Teaching with Video Programs: From Closed Use to Open Use

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Abstract: This paper explores the connection between the nature of the television/video media and the practice of using them in teaching. Much of the current use (and non-use) of television/video is based in a conventional view of these media, a view which focusses on the mental passivity associated with the experience of viewing. While recognizing this phenomenon, this research begins instead with a focus on the sensory and personal connections that also accompany viewing.

Based on an analysis of actual classroom use of video programs, this paper presents four categories of teaching practice: "closed use", "one-way use", "partial use" and "open use". These categories indicate the extent to which teaching practices do and could recognize television/video as a medium of sensory, personal involvement. The final sections consider the implications of this analysis for classroom teaching, for producing video and support materials and for developing good use of newer technologies to support teaching and learning.

Resume: Cet article s'arrete sur les liens entre les medias de television et video et leur utilisation dans 1'enseignement. L'utilisation actuelle (ou la non-utilisation) de la television et du video est basee sur une vision conventionnelle de ces medias. une vision qui met 1'accent sur la passivite intellectuelle associee au visionnement de material. Tout en reconnaissant ce phenomene, cette recherche s'interesse d'abord aux liens sensoriels et personnels qui accompagnent le visionnement.

Base sur 1'analyse de 1'utilisation de programme video dans la salle de classe, cet article presente quatre categories de pratique d'enseignement: utilisation fermee, utilisation laterale, utilisation partielle, utilisation ouverte. Ces categories indiquent jusqu'a quel point la pratique d'enseignement reconnait ces medias comme un medium d'experiences sensorielles et personnelles. Finalement, les implications de cette analyse sont presentees quant a leurs impacts sur 1'enseignement, sur la production de video et de material de support ainsi que sur le developpement d'une bonne utilisation des technologies nouvelles comme support a 1'enseignement et a 1'apprentissage.

Introduction

In contrast to the view of television as a medium of mental passivity (Krugman, 1971; Mandler, 1978; Kubey & Czikszentmihalyi, 1990) this paper focusses on the personal, sensory nature of television and video. (McLuhan, 1964; Wartella, 1987; Mcllwraith, 1994; de Kerckhove, 1990, 1995).

Unlike earlier studies of school television/video use, this research explored the use of video programs as it occurred naturally in classroom settings. The research method is modelled on an interpretive rather than an

experimental process (VanManen, 1990), designed to develop a new understanding of how television/video viewing does and can contribute to learning.

The analysis looks at how teachers can and do take the personal response that television and video evoke into account in their teaching practice. Four broad categories are suggested: "closed use", "one-way use", "partial use" and "open use". Consideration is given to the ways video programs could be produced, presented to teachers and used in classrooms when this aspect of the media is kept in mind. Finally, this paper raises questions to consider when exploring the pedagogical implications of newer technologies.[1]

The conventional view of television/video use in schools

During the 1950s and 1960s, television was still a new medium and little had been written about its use in education. Some educators felt threatened by the perceived ability of this new technology to replace the teacher; others were impressed by the attention that television demanded and were eager to explore how it could be used in education. Many different methods and approaches were suggested. At this time, television was still perceived as a new educational tool (perhaps comparable to CD-ROM and multimedia today) whose potential was as yet unknown.

Smith (1961) described several ways that instructional television could raise the quality of teaching. Writing before the spread of Krugman's concern with the low level of mental activity, Smith saw television as a means to "arouse students' interest and attention" which teachers can then direct to the subject matter under consideration (p. 18-19). This approach was based on the view of teacher as deliverer of instruction; it presented television as a way to hook or entice students into the curriculum being taught.

Wilkinson's *Educational Media and You* (1971) also included directions for using classroom television. He began by pointing out that, like the classroom teacher, the television teacher can use his/her voice and gestures to convey personal feeling and involvement with the subject matter. However, he was quick to add that television can not replace the teacher because the television teacher does not receive feedback from students and is therefore limited in its ability to communicate effectively. It took several years to confirm that a televised lecture could not replace a live teacher (Cambre, 1987, pp. 5-6).

Wilkinson also argued that 'immediacy and personal magnetism' were the special facets of television. He wrote: "Immediacy has been the strongest argument for the use of television. Proponents of educational television claim that watchers of television feel the illusion that what they are seeing is happening 'now' "even though they are aware that the program may be on tape or on film" (p. 121). He also proposed that light and sound waves bring a

'telepathy' that is almost as effective as the communications presented by a live teacher. Like McLuhan, Wilkinson attributes the personal response television evokes to the 'light and sound waves' of both television and film. To both McLuhan and Wilkinson, the unique value of television was seen to reside in the personal senses and feeling it evokes.

