EE & TV: Getting the message across

Howard Ellis

Abstract:

Video is presented as a form of teaching technology that has special potential for providing interesting, informative and up-to-date resources for environmental education. The writer describes his personal experience of producing an educational video which represents a case study in wetlands issues. These issues are related to the National Conservation Strategy for Australia and illustrated by human impacts on the area concerned.

A medium to master

There is something compelling about watching TV. It's power to reach the minds of many people of all ages for hours on end must indicate something about its potential for educative purposes. Cynics may suggest otherwise. But while advertising moguls continue to refine their exploitation of this technology, investment funds for more worthwhile learning applications remain limited.

A successful educational program is one that both communicates and captivates. But despite their obvious potential to enhance learning video resources are rarely tailored to assist teachers in the classroom. I believe TV has a valuable role to play in assisting teachers to teach but, like computers, it cannot replace them. Nowadays, the video has a convenience about it that is hard to deny. It is with us to stay as the medium of the day. It behoves resource producers to experiment with the ways and means of fulfilling the promise of its "educational potential".

Part of the difficulty, of course, is the cost of producing such programs. Furthermore, a low-budget video can neither afford the zappy visual techniques of commercials, nor hope to attain the standard of the superbly produced high budget documentaries to which we are accustomed.

Video has the capacity to demonstrate the dynamic and process qualities of environmental education. Videos that could help upgrade and introduce appropriate teaching skills would be a priority, as a tool for teacher training and particularly for the retraining of existing teachers unable to attend in-service courses (if available). At a more basic level, a video that merely conveyed the basic concepts and elements of environmental education would help those unfamiliar with the discipline to understand the term and its significance. I suggest this because a significant barrier to environmental education among many teachers, let alone others, is a confusion about what it means. This is exacerbated by the suspicion of yet another possible addition to the curriculum, and hence by implication to a teacher's work-load.

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Perhaps the environmental education fraternity should take a frame from the advertising world, and consider the need to sell the concept of environmental education, to teachers, to the community, and to consequently gain institutional and financial support for its objectives.

"Up The Creek"[1]: A Wetlands Video

A second target for educational video is of course the students themselves. The general idea is to provide resources for teachers to use at the front line, so to speak. In this part of the article I outline an attempt to produce an environmental video for schools. From a personal account of the trials and tribulations of this production it is hoped that others may feel inspired to throw caution aside and take the plunge ...

I had my sights on making a video not because I fancied myself as a film maker, but because I wanted to explore its potential as an environmental education tool. My modest excursion into the audio-visual mode seemed anachronistic, at least in New Zealand. Whereas few schools had good slide-tape equipment, most did at least have video units. It was patently ridiculous to continue to produce resources that few schools would use.

Developing a proposal

The theme for World Environment Day '86 was "Wetlands are not just for the birds". It seemed prudent to make wetlands the topic for a video proposal.

Mr Ellis, have you ever produced a video before?

(The terms of reference for my one year secondment to Canberra included the production of audio-visual material. This had to count for something).

Ah ... No.

(Was my proposal about to be consigned to the rubbish bin?)

Hmm ...

After the raised eyebrow had settled, a quizzical grin confirmed that my superior was prepared to take a punt. Perhaps my naivety didn't show. From such inauspicious beginnings a video was born. However, to receive approval in principal was just the beginning of a nail biting and frustrating period of waiting for confirmation of the budget.

I wasn't entirely ignorant of what it took to make a video. I had the good fortune to gain some familiarity during a 'hands on' course at the local TAFE. At 4 hours a week, for 6 months, I was one of a small group ably tutored in the practicalities of television technology and production. It was enough to give me a basic familiarisation, and the Dutch courage to tackle a major project.

The project began and evolved from first principles. The proposal was based on three broad axes: an environmental education approach [issues orientated], the objectives of the National Conservation Strategy for Australia (NCSA) [environmental management], and wetlands [the subject]. Was it possible to combine these into a video and not bore the intended target audience of secondary students?

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The difficulties were that firstly I knew very little about wetlands. Secondly, the objectives of the NCSA, although noble in intent, was turgid material from which to inspire young minds. Thirdly, could I shape the video into a distinctive resource? Perhaps the most daunting prospect was to undertake the production in a country where I knew few people and was even unfamiliar with the processes of departmental administration under which I was required to operate. Interestingly enough, it was this latter aspect that worried me the most. I was required to document my ideas. My proposal went through many drafts before it eventually appeared to satisfy administrative requirements. The aims and objectives of the video project, and the strategic criteria by which wetland sites might be selected were amplified at various times by rationales, background notes, and other means of attempting to present a persuasive case.

