

TAP into Learning

Volume 3, Issue 2
Winter 2000

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To learn more about SEDL's Technology Assistance Program, visit our Web site at <http://www.sedl.org/tap>.

Action + Reflection = Learning

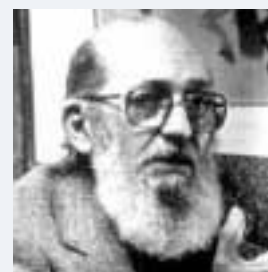
Learning is both an active and reflective process. Though we learn by doing, constructing, building, talking, and writing, we also learn by thinking about events, activities and experiences. This confluence of experiences (action) and thought (reflection) combines to create new knowledge. Both action and reflection are essential ingredients in the construction of knowledge. Indeed it is difficult to extricate one from the other since we are often “parallel processing”¹ — reflecting upon activities even as we are in the midst of doing or experiencing them. Because learning is so often subconscious, we don't realize we've actually gained new knowledge or understanding until we stop to contemplate a particular activity. Reflection then is the vehicle for critical analysis, problem-solving, synthesis of opposing ideas, evaluation, identifying patterns and creating meaning — in short, many of the higher order thinking skills that we strive to foster in our students.

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1 Caine, R. & Caine, G. (1991). *Making Connections*, 29. Menlo Park, CA: Addison-Wesley/ Innovative Learning Publications.

2 Photo used with the permission of the Instituto de Paulo Freire in São Paulo, Brazil. <http://www.paulofreire.org/>

Paulo Freire and Education for Critical Consciousness



Paulo Freire, 1921–1997²

Reflection, for the influential Brazilian educator Paulo Freire, was the critical component of education. Reflection, he believed, resulted in “critical consciousness” in which learners become actors, not observers, and authors of their own decisions.

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A Framework for Constructivism

- Learners bring unique prior knowledge and beliefs to a learning situation.
- Knowledge is constructed uniquely and individually, in multiple ways, through a variety of authentic tools, resources, experiences and contexts.
- Learning is both an active and a reflective process.
- Learning is developmental. We make sense of our world by assimilating, accommodating, or rejecting new information.
- Social interaction introduces multiple perspectives on learning.
- Learning is internally controlled and mediated by the learner.

These six principles were distilled by the staff of SEDL's Technology Assistance Program from a variety of sources on constructivism, brain research, and education research as well as staff members' experiences as teachers, learners, and observers in classrooms.

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“We apprehend the objective data of our reality through reflection,”³ Freire wrote in 1973. When we as learners do not reflect on our place in the world or critically evaluate the validity of information presented to us, Freire claimed, we become passive and superficial, accepting faulty logic, untested ideas, and allowing ourselves to be swayed by deceptive arguments and polemics.

By combining action and reflection, we create what Freire called *praxis* — a set of practices informed by reflection. Thus our actions are not random or haphazard but informed and deliberate and we are aware of why we do what we do.

In Freire’s model of education, the teacher is a co-learner with his or her students. Freire was critical of teachers who did not believe that their students had the ability to “discuss, to work and to create.” “Education is an act of love and courage,” wrote Freire in *Education for Critical Consciousness*. “It cannot fear the analysis of reality, or under pain of revealing itself as a farce, avoid creative discussion.”⁴

Freire utilized the component of reflection in the adult literacy programs he devised for peasant farmers in northeastern Brazil. So successful was this educational method that formerly illiterate adults exhibited reading success in a matter of days.⁵ Freire’s use of reflection and critical consciousness in adult education has been emulated by adult literacy educators throughout the globe.

Learning is Both Active and Reflective, *continued from page 1*

The optimal learning environment provides sufficient time for both action and reflection. This is often difficult given the pressure to cover the curriculum and prepare students for state exams. Because of these and other demands, we often must end an activity without giving students some formal or informal means of discussing what and how they have learned. Thus, an opportunity for the meaning making, the introspection of reflection, is lost, and true learning is not fully actualized. Further complicating this, in our formation as teachers we may not have learned how to engage students in authentic speech where they are allowed to honestly share their viewpoints about a particular activity, as opposed to giving formulaic answers (reflection versus recitation). We may attempt to get students to reflect but they sit silently, unwilling or unused to sharing their thoughts, and we are unsure of how to elicit such thoughts.