Despite his understanding of the sensory nature of television viewing, the specific pedagogical guidelines that Wilkinson proposed suggested an emphasis on the information being delivered and the mental activities of learning (p. 122). Like Smith, Wilkinson assumed that television is a tool to help teachers deliver curriculum and that the personal involvement television elicits is useful only as a first step: to entice the interest of students.

In the 1970s, educators became increasingly concerned with television as a passive experience that minimized - perhaps even curtailed - mental activity. The leading research on the value of video in teaching conducted by Salomon (1979b) drew attention to the general perception of television viewing even in a school situation as requiring less active thinking than did other media, particularly print. Since television was perceived to be mentally less demanding than comparable print material, learners were reported to invest less mental effort in television/video and to generate fewer inferences from it. To compensate for this lack of mental effort, Salomon found that making explicit task demands increased the amount of effort students invested and the amount of inferential learning they achieved.

Based on this research, instructions to teachers in the 1980s focussed on compensating for the mental passivity of television (Cunningham, Anderson & Leithwood, 1985). The most widely-adopted strategy suggested that teachers precede their use of video with a question or direction that draws students' attention to particular information or concerns. Providing such a focus for viewing was suggested in order to enlist students' mental processing while watching by giving them a mental task. In order to introduce opportunities for mental activity, teachers were encouraged to show long program in chunks and ask questions at each break point to ensure that students were paying attention to the information or ideas delivered by the program. Cunningham, Anderson & Leithwood (1985) also recommended asking post-viewing questions and providing related activities to "reinforce content, practice skills, or encourage questioning and critical thinking" (p. 15). These strategies focussed on overcoming the "couch potato" image of video viewing.

Rethinking the Conventional Approach: From "Closed Use" to "Open Use"

Typically, teachers have been encouraged to use the personal response that video elicits as an attention getting base from which they can deliver

instruction, set up an activity and cover the curriculum. The pedagogical perspective underlying this approach views teaching as a process of delivering curriculum (teacher-centred). Both general guidelines and particular teachers' guides that accompany specific programs are often based on such an approach.

This paper suggests that the sensory arousal which accompanies television viewing can be seen as a kind of personal experience, made up of the perceptions and feelings stored by viewers and available for later reflection (Gendlin, 1978). The pedagogical perspective underlying this approach to using television/video focusses on the student as an active, involved learner and sees the teacher as a facilitator who supports, encourages and guides students in their learning. From this perspective, television/video is seen as a medium that invites students to express their personal response, which provides a foundation for reflection, critical thought, and awareness of the learning process.

Types of Classroom   Use

Based on the classroom observations presented below, I describe classroom use of video as ranging from "closed use" at one extreme, where there is no recognition by the teacher of the personal response that viewing evokes in students, to "open use" at the other extreme, where teachers recognize and build on the sensory response that students experience. At the closed end, the teacher's focus is strictly on providing curriculum and directing response; as teachers become open to students' personal response, their attention shifts to using video in recognizing and involving students' personal participation and making room for students to direct their own learning.

As described below, four different approaches to using video were seen in the classroom research. While one teacher was not at all open ("closed use"), two teachers directed their students' attention to the personal elements presented in the video ("one-way use"), two teachers provided indirect recognition of students' feelings ("partial use"), and one teacher invited and built on students' personal response to the program ("open use").

The following table summarizes the classification of the programs seen in classroom use and presented in this research.

Table 1
Pedagogical Styles When Using Video Programs in the Classroom

Type of Use	How Used in Teaching	Example(s): by Program Titles
"Closed Use"	Avoided consideration of feelings.	*You Can Say No*
"One-Way Use"	Drew students' attention to the feelings and processes presented in the programs.	*Adolph Hitler Up Close*
"Partial Use"	Asked students to incorporate their opinions in answering questions and presenting their views.	*The Great Gold Mine Strike*
"Open Use"	Asked students to express their response to the program as a basis for assessing the message and its implications.	*The Lorax*

Teachers' openness to students' personal response when using video is consistent with teachers' use of student-centred elements in their teaching, as described in *Archetypal Forms in Teaching: A Continuum* by William Reinsmith (1972) and in Teaching for Understanding by Cohen, Milbrey, McLaughlin & Talbert (1993). The "closed use" of video programs is consistent with Reinsmith's most teacher-centred forms of teaching, namely teacher as disseminator/transmitter and teacher as lecturer/dramatist. The "one-way use" of video might be linked to Reinsmith's category of teacher as inducer/persuader, who draws students attention to the feeling element of the video to help convey their point. The "partial use" of video can be linked to the teacher as inquirer/catalyst who calls on students' opinions in an effort to steer them toward a particular train of thought. The "open use" of video programs is consistent with Reinsmith's student-centred teacher. The teacher as facilitator/guide is continually aware of students' experience, draws students out, confirms the value of students' life experience and is responsive to students' initiative.

