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ABSTRACT

This paper is a report on a workplace adult literacy project at Kakadu National Park in the Northern Territory of Australia. The project deals with the use and function of written text in the work of park rangers and assesses the literacy needs of park rangers and trainees. The project focuses on the uses and functions of written text in the workplace, the perceptions of park staff about written text and how the use of written text influences the work of a park ranger. The emphasis of this project is on the literacy requirements of the workplace, not on the literacy of individuals or groups of individuals working there or hoping to work there. Discussion of different groups becomes relevant, however, where needs and perceptions differ. This report focuses on what types of written text are used and are necessary in managing the park, how those texts interconnect and what types of difficulties these texts are likely to have for park rangers. (Contains 16 references.)
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NATIONAL
PARADISE
AS A CASE
STUDY
WORKPLACE
LITERACY

by Peter Wainwright and Kate...

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**Adult Literacy Report
for
National Languages and Literacy Institute of Australia
and
Centre for Studies in Language in Education**

**“KAKADU NATIONAL PARK AS A CASE STUDY IN
WORKPLACE LITERACY”**

**by
Peter Wignell and Kate Boyd**

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Northern Territory University**

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The National Languages and Literacy Institute of Australia Limited

Overview

In 1990 an important step was taken to raise the focus on language and literacy issues through the creation of the National Languages and Literacy Institute of Australia Limited (NLLIA). The NLLIA brings together in one organisation most of Australia's leading language and literacy educators, researchers and policy advisers in fields including English language literacy, Languages Other Than English, English as a Second Language, Aboriginal languages, Interpreting and Translating, and Australian Sign Language.

The NLLIA provides advice to Commonwealth, State and Territory governments, as well as business, unions and the general community, on the full range of language matters. It has a key role in proposing and commenting on policy.

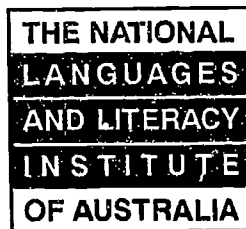
Working in co-operation with government, industry and the community, the NLLIA also initiates, responds to and manages research and development activities aimed at improving Australia's language resources. A great deal of research is needed so that Australia can make the most of its unique language heritage and so that educational programs in second language learning can be successful.

Through its network of research and development centres in universities around Australia, and the Literacy and English as a Second Language networks, the Institute provides educational and human resource consultancy services which relate to the goals of the Australian Language and Literacy Policy. The NLLIA also facilitates, conducts and disseminates both basic and applied research in linguistics, cross-cultural communication, and language and literacy education.

Objectives

The NLLIA offers national leadership and guidance on language and literacy education issues by:

- providing professional development activities for language and literacy lecturers, teacher trainers and teachers
- facilitating and conducting research needed to improve practice in language and literacy education
- regularly assessing language education needs and providing advisory and consultancy services to government, unions, business and the community on relevant language issues
- creating and operating a database and clearinghouse on language and literacy education issues and regularly publishing information from these.



Foreword

This study is the first report of research generated by the National Languages and Literacy Institute of Australia's Adult Literacy Research Network. The Network, funded by the NLLIA through the Australian Language and Literacy Policy, was set up to promote research into aspects of adult literacy policy and practice and to develop greater dialogue and collaboration between researchers in the higher education sector, adult literacy practitioners and systems of post compulsory education.

In this instance the study demonstrates an effective collaboration between the Northern Territory University with expertise in applied linguistics located within the Centre for Studies of Language in Education and educators and staff of the Kakadu National Park.

In a deceptively simple way the report not only explains the very complex socio cultural features of the Kakadu National Park (combining as it does traditional indigenous ownership and custodial obligations, and a workplace with all of the trappings of a modern bureaucratic structure and culture) but also provides explicit linkages with the linguistic forms used in the workplace. The practical recommendations are then able to make very specific references to improving the form of texts used within the National Park and to provide sound suggestions as to how workplace training texts might be improved and appropriate curriculum developed to ensure that all rangers have access to promotion within the organisational structure of the management of the Park.

I would like to acknowledge the contribution of Peter Wignell and also Professor Frances Christie, who had the foresight to guide the initial stages of this study in her capacity as the first Director of the Adult Literacy Research Network in the Northern Territory, and to commend all who participated in the research. On the basis of this report I look forward to further collaboration with the Northern Territory University.

Joseph Lo Bianco
Executive Director
The National Languages and Literacy Institute of Australia Ltd

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Acronyms

AEDP	Aboriginal Employment Development Policy
ALRN	Adult Literacy Research Network
ANCA	Australian Nature Conservation Agency
ANPWS	Australian National Parks and Wildlife Service
CAE	Council of Adult Education
CCNT	Conservation Commission of the Northern Territory
CSLE	Centre for Studies in Language in Education
KNP	Kakadu National Park
NLLIA	National Languages and Literacy Institute of Australia
NTOC	Northern Territory Open College (of TAFE)
TAFE	Technical and Further Education

1 INTRODUCTION

This paper is a report on a workplace adult literacy project at Kakadu National Park in the Northern Territory of Australia. The project was conducted through the National Languages and Literacy Institute of Australia (NLLIA) and the Centre for Studies of Language in Education (CSLE) of Northern Territory University. The project deals with the use and function of written text in the work of park rangers and from this assesses the literacy needs of park rangers and trainee park rangers. The project focuses on the uses and functions of written text in the workplace, the perceptions of park staff about written text and how the use of written text influences the work of a park ranger.

The emphasis of this project is on the literacy requirements of the workplace, not on the literacy of individuals or groups of individuals working there or hoping to work there. Discussion of different groups becomes relevant, however, where needs and perceptions differ.

This report focuses on what types of written text are used and are necessary in managing the park, how those texts interconnect and what types of difficulties these texts are likely to have for park rangers.

1.1 Working Definition of Literacy

The term 'literacy' is used here to refer to having access to meanings encoded in written text. This includes both reading and writing. This view of literacy includes all of Freebody and Luke's (1990) roles, ie *code breaker*, *text participant*, *text user* and *text analyst*. While Freebody and Luke's work was specifically directed at reading, it is assumed here that the roles they identify apply to writing as well. These roles are summarised briefly below.

i) *Code breaker* refers to the ability to decode the relationship between letters on a page and language. This is seen as a necessary but not sufficient condition for literacy. For example, a person might be able to read aloud almost any language which uses a Roman alphabet but not have any idea what they were reading.

ii) *Text participant* refers to the ability to bring background knowledge to the text and to draw inferences between the text and what they already know. That is, the person sees some connection between the text and the world at large.

iii) *Text user* refers to the ability to "participate in social activities in which written text plays a central part (p10)". That is, the person can not only understand the text but can act on that understanding; they can use the information in the text to do something.

iv) *Text analyst* refers to the ability to critique a text; to understand where it is coming from in terms of things like its ideology. This role involves reading between the lines of text and drawing inferences about what the text is trying to do to you.

1.2. Other Definitions

Four terms are used here with particular meanings. In order to avoid defining one group of people as the negative of the other ('Aboriginal' and 'non-Aboriginal' people)

the local terms, *Bining* for Aboriginal people and *Balanda* for non-Aboriginal people, especially people of European descent, are used.

The terms *traditional owners* and *custodians* are used to refer to different groups of Bining. 'Traditional owners' refers to Bining recognised under the Aboriginal Land Rights Act as having a land claim granted. 'Custodian' refers to people who are land claimants.

2 BACKGROUND INFORMATION

In order to establish the role of written text and literacy in this workplace it is necessary to first present some quite detailed background information. The purpose of this is to establish what a large, diverse and complex workplace Kakadu National Park is and to foreshadow the argument that literacy has a significant role in the life of a park ranger.

Kakadu National Park is a big place. It is located approximately 120km east of Darwin and occupies an area of 19,804 sq km and includes a range of different environments. A significant part of this area is Aboriginal freehold land leased to the Australian Nature Conservation Agency (ANCA) (formerly ANPWS) A further significant area is land under claim.

All of Kakadu National Park is on the World Heritage List. As such the park can be considered to be an area of great cultural and natural value, both nationally and internationally.

Culturally the park has a long history of human occupation, estimated at between 25-60,000 years. It is a place of archaeological and contemporary significance. The park contains many major art sites (estimated 7000 art sites) and a number of sacred sites.

Because of its significance and high profile the park attracts many visitors (240,000 in 1991- 80% between May and October. Average annual growth rate - 24%).

These visitors come for a number of reasons such as day trips, extended trips, sightseeing, bushwalking, camping, safaris, specialist tour groups (eg, birdwatchers). Visitors come either in organised tour parties or by their own means. The park is also a significant recreational fishery.

In addition to this, and perhaps most significantly, the park is the homeland for its traditional owners and custodians. Approximately 300 Bining people live in the park. These are "traditional owners and Aboriginals with recognised social and traditional attachments to the area". (Kakadu National Park Plan of Management, 1991, p83).

The park is also an area of considerable and varied scientific research. This research and survey function is "largely oriented to management areas in which there are perceived to be problems or in which there is a lack of necessary information on which to base management decisions." (Kakadu National Park Plan of Management, 1991, p131). There are three main research fields: cultural resources, natural environment and park use; visitors and recreation. Specific examples include: a survey of migratory waders in Kakadu National Park, development of an expert system for fire management, a study of the Jawoyn language, thermoluminescence dates from artefact-bearing sands, and the impact of amateur fishing in Kakadu National Park.

There are therefore many different, if not necessarily competing, interests involved, interests which involve people with viewpoints coming from many different directions. In the area of land management, for example, it is likely that there will be some differences between traditional perspectives and say a research scientist's perspective. Likewise the interests of tourists and people for whom the park is home are likely to be quite different. A park ranger's duties touch on all of these interests and, as will be shown later, written text is in some way involved in them all.

2.1 Management Structure

The park is managed by a Board of Management, which consists of:

- ten adult Aboriginal persons nominated by the traditional owners (and custodians) of the park
- the Director and General Manager (Northern Operations) ANCA
- an employee of the NT Tourist Commission
- a person prominent in nature conservation

People in the last two positions must be acceptable to the traditional owners of the park.

The main functions of the board are to develop a plan of management for the park, make decisions consistent with that plan and monitor the implementation of those decisions. Administration and implementation of the board's decisions are done by park staff, mainly by park rangers.

In keeping with the objectives expressed in the Plan of Management it is both desirable and also policy to train and employ Bining people as rangers and in other positions in the park.

Senior administrative staff, however, are still mostly Balanda. Thus, while numbers of Bining staff are employed, most are at the lower levels of the hierarchy. The hierarchy has Bining at the top (Board of Management), Bining at and around the bottom, and mostly Balanda in the middle. This is a situation which will be shown to be intricately tied to literacy.

3 AIMS AND RATIONALE

The first question that arises is whether literacy is necessary in this workplace or not. It will be argued that the only answer here is a definite 'yes'. Because of the scale and complexity of operations the park just cannot be managed orally. Unfortunately the issue of literacy is not a simple one, a lot more is involved than simply reading and writing.

What is being investigated at one level is the degree of mastery of written text that is necessary to be able to function effectively in the workplace. But at another level, the perceptions and beliefs that the people involved hold about written text need to be considered since these raise issues which need to be addressed before any literacy program can be implemented.

In keeping with the above this project has three principal aims:

- i. to identify the literacy demands the workplace imposes on people working as park rangers (or intending to work as park rangers)
- ii. to identify and discuss the prevailing perceptions and beliefs about written text among ranger staff
- iii. to provide input from i. and ii. (above) into the development of training programs for trainee park rangers and in-service training for rangers.

