

USING INTERACTIVE TELEVISION TO DELIVER PROFESSIONAL DEVELOPMENT PROGRAMS IN RURAL VICTORIA

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In 1991 the Regional Telematics Education Consortium (RTEC) was established to promote and coordinate the telematic delivery of education and training programs in rural Victoria. 'Telematics' is defined as all electronically-delivered communication, including audio and audiographic conferencing, and one or two-way video transmission. Interactive television programs were first trialled in 1991 in the Loddon Campaspe Mallee Region, and expanded to over twenty programs in 1992. While many of these programs consisted of only one or two sessions, the Promoting Effective Teaching and Learning Program (PETL), a professional development course of six ITV sessions supported by one initial face-to-face session, provided more data on presenter and participant initial perceptions and responses. Eleven presenters delivered PETL to two hundred and forty-one teachers at twenty-three sites in the Loddon Campaspe Mallee Region during 1992. Presenters were involved in the following programs:

- PETL (Teacher Professional Development)
- Homework Hotline (VCE Subject sessions)
- Management Skills (DSE School Council Members)
- Numeracy Training for Adult Literacy Trainers
- Strategic Management (La Trobe UCNV)
- Managing Behaviours (DSE)

Note: Homework Hotline has been included as a professional development program because much of the material was directed to the VCE subject teachers in addition to students.

The PETL program, after an initial face-to-face introductory session, was usually organised in sessions that alternated between interactive television segments and applied activities at each participant site. Each session began with an opportunity for participants to confer through phone links as they responded to pre-session reading material. This twenty-minute activity was followed by delivery through interactive television of a range of instructional strategies. This segment lasted about fifteen to twenty minutes. Participants were then given twenty minutes to trial the strategy. This was followed by a further satellite segment where presenters and participants could share perceptions of the value of teaching and learning strategies covered. Participants at some sites were invited to use the phone to ask questions or register further responses, while participants at other sites used FAX machines to respond. This format was adopted by the other programs with the exception of Homework Hotline.

Past research on the use of live-interactive television in distance education (Catchpole, 1986, 1992; Garrison, 1990; Johnson, H.C., 1992; and Smith, Fyffe and Lyons, 1993) has indicated some of the challenges facing new presenters and recipients of programs in this medium. These include the mastery of the new technology as well as the development of appropriate forms of interactivity and program resources. This paper is part of a longitudinal evaluation of the general provision of interactive television for professional development and educational programs (see Booth, 1993) and reports primarily in this case on presenter initial perceptions of the effectiveness of this method for

delivering professional development courses. The analysis is based on a post-program questionnaire which focused on presenters' perceptions of this delivery method including appropriate learning and teaching strategies, and learning outcomes for presenters. A follow-up semi-structured interview was conducted with thirteen presenters, usually immediately after the session.

The Presenters

A sample of 27 presenters from six of the programs transmitted by Aussat completed questionnaires during the September to December period of 1992, of which 13 completed an additional twenty minute 'focused' interview. Thirty six presenters actually took part in that period. Just over a half of the presenters responding to the questionnaire described themselves as volunteers, the remainder taking part because of their positions, eg regional co-ordinators. Almost equal numbers of males and females were involved. The 36-45 age group was the biggest (60%), with over three quarters of the entire group possessing a four year degree/teaching diploma qualification. One in six possessed a masters or doctorate. Two thirds of the presenters described themselves as teachers, whilst 17% described themselves as curriculum consultants. Lecturers and educational administrators made up the rest.

Demographically the presenters were similar to the participants. Only a few had more advanced formal qualifications; they came from the same age group and the majority described themselves as school teachers. Proportionally more males were presenters than participants. Less than an eighth of presenters claimed to be experienced in ITV; a quarter had no previous knowledge of ITV. A half of the group had not read the booklet 'Educational Uses of Interactive Television' provided by the Victorian Department of School Education. Like the participants, the majority (65%) were within 15 minutes travelling of the transmission site. Only a minority of experienced presenters had travelled any distance to reach the transmission site.

Over a half of presenters thought they had benefited a great deal by preparing ITV programs and a further 36% thought they had benefited to some extent. Only 8% thought their programs had achieved their aims to a limited extent. 60% believed they had partially achieved their aims whilst 32% thought they had totally met them. A quarter of the presenters believed their methods fully suited to ITV, the remainder believing them suitable to some extent. One presenter thought him/herself unsuccessful teaching in this medium; 23% thought themselves marginally successful and 73% quite successful. Presenters made these judgements when 23% of them admitted that they were unable to ascertain the success or failure of their presentation. A further 39% conceded they could only ascertain their performance to a small extent.

