VIDEO USE FOR PROGRAM EVALUATION, A CONCEPTUAL PERSPECTIVE

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Program evaluation is aimed at and achieves a range of goals. A modest, yet difficult goal is the operative improvement of programs. A more ambitious and even more difficult goal is the deeper stakeholder understanding of a program and the larger issues with which it tries to deal. In either case, it is the job of the evaluator to stimulate productive thought about the program. This article deals with my belief that the video helps the evaluator facilitate this kind of thinking. First, I will explain the kind of thinking, reflection, needed to promote action leading to the operative improvement of a program or the deeper understanding of the issues involved in that program. Next, I will discuss the source of reflection and the need to provide it. I will then discuss methods of promoting reflection. I will discuss my belief that the video should be included on the list of the options available to the evaluator to provide this stimulation and to accomplish this reflection: the role of video in promoting reflection. And finally I will relate these ideas to the application to program evaluation.

Reflection

The kind of thinking that leads to learning is reflective thinking, i.e. reflection. The theoretical basis for reflective thinking was proposed by Dewey (1916, 1933) and expanded by Schön (1987). There has been a wide range of academic debate surrounding the subject of reflection and its various forms (Grimmett Erickson, MacKinnon, & Riecken, 1988; Tom, 1985; Zeichner, 1986). Within the field of teacher education, Grimmet et. al. (1988)
divide the concept of reflection into three major categories: (1) reflection to direct; (2) reflection to deliberate; and (3) reflection to reconstruct. The first category concerns reflection that leads to acquired knowledge use in order to control a teaching situation. The second concerns applying acquired knowledge to make a decision or a choice between teaching methods. The third category refers to building knowledge through reflection and thereby reconstructing experience within a specific context. The last category is the one that concerns Dewey and Schön. Dewey states that education is the reconstruction or reorganization of experience which adds to the meaning of experience and which increases ability to direct the course of subsequent experience (1916, p. 76). He views experience as an active process, which not only occurs, but also sheds light on itself at the same time. This kind of experiencing is made possible through reflection.

Reflection occurs when one is faced with a perplexity that invites one to look for solutions (Dewey, 1933): "Where there is reflection, there is suspense" (1916, p. 148). Other activity is suspended and the learner stops to reflect upon a certain perplexity with which he is faced. The learner has to be ready to see the perplexity and this is what Dewey calls the pre-reflection stage of learning. It is the educator's job to cause the learner to suspend his activities and see the perplexity before him and begin the process of thinking. "Thinking is a process of inquiry, of looking into things, of investigating" (p.148) with an eye towards finding a solution. According to Dewey this process does not occur unless one is faced with a perplexity, a genuine stimulus that sparks inquiry.

Once the initial spark is there, the learner needs information and the opportunity to make the necessary observations. Using the available information in combination with past experience and intuition, the learner formulates possible solutions to the perplexity. Then, given the opportunity of trying out these possible solutions, the learner tests them in action. These attempted solutions sometimes work and solve the problem, but other times lead to unexpected outcomes that in turn promote more reflection, and the process begins again.

This process of confronting a perplexity and looking for and testing solutions is the basis of reflective thinking. According to Dewey the learner reflects with a view to the future, with some kind of outcome or expectation in mind while making connections between the past and the current experience. This quality of reflection differentiates between passive experience and the kind of experience that allows for learning. "Reflection", according to Dewey (1916), "is the discernment of the relation between what we try to do and what happens in consequence" (p. 144).

Schön (1987) discusses two modes of reflection: reflection in action and reflection on action. Reflection in action occurs at the moment of the action, simultaneously alongside it. It is what van Manen (1991) calls "active or interactive reflection." It is one of the elements of expertise that characterizes the professional in any field. In contrast to this reflection in action, in which the practitioner acts immediately upon his reflection carrying on an ongoing dialog between his action and his thinking, reflection on action is a process that allows the thinker to review his actions after the fact and to understand them from a variety of angles. In Rylian terms it allows him to "thicken" his recollection and in some cases to reinterpret the action entirely. Reflection on action concentrates thinking on an action that occurred in the past from a distanced perspective that permits greater understanding and analysis.
The kind of reflection that is most relevant to evaluation concerned with operative improvements is reflection on action. The deeper and more extensive the reflection, the larger the issues it touches. When reflection on action takes in the entire overview of an action including the examination of the reasons that lie behind the action as well as those that led up to it, it deals with the larger issues of the program. This kind of reflection leads to double-loop learning (Argyris & Schön, 1978): to the examination of how and why activities are being conducted, dealing with theories and goals, rather than strategies. It goes to the heart of a program and examines the concepts and theories that support it rather than just the strategies designed to carry it out. Van Manen (1991) labeled this kind of reflection the third level of reflection composed of systematic reflections on our own and others' experience with the aim of developing theoretical understandings and critical insights. He contrasts this type of reflection to the first two levels: the first, everyday thinking and acting and the second, reflection on our practical experience in an incidental and limited way. Van Manen's fourth level, reflection on reflection goes one step further than Schön's reflection on action in that it examines how knowledge functions and how knowledge can be applied to active understanding. The concept of active understanding brings us back to Dewey and the idea of learning as an active process. The active nature of this process leads to self-generated knowledge.