4 METHODOLOGY

The methodology adopted for this project is outlined below:

- i. discussions with park staff to establish the role and importance of written text in the life of a park ranger.
- ii. discussions with park staff to establish the range of text types which need to be written and read.
- iii. survey of supervisory staff to establish a hierarchy of texts. ie which text types are most valued.
- iv. survey of rangers to ascertain which text types are most difficult for them and what strategies they use in dealing with those text types.
- v. collection of model examples of each text type. Both authentic texts and specially written texts.
- vi. ethnography of written communication in the life of a park ranger - interviews with Bining and Balanda rangers to determine their perceptions of and attitudes towards written text and their work.
- vii. classification of texts according to function in the workplace.
This classification is on a threefold basis: (a) texts which need to be written and texts which need to be read (b) according to what part of the duties of a park ranger the text applies, for example law enforcement, information for person taking over the next shift etc, (c) at what level in the hierarchy a ranger is likely to encounter the text.
- viii. analysis of the texts using systemic functional linguistics as the theoretical model for analysis. (Texts are analysed for features of generic structure and for register and lexico-grammar. The main focus here is on the relationships between text and context - how closely a text is embedded in a particular context or how abstracted from an immediate context it is.)
- ix. consultation with people involved in ranger training and people involved in Aboriginal adult education to determine the most effective and culturally appropriate way to translate the results of analysis into teaching materials
- x. Development and trailing of materials

5 BRIEF OVERVIEW OF THEORETICAL MODEL

The view of written language taken here is that written text in the workplace can be regarded as a kind of technology, a means of getting a job done. Some jobs we do with tools and machines, some jobs we do with language. Out of the jobs we do with language, some involve written language. For example if you need written instructions on how to operate a piece of machinery you use a particular type of text. On the other hand, if you have to write a report on something you use a different type of text. One way of looking at the different jobs language does is to consider the relationship between language and its contexts of use; different job, different tool. In a complex job we often need a number of tools. The same applies to text as technology, we often need more than one text to do the whole job. These interrelationships among texts are explored further in the rest of this report.

5.1 The Relationship between Language and Context

What we are looking at in examining written text is the relationship between the text and its context. If we consider, for instance, typical spoken language, say a conversation, we find that the language is quite close to the context of speaking. We can talk about and refer to people and objects in the immediate physical context and still make sense because we are talking to someone who is also there with us. In this instance the shared experience makes communication easier. This idea of the connection between a text and its context can be extended to the broader social context. If we speak within a close community there is a lot of shared knowledge, we can speak relatively cryptically knowing that people with the same body of shared experience can make the connections we intend. We can leave things out and make assumptions based on our audience being able to fill in the gaps and if they can't fill them in they can always ask for clarification.

The further we move from this body of shared experience, either at the personal or community level, the more we have to make what we mean explicit, the more details we have to fill in so that people can understand us. That is, we cannot rely on the shared context to do a lot of the work. For example, we might write about something which we know a lot about but we cannot necessarily assume that the person we are writing to knows about it as well. If we want to tell someone about something that they know nothing about, we have to supply much of the context for our reader so that they can make sense of what we are saying. Because we are not there to fill in the gaps, the text needs to be self-contained.

In general, the further we move from direct face-to-face communication the more abstract a text becomes, the more the text needs to be able to stand alone, to communicate meaning by itself. Likewise, the more we are talking/writing in general terms rather than about specific, tangible events the more abstract a text becomes.

The issue of the relationship between a text and its context is one of the key issues in literacy. Written language is not just spoken language written down, it involves different ways of meaning which, to a very large extent, are tied to the relationship between text and context. It is not the intention of this report to enter into a long theoretical discussion. A concise account of the differences between spoken and written language can be found in Halliday, M.A.K. 1985 *Spoken and Written Language* Geelong: Deakin University Press.

6 RANGER RECRUITMENT AND TRAINING

6.1 The Rangers and Trainees

Because of differences in the recruitment and training between Bining trainees and Balanda rangers this section treats them as two separate groups.

(a) Out of a permanent workforce of 55, at present there are 31 field positions for rangers, of whom ten are Bining. These ten rangers are employed at levels ASO3: two, ASO2: four, and ASO1: three (ASO1 being the lowest level) The other is a T1 employed by the NT Conservation Commission. In addition there are at present three Bining trainee rangers. There are also two Bining cultural advisers (not rangers). Two Bining rangers now work as assistant project officers in natural resources management. To be in a managerial position a ranger needs to be at ASO3 (senior ranger) or above. Thus the Bining rangers tend to be clustered at the lower levels of the hierarchy.

Of the ten Bining rangers five are traditional owners, one is a custodian and of the three trainees, two are traditional owners and one is a custodian. Traditional owners and custodians come from different areas of the park. Language background also varies. Four of the ten Bining rangers now employed are competent speakers of the vernacular (Gundjeihmi/Maiali or Kunwinjku), Jawoyn is the first language of one, two know some 'language', and for the rest English is the first and only spoken language. Of those whose first language is a local language, two rangers are participating in a Batchelor College course: 'Reading and Writing in Your Own Language'. Only half the present Bining rangers are traditional owners of the park and one trainee is a custodian. Some have attachments to nearby country.

In very general terms the Jawoyn people are custodians of Stage Three of the park; their land claim is to be heard mid-1994. Gundjeihmi and Gagadju people are traditional owners of Stage One. Most of the younger generation have had formal western education up to the end of primary school. Many of the older generation have had little or no formal western education.

(b) Balanda rangers fall into two broad groups: those with tertiary qualifications and those who have been recruited from elsewhere including the army, navy and Telecom. All rangers are recruited by Australian Public Service procedures: jobs are advertised with specified criteria. "An understanding of Aboriginal culture and ability to communicate with Aboriginal people" is also stated as a requirement. A Bining representative participates in all interviews. Balanda rangers may come to Kakadu from anywhere in Australia. Many are highly literate tertiary graduates. The most common qualification held is an associate diploma or degree in natural resource management or applied science. Some rangers have studied for these qualifications following their recruitment to Kakadu.

In summary, Bining rangers are selected locally, or as locally as possible, and trained locally. Balanda rangers are usually selected elsewhere and appointed to Kakadu.

6.2 History of Recruitment and Training

While this study is examining the literacy requirements of the workplace and not those of any particular individuals, there are some differences between Balanda and Bining

rangers which need to be outlined. Bining recruitment is the result of the 1978 agreement between the Director of the park and the Northern Land Council, which established principles and conditions for the management of the park including the training of traditional owners in park management. This agreement was preceded by the leasing of the land by the Aboriginal owners to the Director 'for the purposes of a national park for the use, enjoyment and benefit of all Australians' (ANPWS, 1991: 8).

Bining rangers in the park have commenced their ranger working lives as trainees in the park. The first trainees were selected by the Gagudju Association but, since the park boundaries have expanded, trainees are now selected by the Gagudju Association, the Jawoyn Association and the Djabalugka Association. The Jawoyn Association has some members who are custodians of Kakadu National Park. The Djabalugka Association was formed as a royalty receiving association but is presently funded by ANCA to run training/employment programs. The trainees have included people with a secondary education, some with primary education only and some with minimal experience of western education.

There have been five training programs altogether, one is current and the sixth is due to begin in June, 1994. The first three training programs were conducted at three different locations.

Six trainees participated in the first program in 1979, with five graduating in 1980. This was the first Aboriginal Training Program implemented by a nature conservation agency in Australia. It commenced after twelve months of discussion with traditional owners, the Northern Land Council and the (then) Department of Employment and Youth Affairs. It was partly based on a national survey of rangers and their duties. At the time 'rangering' was only just being established as a profession with set educational requirements in Australia. The program was open ended in design and 'relied heavily on these trainees for information and direction of management' (Morris, I. in Smyth, D. et al, 1986: 89).

Training conditions stabilised with the second program with the four trainees better able to relate to the new role of 'Aboriginal ranger'. The third one-year program, 1982-83, saw two out of four trainees graduate. This program was the first at a fully established regional station under the control of a district supervisor. This third program saw the Gagudju Association being unable to supply traditional owners to meet the required criteria, consequently applicants were selected from the Darwin area as well.

Continuing modifications were made to the Aboriginal Training programs, 'based on internal evaluation and experience, as well as recommendations from traditional owners and ranger field staff'. (Morris, I. in Smyth, D. et al, 1986: 89). According to the first training officer, the first three programs aimed to give a 'shallow but comprehensive coverage of all aspects of rangering', helping the Bining trainees to 'incorporate and develop traditional land management techniques and skills into what until then had been a white man's vocation' (p.90). This is in the context of traditional owners having concern for the natural, social and spiritual aspects of their landscape, whatever shape these concerns may take.

As the training officer at the time stated: 'Objective assessment is made difficult as the academic ability and background of each trainee varies greatly from person to person' (p.91). No academic prerequisites were required for these early programs as it was considered that applicants from a traditionally oriented background should not be disadvantaged. This situation has created a continuing dilemma for ANCA and the local Aboriginal Associations. That is, that a person who is knowledgeable about Bining

land management issues may not have even basic western schooling. Land management, traditional or otherwise, is just one aspect of a ranger's job. Other aspects include general field and station-based duties, law enforcement and 'paper work', the latter requiring reading and writing skills of a reasonably high order, as will be demonstrated later in this report.

The fourth training program was developed to be different in organisational style and content from the first three. A new training officer had been appointed and considerable discussion was undertaken with relevant parties. Instead of the training officer and the trainees living together and training at one location in a supportive 'enclave', ranger trainees were allotted to the districts at the beginning of the program (previously there had been blocks of field placements). The course was then taught by the trainees coming together about once a fortnight for a wide range of modules taught by the coordinated use of Kakadu staff, appropriate Territory and Federal employees, the training officer and traditional owners. Trainees also attended in-service courses offered to all staff. The trainees met with the training officer on a weekly basis.

During the third and fourth Aboriginal Ranger Training programs some trainees enrolled in the General Education Certificate from the former Mt Lawley CAE with a local tutor. This included literacy modules. Two students completed the first stage of this program. Enrolling students in this program was the result of awareness of trainees floundering in the areas of literacy and numeracy.

Over time the Aboriginal Ranger Training course has become decentralised and increasingly formalised. Now the preferred model of training is participation in a Certificate in Lands, Parks and Wildlife Management, an accredited course run by the Northern Territory Open College of TAFE in Jabiru. Trainees now work at ranger stations and come to Jabiru for several two week blocks. One current trainee has been unable to cope with the demands of the course because of the written language demands of the course. In response to this the training officer has developed special provisions for such trainees. These trainees enter into training agreements which are short-term skill-specific and assessable using a competency based model. They involve a signed contract between the trainee and the supervisor where the trainer agrees to provide quality tuition and the trainee agrees to learn the training objectives over an agreed period. Trainees go back into the TAFE course when skills are gained that enable them to succeed. Under the new program there will be three separate recruitment categories: one in natural resources management, a second in cultural resources management and a third in clerical/administration.

The course is for one year full time or two years part time although the time trainees can take to complete the course is flexible. Students can also access the NTOC Certificate of Access to Employment and Further Study as a 'booster' course if they fall behind in the mainstream Certificate course. For example, a recent week's intensive on report writing. Training is done on a four-week cycle. Two weeks are spent at TAFE. The next week is spent on field duties specifically related to the areas covered in the previous two weeks. The next three weeks are on the normal roster. Rangers who are already employed can access course modules and complete the Certificate.

Bining rangers who have completed the in-house Kakadu courses will be encouraged to access the NTOC Certificate modules. Recognition of prior learning will enable previous training skills to be acknowledged and credited to the Certificate. (During interviews some fears were expressed about competition between graduates of the in-house courses and NTOC course graduates.) As yet there is no specific literacy component in the training course. It is one of the aims of this project to assist in the provision of such

a component.

The Aboriginal Ranger Training programs have generated much reflection, evaluation and discussion over the years in Kakadu National Park. The original self-sufficient enclave organisation was necessitated by the incipient stage of park development at the time. Some staff and former staff interviewed suggested that this protected trainees from the life of a 'real life ranger'. At the same time, however, it enabled the first trainer to put into practice his knowledge of cross-cultural education issues such as utilising Aboriginal learning styles and communication patterns. There has been much discussion as to how 'Aboriginalised' the training should be in terms of both method and content. Although, the first trainer stated 'one of the disappointing aspects of the training programs is the amount of energy devoted to the promotion of social and cultural values, a subject in great demand by the visiting public, only to find that in the work situation Aboriginal rangers have not been free to develop this area to any degree'. It was also stated by senior staff that trainees have been reluctant to participate in this area. This situation was also often due to continuing staff shortages and maintenance demands, but was also said to be due to strongly held beliefs of some supervising staff as to what 'rangering' involved. Issues such as these came to dominate reflection about Kakadu's innovative Aboriginal training programs and led to the subsequent changes in direction.

