

Thinking With Technology

It is the work of true education to develop this power [individuality, power to think and to do], to train young people to be thinkers, and not mere reflectors of other people's thought.—Ellen G. White, *True Education*, p. 12.

The education that consists in the training of the memory tends to discourage independent thought, and has a moral bearing that is too little appreciated. As students sacrifice the power to reason and judge for themselves, they become incapable of discriminating between truth and error, and fall an easy prey to deception. They are easily led to follow tradition and custom.—*Ibid.*, p. 140.

For centuries education has had to do chiefly with the memory. This faculty of the mind has been taxed to the utmost, while the other mental powers have not been correspondingly developed. Students have spent their time crowding the mind with knowledge, very little of which could be utilized.—*Ibid.*

As Seventh-day Adventist educators, we know the value of teaching students to think. So how can we apply these ideas in our use of technology? The statements above encompass four principles: (1) connections to the real world/application of knowledge, (2) independent thought, (3) the capacity to reason and judge, and (4) the ability to distinguish between truth and error. How can we use technology as a tool for thinking, while keeping in mind the big principle of education as “the harmonious development of the physical, the mental, and the spiritual [or social] powers?”¹

Application of Knowledge

One favorite Internet activity that encourages the application of knowledge is a WebQuest. This instructional activity was developed in 1995 by Bernie Dodge, who defines it as “an inquiry-oriented activity in

which some or all of the information that learners interact with comes from resources on the Internet.”² WebQuests guide students through various resources on the Internet and require them to construct or create a product that represents their learning. WebQuests use real-world applications of knowledge and include the following critical attributes:

- An introduction that sets the stage and provides some background information;
- A task that is doable and interesting;
- A list of sources necessary to complete the task. Many (though not necessarily all) of the resources are links to online information sources;
- A description of the process the learners should use in accomplishing the task, broken down into clearly described steps;
- Guidance about ways to organize the information acquired; and
- A conclusion that brings closure to the quest, reminds the learners about what they've learned, and encourages them to extend the experience.³

For example, in a WebQuest for grades K to 3, students research three Australian animals and recommend to a zookeeper that they be included in a new exhibit.⁴ In a Baseball WebQuest for 4th-grade social studies and math, students plan a virtual trip to major-league baseball stadiums. Along the way, each team of four students calculates travel costs, develops a system for rating players, calculates the total costs of the trip, and graphs the cost of attending a baseball game in different cities.⁵ In a WebQuest for 6th-grade health and language arts, students are hired by the parents of a class member to convince him of the dangers of smoking.⁶ In a WebQuest on Anne Frank, students become journalists writing travel diaries as they learn about life using a specified time line of the Holocaust.⁷ In another WebQuest for 5th to 8th graders, students choose a country in the 10/40 window and

prepare to serve as tentmaker missionaries in the country.⁸

WebQuests engage students through real-world research on the Internet, keeping them on task and avoiding the problems of wandering or surfing. (You can find many more WebQuests listed on Bernie Dodge's Matrix of Examples page or learn to create your own in a online class offered through TAGeducation.⁹)

Independent Thought

To encourage independent thought, confront students with issues lacking an obviously right or wrong answer, and have them compare information that supports various points of view. Ask them to choose and defend one view.

My workplace is a preview center for Tom Snyder Productions. As part of our contract, we offer software demonstrations in classrooms around the county. I have thoroughly enjoyed visiting classrooms and modeling the effective use of technology while teaching issues such as Building a Nation, Colonization, Immigration, Environment, the Cold War, Lying, Cheating, Stealing, Juvenile Crime, and Free Trade using *Decisions, Decisions* software.

Decisions, Decisions takes students through a scenario with several points of view. For example, in “Colonization,” students use facts and history from the U.S. Colonial era to make decisions about colonizing space. Students prioritize four goals such as getting re-elected, protecting citi-

zens, finding energy sources, and spending money wisely. Using guidebooks with information from one of the four points of view, they debate the issue and make a choice. The software guides students through the scenario, assigning reading based on their choices. The reading gives students evidence to argue their point of view, and they may agree or disagree with the point of view assigned to them. *Decisions, Decisions* is similar to a choose-your-own-ending story, with more than 300 ways the scenario could play out.¹⁰

Ability to Reason and Judge

In a previous column, we discussed Internet research and teaching students to evaluate World Wide Web sites.¹¹ Following are six broad criteria for evaluating online information:

- Authorship/source (the credibility or credentials of the author);
- Objectivity /biases (point of view, indications of bias);
- Validity of content (verifiable data, references, etc.);
- Bibliography/reference links;
- Currency (timeliness of information); and
- Quality of writing (clear communication).¹²

Students should be given practice evaluating sites and be required to do so when they use Internet references in a paper or project. You can help students develop rea-

Continued on page 47

Thinking With Technology

Continued from page 28

soning and judgment by offering many opportunities to judge and evaluate information presented to them, whether on the Internet, in the media, or in print.

