. Much useful material can be produced using desktop publishing techniques and it remains to be seen what level of quality can be achieved without resorting to professional production personnel. However, the process is not mysterious. Older media such as slide tapes and filmstrips, film loops, and overheads have long been produced both by teachers and professionals. Teachers are familiar with the differences and can expect similar results with CD ROM. The only new factor is the programming of the CD ROM which requires a programmer who understands how to code interactions designed by educators and trainers. The programming languages involved are specialised programs called author languages because they are supposed to be useable by the educational author and not require a specialised programmer. These programs are able to be mastered by the determined teacher with a flair for computers, but most would require some training to be able to make use of these program features fully.

Student Attitudes
While no students were available for interview in Cairns, staff in OCTEP Community Management and Ranger Training said that the introduction of CD ROM has been well liked by students who generally find the material easy to use and easier to persist with than printed packages alone. The CD ROM material can help with literacy because it reads some material to students, who are reported to appreciate this feature.
Flexible Delivery in Vocational Education and Training

Australian Remote and Rural Training Systems (Interactive Book)

Summary
A consortium consisting of the Victoria University of Technology, Spencer Institute of TAFE and two private organisations, Australian Remote and Rural Training Systems and Skapin Multimedia, have utilised software developed and held under copyright by the Victoria University of Technology to develop accredited preparatory training packages for Aboriginal people.

Interactive Book may be seen as a technological enhancement of ordinary printed learning packages, as well as a medium in itself. A bar code is added to the printed page and controls a computer which can play audio files, display pictures and simulate human interaction with the student. While it is similar to CD ROM in the way it works, it is less expensive and a natural extension of the use of printed learning packages.

Background
Australian Remote and Rural Training Systems will be providing cost effective learning materials (on behalf of the consortium) in the Interactive Book medium. This format adds interactivity to printed learning packages by storing audio files on CD ROM (i.e., recordings of the text and questions found in the printed learning package). The student interacts with the material by swiping bar codes on the printed page which then plays the selected audio segment through earphones. These audio segments may be information, questions, answers, responses to student answers, or even responses the student has recorded during the lesson. Interactive Book is relatively inexpensive—about one quarter the cost of CD ROM. It is particularly useful for students with low literacy and numeracy because it can present written material over headphones while the student reads along and then answers questions.

Course Detail
To date the following subjects from the Certificate in Preparatory Education have been developed in Interactive Book format.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Writing Skills for Everyday Use</td>
<td>40</td>
</tr>
<tr>
<td>Everyday Writing</td>
<td>40</td>
</tr>
<tr>
<td>Accidents and Incidents</td>
<td>20</td>
</tr>
<tr>
<td>Personal Income</td>
<td>20</td>
</tr>
<tr>
<td>Safety Signs and Information</td>
<td>20</td>
</tr>
<tr>
<td>Reading for Everyday Use</td>
<td>40</td>
</tr>
<tr>
<td>Basic Number Skills 2</td>
<td>20</td>
</tr>
<tr>
<td>Basic Measurement</td>
<td>20</td>
</tr>
</tbody>
</table>

Flexible Delivery Strategies
In terms of flexible delivery strategies, Interactive Book is an example of a new form of resource-based education and training which extends the power and versatility of conventional printed learning packages by using computer technology to add the capability for the materials to simulate human interaction. The materials, therefore, are self-paced and self-instructional and highly suitable for use in distance education. The medium has the added advantage of allowing the student to repeat passages and questions until they are clear. This latter feature makes the medium particularly suited to students with low numeracy and literacy. It also fits in well with the existing equipment and skills base in education and training institutions which already produce learning packages with desktop publishing.

Technological Enhancement
The technology involves an industry standard computer equipped with a bar code reader connected to a serial port, and a sound card with headphones and microphone attached. Together this equipment adds about $500 to the cost of an ordinary computer, although many newer computers are already equipped with sound cards. The key to this implementation of the technology is proprietary software which actually links the bar-coded information with the audio or image files stored on the computer's hard disk. This software is similar to 'authoring languages', designed to enable teachers to create interactive computer-assisted learning, but is specifically written to work with bar and other simple coding systems. An institution wishing to produce an Interactive

Pundulmurra College
Book could write the course material, record the audio segments, and do the desktop publishing leaving room for the addition of codes. Australian Remote and Rural Training Systems would only have to apply the bar codes and do the programming that links the audio files to the bar codes. Because ordinary analogue recordings do not reproduce well on disk, an institution would need to spend about $800 for a digital tape recorder to make the original recordings if one is not already available. Once produced, or with the purchase of existing packages, the printed portion—along with the computer disks containing the coded audio files—can be mailed to a remote site and installed by anyone capable of installing computer software.

**Learning Outcomes**
Trialing of the above learning materials has been completed and a report has been prepared by the Spencer Institute of TAFE. This report should be available to interested parties in the near future.

**Cost Benefit**
The Interactive Book is a cost-effective alternative to CD ROM. Production expenses for 20 hours of instruction costs about $2,500 for the print-based material and $200 for the software programming, as opposed to $10,000 for CD ROM. It should be understood that CD ROM will typically contain more appealing features such as pictures and colour, while at this price Interactive Book relies on inexpensively reproduced paper and computer audio files. While both media can be made to do most of the things the other can do, the prime attraction of Interactive Book is that it can be used to make written learning materials highly interactive at a reasonable cost. It is particularly cost effective for students with low literacy because it will play an oral reading of a printed page or any part of that page repeatedly and on demand. The developers say that later versions of Interactive Book can and will include colour photographs and diagrams.

**Student Attitudes**
No students were available for interview at time of the site visit, but lecturers reported that Interactive Book bolsters confidence because students find themselves grasping and learning to read material they could not ordinarily read by themselves. They also report liking being able to repeat material at will until they understand it, and the fact that headphones kept their answers private.
Hospitality Training in Remote Communities  
Innisfail Campus, Far North Queensland Institute of TAFE  
(Telematics Delivery)

Summary
Delivery through Telematics of the Hospitality Training course to staff at Pajinka Wilderness Lodge is an example of the innovative use of computer and telephone technology to deliver real time interactive teaching to Aboriginal people in a remote community workplace.

Background
The Injiloo community extends 200 kilometres south from the tip of Cape York. Its council was formed in 1985, when the community, along with several other Aboriginal communities in Queensland, was given the right to re-establish self administration. In regaining self administration, the Injiloo people have entered into eco-tourism with the inheritance of the Pajinka Wilderness Lodge which is located 350 metres from the northern-most point in Australia. There are 24 guest rooms, a swimming pool, a cocktail bar, restaurant, souvenir kiosk and reception area. Guests come from all over the world to view the enormous range of flora and fauna—much of which is unique to the area—to go fishing, or simply to stand on the tip of Cape York. The present council sees education and training as a major issue, and acknowledges the need for considerable training for their own people to fully take over the management of the Pajinka Wilderness Lodge. In conjunction with Johnstone College of TAFE at Innisfail, now part of the Far North Queensland Institute of TAFE, the council has sought to develop an approach to training which allows students to complete most of their course work without leaving their community and which allows them to continue to work in their jobs at the Lodge.

Course Detail
The course consists of 519 nominal hours to be completed over fifteen months in a traineeship/work experience program. The main aims of the program are:

- to develop the trainees' confidence and customer skills to interact successfully with local, interstate, and international tourists;
- to provide the staff with quality food and beverage service skills in the workplace;
- to improve the communication and supervisory skills of staff; and
- to provide the community with an opportunity to access vocational, literacy, numeracy and general communication skills through flexible external delivery using multimedia and traditional learning materials.

Flexible Delivery Strategies
The key strategy is the use of Telematics to achieve flexible venues. The multimedia software package Electronic Classroom for Macintosh combines teleconferencing with a direct computer link up for the trainees. Using the mouse, teacher and student can alternately take control of the screen to point, draw, or show prepared visual information such as digital camera photographs. Both teachers and students have still and motion cameras and send visual material to each other routinely. The visuals are used for both teaching and assessment—an example of the latter could be students’ photos of how they have set a table. The system allows immediate visual and oral communication between the teacher and the students on a daily basis. Sessions take place for two hours each weekday. Four are devoted to the hospitality skills modules, while the fifth deals with numeracy and literacy support.

In addition to Telematics the course has a strong element of self-pacing through the use of workbooks which allow the trainees to work individually or as a group, and to continue or catch up on study they may have missed in the Telematics sessions. The existing restaurant manager serves as an on-site tutor. Site visits by teaching staff are also used as necessary. An initial ten day residential workshop is conducted to familiarise teachers and students with each other and to learn to use the Telematics equipment as well as cover the following modules:
Technological Enhancement
Telematics is a relatively new technology which involves the use of an ordinary voice phone
connection in combination with a modem connection between two computers in order for graphic,
print, and photographic information to be passed back and forth between teacher and students.
The computer screens are synchronised so that what is done on one screen appears on the other
screen in the remote location. Teacher and student can pass control of the screen back and forth
so that, for example, a drawing could be done on the screen, by the student, who could then pass
control to the teacher who might correct or modify the student’s drawing. If the drawing is done on
screen the other person will be able to watch the drawing being done, much like observing someone
drawing on a whiteboard. Similarly, prepared graphics or photographs—even motion clips—can
be prepared in advance by either party and sent to the other. This allows teachers to prepare
material for lessons and students to prepare homework for uploading and discussion where
appropriate. In the hospitality course, competencies such as setting a table properly are
photographed by students using a digital camera by students and passed to the teacher for
evaluation via the computer. The digital camera—because it involves no processing delay—can
be used spontaneously to illustrate a point that comes up during a lesson.