Yet, as humans, we are reflective beings, who by our very nature constantly search for meaning.⁶ Speech — our ability to communicate concepts — can shift us from a state of unawareness to deliberate, self-conscious action. This helps us internalize and link thought to action, allowing us to problem-solve, create coherence, and form patterns of understanding.⁷ Yet, in the classroom, students’ “social speech” — the sharing of their thoughts and ideas with classmates — is often silenced, thus stifling “inner speech”: the internal realizations and concept-formations that can result in higher order thinking.⁸

As teachers we may have experienced the situation where we actually learn a certain subject more when we have to teach it than when we studied it as students. Certainly, this is the result of our action — our having to *do* (teach) the material — to engage with it in an authentic and meaningful manner. But it may also be the result of our having to *think about/reflect upon* the material. Thus our understanding of the material is both broadened and deepened. This holistic approach “captures” the greatest amount of learning.

As learners we are constantly constructing, revising, and reconstructing our knowledge and beliefs to create a new framework of understanding. Reflection is the engine that drives this process. Through reflection students build upon and develop existing understandings to generate new knowledge.

3 Freire, P. (1973). *Education for Critical Consciousness*, 3. New York: Seabury Press.

4 Ibid, 38.

5 De Paiva Bello, J.L. *Paulo Freire and a New Philosophy for Education*. <http://pedagogia.click2site.com/pfreire.htm>. (Accessed November 2000). See also Brown, C. (1975) *Literacy in Thirty Hours: Paulo Freire's Literacy Process in Northeast Brazil*. London: Writers and Readers Publishing Cooperative.

6 Caine, R. & Caine, G. (1991). *Making Connections*, 29. Menlo Park, CA: Addison-Wesley/ Innovative Learning Publications.

7 Wittgenstein, L. (1965). *The Blue and Brown Books*, 106-107. New York: Harper Torch Books. Vygotsky, L. (1978). *Mind in Society: The Development of Higher Psychological Processes*, 25. Cambridge: Harvard University Press.

8 Vygotsky, L. (1962). *Thought and Language*. Cambridge: MIT Press. The terms, “social speech” and “inner speech” are Vygotsky’s.

Combining Action and Reflection in the Classroom

Reflection does not mean that we sit in the lotus position, hypnotically humming meditative chants. Reflection can be active and multi-modal. Opportunities for reflection should occur before, during and after activities. That way students can take note of their learning starting point, assess their progress in the midst of the unit and critically evaluate their own learning at the end of the activity.

A key to helping students reflect and make meaning of their learning is a good, open-ended questioning technique designed to plumb the depths of student understanding. In addition to the “what” questions (as in, “What did you learn?”, “Now what?” and “So, what does this mean?”), the “why” and “how” questions (“Why do you believe that now?”, “How has your knowledge of this topic changed?”) propel students toward broader and deeper understandings and encourage students to actively participate and evaluate their own learning.

As important as questioning techniques is the atmosphere of the learning environment. For students to feel comfortable sharing their views honestly and openly (reflection rather than recitation), they must feel that their opinions are valued and will not be ridiculed or minimized. In essence, the teacher must strive to create an atmosphere based on trust and respect and must act as a co-learner with the student. Educational research also speaks of the need to establish “active and passive” space—places where students can reflect and retreat from others to work quietly and intrapersonally, as well as places for active engagement and interpersonal learning.⁹

As teachers we utilize action and reflection on a continual basis in a variety of formats: classroom activities and evaluations. A test, for example, is both an action and reflection tool, prompting the student to think about how much he or she knows

about a particular domain and demonstrate mastery of it. Because of the pressure associated with tests however, they may be imperfect reflection tools. Students don’t see them as non-threatening but often as another meaningless academic hoop they must jump through or as a potential trap to “catch” the student.

While tests will always be with us in the classroom setting, it’s important to utilize other tools and methods to wed action and reflection and provide students with structured opportunities for reflection. Such opportunities can certainly be evaluative—both formative (on-going) and summative (final). We’ll examine a few below:

Writing. Essays, journals, letters, and written persuasive arguments are all effectual means of prompting student reflection. Students can do reflective writing individually or with one or more students. Journals, especially if not graded and if their private nature is maintained, can be a very potent tool for prompting student reflection. They are particularly effective if writing is on going (e.g., a 10 minute free- or guided-writing activity at the beginning of the class period — handwritten in a small notebook) and if the teacher dialogues with the student in the journal. This intimate, shared expressive space can help to create a feeling of trust that prompts the student to be more open with teacher in other academic matters.

Computer Mediated Communication. Anyone who has spent time with students knows that many of them are enamored of technology, especially of the various features of the Internet. Bulletin boards, e-mail, list servers and chat rooms can all be effective means for eliciting student reflection about a particular activity. The teacher can establish and monitor a chat room that

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Reflection
is both
“internal
speech”



and
“social
speech”



⁹ Lackney, J. *Twelve Design Principles Based on Brain-based Learning Research*.
<http://www.designshare.com/research/BrainBasedLearn98.htm>. Accessed November 2000.