Ability to Distinguish Between Right and Wrong

Doug Johnson, of the Mankato School District in Minnesota, has developed some excellent scenarios for teaching students right from wrong in the Digital Age. His case studies can be used as discussion starters or for role-playing to help students learn right from wrong.

- Adele meets Frank, who shares her interest in figure skating, in an Internet chat room. After several conversations in the following weeks, Frank asks Adele for her home telephone number and address. Adele likes Frank so she gives him the information he asked for.

- Cindy finds some good information on a CD-ROM reference title about plant growth nutrients for her science fair project. Using the "Copy" function of the computer, she takes an entire paragraph from the CD-ROM article and pastes it directly into her report without using quotation marks. She writes down the title of the article and the CD-ROM from which it was taken. When she writes her report, she includes the source in her bibliography.

Other scenarios help students compare ethics in the physical world with that of the virtual world. For example, one could ask students, "Is reading other people's E-mails without their permission like or unlike reading their physical mail?"

With careful thought about the use of technology in instruction, we can find conversation points, case studies, and scenarios

that encourage our students to "be thinkers, and not mere reflectors of other people's thoughts." ☞

Janine Lim is an Instructional Technology Consultant at Berrien County Intermediate School District in Berrien Springs, Michigan. She works with Adventist schools as well as other private and public schools.

NOTES AND REFERENCES

1. Ellen G. White, *True Education* (Nampa, Idaho: Pacific Press Publ. Assn., 2000), p. 9. See also Linda Caviness' article in this issue.
2. Bernie Dodge, *Some Thoughts About WebQuests*: http://edweb.sdsu.edu/courses/edtec596/about_webquests.html.
3. *Ibid.*
4. See <http://cte.jhu.edu/techacademy/fellows/MENTZER/webquest/austan.htm>.
5. See <http://bayless.mints.more.net/Miller/basebwq/baseballquest.htm>.
6. See <http://www.sbcsc.k12.ca.us/sbcsc/services/educational/cctechnology/webquest/tobacco.html>.
7. See <http://www.fsu.edu/~Cand/ENGLISH/fsuwebquest3/annef.htm>.
8. See <http://www2.andrews.edu/~freedj/1040window/webquest/index.htm>.
9. See <http://edweb.sdsu.edu/webquest/matrix.html> for the Matrix of Education or <http://www.tageducation.org> for information about a class that will be offered periodically throughout the school year and in the summer.
10. Visit Tom Snyder Productions online at <http://www.tomsnyder.com> or try out *Decisions, Decisions* online at <http://www.teachtsp2.com/ddonline/>.
11. See Janine Lim, "Internet Research," *Journal of Adventist Education* (December 1999/January 2000) or <http://www.andrews.edu/~freedj/iae/d99j00extra.htm>.
12. James M. Shiveley and Philip J. VanFossen, *Social Studies* 50:1 (January/February 1999), p. 42.
13. Visit <http://www.doug-johnson.com/dougwri/ethicspdm.htm> and <http://www.doug-johnson.com/pres.html#Teaching/> for more details and the complete articles.

Journal Editor Receives Achievement Award

Beverly J. Robinson-Rumble, editor of the *Journal of Adventist Education*, was honored with an Award of Excellence during the North American Division K-12 Teachers' Convention held this past August in Dallas, Texas.

During the convention banquet, Garland Dulan, associate director of education for the General Conference, presented the award to Robinson-Rumble, who has worked on the *Journal* since 1971 and became the magazine's editor nine years ago.

Along with receiving six Distinguished Achievement Awards from EdPress during her tenure, Robinson-Rumble was recognized for maintaining a "constant high level of quality in developing themes, finding authors, working on deadlines, editing manuscripts, and promoting the *Journal*.... Special theme issues are bought in large numbers to be shared with boards and other educators. The *Journal* stands tall among all Christian education journals in the world."

A graduate of Atlantic Union College in Massachusetts (B.A. English),

and the University of Maryland (M.A. Journalism), Robinson-Rumble taught English for a year in North Dakota before moving into editorial work. In addition to her responsibilities with the *Journal*, she has served on a number of major church committees, including the Christian View of Human Life Committee and the World Commission on Human Sexuality, and assisted with the editing of many textbooks and curriculum materials for the North American Division.

Six other educational leaders at the convention received the Award of Excellence, which was granted to individuals with more than 15 years of service to Adventist education who had made a positive impact within a division through a combination of personal excellence and a dynamic Christian faith.

"The Call, the Challenge, the Commitment" was the theme of the four-day convention, which drew about 6,200 attendees, making it the largest gathering of Adventist educators ever. ☞

Picture Removed

At the awards banquet during the Dallas teachers' convention, Beverly Robinson-Rumble, third from left, poses with some of the people who helped to make the *Journal of Adventist Education* a success: From left: Mrs. David Vanderwilt; David Vanderwilt, customer representative at Southwestern ColorGraphics (SWCG) in Keene, Texas; Beverly Rumble; Mrs. David Tharp; Joseph Trombetta, JAE subscription manager; David Tharp, president, SWCG; Mrs. Joseph Trombetta.