Similarly, in the pedagogy called Teaching for Understanding (Cohen, et al., 1993) teachers no longer see themselves as the transmitters of knowledge and engineers of behaviour; instead they become involved with students in

constructing knowledge. Teachers who decide to move to this approach undertake substantial new learning in order to rethink both what is taught and how it is taught. This approach is based in a knowledge of the learner which the teacher uses to guide conceptual change in the learner. "Teachers must be able to consider subject matter through the eyes of the learners; they must be able to interpret the learners' comments, questions and activities through the lens of a particular subject" (p. 2). Classrooms using this approach are characterized by generally cooperative relations and ongoing communication among students, by recurring support for trying out new ideas and by a close and active relationship between students and teacher (p. 2-3). The "open" style of video use is very consistent with this pedagogical approach.

Classroom Research: Research Method

Large numbers of studies on instructional television and media were done in the 1960s, '70s and '80s. Early research struggled unsuccessfully to show that one medium was generally superior to another. While concluding that children can and do learn from television, the research literature offered little information or understanding about when and how to use which programs (Cambre, 1987; Bryant, Alexander & Brown, 1983).

In their review of the literature, Clark & Salomon (1977) indicated that little of value could be gained from the research. See also: (Clark, 1983; Clark & Salomon, 1986). They attributed the failure of this research to its highly analytic and detached approach, and concluded that the research did not represent the classroom world of education (p. 106).

Initially, this study was designed to explore what could be learned by observing actual use of video programs in Grade 7 and 8 classrooms and asking teachers to describe their plans. After reviewing the literature on using video in school teaching, I had accepted Clark's view (1983) that instructional design and the novelty of new media, rather than the nature of educational media, play a predominant role in the use of teaching materials and resources. Despite this predisposition, my pilot research in classrooms led me to focus instead on the nature of the television/video media and its impact in the classroom.

In doing the actual research, I attended 13 Grade 7 and 8 classes during the 1992-3 school year. I watched 13 programs in use, observing classroom activity, noting (and often audiotaping) what was said, and how students and the teacher behaved. I selected six of the thirteen programs to report in detail.

In the six chosen settings, the programs consistently drew students' attention and involvement. This involvement could be seen in such elements as their constant eye contact with the screen, their body language, and the decrease in the usual level of social contact among students. Four of the 6 programs were designed with classroom use in mind, while two were produced for broadcast television or home viewing.

In the classrooms I visited, I watched for events and listened for words that indicated how teachers were using video programs, what the programs offered, and what happened in the class when they were shown. I watched three elements of classroom communication and all the interrelationships at once - the teacher, the video, the students. I talked to teachers before and after classes, sometimes taping the conversations, and then transcribed tapes or filled out notes made during these conversations.

While including all three elements in my observations and consideration, I was especially interested in what the teacher did and didn't do before, during and after the video program. I began to note where teachers focussed on increasing mental activity to counter the assumed passivity associated with video and where teachers made room to recognize the nature of the video medium in evoking personal response.

In the analysis, consideration is given to the process presented in the program, as well as the content, an approach that McLuhan (1964) suggests is particularly appropriate to the personal involvement of television viewing. While consideration of both content and process is part of all teaching and learning, the relative attention given to each component varies: it appears that a relative emphasis on content is associated with an avoidance of personal response in the classroom, while an emphasis on process increases as room is made to include personal response.

Classroom Research: Six Examples

1. "Closed Use ": You Can Say No

What I call "closed use" can be seen in the way a teacher, I call Pam, used the program, *You Can Say No.* This program was designed to encourage students to consider their potential use of harmful substances such as alcohol and non-prescription drugs. The program included four generally well-acted dramatic scenes where students could see young people like themselves handling intense situations. It was designed to provide a lot of information in an appealing manner, to show some examples of situations where young people are enticed or encouraged to consume alcohol or drugs or to behave irresponsibly, and to model ways young people can handle pressure and choose to say no. Pam, the teacher I observed using the program, gave the students a handout with questions on the information covered in the video.

The students were very interested in watching the program. There was steady participation in answering the questions asked on the handout given them. For many students, the program evoked personal experiences and feelings. This could be seen and heard from the regular talking back and forth among small groups of students and from the personal stories and concerns expressed by three of the students.

Pam stopped the video three times during shifts in the program. In the discussions, she focussed on the information provided in the program, supporting the assumption that students who know more of the consequences will make better decisions. The questions on her handout asked for information - how many years does it take for an adolescent to become addicted to a drug? Name two health problems that may be associated with drinking? How does cocaine affect your body? Many of the students questions during the discussions asked for the meanings of some of the terms used, such as sober, joint, etc.