Figure 1 illustrates kinds of reflection.

![Figure 1: Kinds of Reflection](image-url)
Self-generated knowledge is knowledge that is the outcome of some form of problem solving or inquiry by the learner. This problem solving is the result of reflection. Here the learner is faced with a dilemma, a perplexity, an inconsistency, or a problem that begins the process of reflection and sets out to find a solution. This process of inquiry and problem solving creates knowledge that is useable because the learner is personally associated with it. He has an understanding of it and a stake in it as opposed to knowledge that was acquired through the dictates of someone else. The learner participates in what Bruner (1968) calls the *act of discovery* and therefore has a better command of the material he *found-out-for-himself*.

The Source of Reflection

The process of reflection leads to learning. Therefore, it is important to identify and understand the source of reflection – the trigger, the spark. According to Dewey (1933) reflective thinking, or in Schön's terms, *reflection in action*, is sparked by an obstacle in the path of progress in the performance of a task and our need to remove it and carry on. *Reflection on action*, however, can be stimulated by a variety of sources. Since reflection on action comes after the fact, it can focus on a perplexity that the reflector wants to understand and learn from. Possible sources of reflection of this type are based on what happened: impasse, success, or an unexpected or unanticipated occurrence, or outcome.

One source of learning from what happens is the confrontation with reality. Confrontation with reality involves the experience of that reality, the expectations before it and the recollections after it. We must be able to juxtapose our own interpretations or perceptions of what happened with an approximation of what actually happened. These interpretations and perceptions are composed of expectations and preconceived notions stemming from the specific context of the event or the specific person experiencing it.

Thus, what happens is an elusive and illusory entity. Is it something real or is it something we encode and remember in encoded form? It lies somewhere on the spectrum between absolute and fabrication. Using the allegory of the cave, Plato demonstrates to Glaucon that reality is influenced by the limitations of the situation of the reality (a long dark cave with an entrance open to the light), and the functioning of the perceiver of reality within that situation (men tied by the leg and neck from childhood so that they cannot move and can see only what is in front of them). In addition Plato demonstrates that the perception of reality is the perception of that which the above mentioned men see and hear before them. He raises the question, how much of our own perception of reality is based on the shadows of artefacts (Plato, 1994, p. 241). Plato continues by presenting a dilemma. Suppose one of the prisoners is allowed to see outside the cave. At first, blinded by the light to which he is unaccustomed he, himself, would not be convinced that what was presented as real was real. It would take him time to get used to the idea. Then, once convinced of the truth of the reality outside the cave, he would return to inform his fellow prisoners. Upon return, however, he would once again be blinded, this time by the darkness. Unable to see the former reality clearly, he would lose the trust of his fellow prisoners and not only fail to convince them of his truth, but become an object of derision. Plato presents the dilemma from all sides, the situation, the perceiver, others, and the pre and post states of awareness of a new reality.
Anthropologists have applied these multiple facets of reality to the study of peoples. What really happens is ephemeral and dependent upon culturally bound interpretations. The constructivist view of reality (Schütz, 1962) is akin to the standard emic view that states that reality is what the person who experiences it makes of it. The cultural component of the interaction, or experience, is part of the reality. Thus each person's reality is not the same, even if it is objectively the same. The constructivist view goes one step further in that while experiencing an event, or interaction, a person instantaneously interprets it. Thus, his recollection of the event is a memory of an interpreted occurrence. The memory is tied up with the event as perceived by the person according to his cultural and personal makeup as well as the interpretation of that occurrence according to immediate circumstances.

Mehan and Wood (1975) expanded upon the constructivist view. They do not view meaning as a stable thing, but rather as a ceaseless sensuous activity. Dorr-Bremme (1985) applied the approach to evaluation by claiming that inherent in this approach is the theoretical model of social organization that explains "how educational and other programs are constructed in interaction as participants draw upon and use their notions of reality and meaning" (p. 380). He summarizes the theory by stating that the "participants actively and creatively construct social events. Through their successive, collective interpretations and actions, participants collaboratively assemble everyday social events" (p. 380).

Since each person views reality through a framework made of preconceptions, predictions, intentions, hopes, calculations, anticipations, attitudes and feelings, reality becomes something more than what happens. In addition, reality is influenced by each person's reaction to his own version of what is happening, thus creating an ever changing situation of influence and counter-influence. According to Fiske (1987) the only way that we can make sense out of reality is by the codes of our particular culture. What passes for reality in any culture is the product of that culture's codes. Therefore, reality per se is
always encoded; it is never raw. The same reality is in essence slightly different for each person and in each situation.

In sum, although individuals react and respond continually during an event – reflection in action – the fact that events pass so quickly necessitates reflection after the fact in order to understand an event better. A starting point for reflection is often an examination of the discrepancy between what one thought would happen, one's expectations including all the factors mentioned above, and what one perceives actually happened. In other words, the perplexity arises from the discrepancy between expectations in the broadest sense of the word and reality according to an individual or according to several individuals.