Just over two thirds of presenters remained favourable or highly favourable to ITV after presenting. A third were undecided. On asked to judge their feelings when acting as part of the wider group through ITV ie the extent to which they were conscious of maintaining contact, 73% expressed some degree of deprivation, the remainder feeling equanimous.

The presenters' views and knowledge about teaching in this medium were explored through metaphors. The study of metaphors and similes teachers used to describe their own practice has proved a useful technique in uncovering the concepts and beliefs they hold about successful teaching and learning (von Glaserfeld, 1987; Marchant 1992, Tobin, 1990). Not only do they indicate how teachers see their role and the nature of effective pedagogy, but they directly influence and correspond to classroom practice (Tobin, 1990).

Respondents were asked to choose from a simile list. The list included the following similes: (A presenter on educational ITV can best be likened to)

a magician with a box of tricks
a tour guide
a coach of a team
an expert with her/his apprentices
a sailor at the helm of a yacht
TV anchor person for a new broadcast

Six presenters thought the TV anchor person the best simile, four selecting the tour guide, and three the coach of a team. The remainder were chosen by at least one or two presenters. A further six thought that presenting on educational ITV was like all of the above. These may have been absolute beginners but we were not able to confirm this with total confidence. The remaining four saw presenting like none of the above similes but failed to provide an alternative when invited to do so. This would seem to indicate an early stage of personal knowledge for most presenters. The TV anchor person is an obvious way of thinking about presenting on educational ITV but the analogy will only stretch so far in reference to education. Equally indicative are those who thought all six similes were suitable. Their vision of this experience is not yet organised into a personally useful form. If we compare these selections with metaphors chosen or provided by experienced teachers regarding their professional work in classrooms with students (Marchant, 1992) a richness and discrimination is missing from the presenters' views. For example, a teacher may well reject being compared to 'a coach' as she views this as inimical to her beliefs about teaching. At this point the presenters are making comparisons but are incapable of evaluating the metaphors. They are not yet cognitions.

In summary, the presenters were newcomers to ITV who had brought their professional experience and skills as teachers to the medium to plan (largely unaided) and execute a session which they had successfully disseminated (in their eyes at least) throughout the region to other professionals. The experience had left the majority very favourably disposed towards the idea of ITV especially as the transmission sites were so accessible.

Presenter Concerns

Focused interviews provided a more detailed picture of presenters' views. Their concerns tended to cluster around the issue of their effectiveness as teachers and specific problems associated with adapting their teaching methods to the new context and technology. The interviews indicated that a major concern of presenters was the perceived differences between satellite teaching and face-to-face interaction. Most commented on the apparent reduction of feedback from participants. As one presenter noted, "I do really rely very much on the look on people's faces and their response, and I like to make what I am doing relevant to the people who are there, so it is pretty hard to do that on television". "The feedback you get is over the telephone whereas the feedback you get from an audience is body language that lets you know how well you are going." Another agreed that "talking to an inanimate object" was a concern as was the self-consciousness engendered by television cameras. Presenters were also more conscious of the need for more precise timing of content coverage than in face-to-face teaching, as well as the need for more precise wording to accompany visual material presented. This concern is substantiated by Catchpole (1986) who has argued that effective use of television presentations requires especially detailed preparation in terms of time allocation including segment lengths, video inserts and breaks, with each segment timed precisely.

Satellite transmission made presenters very aware of the demand for a more formal approach to teaching and far more precise planning. They believed that heightened consciousness of time, and "a schedule down to each minute" are inevitable concerns with this delivery method. One presenter

observed that the content of a session needed to be reduced "quite significantly" for effective pacing of material. For some presenters, the technology heightened a sense of a transmissive model of teaching where presenters were concerned that their "performance" not appear "stilted". They believed they needed to develop the kind of television skills that Catchpole (1986) perceives as central to success in teaching in this medium: these include effective relating to the camera, successful use of notes and prompts, and skill in handling live phone-in segments. As one presenter said self-critically of her own performance, "It always seems fairly stilted to me".

The majority of presenters believed that their teaching methods were successful even though they acknowledged a lack of participant feedback to verify this perception. Some saw the need to supplement the televised program delivery with "a lot of background knowledge" in print form so that presenters could then challenge and refine participant understandings during transmission time. Most presenters considered it valuable to review videotape records of effective presentations as a method for making desirable changes to their own procedures and style.

Presenters commented on initial difficulties in using the technology effectively and their fear of "technical hitches". This suggests that concern with mastery of the procedures for satellite delivery was an overriding initial issue of ITV teaching. As the more experienced presenters became more confident of their handling of the technological aspects of the teaching, a few shifted their focus to refinement of presentation skills. These presenters commented on the need to focus more on graphic and visual material to replicate the effectiveness of observed videotape presentations. Presenters were perhaps becoming aware that there needed to be a greater match between verbal and visual messages for effective learning. Catchpole (1986) confirms the validity of this insight when he argues that it is desirable in learning through interactive television for there to be more than one 'channel' for learning. He goes on to say that presenters should deliberately create a degree of redundancy within and across channels in their use of print texts, visual material, audio and visual teleconferencing, as well as in their live presentations to develop and consolidate participant learning.