The second skit showed one girl refusing to drive home with a girlfriend who had been drinking, deciding to call her father instead. This was followed by some factual material. While considering the question,"What are some problems related to impaired driving?", several students became involved in a lively exchange about alcohol strengths and blood levels. One student asked "why do they make alcohol if it's just going to hurt people?" Several students respond all at once with positive ideas about alcohol use - it's for celebrations, its for New Years Eve, its okay if you don't drink more than 3 beers, etc. - and the talk ended when another student added - "there's a person down the street from me and he was drinking and he killed himself and his girlfriend."

Pam did not comment on these personal views - either the possibility that moderate use could be harmless or that the personal impact of alcohol abuse can be devastating. Instead she continued, "Let's see, oh another comment that was made was that there is almost the same number of passengers killed as drivers, so you as a passenger getting into a car with someone who has been drinking, you're risking your own life there as well, so you have to be very very stern, if you see someone who has been drinking, don't get into the car, you can say no, find some other way to get home."

Following the fourth skit, while students were answering the question, What are two facts about cocaine?, one student responds that it releases dopamine in the brain. Another student asks what dopamine is and Pam explains that "dopamine is already a substance in your brain, that's what causes a rush or a high and then you come down. You can be addicted to cocaine the first time you try it."

Pam then asks a student, Janet, for a second point and Janet says "Well I was going to ask you before if some people, if they have mental disorders. Is that the same effect as some drugs, because like, some people have, like, he had this thing like where he'd - feel happy and hyper and then, really happy and hyper, and then all of a sudden he'd get really depressed." Pam replies,"That would probably just be some sort of a neurotransmitter or dopamaine which is in his body naturally, shutting on and off." Janet adds, "He's not on any drugs," and Pam continues, "yeah, that's what I mean naturally, that's within his brain, but I'm not really too sure about that." Janet then continues, "It was really serious, he died like [Pam says 'shh, girls, listen'], he died just recently

because, he'd, um, what happened was when he gets really really excited..."
[girls not listening and Janet fades out, discussion peters out]. Pam points out
to the students "that was very rude of you," then moves on to say, "meanwhile
back to the ranch. Okay I want to hear some more facts."

In this situation the students did not listen to Janet's concerns and while
Pam noted they were behaving rudely, she didn't ask Janet to finish her story
or address Janet's concerns and emotional expressions about the person who
died. Again, Pam kept very strictly to conveying the dangers of alcohol and
drugs, without allowing consideration of students' experiences or feelings.

In the questions and answers after the viewing, Pam maintained focus on
the information provided. At every opportunity she moved away from
students' personal experiences and feelings and she did not offer her own. No
room was provided for students to imagine themselves or remember
themselves in similar situations. Students concerns were not invited into the
whole class discussion or were ignored and discouraged. Pam was happy to use
the appeal of the video to get students' attention but was not aware of or
sensitive to the personal feelings that the video medium evokes.

By focussing on the phenomenological potential and process bias of the
medium of video, a teacher could take a different approach. This might include
stopping during, or at the end of, each dramatic sequence to ask students what
they saw happening, whether they've ever been in a similar situation, or
whether they thought the scene was realistic. Students could be asked about
tough decisions they have made in the past and how they made them. By
asking open-ended questions about personal feelings and experiences, students
would have the opportunity to consider and share the personal meanings
evoked by the program. A teacher could then move from there to encourage a
reflective consideration of how students' personal experiences and feelings fit
with their own beliefs and values and how they would affect decisions and
behaviour. The information covered in the program could be provided in print
form with time for questions at the end.

Pam's use of *You Can Say No* did not reflect any recognition of video as
a medium that involves students in a personal way. She paid no attention to the
feelings students expressed and made no effort to involve these responses in
the teaching/learning process. I call this a closed approach to using the
medium. Pam was closed to the opportunities provided by the video program
to discuss students' personal feelings and opinions, or to consider how feelings
and information are related in learning and decision making processes.

Rather, Pam was using video to deliver content. While this works on a
cognitive level, the meta-message that may be conveyed to students is that
personal response is not an important part of learning.

2. "One-way Use ": Adolph Hitler Up Close

While I named the use of *You Can Say No* "closed use", I call the teacher Gail's practice of showing *Adolph Hitler Up Close* "one-way use". This two-hour program is a high quality documentary of a vary emotional subject, co-produced by British and American companies combined extensive historical footage with recent interviews and narration by an American film and television star.

Gail showed the program as part of a Grade 8 English course on the theme of Identity. She told the class that she was showing this program in order to develop students' respect for human life and their tolerance of differences, while building on their knowledge of WWII. Gail also told students that she was showing this program as an opportunity for them to develop listening, viewing, and note taking skills.

Gail showed the program in roughly fifteen-minute daily segments over a two-week period. She stopped the program every 3 or 4 minutes to review the notes students were making of the sequence of events.