Promoting Reflection

Promoting reflection basically reveals the source of reflection and allows the reflector to examine it. In order to promote reflection on an action or event efficiently, it is necessary to capture some representation of the reality of that action or event and to devise a way to reflect upon it. We must allow the stakeholders to distance themselves from their stake in the event and to facilitate their reflection. Metaphorically, the evaluator is faced with the task of presenting the stakeholders with a picture of the reality of a program or a part of a program. The picture, or representation, is usually done by means of words in the form of surveys, documents and reports. The evaluator presents a written text to the stakeholders. That text informs them about the operation of their program.

The task of representing reality is as complicated as the task of reflection upon that reality. Since we assume that reality is in fact interpretation of reality, the representation of reality makes possible a compilation of interpretations. Each recounting of the event must by definition be an approximation of the event.

In order to represent reality, then, the evaluator has to somehow capture it and turn it into a comprehensible, interpretable entity. Short of picking the brain of each individual involved and compiling the numerous interpretations of what happened, there is no sure way of capturing what happened. How can we, then, reflect on what happened? In essence, that is what data collection is all about.

In fact, there are several ways of doing this. One is the usual use of memory; that is, the evaluator reviews an event based on her own recollection of what happened or the recollections of participants in that event. Regarding her own recollections, the evaluator can record either in writing or audiotape her own interpretation of what happened as soon after the events as possible. When relying on the interpretations of others, one way of obtaining information is via questionnaires or interviews. The growing field of eyewitness testimony, however, has shed new light on the accuracy or assumed accuracy of memories (Hall, Loftus, & Tousignant, 1984; Locke, 1971; Loftus, 1992). The witness or actor is limited by her own recollections which are really recollections of her own interpretation of the event at the time. In addition the role of suggestion and recall come into play (Loftus & Ketcham, 1996) especially when using questionnaires and interviews. These disadvantages can be combated somewhat by working in small focus groups (Morgan, 1993), drawing on the combined memories of participants. However, one risks the danger of reflecting on what happened on the surface, debating semantic rather than existential issues, instead of delving into the multi-layered nature of the event.
Another means of combating the distorted nature of memory is to re-enact an event using dramatic or psychodramatic techniques. This process allows one to re-view the event and shed new light on it (Hare & Hare, 1996).

Another method consists of observations conducted in an open or closed format. In this case one is limited by the nature of the observation and by "looking for something specific." By definition, it is difficult to catch the unexpected. Observation does provide another view of the situation and its limitations can be overcome somewhat by using multiple observers. Of course the number of observers is prescribed by the situation. The number of observers introduced into a particular setting is limited. Once the observation is taken, however, it is a static document providing limited opportunity for interpretation.

Still another method is photography. Photographs capture isolated moments and can be used by an evaluator to stimulate recollection. Pictures provide an excellent source of reflection by providing a document that contains a balance of captured reality and the possibility of interpretation. The eye of the picture taker and the inability of still pictures to capture process, however, present certain limitations.

Moving pictures or videotape differ from photographs in that they capture the moving action. A wider viewfinder enables the video camera to capture a more comprehensive and detailed picture including more periphery activity. Thus more information is available in each frame. Moreover, the ability of the video to capture moving images preserves action rather than pieces of action as with the still camera. The moving image allows for examining a process of an interaction or action. The document produced by the video camera is rich in visual, verbal, peripheral and situational detail that provides nuances unavailable in other methods. The frame of the video is larger than the frame of the observer's eye (Brandt, 1948). A common metaphor used to describe this use of the video as a recorder of observations, is the window. The videotaped image allows the viewer to examine reality as if through a window. Burnett (1995) contests this approach as being too static and immobile. He expands upon the metaphor of the window adding a house to the window to illustrate the depth of information obtainable from the video. The eye focuses on an aspect of an event (interaction, activity,) that draws our attention, virtually skipping over other important aspects. The video camera captures and preserves these other aspects and allows the observer to focus on them later. It allows one to return to the scene to re-view it, to see things that were lost to one's vision at the time of the occurrence.

Another method of representing reality is that suggested by Eisner (1979) in his application of the epistemology of art to educational evaluation. Using Kozloff's (1969) term rendering, Eisner discusses criticism in education. One form of this criticism is evaluation. Eisner views the critic, or evaluator, not as a judge but rather as a facilitator in the task of "seeing". According to Eisner, deeper understanding is reached by rendering one's perception of an event or object into a new medium. The goal of the critic or evaluator is to reach the level of knowledgeable perception that is called connoisseurship in the arts. Once he has reached that level, the task of the critic is to disclose that perception to others.

In the case of evaluation, the stakeholders constitute those others. Since Eisner's point of departure is art, he focuses on rendering a work of art, or any event or object into prose. By doing this, the renderer or the critic is forced not only to perceive the object more
deeply, but is also invested with the ability to convey his appreciation of that object to others effectively.

By its very nature, rendering presents a story of already interpreted reality. The critic or evaluator brackets his perception of the event or object and renders it into his own medium, usually prose or narrative. Thus, in my view, unless the act of educational connoisseurship is conducted in a participatory fashion, so that all participants are trained in the art of seeing and rendering, it is often not as effective in practice as it is in theory.