ANCA has an "Aboriginal Recruitment Training and Career Development Strategy". The strategy was developed in response to the Commonwealth Government's Aboriginal Employment Development Policy (AEDP), 1987. The objectives and opportunities outlined in the strategy are funded by the Department of Employment, Education and Training. "The strategy integrates improvement in access to mainstream employment and training with greater flexibility in employment structures such as casual and contract employment." (ANPWS, 1992: 2).

7 THE PARK AS A WORKPLACE:

7.1 Career Paths

As already indicated, Kakadu National Park is a large, diverse and multicultural workplace. The park is divided into five districts. Each district is run by a district supervisor with three or more ranger staff.

Living and working in such a remote and large national park involves certain factors for staff which do not arise in town-based public service employment. Different factors affect different groups of employees within the park. For example, Balanda staff may rotate around the districts during their stay in Kakadu National Park, working alongside Bining staff who have always and probably always will live in the park (that is, those who are traditional owners). Some Bining staff have indeed been stationed in one district all their working lives. Their career paths thus become 'limited' to applying for positions in that district.

Balanda staff stay in the park for varying periods of time, and if employed by the Conservation Commission of the Northern Territory often move to other Territory parks or towns. Balanda staff also move to other ANCA controlled parks such as Jervis Bay or Christmas Island, or apply to join other conservation agencies. Therefore, in most cases, a Bining ranger's perceptions of his/her employment future can be quite different from those of Balanda rangers.

7.2 Approaches to Rangering

Different approaches to rangering are also found. Some rangers become very 'headquarters oriented' while others appear to be 'out in the field' oriented. Sometimes a split between 'what goes on at headquarters' and what happens at outlying ranger stations occurs. During interviews some Bining staff indicated that they find visiting park headquarters an 'alienating' experience, having a perception of 'the bureaucracy in full swing' or 'all paper work there'. One former staff member claimed that a lot of physical and mental energy goes into 'the system' at park headquarters and headquarters can seem to be divorced from staff in the field, traditional owners in the park and the surrounding natural world. Not all staff share this perception. Some staff maintained that efforts were made to remain field oriented. It is possible too that the demands of 'paperwork' keep some staff in the office when they would prefer to be out in the field.

7.3 Park Ranger Perceptions and Experience of Literacy

Districts within the park are 'bombarded' with written information: texts which emanate from within the ANCA bureaucracy, from Park Headquarters, from Darwin office and from Canberra, and those emanating from outside the workplace and its hierarchical structure. Examples of the first category are: minutes, staff newsletters and material published by ANCA. Examples of the second are: reference texts or communications from other organisations such as CSIRO or CCNT. The demand to write texts in the districts is high and pressing. For example, daily journal entries, incident reports, monthly district reports and replies to minutes. There is also a continuing demand on park rangers for information (oral and written) from tourists and researchers.

The use of written communication is increasing. In the early days of the park much communication was oral, for example by radio and by telephone. Written communication now includes some of the jobs previously done orally, for example use of fax machines in the districts. This trend is expected to increase and will soon include a computer network. Park management is an intellectual exercise for most Balanda. The management of the park is mediated and made possible by the tools of literacy, hence those who are most literate could easily be overwhelmed by paperwork and miss out on work in the park itself.

7.3.1 Strategies for Dealing with Written Communication

District staff have developed strategies for dealing with differing levels of literacy skills among staff. While some staff automatically examine incoming written communication and respond to it fairly quickly there are others who do not do this and actively avoid paperwork. The attention of staff is drawn to pressing matters at regular meetings or during office encounters. Reports from rangers are sometimes taken orally and written up by someone else. That is, oral strategies are used to replace written text in some cases. Using this strategy 'not everything gets through' but considerable effort seems to be put into local staff awareness: 'if everyone helps it's alright'. However, the verbal delivery of information 'is hard to sustain'. Some staff verbally communicate information which would normally be written, for example, the information that needs to go into an incident report. This information is sometimes not recorded in the daily journal or on the relevant formatted page until done by an officer at a higher level.

Writing duties in districts often depend on duties allotted to individual staff members. For example, in an area such as weeds observation and control, the ranger who did the work would be expected to write the report.

Distribution of writing tasks and lack of writing skills seem to be potential sources of conflict with some mild resentment about being overloaded with writing being evident. For example, this could occur when a ranger was promoted to a level requiring literacy skills beyond the ranger's capacity. This could occur in temporary or acting positions where perhaps an officer might have to fill in at a higher level during the 'wet' when leave is often taken.

While there was a general view among staff that the social dynamics in such a situation could cause conflict this did not come across in relation to any particular situation during the interviews. More insightful remarks were directed towards the need for negotiation and counselling when these situations arose, with park management being assumed to be responsible for initiating this. Thus resentment was not felt towards any individuals but towards park management for not dealing effectively with such occurrences. Some ranger staff said that a person 'who can get the job done' should not be held back because of lack of literacy skills. This appears to beg the question of what 'getting the job done' really involves and raises the question of whether a person can in fact 'get the job done' effectively without at least some literacy skills. The possible need to upgrade literacy skills was not frequently mentioned during the interviews with non-supervisory staff.

7.3.2 Perceptions of Written Communication

One commonly held view was that inadequate spelling, punctuation and basic grammar were the main source of literacy problems, and that some staff avoided reading

and writing because of perceived lack of ability in these areas. It was stated that attempts at 'phonetic spelling' should be acceptable. Perceptions of writing thus seemed to focus at sentence and word level. There seemed to be no awareness that the language of different types of texts was in fact different. Often all written texts were categorised as 'reports'. Those who felt they had difficulties with meeting the writing requirements of the workplace said that they 'couldn't write reports', meaning presumably such text types as incident reports, minutes, monthly district reports or information reports.

Some of the concerns of these rangers may emanate from some of their sporadic experiences of literacy tutoring - sporadic due to work or travel demands. As students they perceived literacy as being about gaining spelling, grammatical and punctuation skills and saw these aspects of literacy as being the core issues in their lack of writing ability. In the view of literacy expressed above their perceptions were those of *code breakers*. That is, what could really be classed as editing was being treated as the central issue. This was expressed as both the students' perception and the students' perception of 'what the literacy tutor said'. Other ranger staff also believed that acquisition of these (spelling, punctuation, grammar) aspects of writing were what was needed to overcome 'deficiencies' in some of their co-workers' writing.

In talking about literacy skills reading was rarely emphasised. People interviewed seemed to be able to be more explicit about lack of writing skills and how they dealt with writing. One presumably can't complain about the lack of editing skills in texts that emanate from outside the park (often published material, or texts from the central bureaucracy) or even texts written inside the park, such as minutes from Headquarters staff. The main complaints about texts to be read were that they were just 'too hard', 'too technical' or 'too abstract'.

Some rangers asked the questions: 'Why can't you just write how you speak?', 'Isn't that good enough for Headquarters or Canberra?'. These are important questions and in some cases the answer to the first question is yes but in many other cases the answer is no. How a person writes is really governed by the nature of the job they are trying to do by writing.

Many staff members with tertiary education have learnt how to become more abstract in their writing ('good' technical language, scientific language or arts/humanities language) while those with limited western schooling have not. There was also a perception that there was a 'proper' way to write reports and that this was in a bureaucratic style of writing.

Whereas for most Balanda staff daily work duties are embedded in paperwork, for many Bining rangers the connection between written material and day to day park work duties is often tenuous. Some rangers saw a more active connection between daily work duties and what had to be written than between daily work duties and what had to be read. (Perhaps other staff could tell more readily if one couldn't do it.) Thus the need to learn how to write was seen as more pressing than the need to learn how to read. It was seen as more important, for example, to learn how to write an incident report or a minute than it was to learn how to access and read the Plan of Management or a reference text on frogs or rock art research.

7.3.3 Desk Jockeys and Bitumen Cowboys

The terms in the heading above come from the park vernacular and summarise the attitude to paperwork among some rangers. Differing perceptions both about written

language and about what it is to be a ranger were found. Some rangers were either not comfortable with written communication (the majority of Balanda said they were comfortable, as did two Bining) or, more commonly in the case of Bining rangers, could not see how it tied in with their cultural view of land management and being a ranger. They tended to see being a ranger in terms of Bining concepts of caring for the land. For example, going out and controlling weeds was working but writing a report about it was not.

One risk involved in seeing jobs as individual, tangible events is that connections between jobs are easily missed. Someone might know what to do and how to do it but have no idea why or how that particular job fits into a larger, coordinated effort.

Strong images of 'what a ranger really does' have developed in some quarters. While some find it easy to strike a balance between field duties and 'paperwork', others spoke of not wanting to be 'a desk jockey' and 'to be out in the field managing the park' is what really counts. That is, 'managing the park' does not derive from the 'bureaucratic paperwork' of Headquarters, Darwin and Canberra but from being there and just doing it. The term 'bitumen cowboy' was applied to rangers who were always out 'doing what really counts'. It was sometimes seen to be 'a bad thing to be tied to a desk'; this detracts from 'getting the work done'. This view of rangers sees the job as a tangible, activity based occupation - getting out and doing things. It neglects, however, what is regarded in this report, as an important aspect of work: How do you know what to do, and where and when to do it? That is, where does the information base come from which directs 'doing what really counts'? It is argued later in this report that much information of this type comes, either directly or indirectly, from written text.

7.3.4 Cultural Perceptions

Different cultural perceptions about what it means to manage the land are also important. Balanda and Bining ways of seeing the role of land management often differ. Some Bining rangers indicated that 'we were already land managers' therefore 'we don't need literacy skills', which come from another culture, to manage this land'. To people who belong to this land or 'country' that has been reclassified as 'park' (with a uranium mine excised out of it) there are many seemingly intractable field problems: managing fire, the invasion of weeds such as mimosa pigra and salvinia molesta, and feral animals such as pigs and (previously) buffalos.

These perceptions indicate a context-specific, highly localised view of the job of ranger, a view which is similar to the dichotomy between 'desk jockeys' and 'bitumen cowboys' discussed above and which is also related to the idea of language and context outlined previously. As mentioned above, the job of a ranger is wide ranging, it covers more than the immediately tangible aspects of weed and feral animal control and fire management. However there was little perception among some Bining rangers that these problems might be best organised at a higher level. That is, decisions about what is a weed, which weeds to eradicate, when and which animals to shoot and when and where to burn, need to be coordinated at a level above the person with the spray, the rifle or the torch.

There was little perception evident that literacy might be important in these higher level decisions. For example, that scientific research into the life cycle of salvinia molesta might indicate the best times and ways to try to eradicate it. This also indicates a context specific view of what it means to manage the land. In contrast, for ANCA, Kakadu National Park is part of a national, or even worldwide, strategy

whereas the Bining tend to see things purely in local terms.

Perceptions among Balanda staff were not uniform and tended to correlate with the person's experience before coming to the park. Some recruits with tertiary qualifications have expressed surprise at the amount of manual duties required of a base grade ranger. They had expectations of more interpretation, planning or management oriented duties. However, other Balanda rangers have come from diverse non-academic backgrounds including the army, navy, and Telecom. These rangers tended to be practically oriented but still saw the need for the paperwork even though it might not be their favourite part of the job. These differences in background governed some of the perceptions of the role of literacy in the park held by Balanda rangers. In general 'paperwork' was seen as being necessary.