Wetlands and the NCSA

Wetlands is an extraordinarily broad topic. I needed to nail it down to one or a few case studies.

One could imagine a program that covered different wetland types, such as mountain tarns and upland bogs, and that traced the catchment flow of water from streams to lakes, swamps, rivers and eventually to estuarine and coastal waters. I thought of the Hunter river in NSW — from the Barrington tops to the sea. A story of such a journey could hang around environmental issues concerning water quality, use and availability. Issues such as the impact of coal mining (deep holes that interrupt the water table, the treatment of coal washing water) the use of water for irrigation and the problem of salinity; dams and the supply of drinking water; the need for a total catchment approach to the problem of erosion of both farmland and river banks. At the level of the plain were other issues — the problem of flooding and the impact of flood mitigation works, the drainage of swamps for agricultural use, and the loss of extensive estuarine areas to industry.

Wetlands are often adversely affected by development and until very recently those who spoke in defence of wetland values were in risk of being buried by bulldozers. Many wetlands, where they still exist, continue to deteriorate in silent witness to untrammelled progress. But times are changing, and there is evidence from other countries as well of a quickening of interest in wetlands and their diverse values. Perhaps the protection and more sensitive management of wetlands is an idea whose time has come. It was therefore entirely appropriate to herald this awareness in the choice of wetlands as the 1986 theme for World Environment Day in Australia.

At a different level, it is instructive to study the NCSA document from the point of view of wetlands. Wetlands are clearly relevant to each of the 4 objectives of the NCSA[2]:

1. *To maintain essential ecological processes and life-support systems;*
2. *To preserve genetic diversity;*
3. *To ensure the sustainable utilisation of species and ecosystems;*
4. *To maintain and enhance environmental qualities.*

Firstly, they play a role in the recycling of nutrients and in the cleansing and maintenance of water quality. Secondly, wetlands are the habitat of a diverse range of flora and fauna, the most visually obvious fauna being birds which depend on wetlands for all or part of their existence. This aspect is, of course, most obvious in times of drought. Thirdly, it is the fresh and estuarine waters that underpin the fishing industry and other sustainable uses of these ecosystems. Lastly, should the quality of the water be impaired through pollution or the extent of the resource be diminished, then the value of these ecosystems for all purposes, including their recreation and aesthetic value, is correspondingly reduced.

The objectives of the NCSA are very broad and all-embracing statements. Their value in educational terms is to provide a framework from which to plan more detailed study. Indeed the substance of the NCSA is enunciated in a further 5 strategic principles and 12 national priority requirements. Although it is not my intention to elaborate on this here, it is interesting to note how pervasive is the influence of water in relation to environmental management.

Wetlands are implicated directly or indirectly in a wide range of human activities. Investigation of a local environment brings consideration of the NCSA into sharper focus and on a human scale. This is nowhere more apparent then in the plight of many streams or creeks that meander through urban, industrial and rural areas. Being smaller than rivers, such waterways tend to be subverted in city areas into drains, channels and concrete pipes.

Finding a case study

This brings me back to the subject of the video and the reason for this article. When the expected finance for my already low-budget video was slashed in half, I was forced to shed any grandiose notions of filming in other than just one location. Perhaps it was a blessing in disguise because it also induced me to try a radical change of tack to salvage the prospect of a video at all. I was looking for a case study by which I could highlight a positive interaction between people and a wetland environment. I wanted to emphasize that the perceptions and actions of individuals are important to the way that environment is managed. I knew I didn't have to look very far to find the model. What better than to take a slice out of what was happening at Shortlands, Newcastle.

Here was a small group of environmental educators who seized an issue and ran with it. What began as a move *against* a threat to a wetland environment — yet another wetland to be turned into yet another garbage dump — quickly rallied public support when an alternative and positive use *for* the wetland was promoted. The political and financial backing for the proposal which followed was due in no small part to the educational strategies employed. That a vision is now being achieved is a tribute to the dedication and hard work of what has become a community of people.

But how to capture some of these issues on video? What was it about the Shortland swamp that got people excited? How to bring out the message that it was our local environments that mattered and that it was these that we had a chance to do something about. First we had to see them for what they were — and for what they had become.