Learning Outcomes
The course was observed during the first six months of its operation. All but one of the original
complement of the nine students have been retained. The most obvious learning outcome was
the confidence and mastery with which students and teachers used the Telematics equipment.
Exchanges were natural and spontaneous and it was clear that a good working rapport had been
established between students and the teachers. The intimacy and ease of the relationship, over
distance, struck the researcher as being in sharp contrast to the much more tenuous kind of
relationship which develops with radio technology or audioconferencing.

Because of the urgency to teach skill areas immediately needed in the workplace the course for
1995 had been arranged to include the following modules taught between June and December:

FBS007 Restaurant - Preparing for Service
FBS008 Restaurant Service
FBS011 Bars and Service of Drinks
FBS009 Wine and Wine Service
FBS018 Cuisine Knowledge
CBT057 Workplace Communications

These modules were on schedule for completion in the planned time even though the methodology
was being used for the first time by both students and teachers.

Another outcome has been that the students have been able to use and care for the Telematics
equipment with minimal training. The training involved a three day workshop on how to use the
equipment followed up by a technician going to Pajinka for a further day’s training. The students
have been able to handle all connecting and disconnecting and setting up of equipment without
further help. This result was contrary to expectations based on expert advice, which doubted this
approach would be successful.

Cost Benefit
While the benefits of this Telematics application appear to be high, so too do the costs. While the
approximately $40 000 start up costs can be amortised over several years, and used to teach other
courses as planned, the course would have to be delivered to several communities to justify the cost
of the two lecturers. However, as a pilot project it is extremely valuable because an essentially new
distance teaching mode is being developed which appears to be culturally appropriate for Aboriginal
people. Unlike other forms of educational technology, it appears to allow a very personal relationship
to develop between students and teachers despite the distance. Perhaps its greatest drawback is
that, used by itself, it is real time teaching and so inherently no more efficient than face-to-face teaching.
Once set up, however, it makes distance education possible which is much closer to face-to-face
teaching than earlier technological methods such as the School of the Air.
Flexible Delivery in Vocational Education and Training

While some proponents see Telematics as a stand alone delivery method, it appears that it may be most cost effective when combined with other distance education techniques, as it is in the program under discussion. It might prove a valuable addition to the Study Centre Methodology discussed elsewhere in this section.

A serious ongoing cost arises because two phone connections are needed—one for the conference phone, the other for the modem link between the two computers. In the case of Pajinka this involved 10 hours a week of Subscriber Trunk Dialling (STD) charges on two lines—not an inconsiderable cost. This double cost was cited as a major problem in a Telematics trial in the Kimberleys conducted by Catholic Education. The advent of International Subscriber Dialling Network (ISDN) lines which can handle both voice and data on the same line holds out some hope for reducing costs in the future—although this hope is tenuous because charging rates for ISDN lines are still in flux. Furthermore, ISDN is probably further in the future for remote communities than for most locations.

Finally, the simplicity and reliability of Apple equipment in this context is almost certainly worth the extra cost over IBM-style equipment given that this choice is in accord with the experience of other institutions dealing with traditional Aboriginal people.

Student Attitudes
The most striking aspect of student attitudes during the lesson observed by the researcher was the high level of enthusiasm and morale of both the students and the teacher. While some of this enthusiasm might be due to the novelty of being able to communicate in a new way, there was a clear commitment to the subject matter and to learning the material at hand. Both the lecturers and the students seemed at ease with each other and the technology. The difference between Telematics and satellite TV, such as Westlink, is that the latter is a relatively impersonal extension of a lecture situation while Telematics, at least in the example observed, manages to maintain a high degree of intimacy and spontaneity. Another key difference from the more passive television situation is that the student must actively operate the equipment with Telematics. There is much more a sense of equal participation with the teacher, and in the case of Pajinka a very real responsibility on the student's part for seeing that the equipment works correctly.
Certificate of General Education for Adults (CGEA)
Western Australian TAFE System
(Open entry/exit)

Summary
The Certificate of General Education for Adults is a fully-accredited, competency-based, adult literacy and numeracy course which is being implemented for Aboriginal students in both urban and semi-urban settings across Western Australia. It is noteworthy in an Aboriginal education context because it is self-paced and highly customisable which allows it to be adapted to a wide variety of situations. It is built on specific competencies which can be taught in a variety of ways while retaining portability and comparability.

Background
The CGEA was developed in Victoria under the Victorian Adult English Language, Literacy, Numeracy Accreditation Framework. This provides opportunities for adults to study for formal credentials giving them credit for improving their reading, writing, mathematical and oral communication skills. It provides competency-based credentials at two levels for adults.

Course Detail
There are four areas or streams of study in the CGEA. The four streams are Reading and Writing, Oral Communication, Numerical and Mathematical Concepts, and General Curriculum Options. The General Curriculum Options stream is based on competencies that are designed to be taught using a wide variety of content-oriented subjects which can be developed around local interests. Each stream is divided into four levels of difficulty with Level 1 being the entry level and Level 4 the most advanced. Each level of each stream is called a module. For each module there are competencies or learning outcomes which the student must achieve before proceeding to the next level.

<table>
<thead>
<tr>
<th>Level 4</th>
<th>Reading and Writing 4</th>
<th>Oral Communication 4</th>
<th>Numerical &amp; Mathematical Concepts 4</th>
<th>General Curriculum Options 4</th>
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<td>Level 3</td>
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<td>Oral Communication 3</td>
<td>Numerical &amp; Mathematical Concepts 3</td>
<td>General Curriculum Options 3</td>
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<tr>
<td>Level 1</td>
<td>Reading and Writing 1</td>
<td>Oral Communication 1</td>
<td>Numerical &amp; Mathematical Concepts 1</td>
<td>General Curriculum Options 1</td>
</tr>
</tbody>
</table>

The CGEA (Foundation) is granted after a student has successfully demonstrated competence at Level 2 in all streams. The CGEA is granted after a student has successfully achieved Level 2 competencies in all four streams and Levels 3 and 4 in one other stream. The stream which is achieved at Level 4 will appear in brackets, for example CGEA (Reading and Writing). A student may choose to pursue all four streams to Level 4. In this case four credentials will be granted, one for each stream.
Flexible Delivery in Vocational Education and Training

Flexible Delivery Strategies
Flexible entry/exit and self-pacing are two key strategies which are used in this course and which have particular appeal to Aboriginal clients. Students are assessed on entry to the program and are placed in the course at an appropriate level. A student can leave the course after having achieved their particular goal, such as mastering specific reading, writing, or mathematical skills in order to gain access to another course. Students may progress at their own pace and there is no necessity to finish the course in a certain amount of time. Aboriginal students in Perth and in semi-urban centres such as Broome and the Hedland region use this flexibility to accommodate cultural obligations and have indicated that the lack of pressure and the ability to pick up where they left off are important to them.

The flexibility of the CGEA to provide General Curriculum Options in any subject which interests the students is a very effective use of competency-based training to maintain a clear focus on defined learning outcomes while throwing open the context in which they are achieved.

Technological Enhancement
The only consistent use of technology used by CGEA students was the use of computers where available. At Pundulmurra students were able to gain access to a computer to complete assignment work. These students expressed their liking for being able to produce well-presented work. In metropolitan Perth the competition for computers with other students was very high during the 9 am to 3 pm span when students attend CGEA classes. In effect, in Perth Aboriginal students may have relatively less access to computers.

Learning Outcomes
The CGEA is particularly relevant to Aboriginal students because many reach adulthood with few literacy and numeracy skills. The combination of a standardised course which is moderated both at a state and interstate level provides a sound basis on which to assess progress. The site visits were conducted late in the 1995 TAFE year in Western Australia and both retention and progress were good.

Cost Benefit
It is hard to assess the cost benefit of such fundamental skills as literacy and numeracy. The cost benefit of the flexible delivery strategies employed in the CGEA is certainly difficult to assess and is the subject of separate research being conducted at Kalgoorlie College. However, the primary goal of finding a literacy and numeracy course that is capable of attracting and holding a wide cross section of Aboriginal students seems to have been met.

Student Attitudes
Self-pacing had the greatest appeal to the Aboriginal students interviewed. They confirmed that this attitude was the result of feeling unduly pressured in earlier encounters with school. While the approach allows for individuals to progress at different rates, in Perth TAFE colleges staff reported that the strong group focus of Aboriginal classes led to a sense of group failure unless everyone in the class succeeded. Because the course is criterion-based, as opposed to norm-based, all students can succeed. This cultural value is strong and it was reported that faster achieving students would slow down to let the slower ones catch up, so the Aboriginal group taking the class would remain intact and could move on to the next level together.
Implications and Issues for Aboriginal Students and Communities

Open Access Computing
Pundulmurra College

Summary
This is an example of the use of flexible entry/exit and resource-based education to turn an inherently inefficient small operation into a cost efficient one with increased client participation, and completion rates. The program allows students to enrol at any time and to attend at any time during access hours to study the computing module or modules of their choice.