Combining Action and Reflection in the Classroom, *continued from page 3*

allows students to communicate synchronously (in real time) about a particular topic, while bulletin boards, e-mail,¹⁰ group emails (such as the free service E-Groups¹¹) and list servers also allow students to discuss relevant academic topics asynchronously. Their asynchronous nature may allow for more reflection time on the part of the student, and by establishing threads, the teacher can keep bulletin board and list server discussions from meandering (too far) off topic. Finally, the anonymity of these communication media may allow for less inhibition on the part of the student.

Guided Reflection Activities. There are many simple guided reflection activities that spur students to reflect on their learning, to critically evaluate knowledge (as is age appropriate) and to become cognizant of their new formations of knowledge. Elementary school teachers (in particular) often end units of study by asking students what they've learned from a particular activity, thus blending action and reflection. Life maps, where students draw important personal landmarks and developmental routes, can be adapted for an academic exercise. Finally, the KWL activity: "What do we **know**? What do we **want** to know? What have we **learned**?" is a commonly used tool for getting students to reflect upon what and how much they have learned about a particular body of knowledge.

Discussion. As humans we are speech-making beings and many students welcome the chance to share their "inner speech" with their classmates. Whole group, and more intimately, small group and paired discussions, provide varied formats

for students to assess their learning, share opinions, and discuss concepts about a particular activity. These shared dialogical spaces can assist learners to make sense of their learning and the learnings of others.¹² The range of questions and comments posed by a variety of individuals offers multiple perspectives on a concept or event and spurs deeper—and different types of—deliberation on the part of the learner. Individual conferences with the teacher, if conducted in an open, non-threatening atmosphere, can also be a wonderful way for student and teacher to co-reflect on an event, story, or learning experience.

Student Portfolios. Portfolios, both digital and non-digital, are an excellent way of prompting students to reflect on both the subject matter learned and on their own learning. Because they can be saved or digitally stored, students can revisit their earlier opinions, beliefs, and ideas, contrasting this "old" knowledge with their current worldviews. Digital portfolios, such as electronic slide shows, multimedia presentations, and hypermedia (such as web pages) provide a forum for students to both construct the fruits of knowledge while simultaneously reflecting on it, sharing their understandings with a larger audience in the process.¹³

Art. Many students are much better expressing their ideas visually rather than verbally or in writing. Drawing and painting, especially for younger students, may be a more appropriate way to elicit reflection and analysis about a particular topic or series of events, especially for students who have some level of discomfort communicating orally or through the written word.



10 For a list of free e-mail services, including free e-mail for kids, check out http://www.pipcom.com/~smorey/email_internet.html

11 <http://www.egroups.com>

12 Shotter, J. *Talk of Saying, Showing, Gesturing and Feeling in Wittgenstein and Vygotsky*. <http://www.massey.ac.nz/~ALock/virtual/wittvyg.htm>. Accessed November 2000.

13 For more information on student portfolios, see the following resources: <http://www.ed.gov/pubs/OR/ConsumerGuides/admuses.html>, <http://www.uni.edu/coe/portfolio/>, or <http://www.kent.wednet.edu/toolbox/portfolio.html>

Telling Stories From the Past

Recorded history may be viewed as the story of humankind told through the perspective of numerous individuals. This story comes to us from person-to-person oral accounts, inscriptions on walls or tablets, handwriting on scrolls, or recorded as text in a book with the invention of the printing press. The history recorded in “text books” may seem dull to students in schools if they simply travel through a parade of facts and events.

Engaging students as storytellers who document the people, places and inventions of human history can be an effective means for encouraging active learning and reflection about those facts and events. One way to do this is to give students the technological tools required for such documentation and provide an authentic audience for students working as historians.

As a middle school social studies teacher learned, video-editing technology can be an effective tool for achieving these goals. As part of a course on the history of the world, students created video documentary projects.

First, the students collected information about a self-selected historical topic. These topics included the history of railroads, the history of photography, the history of space travel, and the history of rock and roll music, among others. Students used the Internet to find web sites and experts on the subject of their documentaries. They visited the local library and a nearby university library searching for primary sources and books about their interests. They sent electronic mail to experts asking for further information or places to go to investigate their topic.

Living in a rural area meant that in most cases students were not able to visit places that housed original artifacts to videotape them. Thus, students had to learn about obtaining permission to use copyrighted materials such as collections of photographs or text from books and the Internet. Once they obtained permission to do so, the students videotaped the photographs to include in the documentaries.

After they had collected a sufficient amount of information, the students began to assemble this information as a video documentary. Using a video camera, music keyboard, and a computer, the students captured sound and images about their topics. Each documentary was a product of the ideas and images they felt were important. Throughout the process of both collecting the information and selecting the ideas and images to include in her/his production, each student went through a process of reflecting on what was important to communicate about the topic under study. Student narrations, images of photographs and other artifacts related to their topics, interviews with local community members, and music were combined to tell stories from their perspectives.

