IT'S INTO LEARNING

Volume 3, Issue 2
Winter 2000

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” — 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.


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

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.

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.
“We apprehend the objective data of our reality through reflection,” Freire wrote in 1973. When we as learners do not reflect on our place in the world or critically evaluate the 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.”

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. Freire's use of reflection and critical consciousness in adult education has been emulated by adult literacy educators throughout the globe.

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. 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. 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.

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.
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.

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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allows students to communicate synchronously (in real time) about a particular topic, while bulletin boards, e-mail, group emails (such as the free service E-Groups) 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. 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.

**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.

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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


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