7.3.5 Political Considerations

One political aspect to consider is the view expressed that 'Aboriginal people should speak up for themselves'. This indicates a pride in and an assertion of Aboriginal identity. It is also sometimes manifested as a dismissal of the Balanda world, sometimes intended as a summary dismissal of an entire 'cultural package', a rejection which at times seems to involve little consideration of what is being rejected. Ways of doing and being are expressed by some as either/or (either Bining or Balanda), to do or think one thing is seen as denying another. This rejection seems to include written text. It is suggested here that perhaps seeing different ways of doing as complementary rather than as opposites might be a worthwhile approach to explore.

It is suggested that as well as 'speaking up for themselves' use of written text could enable Bining people to 'write and read up' for themselves' as well. In doing so it is argued that Bining people could become empowered to deal with difficult questions in the context of the conservation agency bureaucracy. In addition, the material that has been written about such issues, the results of research could be accessed as a means of informing decision making. This is not seen as detracting from the culturally based ability to 'read the country'.

Local politics also need to be considered. Local politics can become very intense in Kakadu. Many issues have arisen from the concomitant gazettal of a major national park, establishment of a uranium mine and the building of a town (Jabiru) to house and service up to 1200 new residents in a remote area in the late 1970's. Prior to that the area consisted of two wildlife sanctuaries, two buffalo stations, vacant crown land, mining leases and a variety of small leaseholders, such as safari camps. Issues such as traditional affiliation to land, conflict between European conservation principles and Aboriginal conservation and general cultural practices (including hunting, gathering and fishing rights of indigenous peoples in a national park) and problems of dislocated Bining lifestyles continue to simmer and occasionally erupt in Kakadu.

One Balanda interpretation of these political issues was that they were another way of avoiding written communication and the social context that goes with it by using local political issues, alignments and 'posturing' as a 'decoy'. It is not proposed to delve into the motivations behind any of the attitudes expressed above other than to say that, whatever their motivation, they do exist and pose a real impediment to any proposed literacy program.

7.3.6 Some Perceptions of Particular Text Types

The following thoughts were offered about a small sample of text types.

Plan of Management

The Plan of Management is the most important text to be read, its purpose being 'to specify the operations which, within budget limitations, will be carried out over the next five years in order to achieve the park's objectives' (Kakadu National Park Plan of Management, 1991: 4). While some of the contents inevitably become known by memory to some staff it is important to know how to access it as a reference tool. For example if a ranger has a developmental idea for an area, the Plan of Management must be checked for possible zonal restrictions or policies about commercial activities.. Some staff (mainly Bining) said they found the Plan of Management difficult to read. The Plan of Management includes different text types, and also includes many figures, tables and maps.

Monthly District Reports

Staff seemed generally 'happy' about these as in most districts everyone gets a chance to contribute, either someone different each month or different people work on different sections. Information is drawn from other district based texts such as the diary, incident reports and information reports.

Interpretation Texts

Interpretation texts are used for the communication of park values and programs relating to the international significance of the park, its natural and cultural assets and the need for their conservation (Kakadu National Park Plan of Management, p75). These programs incorporate promotion, information, interpretation, education and liaison. Interpretation texts can be used on park signs or in brochures, booklets, posters and educational resource material.

There were some strong points of view expressed by ranger staff about their contributions to the writing of interpretation texts. These are included because they reflect some feelings about writing in the Park. The salient role in the construction of these texts belongs to the Interpretation Officer but ranger staff do have the opportunity to write some district based texts. Strong feelings arose from staff perceiving themselves as being denied ownership of their text writing: their writing was not only edited but 'substantially changed'. Presumably this means that the original meaning of the text was changed. Rangers felt that they should be able to contribute more 'interp texts' and that personal vision should be maintained. This applied to both pamphlet writing and to sign writing.

Planning for development of interpretation material sometimes took priority during the Wet Season, a time when rangers are often on holidays and are replaced by rangers on short term contracts. Some rangers said that others seemed to 'hijack' this role, it became restricted to those with the best qualifications (ie with degrees or associate diplomas in park management). Some rangers felt that they were being 'left behind' in this area of writing. Some also stated that short-term seasonal rangers had more opportunity for interpretation writing than long term employees 'who'd really like to do it'.

Further issues arose when Bining rangers spoke about interpretation texts, that of Balanda versus Bining views of the country. Again, 'Aboriginal people need to speak more themselves' meant 'Aboriginal people need to write more for themselves'. There was some resentment of Balanda writing texts about 'country'. On the other hand, the

Interpretation Officer has decided that spoken texts such as Aboriginal English should be transcribed and recorded as such. For example, recently the construction of text for a particularly popular part of Kakadu went through a prolonged process of deciding whose view of the land should predominate or even be included. Both Balanda and Bining staff in Kakadu are caught in a difficult situation in representing indigenous culture to the public (as a World Heritage Area this means the world.)

Since this is an area where staff can make a direct contribution it could perhaps be possible to present interpretation texts (public texts) as representing two different ways of looking at the same thing rather than as an either/or choice.

Forms

The main forms which have to be used by rangers include leave forms, time sheets and movement requisitions. There are also many diagrams and tables included in a number of texts. The general and expected response to filling in forms was negative, 'a real chore' even to the most literate of staff. Several Bining staff said that they needed considerable assistance with reading and filling in forms and found them a threatening experience because they require immediate, observable use of reading and writing skills.

Legal texts

Legal texts (for example the National Parks and Wildlife Conservation Act, 1975 and the national Parks and Wildlife regulations) were treated by many staff with the same apprehension and negativity as forms. They were dismissed as "just legalese" and some staff said "I've never read them." Since a significant part of a ranger's job involves law enforcement this raises the question of how do rangers find out what laws and regulations they are enforcing.

Summary

The issue of literacy in the workplace at Kakadu National Park involves more than people just being able to read and write. It is an issue which encompasses a whole range of issues from world view and cultural identity at the top, to the ability to decode written text at the bottom. Perceptions of literacy can be approximately fitted to the roles of a literate person outlined in section 1.1 *Working Definition of Literacy* (Freebody and Luke, 1990). Questions of world view and cultural identity, whose views (if any) prevail, are best addressed in the role of text analyst, or text critic. Questions about doing particular jobs with written text in the workplace are best addressed by the role of text user. Questions about the purpose of different text types and being able to read and write them are addressed through the roles of text participant and code breaker. Perceptions about literacy encountered in this research tended to relate to these final two roles. The views expressed about the role and function of written text and the broader questions were often directed at the role of text analyst. The broader cultural and political issues must be addressed and reconciled, in our opinion, for any literacy initiatives to succeed.

Bining observations and reservations about written text were sometimes regarded by Balanda as avoidance strategies. This applies to the whole range of issues discussed above.

The 'desk jockey' v 'bitumen cowboy' issue could be interpreted as the 'bitumen cowboys' immersing themselves in the practical/tangible aspects of work as a means of

avoiding written text by being too busy all the time. This could then be seen as manifesting itself in the ethos of 'getting the job done' often in spite of the obstruction of the 'desk jockey'.

The political dimensions outlined above could likewise be constructed as an ideological edifice designed to rationalise avoidance of written text.

Whatever the rationale or rationalisation the issues are real and need to be tackled. It is difficult to see any literacy initiatives succeeding against covert and overt resistance.

8 LITERACY AND RANGERS

The following section presents a case for the importance and relevance of literacy for park rangers.

One important factor identified in the previously mentioned backlog of Bining at the lower levels of employment is literacy. It is argued that literacy is the single most important factor causing this 'backlog' at the lower levels.

This has two significant effects: i) stopping Bining rangers from moving up into managerial positions, and ii) as a consequence of this, the recruitment of additional Bining staff is hindered. The longer term effect of this is to retard plans for the park to be run by Bining staff.

Another consequence, it was suggested, was that low levels of literacy were a cause of some resentment among some park staff, since those who could write effectively ended up having all of the writing to do.

Yet another consequence is that some staff might not be aware of their rights and entitlements as a result of poor literacy. Two examples that were mentioned were: i) a staff member who had never heard of superannuation even though he had been paying it for years, and ii) a female staff member who had never heard of maternity leave. Without the resources to gain access to information in written text a person is totally dependent on being told by others what their rights are.

8.1 Rangers, Literacy and Promotion

When Kakadu National Park was established in the late 1970s it was sometimes stated that the park could have senior Aboriginal management staff in ten years although there was no workplace strategy in place to achieve this. This has not occurred. Instead there is a preponderance of Aboriginal ranger staff at the bottom end of the hierarchy - with some staff staying in this position for up to ten years. Lack of literacy skills was given as one reason by Balanda and Bining staff who were concerned about this situation. The majority of Balanda rangers do not miss promotion opportunities because of lack of literacy skills. Literacy and numeracy skills underpin the ability to understand and respond to selection criteria in job applications and interviews. This does not, however, imply that all Balanda are fully conversant with the written text requirements of the workplace. Use of written text in the workplace is more or less picked up on the job. While there are guidelines for the construction of some texts (such as the monthly district report, minutes, incident reports) these are fairly limited. As a result it is argued that those people with a cultural background surrounded by written text are more likely to pick it up than those who do not have this background.

Bining staff who were interviewed did not in general believe that they got 'a fair go' in accessing the public service hierarchy. Certainly the basic requirements of the Lease Agreement are being fulfilled, that is, the training of traditional owners (and several Bining non-traditional owners). The recruitment process is now being hindered by the concentration of Aboriginal staff at the lower end of the management levels, which means that new Bining staff are not being hired as quickly as might otherwise be the case because the positions they would go into are already filled. However, up to thirteen positions will be released with the gradual phasing out of the Memoranda of Understanding with the Conservation Commission of the Northern Territory.

It was also claimed that ANCA is dominated by organisational requirements and does not really listen to Bining people's questions about how they can get to top management positions. Bining do not want to 'become European' to get to the top. This does not deny the fact that there is continuing consultation with traditional owners, who often say 'too many meetings', and the Board of Management. It indicates, however, that promotion is a different issue that some Bining employees do not see as being addressed satisfactorily.

In the words of one Bining ranger 'it is difficult to get promoted towards the top without dropping our Aboriginal culture'. This comment relates to the issue of identity, the view that Balanda and Bining ways are alternatives and mutually exclusive. The further up one moves, the more dominant the bureaucratic culture of the workplace (Park Headquarters) and the entire organisation (Darwin and Canberra offices) becomes. The perception is that one's desire and ability to 'be Aboriginal' or to be an 'Aboriginal ranger' or land manager will become threatened as one moves up the public service ladder. Whether these perceptions have any basis in fact is not really the issue. What is more important is that they are real in the minds of the people who have them and are part of a strong resistance to literacy and written text which needs to be addressed.

Another factor is that Bining rangers don't really know what literacy skills are required to be a park manager or deputy park manager, or even district supervisor. Several comments reflected this situation: 'tell us what they (the managers) do'. Sometimes this lack of knowledge was reflected in comments about senior personnel such as 'they don't get out in the field enough', they 'don't know what they're doing', 'what do they do all day?'. It was said that the park manager's job involved 'too much writing' and 'not enough time out with staff'. It was asked what type of reading and writing the park manager needs to do and how he 'talks to Canberra'. These comments are a reflection of the 'desk jockey'/'bitumen cowboy' issue about what actually constitutes work.

Several of the comments above can be compared with other comments made by Aboriginal people in the Northern Territory about what is sometimes referred to as 'Secret English', language that is often highly abstract or technical and thus inaccessible and often incomprehensible to many readers, (Martin, J. in Walton and Eggington, 1990: 32). At the nearby settlement of Gunbalanya, Von Sturmer found that Bining think that 'Balanda withhold the secret of their power, and that much of this power is tied up with the 'big English' to which Aboriginal people are denied access' (Von Sturmer, 1984: 273). This 'secret English' or 'big English' really means written text. That is, the different ways meanings are encoded in written language.