Students self-assessed their projects using a rubric collaboratively designed by the teacher and students based on the requirements for entries in the state history fair.¹⁴ The teacher encouraged students to enter their documentaries in a regional history fair conducted by the local university. If a student won, he or she would advance to the state level and perhaps to the National History Day fair to represent her or his state.

At the regional fair, three students were selected to advance to the state history fair. Once there, each student presented her documentary to a panel of judges and answered questions about the research she conducted and how the resources were obtained. The judges also offered students suggestions about other sources they could consult to extend their study. Although none of the students was selected to advance to National History Day, all of them learned many things about the historical process, conducting research, and a topic of interest to them individually.

The students creating historical documentaries edited their stories using low-tech tools. They videotaped a number of images and then added narration, music and titles by re-recording these images on a second VCR as they spoke into a microphone or played music from a tape player and music keyboard. Since they did not know in advance what an expert might say during an interview or what artifacts they might be able to find to videotape, these students had to edit their documentary after videotaping.

Video Documentaries

National History Day[®] is a highly regarded and academically challenging non-profit program. The program’s goal is to promote the study of history by engaging students and teachers in the excitement of historical inquiry and creative presentation. This yearlong educational program fosters academic achievement and intellectual growth. In addition to acquiring useful historical knowledge and perspective during the series of district, state and national competitions, students develop critical thinking and problem solving skills that will help them manage and use information now and in the future.¹⁵

¹⁴ These criteria were based on those established by the National History Day available at <http://www.thehistorynet.com/NationalHistoryDay/student/criteria.htm>

Evaluation forms are also available on the site at <http://www.thehistorynet.com/NationalHistoryDay/Evalforms.htm>

¹⁵ Taken directly from National History Day website. <http://www.thehistorynet.com/NationalHistoryDay>

Storytelling in a Digital Age

The fire crackles and glows bright, a blanket of stars overhead. All eyes are on the storyteller as he weaves his tale. As this idyllic setting fades into our past, a new storyteller emerges in a much different setting. *Click, tap, tap, tap, click, click.* This new storyteller uses pixels, bytes and compression. As processing speeds and broad bandwidth connections increase so does the promise of improved communication.

The digital communicator can reach millions instantly. The 1999 film, *The Blair Witch Project*, illustrated what two motivated and creative people can achieve with a camera, a computer, and an Internet connection. As a result of advances in digital production techniques, moviemaking, once the most expensive of art forms, is now affordable to the most low budget of filmmakers.¹⁶ While not every student is an aspiring Spielberg, most students can gain tremendous insight into storytelling by delving into the creation process.

Using the camera as storyteller allows the student to control every aspect of a story just as if he or she was writing it in a novel form. She must choose settings, time, and the angle and composition of a shot. All of these components make the story come alive. Change one and you change the story. Though, at first blush, this might appear too difficult for most adults, not to mention teens, students today are quite media literate. Lower the

television volume and ask students what is happening in a movie they have never before seen. Almost immediately they will be able to demonstrate that they have a good sense of the plot.

In a 9th grade Special Education classroom in an Austin, Texas high school, 100 students (yes, in one class!) two teachers and a facilitator embarked

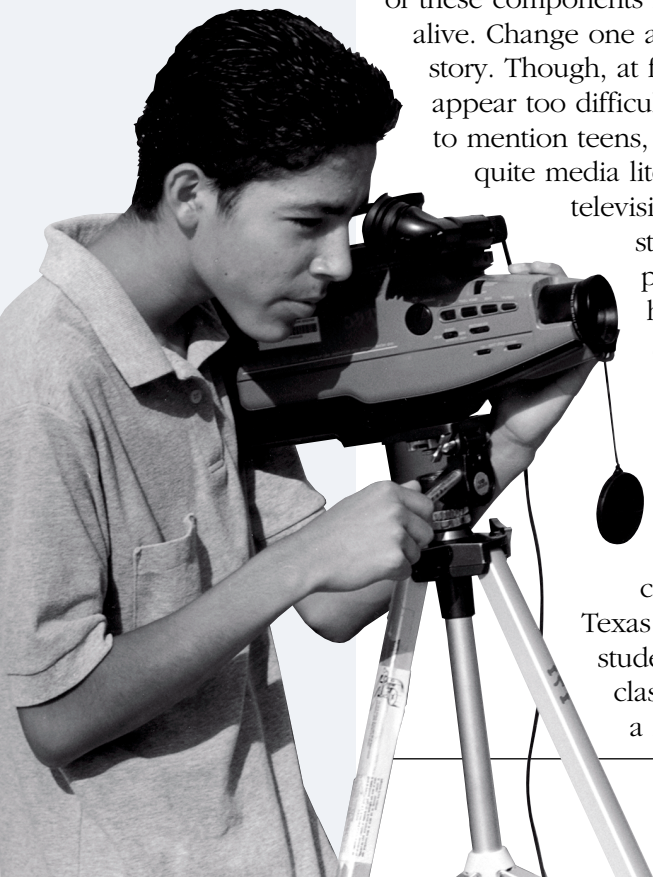
upon their own digital story. Through an experiential education program, students participated in certain physical activities, reflected on them and transferred what they learned to their own lives to help them deal with adversity.