This approach maximises the use of teacher's time and the physical facilities. It also encourages those students to participate who would not otherwise have been able to attend. It should be recognised that the specific character of the teaching resources is depended upon to maintain student engagement.

Background
In Semester One, 1995, computer classes were being taught in a traditional face-to-face classroom setting in a computing room newly equipped with 12 computers. Enrolments in individual units were unacceptably low, but were allowed to run in the hope that enrolments would grow. Three teachers, one full-time and two part-time were servicing approximately 20 students in five classes. Staff observed that the students were of such diverse skill levels that even when teaching word processing to a group, the teacher was essentially teaching individuals because of the skill difference. Because of the individual approaches required, it was decided to mix classes and allow students to come at the time most convenient to them. In order to open up enrolments, in this way it became necessary to produce sufficient learning materials for the students to work semi-independently. As a consequence it was found that considerably more students were interested and accommodated than had previously been the case.

Course Detail
Certificate II of Information Technology - offered Semester 1, 1996.

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Index No.</th>
<th>Title</th>
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<tbody>
<tr>
<td>L201</td>
<td>69023</td>
<td>Keyboarding</td>
<td>20</td>
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<td>H202</td>
<td>31282</td>
<td>Graphical User Interface</td>
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<td>F201</td>
<td>69000</td>
<td>Word Processing Fundamentals</td>
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<td>H203</td>
<td>69001</td>
<td>Using a Command Line Interface</td>
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<td>H302</td>
<td>69003</td>
<td>PC User Fundamentals</td>
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<td>C201</td>
<td>69006</td>
<td>Using Computer Networks</td>
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<td>F207</td>
<td>69025</td>
<td>Spreadsheet Fundamentals</td>
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</table>

Flexible Delivery Strategies
The major strategies used are flexible entry/exit and resource-based education. The flexible entry/exit component works as follows: students may start any of the available modules in the course at anytime during the year. When appropriate, students may enrol for two or three modules concurrently to provide variety during study instead of always doing modules one at a time. The computing room is open from 10:00 am to noon and from 1:00 pm to 3:00 pm Monday to Friday and from 7:00 pm to 9:00 pm on Wednesday nights. For a $40.00 fee per term students have unlimited access at all of the above hours; for $20.00 they have unlimited access on Wednesday nights. The lecturer is in attendance during the 22 nominated hours which constitute the lecturer's teaching obligation. This complete flexibility of scheduling is made possible because the modules are resource-based. Without the resources to engage most of the students most of the time there would not be enough time for the teacher to teach each student individually on a face-to-face basis. While the burden of covering the material is lessened, the extra work of finding or creating the resources makes this approach quite work-intensive at the outset.

The demands for additional resource materials have been limited and it has been only during the second semester that staff have felt comfortable with the level of resourcing on hand. In developing
facilitation skills in this environment, staff have had to become skilful at being aware of the level of progress and development reached by each student so that meaningful activities and resources can be provided when required.

Record keeping is more complex with this approach than with a face-to-face approach. In addition to keeping records of the competencies achieved and modules completed, the lecturer requires students to sign in and out of the computer room so that actual hours of attendance can be determined. In addition, a work plan is developed for each student so that both the student and the lecturer know what the student will be working on in the future.

Technological Enhancement
Other than a supply of up-to-date computers with contemporary software, there is no special equipment needed to operate the computer room in flexible entry/exit mode. What is required however are good quality written materials which can keep most of the students engaged in self-paced learning. These may take the form of written resources or computer based training—the main criteria being the suitability of the material to the students’ levels and needs; coverage of the competencies identified in the curriculum; and the overall instructional quality.

This approach works well with computers now because a reasonable amount of print and computer-based self-instructional material exists and because the computers and the software are the subject of the course. In addition, as more computer-based self-paced instructional material becomes available in other subjects—typically on CD ROM and Interactive Book—there seems to be no reason why this approach shouldn’t work well with any subject supported by a computer and suitable materials for each student.

Learning Outcomes
One outcome has been a significant increase in enrolments and a decrease in drop-out and failure rates. As might be expected from the introduction of flexible entry/exit, students take different numbers of hours to achieve the competencies in a particular module. Some students take much longer to achieve a given level of competence. In modules of 20 nominal hours, actual hours may range from 10 to 40 to complete a module. Given that some students have no previous computer or even keyboard experience before attempting these modules, while others may have significant amounts of either or both, it is not surprising that some students take considerably longer to master the subject matter involved.

Self-pacing appears to work well for students without costing the college significantly more to provide increased hours of instruction. Conversely, the college is not penalised when a student is able to complete the module in less than the nominal time upon which funding is based.

Cost Benefit
Up to nine modules are being offered by a single teacher in one term. This example shows that open entry/exit makes it possible for a single teacher, offering an entire certificate course, to serve a small community efficiently. The model would work with larger numbers of students and more teachers with more opening hours. Up to three full-time teachers could keep a single computing facility open 66 hours a week if demand justified it. While the base figures from the computing room’s first semester fell below levels of economic viability, the improvement is nonetheless real.

One issue concerning self-pacing is that, within the current funding system, colleges are paid according to the nominal hours it takes to complete a course rather than the actual hours particular students take to achieve competencies. The real cost of bringing disadvantaged students to a particular level of competency might be expected to be higher. Using self-paced self-instructional materials to carry the burden of the teaching load reduces the financial load that would be involved if a lecturer were paid for all these hours on a face-to-face basis. However, the operating costs and use of the physical space in the computer room involved for the additional hours will generate further expenses, particularly if other paying students could have been using the equipment and space during that time.

Student Attitudes
Students state that they really like being able to start when their interest and motivation are high, rather than having to wait for the beginning of a term or semester to enrol. Students also like not having fixed hours so they can fit the class around their other commitments rather than the reverse. Even though individual students are working on different tasks in different modules, there is a strong group identity in the computing room. More knowledgeable students help less knowledgeable
Implications and Issues for Aboriginal Students and Communities

students. Students may choose to attend at the same time so that they can work with someone they know. Because Pundulmurra is an Aboriginal college, Aboriginal culture strongly influences classroom atmosphere and the way things are done so that the Aboriginal people are secure in their sense of ownership. The open choice of when to attend and the ability to pick up where you left off fits Christie's (1988) point about the responsiveness of Aboriginal culture. Consequently, students attend because it suits them in the present. The atmosphere in the computing room is relaxed, yet industrious, with little idle time. The organisation of the space lends itself to the teacher working with the students. This program is similar to the South Australian study centre program in that the materials are doing most of the teaching while the lecturer is seen as helping. Disadvantaged students also emphasise the importance of self-pacing.

Two new groups of students began to take computing classes as a result of the open enrolment policy. For some students, such as shift workers, the open attendance is what makes taking the classes possible because their work schedules mean that they have days free for a week or two, and then can’t attend until their shift rotates again. They study intensively when they can, work, and come back the next time their schedule allows to pick up where they left off. The second group is casual office workers needing to upgrade their office skills to Windows programs—typically wordprocessing. Finding their skills obsolete when they apply for temporary work, the local temporary agency refers them to the Pundulmurra computing classes where they are able to start the module they need immediately.
Electronic Discovery Learning Environment and Web Site
Indigenous People's Unit, Southbank Institute of TAFE Brisbane

Summary
The Indigenous People's Unit at the Southbank Institute of TAFE is developing a multi-purpose computer facility for the delivery of accredited courses to Aboriginal and Torres Strait Islander clients, providing services from technologically-enhanced conventional classroom delivery to dial-up World Wide Web sites. At the time of site visits this operation was not yet operational but should be by the time this report is published.

Background
Australian National Training Authority (ANTA) funding was obtained in late 1994 to provide a broadly based electronic learning facility using the capabilities of networked computers (both locally and through the Internet) to support a variety of courses and projects for indigenous Australian students. A key design consideration was to give access to on-line data services in a group based, culturally appropriate manner. Therefore, in addition to remote dial-up access, a room with twelve computers is intended to encourage free movement—physically, electronically and interpersonally—so that students can work together in pairs, small groups, and families as well as individually and in conventional classes.

Course Detail
Broadly, the centre will provide all teachers at the Indigenous People's Unit with the ability to teach current and future subjects using the latest electronic aids. The subjects range from introductory job skills to Associate Diploma level courses using business software at an advanced level. Other short term courses will be offered, including computer-based subjects. Furthermore, an Internet Web Site will be created and made available to students and staff while connected to the network.

The first course under preparation for delivery via the Web Site is intended to help indigenous people upgrade their industrial, commercial and academic job related skills. The course is primarily aimed at employed people interested in promotion who need to assess their current skills, determine their strengths and weaknesses, and then obtain the necessary training to upgrade their skills to be able to confidently apply for better jobs. These students would typically access the Web Site by dialling in from home or their workplace.