The locality offered an opportunity to look at three distinct wetland ecosystems — an estuary, a small river, and several swamps — all within the same catchment. The waterway that linked them together was called Ironbark Creek and it had suffered its fair share of damage.

Table 1:
SOME ENVIRONMENTAL IMPACTS ON IRONBARK CREEK & WETLANDS

IMPACTS (MANAGEMENT AGENCY)	DEVELOPMENT BENEFITS	ECOLOGICAL CONSEQUENCES
1. **Flood gates** [Dept. of Public Works] AND Related impact of Farm **drains** [Farmers]	Protects low-lying farms and urban area from minor and irregular flooding. Lowering of water table enables near all-year use of swamp for grazing and rural use. Loss of salt from soil promotes pastures growth. Quick drainage after wet conditions.	Flood gate is a barrier to tidal ebb and flow of creek: consequent and significant loss of estuarine habitat and productivity, e.g., fisheries feeding, breeding and nursery grounds. Mangrove die-back is a symptom of this change. Increase in pasture weed infestation of creek system.
UNRESOLVED ISSUE: Present flood gate management favors a marginally improved economic benefit from grazing of flood prone land for a few private land-holders at the expense of estuarine values such as fisheries and wildlife habitat.		
2. **Coal dump** adjacent to creek [coal industry]	'Reclaimed' industrial land.	Loss of wetland and possible pollution from coal leachates.
ISSUE: The need to contain leachates and provide for a buffer zone between the industry and the creek bank; the need for planting of suitable vegetation to visually screen an ugly sight.		
3. **Discharge pipe** [industry]	Storm water discharge.	Possible source of water pollution.
ISSUE: The need for careful management of industrial sites to prevent water pollution.		
4. **Motorway, railway line, water pipeline, power lines — bridge and embankments.**	Transport services and public utilities.	Ecological barriers to movement of water and swamp fauna. Corridor access for pests/weeds? Induced habitat changes. Power lines are a survival hazard to large birds during nocturnal flight e.g., swans.
ISSUE: The need for better planning of essential services in order to minimise impact on ecosystems.		
5. **Sewage effluent discharge to swamp.**	Improved effluent quality-reducing impact on creek at low cost.	Eutrophic influence on swamp with induced change to flora and fauna.
ISSUE: Should existing wetlands be used for his purpose?		
6. **Garbage dump** [City Council]	Solid waste disposal.	Loss of wetland reclamation garbage in creek. Increase in seagulls, rats etc. and predator species. Possible pollution by leachates.
ISSUE: The adequate disposal of solid waste, containment of leachates and provision of buffer zones.		
7. **Urban development**	Living areas.	Sediment, nutrients, pathogens and rubbish from urban run-off. Siltation of creek bed and lowered water quality.
ISSUE: The need for adequate interception traps and filters in urban drains.		

Table 1 lists some of the environmental impacts visible from and incurred by Ironbark Creek which drains both an urban and a swamp catchment before joining the South arm of the Hunter river, Newcastle. I reasoned that these aspects would be more likely to be of interest to a secondary school audience if students of this group were themselves involved. I adjusted the traditional narrator/reporter documentary approach in favour of a more dramatised style.

If two young people could explore the area by canoes, their experiences over the period of a day would add human interest and be a foil to the informative role of the scientists and other adults who comprised the rest of the 'cast'.

This concept immediately clarified the nature of the task at hand. Planning and research had a practical focus and the detail of the film evolved quickly as my potential cast contributed their ideas. I posed an outline to my video director. He was the person who would have to stage manage the people in front of his camera.

For God's sake — this is not a documentary — this is a bloody drama!

Was I biting off too much? I didn't dare pause in case I thought too much.

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Yes, I know — can you manage it?

Whether we did 'manage it' will be for you to judge when you see, and hopefully use the video in a wetlands course in your area.

I know that the video is not technically perfect. But I also know that it was made on a shoe-string budget, that it had to be made quickly or not at all, and that production problems were solved as best as circumstances allowed. I also think that it will do the job for which it was intended and that in the end is what counts.

I called it "Up the Creek" for two main reasons. Apart from it being the story of a journey in that direction, as the title suggests, all is not in pristine condition. It is a story that is relevant around the Australian coast. If students gain only one thing from it, I hope it is the motivation to find out what's happened to the creeks and wetlands of their local environment.

References

1. "Up the Creek", Dept. Arts, Heritage & Environment, Canberra, 1986; (30 min. col. video, UP-US).
2. *A National Conservation Strategy for Australia*, AGPS, Canberra, 1984.

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