The unit for this program was “courage” and the goal of the activity was to have students create a brief video that captured or portrayed some aspect of this human characteristic. In preparation for their video production, the teachers asked students to privately write about situations where they, or someone in their lives, displayed courage. As a whole group students also offered their opinions on what courage meant and related instances in which they had seen courage in action.

In preparation for the actual video production, students watched and discussed excerpts from a few popular films, analyzing the story lines, camera style and dialogue. Some examples were shown without sound so that students could study the story only by the way it was shot. The teachers then cast students into ten individual production companies of ten students each in order to produce their own short video. Each company chose their actors, producer, director, assistant director, Director of Photography, writer, grips and two production assistants. (Many students assumed more than one role.)

The activity was fairly technology-intensive, involving video cameras, screen writing software, and video editing software. None of the students had ever used any of this technology. While the rest of their production colleagues were brainstorming ideas for a story line, the experiential education facilitator took two students from each group and showed them how to use the school’s two video cameras. They in turn were charged with teaching their group members. At various stages in the activity, the facilitator used the same strategy to show students how to use screen writing software and video editing software.

Each production company had to first propose a story line dealing with the theme



¹⁶ See *Moviemaking in Transition*, 61-69. Scientific American, November 2000.

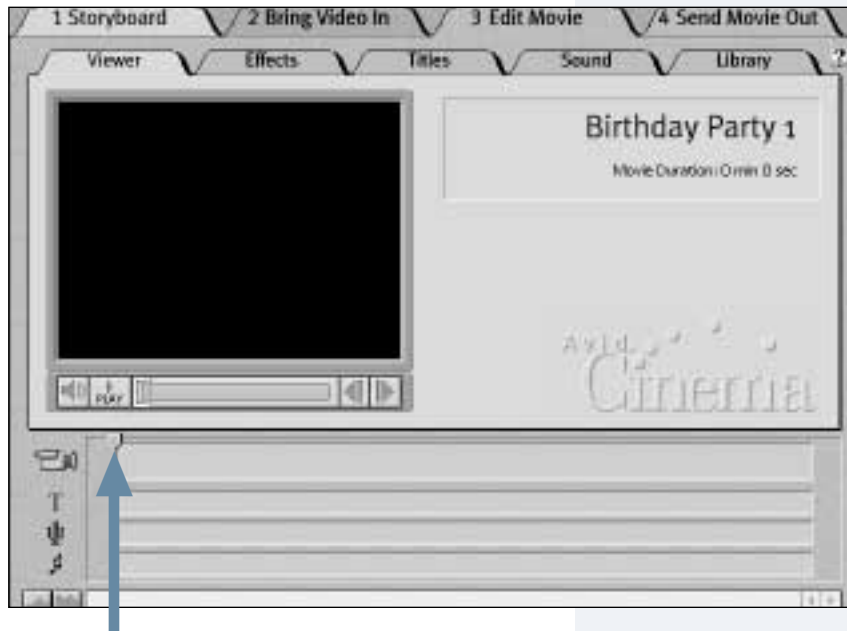
of “courage” that would be presented to the Executive Producers (teachers) for approval and “funding.” Funding simply meant that the teachers approved the students’ ideas and that they were free to begin writing their scripts. Refusal of funding meant that the students had to revise their concept (because of a lack of appropriateness, for example). Upon receiving funding, the production company then had to write a script. Because of the size of the class relative to the number of available computers (five), production companies took turns writing their scripts in *Sophocles*, a screen writing software, while others used chart paper and markers. While chart paper was sufficient, the screen writing software provided the students with guides for plot and character development and gave their screenplay a professional looking quality that students liked. The script was then submitted for approval and further “funding.”

Upon approval of their scripts, the students began to plan for the actual film production. Using *Avid Cinema*, a video editing software, each production company created storyboards for the scenes that were to be taped. *Avid Cinema* allowed students to word process, edit and revise their storyboard before actual shooting began. The storyboard feature allowed students to edit their script further: most groups realized that their scripts were not compatible with the way they wanted to set up their video and spent a good deal of time discussing how they would streamline their videos. Since the videos were to be no more than five minutes in length, students had to carefully craft and edit their scripts and spent a good deal of time discussing the validity of one type of camera shot over another or one scene over another. Storyboards were then submitted for approval in order to receive more “funding.”