Flexible Delivery Strategies
At its simplest, the Web Site format to be used for course delivery is a form of hypertext similar to the help files which are found in typical software such as word processors and spreadsheets. For those unfamiliar with hypertext format, text is presented with key elements highlighted or underlined. Clicking with a mouse on these elements brings up a more detailed article on that element which may in turn have highlighted text leading to further information. Thus the World Wide Web format is a way of browsing through material—although the material is not limited to text but may contain graphics as well as still and motion pictures—and it fosters a discovery process not unlike browsing in a good library. This free-form browsing process is central to the proposed 'Discovery Learning Environment' methodology proposed by the project. It presents a new flexible delivery mode made possible by the combination of hypertext and wide area networking through the Internet.

At the same time, this state-of-the-art computer technology allows for other flexible delivery strategies which are also proposed by this project, such as creating an electronic classroom where various learning modes can be used (including face-to-face teaching enhanced by electronic versions of standard classroom teaching aids such as overhead projectors and video players but with access to a world-wide store of printed and visual information). The technology also has the potential to be used in more innovative and culturally appropriate ways which take advantage of the indigenous focus on group learning. Other aspects, such as the inclusion of such devices as the Apple Newton, allow for the incorporation of raw handwritten notes into computer format and introduce new ways of working for staff and students.
Technological Enhancement

Seen most broadly, this project is an ambitious and formative attempt to apply the latest computer technology, particularly local and wide area networking, to the delivery of education and training to indigenous people.

Learning Outcomes

The projected learning outcomes are as follows:

- Offer the indigenous Australian community access to on-line data services in a group based, culturally appropriate manner
- Offer state-of-the-art technology to assist indigenous Australian students in compiling information from multiple electronic sources, nationally and internationally
- Provide for supported flexible delivery of specifically developed, accredited curricula to indigenous adult students
- Develop job-related industrial, commercial and academic skills for clients
- Promote communication of indigenous Australian experience, including production of participant-generated learning materials
- Facilitation of collaborative projects between Southbank Institute of TAFE and indigenous Australian communities, organisations and project groups.

Cost Benefit

Because this program is not yet operational, no information can be provided on this.

Student Attitudes

Because this program is not yet operational, no information can be secured on student attitudes.
ISSUES AND RECOMMENDATIONS

Patterns of preferred study arrangements for Aboriginal people have emerged from the questionnaire, the consultation processes, the Case Studies of Effective Programs and reading and discussion. These include the strong preference by Aboriginal people for study in their own communities and their general acceptance of computer technology. In turn, delivery options have been developed on the basis of the project findings, including considerations such as supporting the use of technology systems by Aboriginal people and recognising the importance of both group and individual achievement to Aboriginal students.

This is a preliminary study of a fast-growing field. Several factors constrained the research process, namely:

- limited access to sources for a literature review, including information on education and information technology with an emphasis on Aboriginal cultural environments, and overseas resources of relevance;
- low response rate to questionnaire;
- limited time for comprehensive consultation: meetings sometimes coincided with events in particular communities (e.g., 'law business' or the absence of key individuals) which inhibited access to valuable history and knowledge; and
- issues of interpretation with respect to the views of professionals in the field: factors that needed to be taken into account when assessing the evidence were high staff turn-over and the perception that non-Aboriginal involvement frequently includes subtle forms of cultural imperialism.

A primary recommendation of the report is to conduct further research. Areas ripe for broader consideration identified by the project have been organised into eight clusters:

- Aboriginal/Contextual
- Cultural/Aboriginal Education
- Vocational Education and Training/Aboriginal Education
- Program: Structure and Administration
- Flexible Delivery
- Open Learning
- System Administration
- Staffing.
1. Aboriginal/Contextual

It became very clear to the research team that to regard Aboriginal communities as a homogeneous group would be a significant error. Not only were some closer to accessible employment and influenced by Western forms of education leading to that employment, but others were so far distant from formal employment locations that to consider forms of vocational education and training commonplace in other parts of Australia would have been extraordinarily irrelevant. Clearly, some Aboriginal groups maintain a relatively traditional lifestyle while others, being located closer to urban areas, have been influenced to a greater or lesser degree by their local environment.

However, in accordance with the findings of other researchers, the team readily acknowledged that Aboriginal people could not readily be categorised into 'remote', 'rural' or 'urban' for a variety of reasons. For example, even when Aboriginal families appear, at least at the superficial level, to be somewhat apart from their traditional culture and its influences, there are nevertheless firm bonds, kinship obligations and historic cultural influences which continue to have a major effect upon outlooks and daily life. The comments below will reaffirm that location, levels of mobility, contact with Western forms of occupations and employment are just as diverse across Aboriginal communities as Aboriginal languages and the influences of Aboriginal culture.

Clearly under these conditions, there is no one formula for the delivery of educational services to Aboriginal people. Some Aboriginal people excel in formal Western educational programs; others want to be immersed fully in the social aspects and cultural life of traditional Aboriginal communities. To serve the wide spectrum of groups between these two is a major challenge warranting exceptional sensitivity and perceptivity on the part of providers, and a far greater degree of tolerance in the matter of diversity and flexibility where educational institutions and systems are concerned.

**Recommendation One**

It is recommended that the guiding principles for Aboriginal vocational education and training be understood to be cultural sensitivity and perceptiveness on the one hand, coupled with administrative and service diversity on the other.

In correspondence with these guiding principles, it will be expected that providers of education and training comprehensively understand and ensure that all staff members understand the Aboriginal perspective on cultural values vis-a-vis Western education. Education providers should understand what is, or will be seen to be, cultural imperialism in the exercise, not only of content issues but also of process issues for Aboriginal students.

Dawson (1993) clearly emphasises that, perhaps even more forcefully among Aboriginal students than among others, the motivation comes from within the learner, and students will only be interested in learning in particular areas when they have a personal need for that knowledge as well as the maturity to incorporate it into their individual structures. The same is evident where communities are concerned, support being given to learning programs and processes when the need is clearly evident rather than when a particular course of action is proposed from outside the community. This makes especially critical the understanding reached by the research team that consultation with Aboriginal communities and Aboriginal people is paramount. Only through extensive consultation can charges of cultural imperialism be avoided, and the most appropriate programs, delivered in the most appropriate fashion, be provided for Aboriginal people.

**Recommendation Two**

It is recommended that widespread consultation with Aboriginal people be undertaken in relation to course content and delivery process for all activities related to Aboriginal vocational education and training.

**Recommendation Three**

It is recommended that consultation with and participation by Aboriginal people be encouraged in the planning and preparation of curriculum and course materials noting that these are likely to be, at least to some degree, community specific.
Again, it is reported by Dawson that where Aboriginal community members became too committed to Western education there was the risk that they would be alienated from their communities. Dawson reports that community members have revealed some considerable degree of pressure applied by community and family members because of their identification with the values of Western education, and, therefore, their perceived abandonment of cultural values firmly held by the community. As a consequence, this recommendation is of significance to the whole question of participation and consultation where Aboriginal communities and Aboriginal students are concerned.

Further, while Western planners and educators tend to have a goal orientation which leads them to consider that successful accomplishment, in learning as in other pursuits, stems from deliberative planning—frequently with a long-term perspective, this is not necessarily the case in Aboriginal society.

Hence, service providers will need to understand perceptions and values concerning Western long-term goal orientation. This orientation is not necessarily shared by Aboriginal communities, who may not value external goals with the same level of commitment, the long-term perspective, direction and persistence endorsed by Western educators.

Finally, while much has been written about the impact on Aboriginal values of Western culture and the introduction of, and perhaps resistance to, Western education, there is a related issue scarcely mentioned in the literature—the issue of Aboriginal education by Aboriginal people in Aboriginal culture per se. There have been forms of Aboriginal education and enculturation evident and successful for thousands of years, but Australian educators have been slow to document or understand the value and implications of these practices in Aboriginal society. The special purpose of this report in dealing with vocational education and training emphasises the need to link traditional Aboriginal cultural educational practices with any prospect of offering assistance or accrediting these skills and practices where that may be proposed or accepted.

**Recommendation Four**

It is recommended that a discussion paper be developed outlining, in broad principle, traditional educational practices that have contributed to the maintenance and reinforcement of Aboriginal cultural values, with a view to examining any possibility of transition, under the rubric of vocational education and training, towards accredited status, for example in the areas of art, language and dance.
2. Cultural/Aboriginal Education

As Baumgart (1995) has noted in relation to higher education, and the same is equally true of education at other levels:

The diverse nature of communities and their differing needs also need to be recognised. It is unlikely that one approach to course development and delivery will be applicable across all communities.

Much of the following discussion on Aboriginal education and training as affected by cultural issues is concerned with the most appropriate forms of delivery given the diversity of Aboriginal groups and communities.