After the first or second class, students learned the expected pattern of viewing and note taking. But many students had difficulty shifting from viewing to note taking and picking out the points Gail was looking for. Gail encouraged them to work at it with such comments as:

> okay when you write, you don't have to write sentences, you have to use your arrows and equal signs and all kinds of things like that, and little codes like H for Hitler, or whatever other codes you um devise for yourself... . Now don't get caught up in watching, remember we still have to listen, we hear not with our hearts, right, [later] We're going to see another video strictly for visuals, for the emotional part and you won't have to take any notes. I can only tell you that the last two classes it has been getting much easier for them to take notes, much easier as the time goes. You have to learn it. You have to do a real training of your mind, okay?

Over the first few days, Gail and the students seemed to accommodate to each other. Gail wanted students to get the points and give them to her when she stopped. At first students had difficulty separating themselves from the program to separate out and write down the main points. To help them, Gail started to call out, "Get that Down" for each point, to direct students attention to the main points. With this direction, students were able to note the points being made and give them back to her at the breaks. Despite the constant interruptions, many students adjusted and were able both to hook into the program while it was on and step back to record notes while it was stopped,as students comments below illustrate.

But the practice of shifting back and forth between watching and note-taking demanded ongoing attention. On the second last day, Gail again commented on this process:

> you need to remember that your brain has to be active and listening. You're getting much better at what you are doing. Put your hand up if you yourself feel there's an improvement in your own ability to get things down. Good! That's what I care about; that you're making progress in doing some very difficult tasks.

While conducting this activity, Gail repeatedly drew students' attention to the process featured in the program connecting Hitler's charismatic power and the course of events. She also drew their attention to their own mental processes in moving back and forth from video to print.

Gail drew students' attention to many of the feelings shown in the program. She encouraged students to repeat what they had seen and heard, and she provided two opportunities for students to relate particular experiences shown in the video to their own experiences in real life.

When asked about the value of the video itself, students said they understood more because they saw Hitler speaking, because they had seen real footage of the concentration camps and atrocities, and because they heard people who knew Hitler talking about him:

> like, if we were reading it out of a book it wouldn't attract your emotions... . They showed how the genocide [was]. You could feel the pain they were feeling and when we talk to the survivor we can feel something of what she was feeling.

> when you see them take the valuables out of their mouths and put them in their pockets... the expressions on people's faces.

> well some of the parts of the movie were sad, they just... and the way he acted towards people and how he could do those things.

> because it showed everything in front of you... people being shoved into graves and like... shot in the head, buried alive... [it showed] what Hitler was really like, how people suffered.

> because its about war and its fun [different feeling than others].

Most students seemed to be strongly engrossed and touched by the program. They were asked to learn to take notes, repeat what was shown, and to make connections with the learning they had been doing in the larger unit on WWII and the holocaust. The program kept their attention and most of them seemed to work at the tasks they were set. However, only one opportunity was given for students to express their own feelings about the international forms of abuse and discrimination they were seeing. After their visit to the holocaust

centre, students wrote personal reflection papers on what they felt about the experience and handed these in to their teacher. No organized class time was spent, either with the class as a whole, or in groups, with or without the teacher present, discussing the students' feelings about Hitler and the holocaust.

I call this example "one-way use" because it encouraged students to describe the feeling shown and to note the processes involved, but didn't provide them an opportunity to express their personal responses to what they were seeing and doing. Students were asked to identify the emotional elements presented in the program, but were not invited to express their feelings or to respond to what they were shown. The meta-message students receive may be that their personal feelings are not an important part of teaching and learning.

Teachers who adopt a facilitator role could pay greater attention to the students' response to what they were seeing. This program might be shown in response to student interest in how Hitler came to power and maintained it. Students would be asked to express and consider what the program meant to them personally and as a group, and to look at the questions the program raised for them to get ideas for further research.

3. "Partial Use": CBC News in Review: The Giant Mine - The Price of Gold

In the next example, *Adolph Hitler Up Close,* students were asked to identify the personal links presented in the video, but were not asked to express their own responses. In using this program, CBC News in Review: *The Giant Mine - The Price of Gold,* the teacher, Sandra, adopts what I call a "partial use" of video

The story Sandra chose from the March 1993 video is called *Giant Mine Strike: The Price of Gold.* Sandra saw it as helpful because it ties into the Grade 8 history lesson on the Yukon gold rush. On a more personal level, it talks about strikes, and the strike process, which connects with the labour unrest in the local community and "all that stuff that's happening to all those kids in their houses."

Sandra told me how she planned to lead the class.

I've modified the work sheet, um we're going to take a few minutes at the beginning, we're going to talk about these [terms] to make sure we've got the language straightened out first of all, and they [the students] will probably have it quite right.... I'm going to put them in small groups and have them discussing one of these three issues, um, or we may just do it as a whole group, we'll just see how much time we have.