Each company then went into rehearsals. They used their own members as actors while the Directors of Photography (DPs) practiced using video cameras and setting up shots. When actual videotaping began, the experiential education facilitator took one group at a time to videotape while the other students worked on another activity. After videotaping, students imported the video into *Avid Cinema* and began the editing process. The “Edit Movie” feature of the software



Storyboard Example in Avid Cinema



Video editing software:
This needle allows the user to start and stop a frame for editing by simply dragging. As seen by the menu tabs, users can also add special effects, sound (such as music and voiceovers) and transitions to their film.

Storytelling in a Digital Age, *continued from page 7*

allowed for juxtaposing the storyboard and film frames for simultaneous video and dialogue editing. Students could edit their raw footage, view the edited version, reflect upon and discuss the merits and demerits of each version, and re-edit in a non-linear fashion. Students also discussed the best types of shots (cutaways, long shots, zooms, etc.), music and transitions to add to their videos to maintain the overall mood of their work. After editing, they were allowed one more chance at reshooting and final editing. Thus, before re-shooting, they had to have thought about, discussed, and have been absolutely certain of their actions, dialogue, and composition.

Naturally, videos varied in their treatment of the theme of courage. One video dealt with a boy and girl being honest with one another about a difficult situation, rather than not addressing it, lying about it, or avoiding one another. Another — a wrestling mini-documentary — showed a young, small boy overcoming adversity and intimidation to defeat an older, bigger opponent. A third video documented different stories of students resisting pressure to become involved with drugs and gangs.

Student projects were then premiered at a “Film Festival.” The entire class watched each video and then privately voted for awards for Best Actor, Actress, Producer and Screenplay. On their ballots they had to explain why they made a particular selection. The class ended the activity by discussing what they had learned — both in terms of script writing and videotaping — but more important, in terms of what courage meant, how they themselves showed courage, and how they could draw upon this knowledge when faced with situations that demanded rational decision making.

While students could have certainly produced videos without video editing software (through “in-camera” editing, for example), video-editing software allowed for greater expediency of video production—no small matter with 100 students and five computers. Students didn’t have to re-shoot the whole video if there was a problem with one frame, nor did they have to shoot the film in

a linear fashion; they could simply re-film the “problematic” frame and use Avid Cinema to insert the shot where they wanted it. More important, the video editing software facilitated the reflection component that is a major piece of the creative process. The storyboard and frame editing screen allowed all students to view both the text and images of their video, generating reflection and critical analysis of each: How could a shot be better composed? Was the message of the film clear? Was another word or facial expression needed to convey a particular feeling? By using the video editing software to edit and review their work, students could almost immediately see the fruits of their revision and easily make adjustments. The software also allowed for display in alternative platforms: TV/VCR or the computer. Finally, the video editing software allowed students to create a product that appeared more professional than would have otherwise been the case.

In this newsletter we have discussed action and reflection as one formula for fuller learning. This unit on courage could merely have been a reflective activity in which students discussed or wrote about examples of courage and moved on. Or they could have created their videos without the pre-activity reflection on courage, without the in-process deliberation that accompanied video production and editing, and without the final reflection activity in which they discussed ways in which they could apply the many variations of courage to possible or probable situations they might encounter. The chances are that the quality of both their films and learning experience would have been diminished. Examples of courage might have been grandiose and less nuanced and realistic, and therefore less relevant to the students’ lives, perhaps. The creation, revision and recreation of their videos parallel the ways in which learners construct knowledge. The reflective and active nature of filmmaking spawned a cycle of learning: the action resulting in deeper reflection and the reflection resulting in praxis — a set of deliberate and informed student actions.

Getting Connected

Getting video into your computer is tricky but not difficult. There are many different ways and different pieces of equipment that you can use. Here are some typical setups using different methods.

- VCR/Camera to video capture card in computer
- VCR/Camera to capture box to computer
- Digital video camera to the Firewire port

A *video capture card* is a card that goes inside your computer and has inputs for video and audio. Just like your sound card lets you plug in speakers or a microphone, a video capture card allows you to plug in audio-visual (AV) cords from a camera or VCR. *Capture boxes* are small boxes that attach to the serial connection on your Personal Computer (PC). These boxes also have inputs for audio and video and bring the information into your computer.

New digital video cameras have Firewire or IEEE1394 outputs that let you connect directly to computers with Firewire inputs. These are standard on many new Macintoshes but require a special card on most PC's.