Figure 3 illustrates the relationship between reality, methods that attempt to capture it and representations of it. Before progressing to the methods of capturing reality, it is important to note that in some cases the documentation of reality is one step removed from what happens since it is dependent upon the memory of reality, rather than an on-the-spot documentation like, observation, videotapes, photographs or audio tapes. The center of the diagram illustrates reality or memory of reality as the starting point. The next ring shows eight different ways of capturing reality moving clockwise from the top left: questionnaires, interviews or psychodrama (all of which are dependent upon memory of reality), and photographs, audiotapes, videotapes, observation + rendering, observation. The outside ring shows representations of reality. Each method of capturing reality has a corresponding method of preserving and presenting it, again moving clockwise from the top: memory of reality, reworked reality, photographed reality, audiotaped reality, videotaped reality, rendered reality, written reported reality, and analyzed reality in written form. These documents, then, provide a representation of the reality and a vehicle for reflecting upon that reality.
Thus we can see that there is a variety of ways of calling forth an event in order to reflect upon it or to promote reflection upon it. Those methods that rely on memory are one step removed from reality since the memory of it is already interpreted and encoded. Those methods that record reality are limited by their ability to capture all facets of it—sound, sight, smell, feel, general atmosphere. Thus far the videotape has the capacity to capture the most complete picture of observable reality. The next section will explore this capacity by examining the moving image within the conceptual framework of text according to the ideas of Ricoeur (1982) and others.

The Role of Video as a Promoter of Reflection

Of these representations of reality the video possesses specific features that provide a vehicle for interpretation and reinterpretation of the events that allow for and encourage interactive feedback. In this section I will discuss these features of the video and how they contribute to the promotion of reflection. First I will discuss the video document as a text. In this discussion I will address the issues of distanciation and authorship. Next I will address the issues of hermeneutics and the special interactive relationship between the audience/viewer and the video text/image relating to the special aspects of video as a medium. Finally I will give an example that illustrates these combined features of video use.

The Video as Text

In order to facilitate the discussion of the video document as a promoter of reflection, it is helpful to refer to the concepts of text and hermeneutics as proposed by Ricoeur (1982). For Ricoeur, text is discourse and discourse is a work. In other words, text is "a structured totality, produced within the rules which define its literary genre and individual style" (Ricoeur, 1982, p.13). In addition to viewing discourse as a work, Ricoeur views text as written discourse. The written text is not simply speech put into writing. The written document is distanced from the spoken word. It is an entity in its own right and as such is subject to interpretations in its own right as well.

Distancing takes place in four main areas. First, it separates the event from its action, that is, it moves it from the active mode to the passive mode, from the "saying" to "what is said". Second, it removes it from the author and the author's intentions. Third, it preserves it, freeing it from the contextual constraints of time and space. Finally, it transcends its original audience, opening it to interpretations because the judges of the text are not necessarily the people who originally performed or witnessed it (Gordon, 1988). For Ricoeur (1982), a text is an open work: so too, the video-document.

The video camera is similar to a writer's pen which enables the writer to inscribe or "fix" language. The video camera, however, fixes not only language, but action and interaction as well. The event is inscribed on the film or the disc and is preserved. It becomes an entity of its own. "Doing" is distanced from "what is done". The actors and the camera-person are removed from the action and the filming. The action is preserved and no longer subject to the constraints of time and space. Finally, like the written text, the videotext is open to interpretation by a range of viewers. Support for this view of video as
text comes from Onega and Landa (1996) who define text as "any semiotic construct, anything made of signs" (p. 3).

Let us examine the ramifications of each one of these distanciations. The first, distancing "what is done" from the "doing," means that one can observe the action or interaction after the fact. One can look upon it rather than be in it, enabling one to gain a deeper understanding of the meaning of the action. A similar view is expressed by Willener, Milliard and Gantry (1976) who propose that the video allows the observer to "stand outside" and "look back in" to certain "givens" of a role or situation. This capacity to "migrate" away from a situation enables the viewer to "become aware of latent possibilities for action" (Dowrick & Biggs, 1983, p. 180).

The second, removing the action from the relationship with author, is complicated because in the case of the video, who is in fact the author? Is it the actor performing the action or the cameraperson filming it? With the written text this problem does not arise because clearly the author is the person writing down his version of the event about which he is writing. Basically, what the author decides to record in writing is what appears in the text. Clearly a reader could discover "unwritten" items, within limits, during the process of interpretation. However, the text includes what the author decided to "fix" in writing. The videotape differs in that the cameraperson may focus on one aspect of the action, but the camera, on its own so to speak, captures the picture that is located within its view. Thus, the cameraperson is not strictly speaking the author. Those doing the action are also authors in the sense that they are performing the action that is being recorded. The videotext is therefore similar to a historical text in that authorship is diffused (White, 1978).

It would be helpful here to refer to terminology used in the field of narratology: "A narrative is the semiotic representation of a series of events meaningfully connected in a temporal and causal way" (Onega & Landa, 1996, p. 3). In this sense the videotaped document of an action, interaction or event is a narrative presenting a story of what happened. The story, however, is not only told, it is seen as well. Thus, the narratological term "focalization" is particularly applicable: "Focalization is the relationship between the 'vision', the agent that sees, and that which is seen" (Bal, 1996, p. 118).