One important contradiction arises from the issue of 'big English'. A number of Bining positions regarding written text have been outlined earlier. What all of these have in common is an 'anti' perception of written text, whether it be for personal or political reasons. On the other hand there is a perception that this 'big English' is used against Bining people and an acknowledgment that some degree of mastery of 'big English' is necessary to be heard both in terms of things like individual promotion and in a wider socio-political agenda. The issue outlined above often seems to be framed in terms of identity: if I learn to use 'big English' somehow I lose or begin to lose my Aboriginal identity. As Harris (1988: 177) says "sometimes big words do amount to keeping secrets, but sometimes the problem is not in the bigness of the words but in knowing the culture content in these words." Harris further argues that an Aboriginal person cannot learn English, or how to use English more effectively, without knowing some-

thing about Balanda culture (eg, knowing what maternity leave is).

there has to make decisions based on the text so they need enough relevant information to act on. This is where the relationships among the texts comes into play. Both the writer and the reader have to know what information is relevant and what is not. The text is written to a format but the longest section must be written in prose by the ranger. Because the text reconstructs the action it is mostly in the past tense and the people involved in the incident are participants in the text. It also follows the action closely so the rhetorical structure of the text follows the order of the events it describes. The writer must know from applying knowledge of the field to the context what things must be put into the text and what to leave out.

3 Follow up Letter to Incident Report (written by supervisor based on Incident Report)

Dear Mr Munday,

I am writing in regard to an incident which occurred at approximately 11.40 hours on Friday, June 11, at Cahill's Crossing on the East Alligator River. I am advised that at that time and place you were found to be in breach of Park fishing regulations under section 5.1.3 of the Kakadu National Park Plan of Management, which states:

a reduction in the bag limit for barramundi to two fish per person per day with a limit on possession of two barramundi per person while visiting the Park.

Your actions in having three barramundi in your possession were clearly in breach of the fishing regulations. While it is not proposed to take any further action in this instance any further breaches will be subject to legal action.

Yours sincerely,

C. Porosus.

comments

This text is based on the information contained in text 2 but is a step further from the context. The field is the same. The writer draws on both text 2 and on the information which informed text 2 but the text is different in kind. The text uses information drawn from a number of sources and synthesises them into a different text.

4 Minute on Crocodile Management (Language Informing/Directing Action)

MINUTE

File 3-6

MANUAL OF PROCEDURE

Operational Procedure No 5

CROCODILE MANAGEMENT

.....

For the purposes of management, crocodiles can be classified into three categories based on their behaviour and/or location:

1. Crocodiles which pose no apparent direct threat to human safety;
2. "Nuisance crocodiles" — crocodiles which show inquisitiveness to humans and/or their objects (eg boats, fishing lines, etc);
3. "Problem crocodiles" — crocodiles which show overt aggression to humans and/or their objects.

.....

STRATEGIES FOR PRE-EMPTING CROCODILE-HUMAN INTERACTIONS

In order to pre-empt unnecessary human/crocodile interactions, regular daylight and night-time patrols of popular camping, boating and fishing areas should be undertaken. These patrols will be undertaken at least twice a day during the dry season, the first patrols to be undertaken when areas become available for public use.

.....

ACTION

Management action relating to nuisance and problem crocodiles will be carried out with full consultation of the traditional owners and the Gagudju Association. The action to be taken in relation to a sighted or reported incident involving crocodiles and humans will necessarily be dependent on the nature of the crocodile's behaviour. The first task should be to inform the District Supervisor immediately. The District Supervisor will then inform the Superintendent.

comments

Although the previous three texts varied in how close they were to the original context they were all about the same specific incident. Text 4 is different in kind. It does not apply to any particular context but applies generally to all crocodiles and to any incident involving crocodiles within the park. It provides general principles which are intended to be applied to any relevant context. In fact the text is one basis for determining what is a relevant context. Knowledge of the information in this text is necessary to inform the decisions made by the ranger

about what to put into the incident report and what to leave out. The text does not refer to any individual people. It is, however, close to the park context since specific titles such as District Supervisor and Superintendent are used.

5 Fishing Regulations - from NT Department of Primary Industry and Fisheries Barramundi Fishery Management Plan, 1991. (Language Informing/Directing Action)

5 DEFINITIONS

In this Act unless contrary intention appears —

.....

“amateur fisherman” means a person who is fishing or taking fish otherwise than for sale or commercial purposes.

“barramundi” means a fish of the species *Lates Calcarifer*.

“fish” means an aquatic animal that is not a bird, an amphibian, a reptile other than a marine turtle or sea snake or a mammal other than a marine mammal, and includes —
.....

19. SIZE LIMITS

- 1) A person shall not take a barramundi that has —
 - a) an overall length of less than 55cm; or
 - b) a headed length of less than 39cm

unless the person is the holder of a licence entitling that person to do so.

.....

4 The possession in a place, other than in a place of permanent residence, of a fillet obtained from a barramundi taken by an amateur fisherman being a fillet having a length of less than 27cm, is prima facie evidence of possession of a barramundi having an overall length of less than 55cm.

20. BAG LIMITS

- 1) Subject to this clause, a person shall not —
 - a) fish for a barramundi on any one day if the person has previously taken 5 barramundi on that day; or
 - b) have possession, other than in a place of permanent residence, more than 5 barramundi.

comments

This text represents a small shift from the previous text. While the previous text applied to the park only, this text applies to the whole of the NT; it is more general. It also represents a shift in field. The text is a legal text, written in a different style from the previous texts. Its function is to provide information which informs action. Thus, even though its form is different, its function in the context is similar to that of the previous text.

6 Plan of Management (Language Informing /Directing Action)

The popularity of recreational fishing in Kakadu National Park is recognised and allowed in specified areas. Because populations of barramundi and other fish under heavy fishing pressure are likely to be slow to respond to controls on fishing These measures may include closure of areas, variation of bag limits and the introduction of specific fishing seasons.....

Specific control measures to be introduced during the life of this Plan include: a prohibition on recreational fishing on any waterway upstream of the Kakadu Highway to provide dry season refuges; the closure of all the West Alligator River to maintain one complete catchment free of fishing; a reduction in the bag limit for barramundi to two fish per person per day while visiting the park; a ban on live bait; and a ban on fish tethering.

comments

This text is a bit of a mixture in that it cites specific regulations but it does this in a different way from the previous texts. Whereas the legal text simply says what is what and what can and cannot be done, this text says what can and cannot be done and provides the reasoning which led to those decisions. It is classified as being a little more abstract largely because it presents the reasoning behind the regulations, something which the previous two texts do not do. The regulations are not the main focus of the text, they are cited as specific examples. That is, the purpose of the text as a whole is not to regulate fishing but to argue a case for regulating fishing in the context of the management of the whole park. It discusses primarily why the regulations are there.

summary

Each of these examples represents a shift further away from the action. Example 1 is embedded in the action and context; example 2 is further away from the action but still assumes knowledge about the context. It would be possible to add, say, a transcript of the interview between the rangers and Mr Munday as a bridge between examples 1 and 2. Examples 3, 4, 5 and 6 are remote from the action. Example 3 derives from the action but is further removed from it than examples 1 and 2. It uses information from examples 2, 4, 5 and 6 to inform or direct action. That is, texts 1, 2 and 3 are not possible without access to the information in texts 4, 5 and 6.

Each of these texts has characteristic linguistic features which are, for the most part, determined by the distance of the text from its context.

It is this outline of the relationship between texts and their context which informs the rest of the discussion in this paper.

10 FUNCTIONS OF LITERACY IN THE WORKPLACE

What emerges from the discussion above is that literacy in this workplace is a complex phenomenon. There are complex relationships among texts and that these relationships are determined by the nature of the job. It is also clear that written text is integral in the functioning of the workplace.

A workplace of this size, diversity and significance could not function without extensive use of written text. Written text has a number of functions in the workplace.

First, both as a function of size, diversity and organisational structure written text is necessary for reporting on daily activities. For example, incident reports function to document anything out of the ordinary which might require further action. They are necessary so that the ranger on the spot can document what happened accurately and make some comments on further action. For the supervisor, the incident report provides a basis for deciding whether further action is necessary. These texts are also used as evidence in court.

On the other hand a ranger's daily journal provides an account of what is not problematic. It provides a record of where the ranger was and what he/she was doing at any given time.

These texts also provide information for supervisory staff in writing up monthly reports.

In addition, to the above rangers need to be able to write a small range of texts such as applications for promotion and to be able to fill in a number of types of forms, for example, movement requisitions and forms for allowances such as camping allowance. These texts have an impact on the immediate and future income of a ranger. Rangers who cannot write these texts are seriously disadvantaged.

Second, written texts provide information on how to do things and what to do and what not to do. For example, operating procedures for the park radio system tell both how and in what manner the radio system is to be used. Written texts such as legal texts and the Plan of Management also provide information which informs courses of action. For example, it does not matter how well a person can write an incident report if they don't know what an incident is. Access to information in these texts is necessary for a ranger to be able to do integral parts of the job properly.

Supervisory staff have to be able to use information in texts (eg journals and incident reports) in order to write other texts such as monthly reports. Because of the relatively brief nature of these texts it is necessary to be able to distil important information from the source texts. This is easier if the source texts only contain what is necessary in the first place.

In addition there are a number of texts which need to be read for information. These would include texts such as the Plan of Management, which provides information about the park. It would also include various scientific reports about the park.

10.1 Discussion and Conclusions

In looking at the texts in terms of their context dependency a pattern emerges. For the

most part, texts which rangers have to write on a day to day basis tend to be fairly closely tied to their context. For example, a journal entry or an incident report are quite close to the events they describe. In order to write the text the writer would have to be witness to the events.

The texts which rangers need to be able to read fall into two categories:

i) texts which provide information

(These would include scientific reports and various information bulletins. These texts could be regarded as desirable rather than essential. Parts of the Plan of Management would fall into this first category of text although the Plan of Management would have to be considered as essential rather than desirable reading because of its function in outlining the broad structure and philosophy of the park's operations.)

ii) texts which are intended to regulate behaviour in some way

(This category of texts is more essential. In many cases a ranger could not do the job without access to the information in them. By using the term 'regulate behaviour' I do not only mean things such as rules and regulations. Texts which tell the reader how to do something, texts which tell the reader what to do and texts which tell the reader what not to do are all included in this category. A text such as a procedure for operating a machine safely would come into this category since its primary function is to direct the reader into a particular course of action. Texts such as Minutes also fall into this category. Texts such as Acts of Parliament and various legal texts would also be included here. Even though these texts provide information, they provide information about what people can and cannot do.

Within this second category differences in mode (or distance from the action) also appear to be the key variable. Texts which are directed towards a particular course of action, such as how to operate a radio are (or should be) closer to the action than say legal texts which outline general principles which must then be interpreted before being applied to a context.

The main argument being put here is that the language of these more abstract types of texts makes access to the information in them difficult. This of course varies in degree but in general more abstract texts require more sophisticated literacy. The park has no control over the language in some texts, for example legal texts. On the other hand, some texts which originate in the park such as minutes, sometimes appear to be unnecessarily abstract. Since these texts are intended to influence action it would be possible to write them so that they were closer to the action. For example, instead of writing,

improper use of machine may result in injury

it would be possible to communicate the same message by saying something like,

use this machine properly or you might hurt yourself.

These two examples contain a number of differences which influence communication. For instance there are no people in the first example, it is not explicitly directed to anyone. The second example is directed to the *you* (the reader and user of the machine). In addition, in the first example the action, what you want the person to do or not do is encoded as nouns (use, injury). In the second example the actions are encoded as verbs (use, hurt). The second example is closer to spoken language and thus, for someone unfamiliar with written text, easier to understand.

In summary the literacy needs of the workplace are integrated into the whole structure of the workplace. The texts are not separate, they all touch on each other in some way. It is not enough, say, to just be able to write an incident report without doing it in an informed context. Thus there are both the individual texts and the relationships among texts to consider.

In conclusion, the written text in the working life of a ranger is generally geared towards doing the job. Most texts are either reports of activity and suggestions for proposed activity or they are texts which inform activity. Texts tend to be more abstract the further removed they are from activity. That is, an incident report is situated quite close to the action it describes but the texts which allow a ranger to decide what constitutes an incident and what does not (legal texts and park regulations) are situated further from the action. Texts such as the Plan of Management, which is mandatory reading for all rangers, are also situated quite a distance from the action. On the other hand texts which directly inform action, such as procedures for operating machinery, are situated closer to the action.