The research team encountered the importance of the group for Aboriginal students in all settings—remote, semi-urban, or urban. This cultural difference from European cultures manifested itself in a variety of ways, for example, through a greater concern that everyone in the group pass, or by faster-achieving students helping slower students and/or slowing down so that everyone could catch up. At a community and institutional level it is manifested in the preference of Aboriginal people for education and training being provided in their own communities. Similarly, in semi-urban and urban settings it is expressed in the preference for having defined Aboriginal institutions such as Pundulmurra and Batchelor Colleges, small community-based centres like Minumarghali Mia in Roebourne, Karrayili Adult Education Centre in Fitzroy Crossing or enclaves like the Indigenous People’s Unit within the Southbank Institute of TAFE in Brisbane. However, it should not be inferred that only specialist institutions can serve indigenous people well. General purpose TAFE colleges like Cairns TAFE can develop excellent relationships with indigenous people.

It is therefore proposed that this aspect of Aboriginal culture continue to be recognised and supported by maintaining existing educational institutions—both sections of larger institutions and separate institutions—which cater for Aboriginal people.

Further, a strong attitudinal preference by Aboriginal students for self-pacing was encountered in all settings. Students most commonly explained this preference as a result of pressure to keep up in school situations and adult education face-to-face classes. As adult learners, Aboriginal students find self-pacing allows for both their studies and family and cultural obligations to be met without undue pressure or stress.

Techniques of open learning and flexible delivery, such as the following, support this cultural preference for self-pacing directly or indirectly and the research team recommend that they be employed whenever practical:

- Open entry/exit
- Competency based training
- Resource-based education
- Computer-based learning, including computer-based training, computer-assisted learning, CD ROM, and Interactive Book.

It should also be pointed out that while self-pacing is well-liked by Aboriginal classes, it involves other issues of which practitioners need to be aware. First, self-pacing can isolate particular individuals from the rest of the group. Because of the strong group awareness of Aboriginal class groups, students who progress significantly faster or slower may begin to feel isolated. Teachers should anticipate the effect of self-pacing on group dynamics.

From the literature review and from the findings gathered by members of the research team, it is clear that education providers should utilise practices which readily provide self-paced learning modules and continuous enrolment/entry/exit/re-entry procedures.

**Recommendation Five**

It is recommended that providers of education and training to Aboriginal people recognise the cultural values relating to non-competition with peers and the history of experience encountered by Aboriginal students in traditional classrooms, and provide culturally appropriate instructional procedures and variable access strategies, including self-pacing.
Flexible Delivery in Vocational Education and Training

The egalitarian relationship which exists between Aboriginal students in the same group reinforces the value placed on group progress rather than upon individual progress. It also reinforces the need for continued consultation and Aboriginal participation so that the cultural appropriateness of materials and practices can be affirmed. These influences reinforce the value of Support Workers as outlined below.

Hughes (1987), in referring to an 'Aboriginal epistemology' or 'world view' emphasises the characteristics which arise from Aboriginal preferred learning styles. Bymes discusses particular learning preferences of Aboriginal students that are likely to be more successful than traditional Western practices in regular classrooms. The literature and pedagogical consultation emphasise not only that Western practices are quite often most inappropriate in classrooms with a high proportion of Aboriginal students, but that teachers are frequently ill-equipped to provide the most appropriate practices for the Aboriginal environment.

**Recommendation Six**

It is recommended that teachers in training be provided with a substantial background in cross-cultural awareness, with a particular understanding of the role of Aboriginal culture in Australia, and with the educational practices likely to be of most value in an Aboriginal setting.

It necessarily follows that teachers who have already graduated, and who are likely to have teaching responsibilities for classes or courses with a proportion of Aboriginal students, should also be exposed to cross-cultural programs and pedagogical insights where such students are concerned. This matter is of such importance and so localised in its dimensions that separate treatment is accorded the issue in a later section.

For strong cultural reasons, Aboriginal communities most frequently prefer courses to be undertaken as close as possible to, if not within, their communities. This has already been the subject of discussion elsewhere in this report, but the development of successful courses for Aboriginal people at institutions such as Pundulmurra and Batchelor Colleges, the Aboriginal and Torres Strait Islander Curriculum Consortium at Cairns and the Indigenous People's Unit at Brisbane demonstrate the importance of being in close contact with the client group. While mainstream courses can and should be used widely in Aboriginal education and training, there is a clear need for courses that specifically address the cross cultural issues to be developed in close proximity to the clientele they serve. The Indigenous Languages Program at Pundulmurra and the Ranger Training Program at Cairns TAFE demonstrate the direct infusion of traditional Aboriginal elements into curriculum development which can only be accomplished if curriculum development is carried out in close consultation with indigenous people.

**Recommendation Seven**

It is recommended that the development of curricula specifically for Aboriginal communities be undertaken as closely as possible with the clientele served.

While Recommendation 7 supports the development of curricula specifically for indigenous communities, consultation with respect to the development of mainstream curricula is also of great importance.

Where mainstream curricula are to be adapted, these should be customised in consultation with Aboriginal clients. When national curricula is developed with employer input, additional resources will be required to customise the curricula through the involvement of Aboriginal people.
Recommendation Eight
It is recommended that, when adopted, mainstream curricula be customised in consultation with Aboriginal clients.

Recommendation Nine
While it is recognised as highly desirable that any national curriculum be developed with employer input, it is also recommended that resources be made available to customise these curricula through input by Aboriginal people.
3. Vocational Education and Training/Aboriginal Education

Nowhere in its research, in its consultation, or in its understanding of responses to the questionnaire did the research team find itself in closer congruence with reports in the literature than in the matter of the fundamental importance of literacy and numeracy. It is frequently the case that Aboriginal people who may speak three or four languages with extraordinary skill may not be fluent in written English, and are therefore hindered when they seek access to Western forms of further education or employment in Westernised occupations.

As the Case Studies of Effective Programs have indicated, Aboriginal students frequently found at some point that their progress through a course was impeded by limited skills in literacy and numeracy. Aboriginal communities have long recognised the disadvantage arising from difficulties understanding and operating in more complex English when dealing, for instance, with financial or legal issues in mainstream society. Therefore, it is important that courses be appropriately paced where language level is concerned and that any strategy which can support Aboriginal students in this area be adopted.

**Recommendation Ten**

It is recommended that course providers understand the importance of, and accommodate, literacy and numeracy, not only in formal programs but in related workplace programs.

The needs of Aboriginal students in this area should be accommodated through extensive treatment of English components, more carefully graduated programs, and varied and flexible approaches to this issue.

A review of the literature starkly emphasises what funding agencies and sometimes investigators do not sufficiently understand—the definition and role of work in remote communities.

Coles (1994) has provided an excellent discussion on the issue of work in relation to Aboriginal people in rural and remote communities in her chapter, 'The Labour Market in Rural and Remote Areas'. She points out that the Aboriginal perspective on vocational education and training may not be associated with Western understandings of the definition and the role of work in society. Activities which are an essential part of traditional Aboriginal cultures are commonly regarded as non-conventional work in the Western sense, and commonly go unrecognised in the collection of data related to labour markets. Aboriginal people performing these tasks are not routinely recognised as participating in a labour market. Service providers clearly need a more detailed understanding of the definition of work under circumstances such as these, and a clearer understanding of Aboriginal traditional perceptions in relation to employment as understood by those trained in a Western context.

Some of the issues relating to work in remote localities include whether people are willing to: undertake employment of any kind; undertake those forms of employment which may be available; and travel to available work that does not require high levels of literacy or the skills which accumulate over long periods of training and experience. Coles points out that in any diminishing job market a lack of experience, a lack of qualifications, a lack of fluency in English, and a lack of commitment to the Western work ethic, for whatever reasons, will not assist Aboriginal people to gain employment of the nature usually fostered by vocational education and training programs.

Many of the developmental programs to which Aboriginal people can gain access are significantly influenced by policies established by the funding agencies. If Aboriginal participants do not meet the program requirements, they may be denied initial or continuing access, or the program may be discontinued. For example, the issue already mentioned regarding the importance of literacy and numeracy skills often emerges in any discussion on vocational training and employment. Furthermore, the data collected by funding or census agencies either ignores particular categories of work, or seriously misunderstands the nature of work from an Aboriginal perspective.

Adding reinforcement to the need for recommendations in this area, Coles outlines areas of potential employment which should be further examined by Aboriginal people as sources not only of vocational education and training, but also avenues toward improved community infrastructure and higher quality community services. Examples of these areas of potential employment include tourism programs, which are currently a major focus of Pundulmurra's attention; management programs;
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horticultural and pastoral programs; housing and other forms of construction; the production of resource materials in Aboriginal languages; and the development and manufacture of items of appropriate technology for use in the locality.

Recommendation Eleven
It is recommended that, as a further aid to program planning, special funding be allocated to support the collection and maintenance of labour market data on Aboriginal communities in remote areas.

Recommendation Twelve
It is recommended that a collaborative working party undertake the task of gathering and maintaining this data so that the interests of Aboriginal groups, which may overlap the operational jurisdiction of particular institutions, can readily be accommodated without duplication or omission.

Because Aboriginal perspectives and motivations in relation to 'work' can be so substantially different from those which exist in Western societies, it is particularly necessary for education and training providers, and employers, to understand these differences.