In a written text, focalization concerns an implied spectator. In other words, beyond narration, another dimension exists in the text. This dimension concerns what is seen by those present in the text as well as by those outside the text. Bal (1996) makes a clear distinction between these two types of focalizations in reference to visual texts: internal and external. The internal focalizer is an actor who sees another actor within the visual text. An external focalizer is a viewer, outside the text, who is aware of an actor seeing another actor and who makes sense of the information. In a visual text, the external focalizer actually sees the act of seeing on the part of the actors. Deleyto uses the concept of focalization as a argument for the objectivity of a visual text.

In film both activities, narration and focalisation, are textual. More specifically, the almost permanent existence of an external focaliser in a film narrative accounts for the general tendency of the medium towards narrative objectivity. Regardless of the various subjectivities that may appear in the text, the almost permanent external presence of the camera ensures a vantage point for the
spectator, which continually tends to dissociate itself from and supersedes that of the various characters involved in the action... (1996, p. 222).

To return to the concept of distanciation, the "textifying" of the event/action/interaction distances it from the both the actors and the author. Thus, one is free to consider the text within the framework of the intentions of the author or not. One can look at the author's center of focus or one can concentrate on points off center or in the periphery.

The third result of fixation, separating the text from its original context of space and time, allows for more leeway in understanding. The text, "what is said" or in the case of video "what was done and said" becomes an entity in its own right, divorced from the constraints of time and space. It can be used as a means to greater understanding of the specific instance it presents, or as a spark to greater understanding of a larger whole. Thus a video clip of a specific activity can promote understanding of that particular activity, of similar activities, of different but related activities, or of a larger whole to which that activity belongs. The enlargement of scale is McLuhan's (1964) main argument for the great influence of the media. The specific medium of video has changed our concept of space and time by capturing reality and allowing us to re-experience it (Meyerowitz, 1985).

The fourth and final result of fixation is that the text is no longer addressed to a specific audience. It is now open to interpretation by any number of people, including those who took part in the event that was video taped and those who did not. The text is open to interpretation by anyone.

Hermeneutics, the Video Image, and the Audience

Interpretation, or hermeneutics, for Ricoeur (1982) is discovery of hidden meaning in a text. There are two ways one can look at hermeneutics: from a vantage point of suspicion or from a vantage point of faith. Although traditionally opposing points of view, for Ricoeur they constitute the ends of a continuous arc. At the suspicion end of the arc lie objectivity, explanation, uncovering what is in the text. At the faith end of the arc lie subjectivity, interpretation and restoration of meaning and "how the text changes the audience." No matter where one is located along this arc, however, the heart of hermeneutics is the relationship between the audience and the text that leads to greater understanding either of the text or of self.

The complex relationship between the audience and the text concerning hermeneutics reflects the interactional phenomenon of the video image and the viewer. The most common conception of this relationship is that the image is viewed by a viewer; observed by the observer. This approach holds that there are two separate entities: one that is seen and one that sees. Another view, propounded by Burnett (1995) is that seeing doesn't stop with the act of seeing. In fact, that act itself comes into question. How much of what we see is actually what we hope or expect to see and how much is what is actually there? Once we see, the image becomes ours and is perceived by the other parts of our mind: memories, previous knowledge, hopes, cultural interpretations.

Burnett (1995) calls this interaction between the observer and the observed image projection. He claims that there is no pure seeing. Rather, observers project onto the object-
the reality, and base their interpretations on the image of that reality that is perceived. This interaction creates a constant exchange between the viewed and the viewer. The exchange is so constant that for Burnett "the boundaries remain vague, and distinctions of internal and external, thought and vision are more often than not tools of interpretations" (p. 10). Returning to the concept of the videoclip as text, Burnett's idea of projection mirrors Ricoeur's symbiotic relationship between reader and text, the text breathes into the reader and the reader breathes into the text.

Burnett uses the metaphor of a hall of mirrors. The image of mirrors reflecting an image back and forth highlights the "shifting movement among observation, perception, comprehension, and interpretation with respect to images and projections" (p. 31).

It is precisely this shifting movement that represents the audience relationship with reality as well as with a text. The videotaped "text" approximates yet distances the "reality" allowing for better interpretation because it allows the viewer to confront his perception, comprehension and interpretation. In order to understand further how the video enables the viewer to confront his interpretation of reality, a few words need to be said about coding.

The capability of the video to create a document in the sense of a text involves the process of coding. Through our projections we encode reality as we see it. When we retrieve it from memory, it is already encoded. When we discuss it in response to a written document, that document has already been encoded. If reality is always encoded (Fiske, 1987), then a method is needed to allow for decoding and comparison coding. The video provides a combination of a rich document and the availability of that document to various simultaneous interpretations and verifiability. It is encoded anew every time it is viewed. Its richness is not frozen at the time of observation, but rather is enhanced with every viewing and every viewer.

Branigan (1996) discusses this process in terms of perception. He makes a distinction between two kinds of perception according to the direction in which they work.