11 SURVEY OF TEXTS: THEIR KEY LANGUAGE FEATURES AND THEIR FUNCTION IN THE WORKPLACE

Samples of a variety of texts are shown below. This is not the full range of texts but is intended as a representative sample to show something of the diversity of written texts a ranger needs to manage. The texts which originate in the park are organised, more or less, using the scale of text and context discussed previously. The texts which originate outside the park are treated separately. These texts are, in general, the most abstract.

In this section all names are fictitious and dates have been changed.

Text 1 — Daily Journal

(Date and calendar at top of page.)

July 9, 1992

- 08.00 hrs To HQ met Mick and Steve. Mick out to Nourlangie Rock to clean out ablutions block cisterns and do remote area garbage. Steve up in helicopter on fire monitoring.
- 09.00 hrs Meeting at 09.00 hrs until 11.00hrs. Spoke to Dave during the morning re proposed press release about the concert. Paper work until 11.00 hrs
- 11.00 hrs when there was a report of 2 boys missing from a school group at Nourlangie Rock by Mick. They were believed to be on the Barrk Sandstone Bushwalk. Jabiru Police informed and I boarded the Robinson helicopter about 13.15 hrs.
- 13.15hrs Searched the Barrk trail and landed in the Anbangang Gallery parking area. Mick informed us that the boys had appeared 5mins earlier. No further action. Left area and 14.20hrs landed at HQ. Lunch taken from 14.20hrs until 15.20hrs.
- 15.20hrs Returned to HQ and routine paperwork and research for the TV Holiday program for the rest of the afternoon.
- 17.00hrs Off duty at 17.00hrs. Dist 9 tray top Toyota broke down at Nourlangie Rock during the afternoon with engine trouble. Vehicle recovered by Les from HQ workshop.

George Snowdon and Neil Bradshaw, both aged 13 ,in school group from Melbourne School overdue 3hrs at Nourlangie Rock.

comments

The text represents a record of unproblematic events in the day of a ranger. It is a record of what rangers did and where they were; as such it is arranged in chronological order and set in the past tense. These texts often contain abbreviations and parts are more or less in note form. This could be one area to address in teaching how to write them (ie, what to leave out when making notes). Also the text does not include everything the ranger did in the day. The text is informed by knowledge of the field to determine what to put in and what to leave out.

The text has the following structure:

Time 1 *event* *comment (optional)*
Time 2 *event* *comment (optional)*

and so on, down to -

Time n *event* *comment (optional)*

Text 2 — Incident Report

INCIDENT REPORT

DATE Jan 8, 1992

OFFICER
REPORTING

DISTRICT

WITNESS
INTERVIEWED

LOCATION Nourlangie rock

DETAILS OF INCIDENT

At approximately 11.40hrs on Wednesday, 8th January, 1992, while on a patrol of the Nourlangie Rock area, I was informed that a male visitor had collapsed on the lookout just below the Occupation Shelter of the Anbangang Gallery complex. I attended the scene and as a result the ambulance and stretcher were requested from Jabiru Health Centre. The ambulance arrived about 30 minutes later with a driver and a nursing sister. The sick person was carried down the hill with the assistance of some of his private group. He was then taken to Jabiru Hospital where a doctor examined him. He was then conveyed to Darwin Hospital. It was later confirmed that he had suffered a heart attack. His particulars are as follows:

Norman Booza,
Brisbane, Qld
Age 52 years.

RECOMMENDATIONS

No further action required.

comments

An incident report represents a record of events when something goes wrong or appears to go wrong. Like the daily journal it is written in chronological order but unlike the journal the incident report focuses on the specific details of one event. Again the text is informed by knowledge of the field. A ranger first needs to know what constitutes an incident and this knowledge comes from reference to other texts, many of them written and many of them quite abstract. In addition, in writing the report, the ranger needs to know what information to put in and what to leave out.

The body of the text (details of incident and recommendations) has the following structure:

- Orientation - establishes time and location
- Details - tells the specific details of the incident
- Recommendation - says what you think should be done about it

Text 3 Follow up letter to Incident Report (written by Supervisor)

4 November, 1990

Dear _____

I am writing in regard to an incident which occurred at approximately 1110 hours on Monday 15 October, 1990 on the Kakadu Highway about five kilometres south of the Kakadu Highway/Old Darwin Road junction. I am advised that ANPWS staff saw a white mini bus type vehicle reg'd no _____ driving about 100 to 200 metres off road to the western side of the road and moving in a westerly direction. ANPWS staff followed the vehicle which stopped as it approached a group of horses.

The driver of your vehicle, Mr _____ was spoken to and admitted driving off the road to look at the horses.

Regulation 6(1) of the national Parks and Wildlife Conservation Act, 1975, states:

A person shall not, except in an emergency, drive or use a vehicle in a part of a park or reserve that is not a road, track, parking area or camping area. (Penalty \$500).

The actions of your driver are in clear breach of this regulation, and also place in jeopardy your permit to conduct commercial tours within Kakadu National Park under Regulation 7AA of the Act.

While it is not proposed to take further action on this occasion, I seek your written assurance that the Park regulations will be complied with fully in future.

Yours sincerely

C. Porosus
District Supervisor

comments

This text uses information contained in incident reports but it does not retell the story as an incident report does. This text uses parts of the story as evidence. That is, it selects parts of the incident report relevant to establishing that something that should not have been done has been done. Its logical organisation is not around the timeline of events but around proving that an offence has occurred and giving a warning. In this way the text is more abstract than an incident report. The time reference of the text shifts from past to present to future through the different stages of the text. The text appears to have the following rhetorical structure:

1. Establish context of offence (details of when, where, who, what)

(past tense — derived from incident report)

2. Cite relevant regulation(s)

(present tense — derived from regulations and legislation)

3. State action to be taken

(future tense — writer's judgment based on 1. and 2. above)

The following texts are texts which are written by people in supervisory positions but must be read and acted on by the writer and others. Text 4 is written by a supervisor and directed upwards through the hierarchy. It provides a record of what people did. The other texts in this category are written at supervisory level and pass across and down the hierarchy. They tend to direct what people will do.

Text 4 Monthly Report (written by Supervisor)MONTHLY REPORT - DISTRICT X - MAY 1993Administration

Barry Munday — on duty
Sarah Togah — on duty
Jack Mangrove — on duty
Jack Daniels — on duty
Bud Weiser — on duty

Meetings

Bud Weiser attended the Fire management workshop at Kununurra from 4/5 — 8/5.
Sarah Togah — Seasonal orientation 7/5
Sarah Togah — Buba walk with seasonals 11/5.

Development Program

No major developments currently in progress.

Maintenance

Routine maintenance of all vehicles and boats on-going.
Building maintenance on-going. Major maintenance is required on most houses etc and these areas are being addressed on a priority basis and as required.

Natural Resource ManagementFire

Fire management in the form of prescribed burning and mapping is continuing. Most of the district has now been attended to and we await some areas to dry out sufficiently. Mapping will start in June along with additional burning where required.

Feral animals

No buffalo work has been carried out by district staff but several attempts, with varying degrees of success, have been put into the pig problems. Pig infestations around the Nanambu salvinia plot have been investigated and some pigs shot. Approximately 13 have been removed from that area.

Interps

Staff have been called on to speak to school groups etc. The seasonal programs have also demanded some input from the district. The seasonals have almost completed their training and appear enthusiastic so far.

Miscellaneous

Large numbers of beer cans are being dumped in two major locations, 'x' and 'y'. We have placed rubbish bins at these sites but they are largely ignored. Staff have been diligent in picking up the mess but I am not going to allow it to continue.

C Porosus
District Supervisor

comments

This text is not particularly abstract but relies on knowledge of a large number of other texts. For example information about staff movements could come from Movement Requisitions and journals. Other information comes from incident reports etc. How to write the Monthly Report depends on knowledge of the Minute from the Manual of Procedures on how to write them. The text's structure is quite abstract. It consists of dividing a month up into categories of experience rather than times and writing a short report on each area of experience. What is meant here is that the monthly report is not presented in chronological order like a diary, its structure is not governed by time.

The general structure of the text is:

1. heading, specifying time and place (month, year and district)
2. aspects of work short report on each category plus comments if necessary

Text 5 Minute (written by supervisory staff, to be read by all relevant staff)

Note: A number of minutes have been included as they are a high frequency and important text in the working life of a ranger. They are also quite varied.

MINUTE

File 3-6

20 February 1987

MANUAL OF PROCEDURES

Operational Procedure No. 10

USE OF CATERPILLAR 926 FRONT END LOADER

1. The Park has acquired a Caterpillar Front End Loader and to ensure its safe and efficient operation and to prevent excessive downtime the following procedures are to be adopted for its use.
2. Initially, the FEL will only be operated by those persons whose names appear on the appended list.
3. The list may be amended from time to time as others demonstrate the necessary experience and possession of a 'C' class licence.
4. Unauthorised use of the FEL is prohibited unless a person is engaged in training under the supervision of an authorised operator.
5. The unit should not be 'walked' excessively. A nominal distance of 20km or less would be appropriate to avoid excessive wear on the tyres and transmission components and to save time due to the low speed of the unit.
6. Long distance travel such as from Jim Jim to East Alligator (approx 95km) should be effected by hiring a float from the Gagudju Assoc. A quote must be obtained prior to

placing an order for the hire of the float.

7. The FEL must be left clean and fuelled after use and appropriate starting and stopping procedures as detailed by the Caterpillar owner's manual.

8. Any faults or damage must be reported immediately to the Snr Mechanic.

9. The current registration (NT) is endorsed day travel only on roads. This should be observed until Commonwealth registration is effected.

10. Bookings must be arranged in two week blocks per district to avoid unnecessary travel.

11. The Deputy Superintendent (N) will arrange a booking book and liaise with the Snr Mechanic.

12. The bookings book is located in the Deputy Superintendent's (N) office and bookings must be arranged over the relevant District Supervisor's or Section Head's signature.

13. A log book will accompany the FEL and must be accurately filled in at the completion of each job.

C. Johnston
Superintendent.

comments

The minute above is an example of a type of text called a protocol (see Wignell, 1992). It is a text which establishes the general conditions which must be met before something can be done. It is different from a text, say, telling you how to drive a front end loader because it does not divide the process up into a sequence of steps. The numbers down the side of the text do not necessarily represent the order in which things should be done. They represent a set of conditions, all of which must be met before someone can drive the loader.

The text has a generalised structure as follows:

Title	specifies the job or machinery
General conditions	Any number of conditions, not necessarily in order

Text 6 Minute (as for text 5)

MINUTE

File 3-6

MANUAL OF PROCEDUREOperational Procedure No 5CROCODILE MANAGEMENT

.....

For the purposes of management, crocodiles can be classified into three categories based on their behaviour and/or location:

1. Crocodiles which pose no apparent direct threat to human safety;
2. "Nuisance crocodiles" — crocodiles which show inquisitiveness to humans and/or their objects (eg boats, fishing lines, etc);
3. "Problem crocodiles" — crocodiles which show overt aggression to humans and/or their objects.

.....

STRATEGIES FOR PRE-EMPTING CROCODILE-HUMAN INTERACTIONS

In order to pre-empt unnecessary human/crocodile interactions, regular daylight and night-time patrols of popular camping, boating and fishing areas should be undertaken. These patrols will be undertaken at least twice a day during the dry season, the first patrols to be undertaken when areas become available for public use.

.....