Recommendation Thirteen
It is recommended that cross-cultural awareness workshops be made available for employers who regularly recruit Aboriginal employees and contractors in order to foster increased mutual understanding of their respective work ethics.

Recommendation Fourteen
It is recommended that providers of vocational education and training for Aboriginal people encourage and support the development of a special nurturing relationship where industry partnerships are established.
4. Program: Structure and Administration

Throughout the course of this project, the research team encountered comprehensive and persistent demands for flexibility, not only in the delivery of vocational and educational training programs to Aboriginal communities, but also in the assessment and accreditation both of prior learning and of current progress where individual students are concerned. Further discussion on issues relating to flexibility follows below, both from a professional and a system administration point of view. Elements of flexibility clearly demand course materials which are compatible with the concept of self-paced mastery. The emphasis on flexible enrolment/entry/exit/re-entry requires that course programs be packaged in self-paced modules which can be mastered and, where necessary, revisited.

Recommendation Fifteen

It is recommended that course materials be provided in the form of self-pacing modules so that the greatest degree of flexibility can be enhanced.

However, if students are to enjoy higher levels of flexibility and wide margins of tolerance where interrupted programs are revisited, there will need to be substantial levels of support both at the institution and closer to the students' home environment. Comment has already been made in the Case Studies of Effective Programs about the central role of Support Workers in Study Centres. There seems to be little doubt of the successful role being performed by Support Workers and the substantial success of Study Centres in many localities.

The research team recognised that learner support of some type was found to be essential for maintenance of effort by students in communities. However, the Aboriginal Tutorial Assistance Scheme (ATAS) presented a number of difficulties. For example, Aboriginal Development Managers reported difficulty in finding qualified tutors in rural New South Wales. When found, they were seldom located where they were needed, and could not be hired effectively because there was no way to reimburse them for travel. In remote communities in Western Australia, it was found that the local teachers who were often hired as tutors in remote communities were unable to do much tutoring because there was no common time available with those needing tutoring. In other situations tutors were reported to work well, and many Aboriginal people and some entire programs depend on the availability of tutor support. DEETYA is currently reviewing ATAS and needs to find ways of increasing the effectiveness of tutors, and consider alternatives where applicable.

Another approach to supporting Aboriginal students in communities, encountered in South Australia as part of the Study Centre Methodology, was the use of specifically trained Support Workers who neither teach nor tutor. This approach has several advantages:

- The Support Worker can be any community member with relatively good literacy and numeracy skills.
- Support Workers are required to do less and therefore are paid less than tutors.
- Support Workers can provide both logistical and moral support for students while avoiding the authority role of a teacher.
- Support Workers can forestall students getting discouraged and stuck on course content by providing social support for non-teaching problems and by referring all teaching questions to the course lecturer.

Recommendation Sixteen

It is recommended that the Aboriginal Tutorial Assistance Scheme (ATAS) or a similar program be maintained in situations where it can effectively support education and training.

Recommendation Seventeen

It is recommended that other forms of local support for students and student groups be investigated, and that the possibility of introducing Support Workers based on the South Australian Study Centre model be more extensively trialed in Western Australia.
Recommendation Eighteen
It is recommended that, given the history of success of the Study Centres in South Australia, the history of experience with Community Education Centres in the Northern Territory, and the frequent discussion within the Education Department of the potential which Community Learning Centres could have in Western Australia, a working party be formed to establish appropriate guidelines and the implementation of Community Learning Centres in a number of Aboriginal communities.
5. Flexible Delivery

As Phoebe Palmieri, Manager, Centre for Flexible Learning in Victoria noted on the video, 'Flexible Delivery', flexible delivery is not a single strategy which can be applied anywhere and everywhere, but rather a philosophy. It is as well to have this emphasised so that education providers do not subside into the convenient but faulty practice of following standard formulae which, through their adoption, would merely replace one form of rigidity with another. The elements of flexible delivery will be recognisable as the use of multi-mode courses; the adoption of computer-assisted learning strategies; the use of television and satellite broadcasting for program delivery; the provision of self-paced learning modules; openness of access; and continuously available enrolment/entry/exit/re-entry, along with continuous scheduling of classes. In addition, flexible delivery requires a particular latitude to be given where assessment modes are concerned. Assessment will need to be varied in type, differentiated according to timing, and flexible as to application. The project acknowledges the benefits of recognition of prior learning, but notes the difficulty in fully acknowledging the diversity of skills present among Aboriginal people, and the difficulty in appraising these as forms of eligibility for access to particular programs.

Moreover, some communities, some sections of communities, and clearly numbers of Aboriginal individuals demonstrate a level of mobility which would render the record-keeping systems common to academic institutions perhaps irrelevant or unworkable. The self-paced learning models will help to ameliorate some of the difficulties in this regard, but there remains a substantial administrative and record-keeping workload if the most focused service provision is to be available to Aboriginal students.

Indeed, the need for recognition of prior and alternative learning, the mobility of some students and community groups, and the commitment which Aboriginal people have to 'law business' and community and kin obligations all describe elements of Aboriginal culture which do not fit comfortably within the regimes of Western educational process. In the interest of quality service provision, the monitoring role of educators and administrators takes on a new significance. This significance is recognised not only where participation and progress rates are concerned, but also in their applicability to accreditation, successful performance, and progression to the next level of education and training. The significance also applies to the desire for course modularisation and the quality of resource and learning materials provided, these frequently being developed under extreme time pressures by staff members ill-resourced for such a task.

From a provider perspective, DEETYA's approach to funding Aboriginal education and training appears to be in a state of change. ATAS is under review, as well as the funding of students, but not teachers, to travel—even when that is what is best for all parties. While the need for clear policies in administering large amounts of funding equitably and consistently is appreciated, DEETYA's approach to policy—both in existing policy and in the reported planned changes—appears to be sometimes rigid, particularly in view of the massive national effort, through the National Training Reform Agenda, to make education and training more flexible in general, and for Aboriginal people specifically.

Again from a provider perspective, it is imperative that ANTA and DEETYA policies more fully support the move toward client-centred open learning/flexible delivery in Aboriginal education and training. While it is recognised and supported that changes need to be made to increase cost efficiency, it is suggested that the costs which traditionally fall outside college budgets continue to be supported by DEETYA, including community-based tutors and teachers who travel to communities, as well as traineeships, short-course skills-enrichment programs, and retraining courses.

In view of the understandings gained by the research team in matters such as these in relation to flexible delivery, it is timely that the following recommendations be recorded.

Recommendation Nineteen

It is recommended that course providers match the provision of entry flexibility with a similar provision of assessment flexibility noting the need for differentiated assessment packages where Aboriginal students may be concerned.
Recommendation Twenty
It is recommended that the success of flexible delivery strategies in Western Australia be evaluated in the immediate future, in view of the difficulties faced by staff members with limited resources and support in providing flexible delivery, and the administrative burden of monitoring more expertly the participation and progress of Aboriginal students.

Recommendation Twenty One
It is recommended that each institution, perhaps through its Academic Board, examine the quality of its courses and the quality of resource materials provided to students to ensure that, despite under-resourcing and the pressures of time on staff members who produce such materials, no reduction in quality has occurred.

Recommendation Twenty Two
It is recommended that the costs of service provision which traditionally fall outside college budgets continue to be supported by DEETYA, including community-based tutors, teachers who travel to communities, traineeships, short-course programs and retraining courses.
Flexible Delivery in Vocational Education and Training

6. Open Learning

As noted above, there is no one 'Best Practice' for application in the wide variety of Aboriginal communities. Best practice, in view of the diversity and dispersion of Aboriginal communities, is likely to be a matter of trial and error and extensive consultation, so that where open learning strategies are employed they meet with the greatest likelihood of success. It is not the intention of this report to discuss the merits of one cluster of open learning strategies over another. (Although much of the literature seems more preoccupied with open learning processes based upon new technology than with other strategies, however successful, which might be less sophisticated or less 'progressive'.)

Notwithstanding the success with technology indicated in the Case Studies of Effective Programs, the project recognises the difficulties encountered by remote communities when complex equipment is installed in dusty environments, or where climatically-controlled venues cannot be guaranteed. In addition, the maintenance and repair of such equipment, when it becomes necessary, can be inordinately expensive, and the range of difficulties and levels of frustration which emerge on such occasions can be most damaging.

Having said that, it should be recognised that the research team found major support of a general nature for the employment of technological aids to the delivery of education and training programs. Computers should be used when justified by course content and available learning materials. While computers are not a technological cure-all, the attitude of many Aboriginal students toward computers was very positive in every context visited, from remote communities to large cities. This attitude showed in the enthusiastic use they received and the strong competition with other students where they were in short supply. The following reasons for the positive attitude were elicited from students and staff:

- Computers gave a sense of practical accomplishment because they required physical manipulation leading to a visible result
- Mistakes were private or semi-private and easily correctable compared to oral or written work and therefore reduced the likelihood of embarrassment and shame
- The characters produced on a computer and the ability to check spelling are the same for everyone and therefore not a source of embarrassment or shame
- Even when working with written material the computer provides an active visual output and requires input from the student
- Computer-based and computer-assisted learning empower Aboriginal students to work at their own pace and produce highly presentable results with less assistance than traditional classroom methods.