Some perceptual processes operate upon data on the screen in a direct, "bottom-up" manner by examining the data in very brief periods of time (utilizing little or no associated memory) and organizing it automatically into such features as edge, color, depth, motion, aural pitch, and so on. Bottom-up perception is serial and "data-driven" and produces only short-range effects. Other perceptual processes, however, are based on acquired knowledge and schemas, are not constrained by stimulus time, and work "top-down" on the data, using a spectator's expectations and goals as principles or organization. Top-down processes are indirect in the sense that they may reframe data in alternative ways independently of the stimulus conditions which govern the initial appearance of the data. Top-down processes must be flexible and general in order to be effective across a wide range of situations while allowing for (unpredictable) variations among specific cases. Top-down process often treat data as an inductive sample to be projected and tested within a variety of parallel frames of reference while bottom-up processes are highly specialized and atomistic (e.g. detecting motion). Both kinds of process operate simultaneously on the data creating a variety of representations with varying degrees of compatibility (p. 239-240).
The idea behind the use of video for evaluation is to examine these top-down processes and to use them toward program understanding and improvement. This brings us to the last feature of the videotext mentioned above in the discussion of distanciation – its availability to a large and varied audience.

Who is this audience? The audience for video can be an individual or a group of individuals. It can be the same person at different viewings. It can consist of individuals who were or were not present at the time of the videotaping. For each audience the ramifications of the distancing from the event hold true. As discussed above, the video image is preserved as a document, a text, so that it can be examined repeatedly and discussed with a variety of viewers. These viewers may have varied information concerning the image or varied interpretations of it. They bring their own relationships with the text to the discussion. Even when there is one viewer, interpretations are compiled with each additional viewing. Goldman-Segall (1993) describes the reaction of a student of hers: "each viewing becomes a new reading as the layers of her seeing add to her interpretation" (p. 267).

Upon viewing the videotaped image the audience can call upon this additional information and insight. The discourse that follows contains what Ryle (1971) and Geertz (1973) call thick description. That is, the discourse concerns meanings of actions and not flat actions devoid of intentions because they include input from people who were there or who had additional information about the observed action, the contents of the text. Goldman-Segall (1993) goes into this aspect of video research extensively. She proposes that although the videotext is fixed, the interpretations definitely are not. Due to its availability to interpretation by a number of viewers with varied information about the subject of the video document, as well as to innumerable viewings, the video text allows the possibility of "building layered collaborative interpretations" (p. 261). Goldman-Segall proposes electronic tools to deal with the complicated and multi-layered possibilities afforded by using video data. These tools concern detailed analysis of video data and, although relevant, are not the main concern of the present research.

Interactive Feedback Using Video

Before embarking on a discussion of the interactive feedback that can accompany video viewing, I will say a word about the video as medium. If one considers the kind of hermeneutics that accompanies a videotext, one can better understand McLuhan's famous axiom "the media is the message" (McLuhan, 1964, p. 3). The message and the medium are inseparable. According to McLuhan, the fact that automation produces cornflakes or Cadillacs makes little difference to the influence of the use of automation (p. 25). In other words, society was changed by the introduction of automation as much as it was by eating cornflakes or driving Cadillacs. In the same way, video technology has changed our view of "picture taking", of documenting our lives. The ease with which events can be preserved on videotape influences our world whether the event preserved is a wedding, a school trip, a bank lobby or a street beating as in the case of Rodney King (Berko, 1992). The message is mediated through the medium used to formulate and communicate it.

The main concern of this article is the use of the video document to stimulate reflection on the part of viewers. The viewers are stakeholders in a specific program that is
being evaluated. They can come from any level of the program: administrative, operative or participant. The video does not convey information to those stakeholders. Rather it mediates a representation of the event for them. When they view it, they interact with it and form their own interpretations and understandings.

Illustration

I will now look at this process more closely by examining the discourse that accompanies and follows video feedback sessions in an actual case, among the many in which I have used video for evaluation. This case concerns a program involving activities between Arab and Jewish elementary schools in Jerusalem. The program uses folklore in the form of traditional activities such as doll-making, pickle-making, and games as a basis for joint learning experiences in matched Arab and Jewish Schools in Israel (Traditional Creativity Through the Schools Project operated by The Center for Creativity in Education and Cultural Heritage, Jerusalem). I will explain briefly how I used video although the method, itself, is the subject of another article.

First I gathered information about the program such as goals, strategies, participants, philosophy. Then I videotaped a specific event at the request of the program director and the internal evaluator. The specific event involved a joint workshop in which the children from both schools made traditional dolls with their parents. After videotaping the entire event, I selected clips to be shown to the stakeholders based on my own understanding of the program and the purpose of the evaluation. Together with the director and the internal evaluator, I invited stakeholders to view the video clip. These stakeholders were the director, the internal evaluator, teachers, and parent-participants in the program.

Before actually viewing the videotape, the stakeholders discussed what had happened during the event. The discussion was hypothetical and there was no development. It did not lead to self-generated knowledge, but rather, reiterated preconceived notions. The general feeling as expressed by one of the mothers was "They [the boys] are simply not interested in the program or in communicating."