ACTION

Management action relating to nuisance and problem crocodiles will be carried out with full consultation of the traditional owners and the Gagudju Association. The action to be taken in relation to a sighted or reported incident involving crocodiles and humans will necessarily be dependent on the nature of the crocodile's behaviour. The first task should be to inform the District Supervisor immediately. The District Supervisor will then inform the Superintendent.

comments

The text's principal purpose is to tell staff what to do about crocodiles but first it establishes a classification of crocodiles to be used as criteria for action. That is, the text not only tells the reader what to do but also provides information on which to base that decision. In doing this it establishes a classification of crocodiles which is relevant only to this specific context, it is creating specialised knowledge for a particular purpose. For example, the common sense, everyday classification of crocodiles is fresh-

water and saltwater. This text has a general structure as follows:

Title - establishes what the text is about in general terms

Criteria - provides information necessary to base decisions on

Action - tells what to do.

Text 7 Minute (As for texts 5 and 6)

MINUTE

File 4 - 6

19 May, 1992

MANUAL OF PROCEDURE

Administrative Procedure No. 3

Monthly Reports

The Director has requested that a report be forwarded to him each month detailing Park activities. The report will be prepared by the superintendent based on information provided by Park Districts and Sections.

This report will provide the Park with a good opportunity for keeping the Director informed on Park matters, and to raise issues which may be causing concern. It should therefore be viewed in a positive manner, rather than just being seen as more paperwork.

Reports will be required from each District and Section, viz. Scientific, Interpretation, Law Enforcement, administration, Maintenance and Training. They should be no longer than one typed page, be factual, and relate only to the month in question. They will be prepared by the District/Section senior officer, or person acting in that capacity, as the case may be.

District submissions should provide data on visitation, eg camp ground numbers, guided tour figures, traffic counter data etc, as well as outlining new developments, maintenance, biological management programs and so forth that staff may be involved in. Problems encountered in inefficiently carrying out District programs should be discussed if appropriate.

Similarly, Section reports should provide a concise statement of activities, together with any matters causing concern which may be of interest to the Director.

Completed reports for each month should be with the superintendent by the seventh day of the following month. These reports will then be combined into a single submission for forwarding to the Director.

C. Johnston

Superintendent

45

comments

This minute is similar in purpose to the front end loader minute, it gives general information as a prelude to action. Its structure differs slightly from the front end loader minute in that its sections are not numbered. However its social function is the same. This text seems to be aimed at supervisors.

The following texts are texts which would be read both for information and to inform action.

Text 8 Excerpt from the Plan of Management

7. CULTURAL RESOURCE MANAGEMENT

"The significance of the park to Bining people is based on the long history and tradition of Bining occupation. In giving assent to the leasing of their land for the establishment of Kakadu National Park, Bining stressed the on-going and all-embracing nature of their tradition. This living tradition is reflected in the presence of many sacred sites in the park. Bining are particularly concerned about the continued well-being and integrity of these sites.

"The major body of art sites and the antiquity and richness of the archaeological resources of the Park were a significant factor in the inscription of the Park on the World Heritage List. The world importance of these sites places special responsibilities on the ANPWS for their protection and management. . ."

comments

The structure of the text is not elaborated on since it is part of a larger text. The function of this text (the Plan of Management) is to provide general background information and to inform action by people working in the Park. It provides the overview for the whole of the Park's operations. It paints the big picture against which all other aspects of the job are seen. It is thus a very important text if people are to see their place in the whole scheme of things. Because the text is quite removed from its immediate context it is quite abstract.

The following texts, while part of the language of the workplace do not derive directly from it. They come from outside sources but inform practice in the workplace.

Text 10: Travel Allowance Ready Reckoner

TRAVELLING ALLOWANCE READY RECKONER
Please follow instructions on back of this form

M/R No
#Rates apply from 1 May 1993 (AMENDED)

NAME CLASSIFICATION TEL. EXT

MEALS

- For BOTH day of departure AND day of return, enter the appropriate amounts in boxes A & C.
 - Multiply the number of complete days absence by daily meals rate & enter the amount in box B.
- NOTE: Air travel departure & arrival times are: Capital cities - 1 hour BEFORE flight departure & 1 hour AFTER flight arrival
Country centres - ½ BEFORE flight departure & ½ hour AFTER flight arrival
For non-air travel use actual departure and arrival times

DAY OF DEPARTURE		SES or EQUIV		OR	NON-SES or EQUIV		ENTITLEMENT
Day	Time	Capital City*	Country#		Capital City*	Country#	
	Before 7.00am	\$62.35	\$49.65		\$52.25	\$45.40	\$ <input type="text"/> A
	7.00am - 1.00pm	\$48.60	\$36.95		\$39.60	\$34.30	
	1.00pm - 7.00pm	\$27.50	\$23.25		\$24.30	\$20.60	
	7.00pm & after	NIL	NIL		NIL	NIL	
Date							

NUMBER OF COMPLETE DAYS ABSENCE

(Day of departure & day of return EXCLUDED) daily x meal rate

SES OR EQUIV		OR	NON SES OR EQUIV	
\$62.35	\$49.65		\$52.25	\$45.40

 \$ B

DAY OF RETURN		SES OR EQUIV		OR	NON-SES OR EQUIV		ENTITLEMENT
Day	Time	Capital City*	Country#		Capital City*	Country#	
	Before 7.00am	NIL	NIL		NIL	NIL	\$ <input type="text"/> C
	7.00am until 1.00pm	\$13.75	\$12.70		\$12.65	\$11.10	
	1.00pm until 7.00pm	\$34.85	\$26.40		\$27.95	\$24.80	
	7.00pm & after	\$62.35	\$49.65		\$52.25	\$45.40	
Date							

*and high cost country centres # including Tier 2 country centres

ACCOMMODATION

Multiply the number of NIGHTS to be spent in each centre by the appropriate rate to calculate the total accommodation amount.
NOTE: Insert centre name & appropriate rate for any high cost country centre being visited.

	No. of nights	SES OR EQUIV	NON-SES OR EQUIV	\$	
Adelaide		\$86.00	\$64.00	\$	D
Brisbane		\$99.00	\$74.00	\$	E
Canberra		\$84.00	\$63.00	\$	F
Darwin		\$88.00	\$66.00	\$	H
Hohart		\$87.00	\$65.00	\$	I
Melbourne		\$124.00	\$93.00	\$	J
Perth		\$97.00	\$73.00	\$	K
Sydney		\$116.00	\$87.00	\$	L
*High cost country centres		\$	\$	\$	M
Tier 2 country centres		\$70.00	\$52.00	\$	N
Other country centres		\$64.00	\$46.00	\$	P
* (Centre) TOTAL ACCOMMODATION AMOUNT (add boxes D to P)					\$ <input type="text"/>

INCIDENTALS

Multiply the daily rate by the NUMBER of 24 hour periods of absence AND/OR part thereof

CALCULATION	<input type="text"/>	&	<table border="1"> <tr> <th colspan="2">SES OR EQUIV</th> </tr> <tr> <td>\$15.25</td> <td></td> </tr> </table>	SES OR EQUIV		\$15.25		OR	<table border="1"> <tr> <th colspan="2">NON SES OR EQUIV</th> </tr> <tr> <td>\$10.75</td> <td></td> </tr> </table>	NON SES OR EQUIV		\$10.75		\$ <input type="text"/>	<input type="text"/> J
SES OR EQUIV															
\$15.25															
NON SES OR EQUIV															
\$10.75															

TRAVELLING ALLOWANCE DUE TO OFFICER (add boxes 1.2 & 3) \$

comments

These forms present different problems. They are not especially abstract linguistically but they are quite abstract in layout. Their design incorporates a number of cultural assumptions about the layout and distribution of information in a form and about the function and purpose of a form. It cannot be assumed that people know what forms are for or how to fill them in.

Text 11

Excerpt from environmental impact statement (desirable but not essential reading)

"Baseline data collection to serve as the foundation of the monitoring program is continuing. It is anticipated that changes in the environmental parameters being monitored, and especially in the riverine habitats, will continue to occur as a result of ongoing changes in land management practices in the upper South Alligator River catchment. These changes will occur independent of any mine development activities.

comments

This text is an excerpt from an environmental impact statement and as such is more in the category of general background information. The language in this text is also quite abstract.

The following texts also originate outside the Park but they directly influence action in the Park in the area of law enforcement. They (particularly Text 12) are more directly related to the daily duties of a ranger than the previous text.

Text 12

Legal text, excerpt from NT Barramundi Fishing Regulations

5 DEFINITIONS

In this Act unless contrary intention appears —

.....

"amateur fisherman" means a person who is fishing or taking fish otherwise than for sale or commercial purposes.

"barramundi" means a fish of the species *Lates Calcarifer*.

"fish" means an aquatic animal that is not a bird, an amphibian, a reptile other than a marine turtle or sea snake or a mammal other than a marine mammal, and includes —

.....

19. SIZE LIMITS

- 1) A person shall not take a barramundi that has —
 - a) an overall length of less than 55cm; or
 - b) a headed length of less than 39cm

unless the person is the holder of a licence entitling that person to do so.

.....

4 The possession in a place, other than in a place of permanent residence, of a fillet obtained from a barramundi taken by an amateur fisherman being a fillet having a length of less than 27cm, is prima facie evidence of possession of a barramundi having an overall length of less than 55cm.

20. BAG LIMITS

- 1) Subject to this clause, a person shall not —
 - a) fish for a barramundi on any one day if the person has previously taken 5 barramundi on that day; or
 - b) have possession, other than in a place of permanent residence, more than 5 barramundi.

comments

The language of this text represents complexity of a different kind from the texts previously discussed although the degree of abstraction is a major source of difficulty. These texts are important, however, since the information in them can influence the daily life of a ranger.

Text 13 Act of Parliament, excerpt from Aboriginal Land Rights (Northern Territory) Act 1976

Land Trusts

4. (1) The minister may, by notice published in the Gazette, establish Aboriginal Land Trusts to hold title to land in the Northern Territory for the benefit of Aboriginals entitled by Aboriginal tradition to the use or occupation of the land concerned, whether or not the traditional entitlement is qualified as to place, time, circumstance, purpose or permission, and shall so establish Land Trusts to hold the Crown land described in Schedule 1.

comment

As for Text 12

11.1 observations on the texts

Observations made from the analysis of the workplace and the analysis of the texts are presented below.

Texts written by rangers at the lower levels appear to be mainly information gathering and recording. For example, an incident report provides information which may be the basis for further action.

Texts which are read by rangers at the lower levels tend to be to provide information as a basis for action. For example, operating procedures tell a ranger how to do something, minutes give directions on what and what not to do. Even legal documents provide a basis for action.

As one moves up the hierarchy there appears to be a shift in the type of texts used, especially texts which need to be written. For example, compiling a monthly report would involve sifting and synthesising information from a number of sources (incident reports, requisitions etc). Likewise, writing a follow up letter to an incident or composing a minute involve different kinds of language than observing and recording information. In addition to a shift into 'bigger English' there is also a large shift into the assumptions underlying Balanda workplace culture. In addition the language and literacy skills involved in producing and using these kinds of texts are for the most part (with the exception of legal texts) more complex than for the incident report type

texts. It is the kinds of grammatical shifts involved in shifting from one type of text to another that are likely to hinder access to higher levels.

The key here is the amount of abstract language in the texts, or the distance of the text from the action. That is, some of the texts are situated close to the action, they either deal with specific events or direct action in specific operations. Other texts are further removed from the action, they are derived from a synthesis of information from other texts. It is this second type of text which I believe will prove to be the biggest stumbling block to promotion.

What is being argued here is that even if a person can write an excellent incident report it doesn't mean that they can write a more general text which synthesises information from say 50 incident reports and draws a general conclusion. In general the texts which inform action (which have to be read) are more abstract and 'difficult' than the texts which need to be written.

12 OUTLINE: POSSIBLE TEACHING MODEL

The view being put here about written language in the workplace is that it is a type of technology, that different texts have different jobs to do. In adopting this view it follows that teaching literacy, teaching about language and how to use language, is no different from teaching any other aspect of the job except that language is inseparable from any aspect of the job. As such it is suggested that literacy needs would best be addressed if they were considered right across the whole training program. That is, if language were taught with 'content'.