Perceptions of Interactivity

Interactivity is achieved traditionally in the classroom through sub-group or whole-class discussion, written feedback and personalised attention in one-to-one talk between teacher and student. Presenters whose classroom teaching practices were built around these ways to establish and sustain interactivity believed satellite teaching was restrictive in this area. None of the 27 presenters said that they felt part of the wider group created by the network. The majority felt deprived of the experience. Two wrote comments on the lack of 'interactivity in ITV', thinking it misnamed. A minority wrote about the lack of personal or group interaction. Others wrote about the need to get feedback from 'outside'. Site participants commented about the lack of personal and group interaction too, although they failed to call for greater feedback. Where presenters and participants diverged was over the technical problems they encountered in the sessions attended. Only two presenters wrote about the technical problems they had experienced, whereas a large number of participants did so. For participants the problems detracted from the success of communication by electronic means. This difference emerged once more in the presenter interviews, although the comments were about the fear of breakdown rather than actual breakdown.

The interview responses suggested that the majority of presenters believed there were limited opportunities to create interactive environments between presenters and recipients, and between participant groups at different sites. Some sites were linked by a telephone bridge, and participants were also encouraged to communicate between sites and with the central studio using FAX machines, but this opportunity for interaction was seen as under-utilised. The segmentation of each session into satellite and site-based activities and presentations with mid-session FAX queries aimed to increase

the scope for exchange of ideas and feedback on tasks. However, presenters believed that participants needed to practise this role and become more familiar with the technology to utilise the interactive scope of this structure. As Catchpole (1993) has pointed out, presenters and recipients alike need to develop skills in sustained two-way communication if they are to meet the demands of an educational transaction at a distance.

One presenter noted that the larger the audience the fewer the people who can ring in to interact. He believed that this factor of scale should be considered in the delivery of programs to geographically disadvantaged teachers, in that audience size should be limited to achieve a workable degree of interactivity.

Presenter Perceptions of Benefits

Presenters perceived the benefits to participants of professional development delivery through interactive television as follows:

1. The program provides access to current professional development to staff who are normally disadvantaged by geographic isolation and, in schools, lack emergency teachers to replace them for in-service programs.
2. Professionals can share ideas and teaching practices with other teachers throughout the region.
3. Some programs have brought together primary and secondary teachers to share mutual concerns and support one another.
4. Programs can disseminate new information.
5. The delivery method is cost-effective in terms of numbers of participants and travel costs compared with face-to-face delivery.

All presenters saw considerable potential in this method of professional development, provided there were opportunities for the planning of sessions either individually or in teams.

Conclusions

The foregoing discussion of presenters' perceptions suggests the following conclusions:

1. The presenters' initial concerns with the technology of satellite delivery and adjusting their teaching styles to this medium suggest that they would benefit from at least one inservice in this area. The published guide from the DSE Victoria was not promoted sufficiently widely to be useful. Whilst it is obvious some training must be given, the question remains just how much is necessary for programs to be seen as successful by both participants and presenters. Free-to-air television relies on very skilful presentations of text and image to make its programs familiar and engaging (Wilson, 1993) which educational television can never match. It needs to be acknowledged that professionals have been conditioned to view the medium in the same way as other members of society, so we simply do not know how much training would be needed to improve the quality of the television to meet the expectations of these groups.

2. The need for feedback on their program presentations was mentioned by most presenters in the sample. We concluded that this should be seen as part of the larger problem of interactivity, which could not be treated simply as another technical puzzle. Certainly, recipients can be trained to use two-way audio and audio-graphic systems more efficiently, but overwhelming reports of lack of feeling part of the larger group and the absence of non-verbal or extra-verbal cues for presenters, leads us to believe that some kind of compromise is necessary when training presenters for ITV programs. They must be helped to trade off the interactivity of natural settings in exchange for economically transmitted, well-planned and well-sequenced subject matters. Catchpole's (1993) ideal instructor using ITV is the culmination of 12 years experience in open education. None of the presenters of professional development programs in rural Australian settings are likely to become full-time so therefore they should be encouraged to use the typographical sources of the regular teacher and move cautiously towards the visual text sources of free-to-air television (Postman, 1986).

3. Generally favourable attitudes to the concept of ITV persisted with presenters and recipients alike. We concluded that a large amount of goodwill surrounded the medium particularly amongst those in more remote regions of the state. It offers equality of access which is unmatched in any other educational setting.

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