Preparing your system for editing

Video editing demands a good deal of your computer. Be sure to have at least 128 megabytes of Random Access Memory (RAM). You'll need lots of room on your hard drive. (Three minutes of video can consume over one gigabyte of hard drive space.) Ideally the drive you use for capturing and editing should not have any system software on it; this slows down the process and may interfere with the quality of your digital film. It is also a good idea to defragment¹⁷ your system regularly to keep your video files easily accessible.

I'm connected. Now where is the video?

In order to edit the video it first has to be "captured." Open your video editing software and find the commands for movie capture. Each software does it a bit differently; so consult your user's manual or the application's Help file for exact capturing procedures.

You'll want to capture your video in pieces or shots and this is where storyboarding is very helpful. Remember that you can put things in any order you want. Gather all the pieces and then drag and drop them into the order you want.



¹⁷ Defragmenting allows you to optimize both the speed and lifespan of your hard drive. Defragmentation simply places "fragments" of files closer together on a particular drive, instead of leaving fragments strewn about the drive. To defragment your PC, click on the drive you want to defragment, then choose *File/Properties/Tools/Defragment Now* and follow the instructions on the screen. Defragmenting on a Mac requires a third-party software, such as *Norton Utilities for the Mac*.

Screenwriting Software

Though students do not need screen writing software to compose a script, screen writing software can help students think about character development, dialogue, transitions and create an output that clearly delineates all components of a video or theatrical piece: speakers, dialogue, action, etc. Further, it is quite useful for those wishing to get into the more complex parts of screenwriting. The following is a list of some commonly used screenwriting applications.

WINDOWS

Sophocles

Functioning primarily like word processing software, Sophocles appears to be the simplest of the screenwriting software reviewed for this newsletter. A fully functional demo is available from the web site.

URL: <<http://www.sophocles.net/>>

StoryCraft

Guides the user through each stage of storycrafting, including Concept Design, Category Selection, Type/Genre Determination, Environment/Characters Description and Structure Creation.

URL: <<http://writerscomputer.com/>>

WINDOWS AND MACINTOSH

Final Draft 5.0 PLUS (VHS only)

Final Draft 5.0 is a mixture of word processing and screenwriting tools. Its claim to fame rests with its assertion that it is used by some famous film directors and popular television shows.

URL: <<http://www.finaldraft.com/news/fd5p.html>>

Dramatica Pro

Dramatica Pro functions primarily as a database with many drop-down menus (It even includes a brainstorming database component!). The user inputs the various elements and Dramatica Pro weaves them together to report the consequences, pitfalls, and issues of your story. The screenplay can be saved imported into word processing software. The demo, though not entirely fully functional, does not expire.

URL: <<http://store.yahoo.com/dramatica/>>

Movie Magic Screenwriter

Magic Screenwriter features a storyboarding system that allows the user to organize ideas like a series of index cards and a mechanism for creating character voices. Once students finish creating their screenplay, Movie Magic Screenwriter can read it back to them. Demo available.

URL: <<http://store.yahoo.com/dramatica/movmagscreen.html>>

Video Editing Software

Video editing is a process of selecting the visual and auditory elements one will include in a story. Both channels of communicating contribute to the message received by viewers. A videotape or movie is more than the dialogue spoken by the characters. For example, the author can use non-verbal communication and juxtapose images in ways that imply meaning to the viewer. When students edit, they engage in a process of learning that includes both action and reflection on the message that is being communicated by their final product.

WINDOWS

MGI VideoWave

MGI VideoWave III is powerful PC video software, which allows even novice users to create professional-quality videos quickly and easily.

MGI VideoWave Information

URL: <<http://www.mgisoft.com/>>

ABC VideoRoll

This free software has an intuitive interface and interactive help menus. It also has a built-in VCR controller with the ability to output video to your home VCR.

Information and Download

URL: <http://www.abc-tv.com/dv_ABC.html>

MACINTOSH

Final Cut Pro

Software for the professional. The cost (about \$1000) puts this out of reach for all but the truly committed to video production. This program does everything you need to make truly professional videos. The learning curve is a bit steep and this type of editing requires a good deal of time.

Final Cut Pro Information Site

URL: <<http://www.2-pop.com/>>

Final Cut Pro Tutorial

URL: <http://www.puffindesigns.com/registration/dv_fcp.html>

iMovie & iMovie 2

Easy to use and free! This software is ideal for the school setting. It does enough to create professional looking movies without getting overwhelming. It is fairly easy to learn and its Firewire interface on Macs makes it easy to set up. Unfortunately, you do need to have a digital video camera (more expensive than a regular video camera) in order to take advantage of the firewire setup.

iMovie:Desktop Video Simplified

URL: <<http://desktopvideo.about.com/compute/desktopvideo/library/weekly/aa102399.htm>>

iMovie Info

URL: <<http://lrt.ednet.ns.ca/IEI/imov.html>>

URL: <<http://www.apple.com/imovie/>>

iMovie Tutorial

URL: <<http://www.in.edcc.edu/videoproclass/WeeklyClassSchedule/09%20DigitalEditing/Digital%20Editing%20Class%2010/tutorial/iMovietutorial.htm>>

**WINDOWS AND MACINTOSH****Avid Cinema**

Avid is a system. It has its own proprietary software and computer. This is a stand-alone system for editing so don't count on this computer for sending email or surfing the web. The cost is a bit prohibitive for the most schools.