In the post viewing session, the participants questioned this "given". "Perhaps, they do want to make friends?" "Look, they are interacting!" This uncertainty concerning the "facts" enabled them to reflect on the event, to examine the issue more deeply, entering into a discussion of kinds of interaction and which kind they wanted as a suitable goal for the program. In other words, they identified and characterized the event with the help of what they saw on the video. The descriptions were supported by the evidence in the video clip. There was a consensus concerning what happened as confirmed by the video, and the interpretations followed. Each interpretation added to the general development of the discussion. From their exclamations during the viewing, "There is a connection. You can see it", it was clear that there was a discrepancy between what they thought had occurred and what they saw on the screen. Their surprise, "It seems that something is happening" sparked their reflection: "How can we use that connection and build it into a more meaningful relationship?" This reflection in turn generated the ensuing productive discussion. "For my part, if the children learn from this that they are all people, with interests and preferences, then, that's enough for me." "Maybe the goal of friendship is too broad."
All present had participated in the same event, but each one interpreted it differently. The discourse that came out of viewing it on videotape was about interpretations of the event and not about what happened. All of them saw the same scene on the tape. They didn’t have to discuss what actually happened because they saw it on the videotape. What they could discuss, however, was what the event meant to each one of them, their projection, in Burnett’s terms, or their position on the hermeneutic arc in Ricoeur’s terms. They differed on the quality and the meaning of what happened. They could clearly distinguish between the thin description and thick description. They could focus on a level deeper than the thin description and discuss what each one’s interpretation meant and how they could deal with the issues involved on that level. This productive discussion took place as a result of viewing the video clip.

In other words, the feedback sessions use the videotaped representation of reality as a basis for discussion of an event at which the viewers were present. Viewers do not rely upon their own memories of what happened, or on someone else’s report about what happened. The video promotes discourse that originates in the renewed perception of an event. That is, whereas the discourse that usually occurs when discussing an event is mostly interpretative, based on individual memories and interpretations of what happened, discourse following a video viewing is based on new interpretations and understandings of what happened based on re-viewing it on the video tape. With the videotaped document available for repeated viewing, there is no need to clarify what happened. If it is said that "no parents attended," one can return to the video clip and see if there are parents in attendance. If it is claimed that "the boys didn't want to play" or "no one could find the material" – one can look for evidence in the video clip.

Often discussion of past events are at cross-purposes because of conflicting interpretations of what happened due to the individual observer's projections. Much discourse about an event focuses on each person's interpretation of that event skipping over what actually happened. However, discourse after video viewing first confirms thin description – what is seen by all on the video – and then turns to thick description. That is, the discussion after viewing the video is deeper than the normal discussion because there is no need to clarify what happened or to get bogged down in each person's interpretation of what happened. The thin description is there before one's eyes and is available to interpretation at the time of viewing allowing thick description to be incorporated into the discussion. In the words of Branigan (1996) bottom-up perception is obvious and does not have to be discussed. Top-down perception can be shared and discussed with other viewers. The video makes all this possible.

We can summarize the features of video use discussed above adding an ethnographic perspective. The availability of the videotape for reviewing provides the opportunity for both in depth analysis and interpretation. Using videotaped documents for analysis has been called microethnography by Erickson (1979, 1982, 1992), constitutive ethnography by Mehan (1979) and sociolinguistic microanalysis by Gumperz (1982). Erickson (1990) refers to it as "machine recording" in his discussion of fieldwork methods in a larger presentation of qualitative methods. Citing as the main advantage of machine recording the fact that it removes the researcher from the limits of "the sequential occurrence of events in real time and space" (p. 149), Erickson discusses the advantages and disadvantages of this capacity to revisit an event "vicariously". He gives three strengths: capacity for
completeness of analysis, the potential to reduce the dependence of the observer on premature interpretation, and the reduction of dependence of the observer on frequently occurring events as the best sources of data.

The two main limitations he proposes concern the vicarious nature of the revisitation which prohibits the observer from interacting with the events, and the fact that the recorded material is missing certain contextual information that the analyst usually needs. Erickson rightly states that both these limitations can be overcome by incorporating the use of regular ethnography with microethnography. In addition, as discussed above in the section concerned with feedback, the presentation of the recorded material to those involved with the event, provides extensive contextual material that would be difficult to attain without the recording.

Let us return to the strengths of videotaped documents for analysis. All the strengths mentioned by Erickson pertain to the fact that the audiovisual document allows the researcher to revisit the particular set of instances by replaying the videotape. The first, the capacity for completeness of analysis, is the result of the researcher revisiting the events a theoretically unlimited number of times examining the information from a variety of attentional foci (Erickson, 1990) enabling a thorough, more in-depth description.

The second, the potential to reduce the dependence of the observer on premature interpretation, refers to the fact that an observer can suspend interpretative judgements at the time of the event. This allows observers the opportunity for deliberation. By watching the videotaped event several times they can avoid making snap judgements that would influence their interpretation of the actions, reactions and interactions observed.

The third has to do with the frequency or reoccurrence of events. With audiovisual records, the researcher has the opportunity to thoroughly examine a rare, yet significant, occurrence. This factor is particularly important in face-to-face interactions.