... I'm going to read... a little bit of information [from the introduction] that they'll need, that'll help them sort these things out... . The other thing I'm going to do is I'm going to talk to them about the fact that this is news footage that was broadcast on the TV

news and that some of these people are angry and frustrated and using strong language. So in other words, I'm warning them that they're going to hear a word that they use a lot on their own anyway and say that its nothing you haven't said.

In talking with me, Sandra didn't mention or discuss the opening paragraph she included on the handout which reads:

Cool Heads

Clearly a great deal has gone wrong during this labour dispute. While attempting to assess the factors that led to the failure to resolve management and union differences, the tendency might be to focus only on the tragic events, the violence, and the sensational aspects. As much as possible, a careful and objective understanding of the situation is warranted.

At the beginning of the 10-12 minute item, CBC announcer Knowlton Nash explains what strikes are, that some strikes get out of hand, and that this is one of them. The story of the lockout and use of replacement workers is presented in a series of interviews with a reporter, a labour rep, the company president, a university expert, a striker who went back, and a picket captain. While their words tell what they think, their voices and bodies tell how they are feeling.

Then the reporter and mine officials announce that there has been an explosion in which nine men died, indicating that it seems the explosion was not an accident. Two days later, officials announce that the deaths were homicide. Two women are shown reacting with outrage and denial. The union says the announcement does not translate into the conclusion that strikers did it. The item shows the hostility to strikers and a counsellor helping students cope. Footage of the day of mourning is very emotional, showing the church service, One of the widows crying, and an RCMP friend of a miner at the funeral. This is clearly the most emotional part of the program. The mine reopens a few days after once safety is felt to be restored. Comments made indicate a move to decertify strikers, the possibility of a commission of inquiry, the company's refusal to bargain, delays in the investigation, and RCMP frustration. Other comments point out that some people may be withholding information and that the widows of the miners are particularly upset by not knowing what really happened.

At the end of the segment, Sandra stopped the tape and begins describing how the story presents us with "three sets of people who are locking heads. So you have a company and you have their point of view, and there's the union and it has its point of view, and there are people who are part of the union who now have sort of broken away from the union and are trying to go back quickly because they don't agree with the union's tactics. That's the third group, and I

think there's a fourth group, the mine workers and they have a job to do no matter how they feel about being involved." She draws students' attention to three questions at the bottom of the handout and assigns them to three small groups for discussion. "Now read the question out loud first so eveybody's aware of what the question is... try and put yourself on both sides of the question."

Sandra walked around to each group and after a few minutes (class almost over) asked students for their answers.

Group 1 Question: Hiring nonunion replacement workers has been widely used ... should companies... be legally allowed to hire replacement workers?
Students' answer: "We think its okay, there is another side to that question and they had it."

Group 2 Question: Should management and staff be allowed to fill in?
Students answer: "We think that isn't really fair, if you wouldn't want other workers to do your job when you are laid off."

Group 3 Question: Should police... be used to escort replacement workers across picket lines?
Students' answer: "We think that they should because their job is to protect."

Because the time was limited, short answers were given quickly with no time for exchange of views. Sandra asks students for their opinion about the rules that should be adopted for governing other labour disputes, and for a justification for their views. The questions are controversial ones, where people's answers reflect their values about what principles should be invoked. By asking for students' opinions, Sandra is using the personal element of the video program and is indicating that personal values are a legitimate element to be included in the discussion.

The questions that were raised for discussion were concerned with the people's rights on all sides of the labour dispute. The questions seemed to be designed to encourage students to look at a situation from several perspectives. However the situation was actually quite complex and each perspective was presented very briefly. Students were asked to give their opinions on several important issues raised in the story with little time to exchange views.

This program did a good job of presenting the story of the Giant Mine Strike. The most memorable moments occurred when seeing and hearing the key participants and the strong feelings evoked both by the murders and by the strike. However, in the classroom viewing, the central events of the deaths and the investigation of the deaths were pushed into the background. No

opportunity was given for the students to express their reactions to the deaths, grief of the families, and the discomfort of not knowing who was responsible.

Rather than minimizing attention to the strong feelings involved, a greater understanding might be possible by recognizing the sensational elements of the situation and how the different parties involved felt. This recognition can then serve as a base for considering the varying experiences and perspectives, the underlying legal principles and the alternatives that could be pursued to address everyone's needs.

This program could have also have provided an opportunity to make connections linking students' personal values with the students' responses to the program. While Sandra made efforts to include students' personal responses to the subject matter at hand and to invite students to develop personal opinions about the labour dispute process, no time was given to expressing their own responses to the program or to making connections between their personal responses and the formulation of opinions about managing labour disputes.