However, Avid Cinema, though no longer in production, can still be purchased in retail outlets. With Avid Cinema you can capture video from your camcorder or VCR, then add music, voice-overs, titles and special effects. When your video is finished, you can publish it to the World Wide Web, a CD-ROM, or videotape. 1-800-949-AVID.

Avid Cinema Tutorials

URL: <<http://www.avidcinema.com/learn/index.html>>

URL: <http://www.sps.edu/Academics/AIS/Computing/help/howto/ht_avidcinema.shtml>

Adobe Premier

Premier is powerful and less expensive than Final Cut Pro. However, its interface is not as clean or intuitive as Final Cut Pro. The learning curve for Premier is also rather steep.

URL: <<http://www.adobe.com/store/products/premiere.html>>

Storyboarding Alternatives**WINDOWS AND MACINTOSH**

You don't have to purchase special software to have students create scripts or storyboards. Several commonly available types of software will do the trick.

Power Point

URL: <<http://www.microsoft.com/office/powerpoint/default.htm>>

Inspiration

URL: <<http://www.inspiration.com>>

Kid Pix

URL: <<http://www.kidpix.com/>>

Hyperstudio

URL: <<http://www.hyperstudio.com/>>

To contact the Technology Assistance Program, please call us at 1-800-476-6861 or write to us at Technology Assistance Program, SEDL, 211 East Seventh Street, Austin, TX 78701. You may also send us e-mail by writing to Vicki Dimock, Program Manager (vdimock@sedl.org).

TAP into Learning is a collaborative effort by the staff of the Technology Assistance Program. This issue was written by Mary Burns, Vicki Dimock and Danny Martinez.

Mary Burns, Editor.

To learn more about SEDL's Technology Assistance Program, visit our Web site at <http://www.sedl.org/tap>.

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Video Editing Software, *continued from page 11*

Film Making and Other Video Editing Resources

Ifilm

Start here. An online omnibus of film and film making resources.

URL: <<http://ifilm.com/>>

Video Guys

Advertises itself as the “number one supplier of affordable computerbased video editing gear in the world.” These guys know all the parts and pieces and what works with what. A great place for technical reviews of software and hardware.

URL: <<http://www.videoguys.com/>>

I Can Stream.com

A wonderful resource for aspiring film makers. Get free editing and compression software as well as server space for your videos and free tutorials on filmmaking and story boarding.

URL: <<http://www.icanstream.com/>>

The Art and Craft of Movie Making

Part of the British Broadcasting Corporation (BBC) Education site. Check out *So, You Want to Make a Movie?* which examines the world of independent, digital filmmaking.

URL: <<http://www.bbc.co.uk/education/lzone/movie/>>

Screenwriting Discussion Groups

These discussion groups are open to all comers and include all aspects of screen writing from discussing methods of creating great scripts to creating characters and tracking down leads on script submissions. For all levels of expertise.

URL: <<http://www.egroups.com/dir/Arts/Movies/Screenwriting>>

Film Education Home Page

Another excellent British site. Created specifically for primary and secondary school teachers in the United Kingdom who use film in their classes. Available resources include: using film in special education classes, Education Packs and a Teachers' Center.

URL: <<http://www.filmeducation.org/>>

Is There a Low-Tech Alternative to All of This Video Editing and Screenplay Software?

Yes! You don't need powerful computers or thousands of dollars of state of the art digital video equipment to involve students in storytelling. A pencil, notebook, hand held tape recorder, and disposable camera will do nicely. Though student productions won't have the animation of a film, their story will still be captured and communicated, nonetheless.

But if you want to go a bit “higher tech” with a video camera, you can still create videos without video editing software. Though video editing makes the process faster and allows for greater simultaneous collaboration, you can compensate for this lack of software. For example, if the video production activity on pages 6–8 were conducted *without* video editing software, students would have had to follow their storyboards exactly and set up each scene in order. They could have shot a piece and “paused” the camera while they set up the next shot. If there was a “bad take” they would have had to rewind and shoot it again from the end of the last scene. Finally, through “in-camera” editing, they could have edited their shots in the camera itself.