It is considered by some that priority be given to providing computers to Aboriginal students wherever possible, and that funds be set aside for self-paced computer-based or computer-assisted materials for use by Aboriginal clients. Where remoteness and lack of technical support are factors, strong consideration could be given to Apple Macintosh computers because of their ease of installation and operation.

There is no doubt that technology can be used to enhance the delivery of vocational education and training programs to remote communities. While the radiotelephone could be seen as the first phase of technological enhancement in distance education, and ordinary telephone service the second phase, the installation of optical fibre might be seen as a third phase. In the second phase, the use of the conference phone and the fax in indigenous distance education has been well documented at the Far North Queensland Institute and the Spencer Institute in South Australia. In the course of this study it was found that ordinary telephone lines were adequate to handle E-Mail, but not always good enough for Telematics in remote locations. Optical fibre is currently being installed in Northern Australia, but the remote communities near such installations will not necessarily be connected unless State, Territory and Commonwealth Governments recognise the potential educational benefit which is likely to flow from having higher quality connections to these communities.

This study was undertaken at the beginning of the third phase of technological enhancement, and while the exact future configuration of services and their timing as they impact on remote indigenous Australia is uncertain, it is clear that the technology will generate new ways of reaching remote communities for educational purposes. Once optical fibre is present, programs can be reliably enhanced with new technologies like Telematics and Internet sites such as the one under development at the Indigenous Peoples Unit at the Southbank Institute in Brisbane.
Implications and Issues for Aboriginal Students and Communities

Audio-conferencing over optical fibre lines are likely to increase in quality and new and better uses of technology will naturally develop. In the end, the exact nature of technological enhancement will generally evolve out of the needs of the communities involved within the budgetary constraints of the providers.

There is some evidence that the advent of television and technological aids to learning have been a destructive influence on the traditional values and cultural elements of Aboriginal society. In the light of the brief comments on cultural imperialism voiced above, the keenness of some service providers to introduce the most sophisticated technological aids into remote communities should be viewed with caution.

Recommendation Twenty Three

It is recommended that computers and other forms of technology designed to assist learning and training programs be introduced only in full consultation with key members of the community, and only where sufficient funds are available for the maintenance, care, and possible replacement of the equipment when necessary.
7. System Administration
The research team engaged in considerable discussion on issues related to flexibility of assessment, the accreditation of particular courses and programs under the National Training Reform Agenda, and the relationship between national benchmarks and cultural interests and priorities. In addition, the research team encountered strong feelings among service providers in relation to the provision of staff and the changing role required of them. Dr Greg Ramsay has emphasised in the video 'Flexible Delivery' that the teacher's role has changed from one of simply being a source of knowledge presented to the relatively homogeneous class to: a facilitator whose multiple roles include resource development, multimedia strategies, mix and match learning systems and culturally sensitive liaison; and a provider of an extraordinarily flexible system where homogeneity does not exist with regard to time of entry or time of exit, nature of assessment or accreditation, continuity of program, level of success or degree of motivation.

As an added difficulty, systems and education providers are concerned by the occasional rigidity of funding agencies, which encourage service providers to demonstrate flexibility but frequently are constrained from doing so themselves. The research team also uncovered substantial levels of concern where discontinuity of budgets was encountered or program continuity could not confidently be expected. Finally, service providers whose work is dedicated to the provision of vocational education and training for Aboriginal students are frustrated by the use of 'nominal hours' as a basis for funding, which is more appropriate to suburban institutions and does not take into account pre-existing difficulties in raising education levels nor the new demand for flexibility, e.g., through appropriate pacing of progress through course modules.

Recommendation Twenty Four
It is recommended that staffing ratios be re-examined with a view to making more generous provision, in light of the comprehensive and emerging roles now expected of teaching staff in organisations providing education and training to Aboriginal students.

Recommendation Twenty Five
It is recommended that budget programs be provided with a more extended duration so that some degree of continuity can be anticipated as a basis for the most appropriate planning.

Recommendation Twenty Six
It is recommended that the extraordinary nature of service provision in institutions whose student population includes substantial numbers of Aboriginal people be recognised by the provision of a more generous ratio of 'nominal hours', so that more appropriate levels of funding and resource support can be forthcoming.
8. Staffing

The need for more generous staffing provision has already been noted above. The additional roles of staff members have been explored in the report as they have been in the literature generally. A number of sources have noted the prevalence of less-experienced staff being engaged by service providers delivering vocational and educational training programs to Aboriginal people, and the frequency of turn-over of such staff. The research team acknowledges the exceptional contribution made by staff members, frequently without sufficient levels of resource support, and under extreme time pressures. Indeed, such is the zeal of many of these professionals that members of the research team readily acknowledged the danger of professional burn-out.

In addition, such is the diversity of need and the range of community values that resource materials appropriately designed for one locality may not be readily implementable in another. The desire for common national experiences under the general rubric of the National Training Reform Agenda, while desirable in principle, cannot be implemented under these conditions for Aboriginal programs. The research team found that while some modification and adaptation is clearly possible, in many cases individual programs and customised courses were required and had to be developed under extreme pressure. There is clearly a need to alleviate these difficulties by collaborative activities, shared experiences and more generous staffing provisions. It may be that incentive programs could be established to encourage more experienced staff and to encourage existing staff to stay longer. From discussions on staffing and human resource issues, a number of recommendations emerge of which the following are central.

**Recommendation Twenty Seven**
It is recommended that more extensive provision be made for the professional development of staff on appointment to service providers in this field.

**Recommendation Twenty Eight**
It is recommended that the professional development programs include cross-cultural awareness and curriculum development as a priority.

**Recommendation Twenty Nine**
It is recommended that a working party be established to examine the intellectual property rights of staff members who develop courses and course materials under these conditions.

**Recommendation Thirty**
It is recommended that a working party examine the new role of teachers in service provision of this nature and, in particular, the complementary roles of teacher and Community Support Worker. At the same time, it should examine the scope for para-professionals to support teaching staff, and the appointment of curriculum resource specialists to support professionals.

**Recommendation Thirty One**
It is recommended that all service providers in this field be required to establish a professional development policy which provides exposure to cross-cultural understandings and skills where Aboriginal communities are concerned, for all new staff members and, on a continuing basis, all staff members, this being undertaken in liaison with Aboriginal people.

Finally, comments in the literature and occasional comments to members of the research team referred to the arrival of service providers who appeared to have the solution to community problems, introduced them, and in a relatively short space of time departed. In a sense, there were vague feelings that new 'educational messiahs' would not be welcomed, and that Aboriginal people were not only taking a much keener interest in Aboriginal issues affecting their community, but also saw the genuine value of education as the means by which the community could interact more effectively with mainstream Australia. In the light of staff turn-over, changes in the administrative profiles of service providers, changes at senior government and political levels, and alterations to the policies and priorities of funding agencies, it can readily be understood why some Aboriginal communities regard education and training provision as sometimes being a 'stop-start' process.
Recommendation Thirty Two

It is recommended that an independent process be established for the purpose of evaluating the effectiveness of Aboriginal vocational education and training and making recommendations to Government on those future directions and funding proposals which warrant the greatest support.

Finally, while the issue is not the subject of a recommendation, the research team would not regard these comments as complete if some concern were not expressed on the matter of centralisation. While it became apparent during the course of this research that the client-centred approach which drives open learning/flexible delivery potentially gives a greater voice to Aboriginal people in their education, there appears to be a trend in the post-secondary sector to greater centralisation of college management and decision-making. This appears to be true at both the State and Commonwealth levels. At the Commonwealth level it involves the move toward national curriculum and funding based on ANTA criteria and mandated reporting structures. At the State level, there is a trend towards centralisation involving the amalgamation of colleges and the alignment of independent colleges with the autonomous college network.

It is hoped that the move to national curricula and the introduction of training packages will provide flexibility for learning strategies and assessment methods to be tailored to meet the requirements of individual learners and/or particular industry or community groups. Two programs which appear in the case study section of this report, the Indigenous Languages Program at Pundulmurra and the Ranger Training Program at Cairns TAFE, are examples of the kinds of curricula which have been developed in response to Aboriginal aspirations. The Pundulmurra curriculum existed well before the current round of reforms and was converted to a competency-based format. The Ranger Training Program was developed later and conformed to the current guidelines from its inception.

The problems of recentralisation at the State level were observed in one way or another in all the sites visited. The most serious problem being caused by recentralisation from the point of view of working with indigenous people to enhance self-determination is that the decision-making power of the institution moves up and away from the clients and the people dealing directly with the clients. Directors with real power, who are a part of the community they serve, then become less empowered campus managers or associate directors who are responsible, not to the community they serve, but to the next level up in their organisations.