It is especially appropriate when such events are rare or fleeting in duration or when the distinctive shape and character of such events unfolds moment by moment, during which it is important to have accurate information on the speech and nonverbal behavior of particular participants in the scene (Erickson, 1990, p. 205).

Subtle nuances in behavior, verbal and nonverbal, are also clearly seen in a videotaped record. According to Erickson, "verification of these nuances of meaning – especially of implicitly or cryptically expressed meaning-can help us see more clearly the experience in practice of educational practitioners" (p. 205). All three of these strengths are further enhanced during feedback sessions, in which participants contribute their own interpretations and understandings to those of the researcher.

Whether considering the video material through a perspective of ethnography or narrative, we come to the same conclusion. Because of the elusive nature and multi-layered quality of reality, the video provides a document that facilitates the kind of thick description necessary to aid in reflection. It provides the information. The process of learning from that information is a dialogue between the viewer and the viewed. The video allows a throughout examination of the perplexity arising from that dialogue that serves as the springboard for reflection.
Application to Program Evaluation

The following diagram graphically illustrates the application of these ideas to program evaluation.

![Diagram showing the learning process as experienced by stakeholders.]

Figure 4: Learning Process as Experienced by Stakeholders

The evaluand is the reality in question. Each stakeholder perceives the evaluand according to his own expectations and interpretation of what he witnesses or experiences within the context of the evaluand (event, activity, sessions, etc.) which is part of a greater program. It is the task of the evaluator to point out discrepancies between these expectations and interpretations and the "objective" reality of the evaluand. Herein lies the perplexity that triggers reflection on the part of the stakeholders. It is my contention that the video provides an excellent method of eliciting this perplexity from the stakeholders. In the standard method of evaluation reports, the stakeholders often approach the evaluation with their defenses on guard. They are not in the pre-reflective stage. They are often not receptive to constructive criticism given by the evaluator (Fetterman, Kaftarian, & Wandersman, 1996; Patton, 1978).

The video, however, is a receptive mode, because it involves them in the viewing and re-experiencing of an event. Their senses are awakened and they are more alert to conflicts or confirmations of their preconceived notions about the videotaped event. They respond spontaneously with comments like: "That's not the way I remember it" or "That's just how I thought it would be" or "I didn't realize that was going on too."
Viewing the video clip highlights the discrepancy between what people thought happened, what they expected to happen, and what actually happened. This discrepancy can take several forms and calls for various outcomes in relation to program evaluation. In the case discussed above, after viewing the videotape and the ensuing productive discussion, several changes were instituted in the program. Expectations were adapted to reality, new ways were devised for promoting interactions between the children, and more emphasis was placed on facilitating interaction between the children and parents of the two schools.

Conclusion

The theory that emerged from using video for program evaluation involves several elements of the evaluation process: observing the evaluand, understanding it, and giving feedback to the stakeholders. In broader terms, it concerns the concept of reality, how we view, interpret, and learn from it.

Moreover, the videotext can play an important role in these processes. The theory proposed in this article combines elements from established theories of learning, hermeneutics, media studies and reality perception. Ideas from these fields have been
brought together in a multi-faceted theory that explores the theoretical roots that underlie issues of practice. Figure 5 illustrates this scheme.

The top boxes represent the theories underlying the practice of evaluation and at the same time focus on the "how", and "what" issues raised in the article. The boxes on the lower two levels illustrate the practice.

The question remains, however. Why has video not been widely adopted for use in program evaluation?

The theory not only explains the effectiveness of video use, but also sheds light on the reason for the slow incorporation of video use in the field of program evaluation. There appears to be reluctance on the part of evaluators and stakeholders to adopt this valuable tool. According to the theory proposed here, the video is effective because by capturing reality in a tangible form, it allows stakeholders to confront their vision of what happened with a video approximation of what happened. This confrontation stimulates reflection, which leads to learning, which creates self-generated knowledge, which facilitates knowledge utilization. Two major conditions are necessary for successful video use in evaluation, however. The stakeholder must be willing to confront reality and the evaluator must be willing to share the task or burden of evaluation with the stakeholder.

The theory put forth here may explain the slow adoption of that use. Returning to the two conditions mentioned above: willingness to confront reality on the part of the stakeholder and willingness to share the task of the evaluation on the part of the evaluator. On the surface, these two conditions may appear threatening. The stakeholders might be afraid to confront the reality of their programs in a visual and revealing fashion. They might prefer to construct that reality. On a superficial level, the video may be a more potentially threatening medium than the printed word. As far as evaluators are concerned, they may be reluctant to relinquish part of the control of the evaluation to the stakeholders. By allowing the stakeholders to confront the reality of their program by viewing the video clip, the evaluator helps them make their own judgments about the program. The evaluators' judgments may appear less necessary in such a situation. Writing a report may seem safer and give the feeling of greater control. Evidence from the field, however, demonstrates that these fears are unwarranted.

The present article has tried to dispel these misgivings and override the hesitations, and thus to hopefully further the adoption of video use for program evaluation.

Note

1. The Center for Creativity in Education and Cultural Heritage is directed by Dr. Simon Lichman and evaluated by Rivanna Miller, 20 Koreh HaDorot, Jerusalem, 93387, Israel.

References


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