Rangers' perceptions about written text need to be taken into account here. Given the level of alienation that there appears to be with regard to written text it is suggested that some kind of cultural orientation into the functions and purposes of 'paperwork' in the workplace could be undertaken. This could be done both as a general overview and in relation to specific text types.

An anecdote told by a Sydney secondary school science teacher is perhaps illustrative here. The teacher had a class of mainly Aboriginal students in a inner city school. The students could all read and write. The students also liked doing experiments in science. However when it came to doing experiments the students became frustrated because their experiments never worked out. This led to behaviour problems in the class. The teacher said that this led to frustration and confusion until he stepped back and thought about what was going on.

Most of the instructions for conducting the experiments were written in standard science experiment form. The teacher realised that the students were not making the connection between the written text and how to do the experiment, they were not familiar with using written instructions. The teacher then spent some time explaining the text to the students, what it was for and the staging of the text, ie how to use the text. He said that after the students made the connection between the written text and the experiment (ie, understood what the text was for) they had no more trouble with experiments than anyone else.

The point being made here is that not all people share the same cultural assumptions about written text. The advice here is when in doubt be explicit. Many of the workplace texts at the Park fall into a category similar to instructions on how to do a science experiment. They are texts which inform, instruct and regulate behaviour; texts which direct or inform action.

Explicitness about the functions and purposes of different types of written text is seen as at least a beginning to breaking down barriers of 'secret English'. It is suggested here that perhaps some kind of apprenticeship or mentor model might be considered. This is hinted at in the current training model of specific training agreements. A benefit of this approach is that an 'apprentice' could work with a 'mentor' on all aspects of the job, be shown what and how to do things and be gradually handed over more responsibility as they become ready for it. This approach keeps the written text close to its context of use. The trainee learns about the written text as it occurs in daily activity on the job and is thus more likely to learn that reading and writing are part of the job. It is argued that this proposal could be accommodated into the current training cycle. There would need to be some in servicing of mentors into their role and perhaps some financial inducement.

To illustrate this point assume that a trainee is out with a mentor, they witness an 'incident' and come to write the incident report. The mentor and trainee could collaboratively talk over: what was relevant and what was not, what needed to go in the report and what did not. They could then jointly construct the report. Over time the mentor's role would diminish and the trainee's role would increase. This model is seen as operating in conjunction with the Certificate in Lands, Parks and Wildlife Management although the entry of some trainees into the certificate could be delayed until their literacy skills were sufficient. The 'apprenticeship/mentor' model suggested above is also seen as a way to facilitate workplace writing.

One possible model (subject to further discussion) for integrating the teaching of workplace literacy with the Certificate in Lands, Parks and Wildlife Management is outlined below.

Each text type could be studied as it occurs in context. For example, in learning about the legal/law enforcement aspects of a ranger's work legal texts could be introduced. This could be done by first introducing the relevant text type beginning with an explanation/discussion of what the text is for. Knowledge about the social purposes of texts cannot necessarily be assumed.

After being explicit about what the text is for it is possible to then turn to how it works, or how it is put together. In doing this it would be possible first to look at the overall structure of the text, dividing it into stages and then looking at the purpose of each stage within the total text structure. Following this, specific features of the text could be addressed. For example, in an Incident Report one thing that could be looked at is time sequencing; getting the sequence of events right. Suggested exercises here could involve first the teacher going through a text and showing students the words which indicate time sequence. Students could then be given a different text and work in pairs or small groups on identifying sequencing words. This could perhaps be followed by a cloze exercise. This could lead to specific work on how to sequence events in time in a jointly constructed text or texts looking at alternative ways of sequencing events and deciding which is more appropriate to particular types of text. There is a nice contrast here between an incident report and a journal, where the times are written in a column down the side and events are written next to them. The same or a similar pattern could be repeated for whatever language features were considered most salient for that type of text. Following this the students could be asked to write a text independently or collaboratively but without the teacher's explicit guidance.

In each step in the sequence above the students are being asked to do a little bit more work, but not much more. Each task is in itself quite small but leads the student in stages to more independence. I would argue too that this focus is less threatening to students since no one person is directly responsible for the text or for the answer.

Having established a sequence of events it would then be possible to work on what to put in and what to leave out, drawing on and building field knowledge at the same time. In this way the integration of reading and writing more or less duplicates the pattern found in the workplace.

The general curriculum and teaching model outlined here incorporates three stages (these are explained in the recommendations below): For writing these are: 1) joint deconstruction of the text; 2) joint construction of the text; 3) independent construction of the text. For reading the model is similar but the focus is on deconstruction of the text. In place of construction of text, application of the text could be added, ie using the information in the text. All of these could be done using small groups

In general terms it would be better to begin with texts which are closely tied to the context. This is for two reasons. First, these texts provide a concrete context to work from. Second, the language in these texts is more like spoken language and is thus likely to be more familiar to students. The general idea is for students to move along the scale outlined above one step at a time. Initially they would do this with a lot of teacher input and collaborative work before moving on to more autonomy.

This process might seem a little laborious at first but as students learn there tends to be a snowball effect. An explicit focus on literacy integrated into the content or field based knowledge might initially slow things down but in the long run more ground will be covered.

The use of simulation exercises is one possibility for integrating field knowledge, writing and context. For example in learning about, say, fisheries management, it would be possible to use simulations to integrate field knowledge with how to write an incident report. The use of simulations ties the knowledge and language to a specific context which can then be discussed and used as a basis for teaching how to write about it.

13 RECOMMENDATIONS

The following recommendations are expressed in general terms only at this stage. The specific details of teaching strategies will be informed by these recommendations but are yet to be formulated.

1) In the area of teaching about written text, it is recommended that two strategies be adopted, one for trainees and one for non-trainees.

i) For trainees it is recommended that initial literacy training be integrated into the NTOC Certificate in Lands, Parks and Wildlife management. This could be done by linking the teaching of reading to the 'content' areas of the Certificate (eg, biology/ecology). It is suggested that materials be developed which are based on typical texts from these areas and which are used in teaching in the Certificate course. This would enable this aspect of literacy to be linked explicitly to something the trainees are already doing.

The teaching of writing could be addressed through the Business Communications module. Materials based workplace texts from the park would be used for this. This would provide a link between training and the kinds of writing done in the workplace.

Trainees who fall behind in the above could be directed into specific modules of the NTOC Certificate in Access to Employment and Further Study in addition to the existing training agreements.

ii) For non-trainees it is recommended that the materials developed for workplace writing be adapted for in-service training. Given the experience of non-attendance at courses (for whatever reason) it is recommended that these materials be developed for use in the park. It is recommended that delivery of the in-service training could be done in either of two ways:

a) Supervisors (or someone designated by supervisors) could be in-serviced in how to use the materials and to conduct training on the job.

b) A person could be employed on a part-time contract basis to teach on location on an individual basis. This would require release time from duty for say two hours a week per employee involved.

Given the small number of people involved and the fact that this form of in-service training could well be a one-off measure, option b) above is the preferred option.

Note. For in-service training of people who are not literate up to the level of decoding print on paper, intensive individual tutoring is recommended.

2) Given that there is likely to be some resistance to written language it is recommended that the materials begin with texts which are located close to the action/context since these texts are in their structure and language features not unlike spoken texts. They may prove difficult or easy to read or write, depending on the initial literacy level of students. They will certainly be easier than texts which are further removed from the context. Since most, if not all, of the trainees are much more likely to be familiar with spoken English than with written, the spoken language should be used

as a 'bridge' into the written. That is, students can be 'talked into' written text. This means a teaching model based initially on a lot of talking about written text and deconstruction of written text, and using this talk to create a bank of knowledge about written language before asking the students to do any extensive reading or writing on their own.

In teaching either writing or reading it is recommended that texts be explicitly related to their contexts of use. That is, students should know what the text is for and why they need to be able to read or write it.

Texts which are more removed from any immediate context (more abstract) present difficulties of a different order. The ways that meanings are encoded in these texts are very different from what is typically found in spoken texts. Given that these texts contain essential information but do not have to be written, especially in the early stages of a ranger's career, it is recommended that these texts be addressed initially through a teaching model which concentrates on reading.

The reasoning behind this is as follows. It would be difficult to get students to see the relevance of learning to write a text which they are unlikely to have to write on the job; they are unlikely to have to write these sorts of texts for several years. Nevertheless, familiarity with how meanings are encoded in abstract written text would have a dual effect: i) they would already know what to expect when the time came to write such texts (for example an application for promotion) and, ii) concentrating initially on reading is less threatening than writing. Information about how meanings are constructed in written text can be incorporated into class discussions of subject matter in a curriculum model as is outlined above, ie students can be 'talked into' written text. This is why the 'science' aspects of the Certificate in Lands, Parks and Wildlife management are suggested. The language of these texts is similar in character to many of the more abstract texts encountered relevant to the park

3) The following teaching model (or a variant) is recommended.

joint deconstruction —> *joint construction* —> *guided independent construction* —>
independent construction

Joint deconstruction means that the teacher and the students examine and consider a model text as a group. They discuss its function and structure and examine salient language features. No writing is done at this stage.

Joint construction means that the teacher and the class together write a text based on the model(s) already examined. This is a group activity with everyone having the opportunity to make suggestions and comment on suggestions.

Guided independent construction means that students work on individual texts with assistance from the teacher and each other.

Independent construction means that students can construct their own text of the type under consideration with minimal help or none at all.

A similar model is recommended for reading except there would be little writing involved (apart from perhaps note-taking) and much more emphasis would be placed on deconstruction of the text.

In this model the initial focus is always on the whole text first, starting with the text's function and purpose, moving on to its structure and how the structure relates to the purpose, finally moving on to a close reading of the text. Using this approach, before the students start a word by word, sentence by sentence reading of the text they have already built up background information about the text and its use which they can apply when they start a closer reading.

It should be noted that this model is also based on the National Framework of Adult English Language Literacy and Numeracy Competence (1993 draft). where competence is addressed through a model which looks at different functions (aspects) of language use. It then maps these onto stages of competence, shifting from assisted competence, to independent competence to collaborative competence. In addition the framework considers phases of learning. The intermapping of these three parts of the model enables specific competency statements to be written. This competency framework fits well with the teaching/learning model recommended in this paper.

4) Writing more difficult or abstract texts, especially those specifically related to the workplace, is probably best done on the job as required. For example, people who indicate an intention to apply for promotion could be taught the specific literacy requirements of the job they are applying for in advance, either through working with a mentor for a period or through short intensive courses. The mentor model is the preferred option here.

5) Regarding new trainees: in the future, if it is the aim to employ traditional owners where possible and if none with the required literacy skills appear to be available, it is recommended that the role/position of 'candidate' (or something like that) should be introduced. People in this role could be required to do either the NTOC Certificate in Access to Employment and Further Study or selected modules from that course before being taken on as trainees.

6) It is recommended that consideration be given to how texts such as minutes and manuals of procedure are written. Given the discussion above on the relationship between language and context it is clear that some of these texts as they are currently written will be very difficult to read and act on. This could be remedied in two ways: (i) Staff who write minutes could be in-serviced on how to adopt a more 'plain English' approach ('Plain English' here should not be taken to mean 'simple or simplistic'. it means that the language should match what the text is for; if, say, the minute is aimed at getting someone to do something then that should be immediately evident on reading it. What is to be done, and why and how, if necessary, should be made explicit. (ii) In some cases manuals should be rewritten so they are more user friendly.

7) The cultural/political issue of *either/or* needs to be addressed (see Section 7,3,5 *Political Considerations*). This appears to be a real impediment to communication. It is quite likely that many Binjng workers enter the workplace with only a superficial knowledge of Balanda cultural assumptions about the nature of work. Some kind of cultural orientation is recommended for new staff.

It is recommended that this could at least start with an orientation which involves some kind of taxonomy of the park hierarchy and an explanation of what is done in each job at each level. Likewise with written text, there could be some orientation into what different kinds of reading and writing are for and who does what. The general idea of this is to present a wider view of work than just seeing it as involving the job at hand without necessarily knowing how that job fits into a wider scheme.

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