At the same time that recentralisation is occurring, there is an increasing burden being put on institutions receiving government funds to report their activities in greater detail to both State and Commonwealth agencies. The burden is enormous on small to medium-sized institutions such as Pundulmurra, and out of the question for community-based organisations initiated by Aboriginal people themselves such as Karrayili in Fitzroy Crossing or Minurmarghali Mia in Roebourne. This is the case even though it is these organisations which are the most effective at getting Aboriginal people involved in their own education and training and producing successful courses and graduates. The requirement to report statistically all of the activity of the institution in a variety of different ways means that the smaller organisations spend a great deal of their time and resources collecting and manipulating this data, along with all of their other reporting requirements, and far less time in the actual training and education of their primary customers.

If these comments are overstating the case, they do not overstate the concern being expressed and it would be appropriate for consideration of this issue to be undertaken.
APPENDICES

Contact Information for Practitioners Involved in Case Studies

- **Indigenous Australian Language Programs**
  Pundulmurra College
  *(Learning Packages - Block Release)*
  Lorraine Injie
  Pundulmurra College, Box 2017, South Hedland WA 6722:
  PHONE: (08) 9158 5600  FAX: (08) 9158 5648

- **Ranger Training**
  Cairns Campus, Far North Queensland Institute of TAFE
  *(Flexible Venues - Two Way Approach)*
  Norma Atkinson, Arnold Wallace, Milissa Nursery
  Far North Queensland Institute of TAFE, PMB 1, Cairns, Queensland 4870
  PHONE: (070) 422 583  FAX: (070) 312 972

- **Australian Remote and Rural Training Systems**
  *(Interactive Book)*
  Barry Piltz
  Australian Remote and Rural Training Systems, Box 57 Wilmington, SA 5485
  PHONE: (086) 675170 (089) 675 225  FAX: (08) 364 5418 Kent Town Office
  Kristen McKay
  Australian Remote and Rural Training Systems, 11-59 Fullarton Rd, Kent Town SA
  PHONE: (08) 364 5418

- **Study Centres for Remote Communities in Outback South Australia**
  Port Augusta Campus, Spencer Institute of TAFE
  Rosemary Moyle
  Spencer Institute, Port Augusta Campus, 9-39 Carlton Parade,
  PO Box 1870, Port Augusta, SA 5700
  PHONE: (086) 42 9254  FAX: (086) 410 416

- **Interactive Multimedia**
  Cairns Campus, Far North Queensland Institute of TAFE
  *(CD ROM)*
  Myriad Multimedia PMB 1, Cairns, Queensland 4870
  PHONE: (070) 422 586  FAX: (070) 312 972
  Peter Gilbert, OCTEP Program Manager,
  Far North Queensland Institute of TAFE, PMB 1, Cairns, Queensland 4870
  PHONE: (070) 422 584  FAX: (070) 312 972

- **Hospitality Training in Remote Communities**
  Innisfail Campus, Far North Queensland Institute of TAFE
  *(Telematics Delivery)*
  Jayne Butcher; Lachlan Mc Donald
  Johnstone College of TAFE, PO BOX 1453, Innisfail, Queensland 4860
  PHONE: (070) 615 249
Flexible Delivery in Vocational Education and Training

- **CGEA in Western Australian TAFE System**
  (Open entry/exit)
  Helen Smith
  Pundulmurra College, Box 2017, South Hedland, WA 6722,
  PHONE: (08) 9158 5600  FAX: (08) 9158 5648

- **Open Access Computing**
  Pundulmurra College
  Kerrie Lewis, Pundulmurra College, Box 2017, South Hedland, WA 6722
  PHONE: (08) 9158 5600  FAX: (08) 9158 5648

- **Electronic Discovery Learning Environment and Web Site**
  Indigenous Peoples Unit of Southbank Institute of TAFE, Brisbane
  Peter Andrews
  Indigenous People’s Unit, Southbank Institute of TAFE, Kangaroo Point, Queensland
  PHONE: (07) 3244 6102
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<tr>
<th>Date</th>
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<tr>
<td>22 September 1995</td>
<td>Karrayili, Fitzroy Crossing</td>
<td>Barry Finch</td>
</tr>
<tr>
<td>25 - 29 September 1995</td>
<td>Batchelor College, Batchelor NT</td>
<td>Wayne Binder (Broadcast Journalism), Steve Anderson (Certificate in Art and Craft), David Benn (Community Management)</td>
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<td>1 October 1995</td>
<td>Kimberley College of TAFE, Kununurra</td>
<td>Ralph Clark, Director</td>
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<td>2 October 1995</td>
<td>Pundulmurra College, Broome Annexe, Len Tonkin, Program Co-ordinator; John Bucknall, consultant with Ngurnipali Ngurnarri</td>
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<td>20 October, 1995</td>
<td>CGEA Fremantle TAFE, Allison Moss, Aboriginal Studies Co-ordinator</td>
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<td>24 October 1995</td>
<td>CGEA Thomlie TAFE, Carmine De Souza, Aboriginal Studies Co-ordinator</td>
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<td>25 October 1995</td>
<td>CGEA Midland TAFE, Jim Seiler, Aboriginal Studies Co-ordinator</td>
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<td></td>
<td>CGEA Balga TAFE, Adele Newton, Aboriginal Studies Co-ordinator</td>
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<td>CGEA Rockingham TAFE, Peter Mann, Aboriginal Studies Co-ordinator</td>
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<td>2 November 1995</td>
<td>Pundulmurra College, Camis Smith, Divisional Manager: Trades, Technology and Community Development</td>
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<td>6 November 1995</td>
<td>Pundulmurra College, Peter Dem, Tourism Co-ordinator</td>
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<td>8 November 1995</td>
<td>Bidyadanga, Hilary Morup, High School and Adult Education, CGEA Teacher</td>
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<td></td>
<td>Broome Campus, Kimberley College of TAFE, Jo Camilleri CGEA; Peter Mitchell Telecentre Co-ordinator; Rob Morup MITS (Modular Integrated Training Scheme) and Essential Services; Phil Hickey, Computers</td>
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<tr>
<td>9 November 1995</td>
<td>Fitzroy Crossing, Cheryl Duncan, Aboriginal Employment and Economic Development Officer</td>
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<td>11 November 1995</td>
<td>Halls Creek Campus, Kimberley College of TAFE, Alan Scott, Campus Manager</td>
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<td>12 November 1995</td>
<td>Billiluna, Alan Williams, Education Officer</td>
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<tr>
<td>13 November 1995</td>
<td>Balgo Hills, Brother Xavier, Tutor; Sister Alice, Head of Programs; Brother Cal, Literacy; Kate Diggins, Literacy; and 12 students</td>
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<td>Billiluna, Alan Williams, Education Officer (2nd interview); Cameron Johns, Teacher</td>
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<td>14 November 1995</td>
<td>Balingari, Gerard Mills; Carol Johnson; Michelle Foley; Community Office employees and business students</td>
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<td>15 November 1995</td>
<td>Kimberley College of TAFE, Bob Minniecon; Dave Witney</td>
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<td>Wyndham, Jim Lewis, Secretary of Wunan ATSIC Regional Council Committee looking at educational services in Kimberley; Charles Batten, Development Officer</td>
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<td>22 November 1995</td>
<td>Pundulmurra College, Kerrie Lewis</td>
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<td>Pundulmurra College Roebourne Annexel Minumarghali Mia, Mary Nealon; Alice Smith</td>
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<td>Pundulmurra College Indigenous Languages Unit, Lorraine Injie</td>
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29 November 1995
Wollongong Aboriginal Development
Manager's Conference

1 December 1995
Indigenous People's Unit,
Southbank Institute of TAFE,
Peter Andrews;
Nigel Stobbs

3 December 1995
Southbank Institute of TAFE,
Kate Ross

4 December 1995
ANTA Office, Brisbane,
Ellie Rose;
Tony Driese

6 December 1995
Cairns Campus,
Far North Queensland Institute of TAFE,
Dennis Walls;
Delsie Watling

7 December 1995
Cairns Campus,
Far North Queensland Institute of TAFE,
Doug Bradford;
Norma Atkinson;
Jeanette Chegwidden

8 December 1995
Val Schiers,
Head of Aboriginal and Torres Strait Islander
Curriculum Consortium

Wendy Ludwig,
Head of Aboriginal and Torres Strait Islander
Curriculum Consortium

Innisfail Campus,
Far North Queensland Institute of TAFE,
Jayne Butcher;
Lachlan Mc Donald

12 December 1995
Australian Remote and Rural Training
Systems, Kent Town SA,
Kristan McKay;
Barry Piltz

13 December 1995
Port Augusta Campus,
Spencer Institute of TAFE,
Rosemary Moyle;
Ahmed Shaheem;
Jenny Cleary

14 December 1995
Port Augusta Campus,
Spencer Institute of TAFE,
Sue Arthur;
Annie Ernst

Oodnadatta,
Chris Hewison

Skapin Multimedia, Port Augusta,
Paul Skapin

Australian Remote and Rural Training
Systems, Kent Town SA,
Barry Piltz

14 February 1996
Pundulmurra College,
Helen Smith
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Piltz, B. et al. (1993, October). 'Bringing TAFE to Remote Aboriginal Communities'. In Good Practice in Australian Adult Literacy and Basic Education. pp. 17-19.


Flexible delivery in VET: implications & issues for Aboriginal students & communities

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<td>(1) Pauline Smith</td>
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