4. "Open Use ": The Lorax

This example presented what I call an open use of video, where the teacher invited students to respond to the program from their own experience and recognized this response as a central part of learning. The Lorax is a lavishly produced animated program designed mainly to entertain young children with lively singing and dancing, but the underlying story drew attention to the fictional Onceler's selfish mismanagement of the forest, despite the Lorax's pleas for the plants and animals that were being destroyed. In showing the program as part of a unit on forest management, Linda was able to draw students' attention to the story and ignore the entertainment elements.

Linda began this class by reviewing their recent visit to the nearby forest and the native and invasive trees and plants they had seen. Many of the students participated in answering her questions. Linda then told the students that they would be seeing *The Lorax* twice. The first time, Linda asked students to relax and enjoy the program and told them that the second time they would get a handout of questions to answer. In both cases, Linda showed the program without breaks.

Before the first showing Linda told the students to close up their books, and that she wanted them to just sit back and enjoy the video. She asked them to move to a place where they could see well, on a stool or on the floor if they wanted, and she turned off the lights.

The Lorax is based on the Dr. Seuss book of that name. The video was done as an animated musical, targeted to a younger audience. It moved back and forth easily between the text that advanced the story and the musical production numbers. Actor Eddie Albert read the lines while the animated

characters sang and danced as well as acted out their parts. During the showings, students were very attentive to the video, although there was some fidgeting during the longer musical numbers.

At the end of the video, Linda began by noting that she had wanted to tell the students before it started that this story was written by Dr. Seuss, and that as you get older you start to appreciate how good his writing is. She then asked a very open ended question, "What was it about? We spent about half an hour watching a video, what was it about? "

After a couple of brief answers, saying that the program was about saving the trees, saving forest life, the air and water, Linda asked, "was it about anything else? Megan?" Megan zeroed in on the heart of the video, namely that the program was about the greed of one person who wanted to be rich and the harm that came from short term planning. Another student talked about how the Lorax tried to speak up for the creatures, like the Swammy Swans and the Humming Fish of the forest, who were ignored by the selfish Onceler.

Linda then added her own observation. "One thing that really stood out for me this time, you never see the Onceler's face, what do you think that means?" A student adds that we never saw the faces of the Onceler's relatives either. And another suggested that means that everyone has greed, it could be anyone. One student suggested it was incidental and Linda asked the students what they thought, and to vote, showing the student who suggested this that others disagreed.

Linda suggested there are two aspects to the story, the forest side and the Onceler's side. She asked for some of the names the Onceler called the Lorax, names such as Nature Boy, that Onceler used in a belittling tone of voice. She then asked if there were any other ideas about what this was all about. "Do you think the Onceler had a conscience?" Students recalled the Onceler musing near the end that if he didn't do this, someone else would. But at the end, the Onceler gave the seed to the boy and said, "maybe if you can grow this seed, the humming fish and the swammy swans will come back."

To relate the story to strategies for forest management, Linda then asked the students what they thought the Onceler would do differently if he could get the forest growing again.

Three days after the first showing, Linda showed the program again. Before the second showing, Linda gave students a handout with 10 questions asking students to consider what was going on, why, where responsibilities fell, what other possibilities they could imagine, and how they would feel if it were up to them. Students were asked to do this work alone, or among themselves, and hand in their answers at a later class.

After this second showing of the video, Linda gave me the opportunity to talk with the students for a couple of minutes. I asked "I'm wondering what you can tell me about how this program was helpful to you in your course on forest management. What is added to what you've been learning?"

Student 1: "Well, its making us realize what's happening to our forests. Because the demand for things that come from the forest is getting greater, so, the trees, like the truffula trees are getting used up so the forest is disintegrating."

Student 2: "Well you can sort of see that it is a chain, if you cut down the truffula trees then there's no more."

In the discussion after the program I was impressed with the way Linda brought out students' personal responses and understandings of the situation in the story, and then flowed seamlessly to a consideration of forest management. Discussion following the first showing focussed on how students felt about the story. Their initial answers showed their concern about the damage done to the animals and the environment. Linda probed for more answers. The next student talked about the greed and wish for lots of money that led to the destruction of the forest. Another student focussed on how the Lorax tried to protect the animals against the Onceler.

Linda then offered a personal observation about the lack of faces on the Onceler and the Onceler's relatives, inviting students' views of why that was done. A student suggested that this was done to indicate that any of us could be the greedy one, a very astute comment I thought. This discussion then led to the beginning of consideration of what kinds of forest management would be needed to prevent this kind of destruction. This consideration served as the background to the list of questions students were given before their second uninterrupted viewing.

Students' responses to my question after the showing indicated that seeing *The Lorax* helped them see the inter-connectedness involved in forest ecology and the variety of perspectives needed in forest management. This they felt was the unique value of the video program. As McLuhan might have predicted, the video was also used successfully to present process. The feelings and personal responses students offered were incorporated as a fundamental part of their consideration of the larger process of forest destruction for commercial profit; and from there, of planning about forest management. This approach was open to the personal response to video and to the use of video to draw students' attention to process. To encourage this involvement, Linda first showed the program uninterrupted, and showed it again with questions drawing students' attention to particular aspects of the process.

Implications forTteachers

Both general guidelines and teachers' guides for specific programs assume teachers are using television/video programs to help them deliver the curriculum, with little or no reference to the video viewing experience and the personal response that the programs evoke (Wilkinson, 1971; Russell, 1992;

Tiene, 1993; Tiene & Whitmore, 1995). "School television [is] now promoted not as a replacement, but as an extension of the teacher, not as enrichment, but as an important complement to the classroom curriculum" (Cambre, 1987, p. 7).

This study suggests a different approach which, like the "open use" approach Linda used with The Lorax, involves acknowledging and supporting expression of the personal response to video programs. It suggests using these expressions to build understanding and generate questions. Examining and comparing personal responses could help students become aware of their own processes for constructing meaning and understanding, and of their own learning processes.

Strategies for "open use" can be summarized as follows:

Selection	Use video when interested in encouraging personal involvement as part of an area of learning. Look for well-produced programs which offer a story or personal perspective.
Action Research	Explore ways to use the understanding of the nature of video presented in this paper. Observe their own and their students' personal response and consider how these responses can contribute to learning. Involve other teachers and share observations.
Encourage students' to express personal response	Use open-ended questions and modeling expression of personal responses. Explore other strategies. Group activity using video materials is described by A. Convery in his classroom research (Convery, 1990).
Act as a facilitator	Encourage a wide variety of response and encourage students to identify their own questions and interests and build their own connections. Include all views and recognize their expression. Encourage pursuit of individual or group interests.
Encourage students to become aware of their own learning	Recognize students' personal response as a valuable element of their learning, encourage their awareness of this process.

Implications for Selecting and Producing Educational Video and Support Materials

In visiting classrooms using video and selecting examples for this thesis, it was easy to see the impact of the design and production quality of the video. Several instructional programs conveyed a feeling of being poor television, a kind of talking book rather than a real video. It appeared to me that the medium lends itself best to programs that present a story or subject for its own sake, rather than in an attempt to deliver instruction. The educational value resides in the decision to produce or show the program.

Most teachers' guides are based on the assumption that it is the teachers' job to move students from the passive viewing experience into mental activity related to the story or content of the program. In very few cases do the guides provide room for or encourage expression of personal responses, or experiences related to the video, before moving to the mental elements covered.

In developing or selecting teachers' guides to accompany video programs, this research suggests an emphasis on ways to encourage expression of students' response to the program, and using the response expressed in shaping subsequent consideration or activities. As with the strategies offered to teachers', producers of teachers guides could suggest open-ended questions designed to elicit students' personal responses and indicate ways teachers can pick up on students' response in shaping subsequent discussion and activity. They could present ways of dividing students into groups and suggest suitable questions or tasks that provide room to incorporate students' responses. They could suggest ways the teacher can express their own personal response and thereby model the acceptability of such expression. Examples of ways to acknowledge and build on students' response can be provided as well.

Producing such teachers' guides could be based on experiences with the kinds of responses students might express and the possible directions such responses suggest. Given the great variability possible among students, such experience could offer indications of the range of responses that might be expected and some of the directions suggested by these particular responses.

Conclusion

Today's schools typically provide computers and CD-ROM resources and are likely introducing computer communications capabilities to bring educational technology to students and teachers. Some students can produce videos as well as view them, often working in small groups. A few schools are introducing multimedia resources and the capacity to produce them.

Both video and computers are often presented to teachers as ways to help them deliver the curriculum better or faster. The research and analysis

presented here indicate that the growing use of technology in schools makes most sense when combined with a learner-centred pedagogy.

Today's teachers spend less time delivering group instruction. They increasingly see themselves as facilitators who coach and support students as they learn and develop skills. This change reflects a shift in the underlying view of the knowledge acquisition process - a shift that moves from a focus on knowledge as something that can be transmitted to students, to a focus on knowledge as the internal construction that occurs in each individual. Use of technology is one of the strategies teachers can use to support a learner-centred approach to the teaching-learning process (Peck and Dorricott, 1994; Hannafm and Freeman, 1995).

On the whole, interactive and communications technologies, video, and multimedia offer engaging experiences for students. This research indicates that video - and possibly newer media - provide an opportunity to do more than deliver information or curriculum. Educators can become more aware of the personal response involved in using media and can develop ways to include this response in the teaching and learning process.

This paper also indicates the potential benefits of taking a close look at teachers' and students' experience in order to explore the relationships that connect the nature of each medium, the experience of its use and its pedagogical value. Such research would best be carried out in regular classrooms, by or with classroom teachers.

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Footnotes

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