Crossover Technology:
What Can Jews Learn from the Educational Technology Community?
by Cheryl Weiner

As we sit at our computers, we access world news and e-mail's about Israel and the Middle East conflict. This is information technology at work. The computer sends us Torah drashot that relate to the conflict. It sends us prayers and tells us how to observe Yom HaShoah and Yom HaZikaron and Yom Ha'atzmut. It tells us how to march in Washington, DC, and how to support the Israeli Red Cross. How can we make these communications educational? What can we do as educators to bring educational technology into our Jewish classrooms?

On three things the world stands: on Torah, on the service of God, and upon acts of loving- kindness.
-Pirkei Avot Chapter 1:2 Attributed to Simon, the righteous of the Great Assembly

In 1979, at McGraw Hill Publishers, I was given the mandate to locate the best educational technology companies and compile a list of what products should be acquired, published, or created, based on what was found. Since that time, many people, companies and programs have come and gone, but the essential questions remain the same. What is worth doing and why, and what levels of support are required to do it? In the Jewish world, these questions are even more compelling, because the stakes are so high. Education is crucial to preserving Jewish continuity and commitment. Therefore, if we believe that educational technology is important, it is imperative that we build a comparable infrastructure to support hardware implementation, software development, leadership growth and ubiquity in our educational environments.

Lessons from the History of Technology in Education: Framing the Discussion

Scenario One: Jacob is in the fourth grade of a Hebrew School class at Temple Emanuel. He takes two-hour classes after school on Monday and Wednesdays and on Sunday mornings. So, as educators, we have his attention for about six hours a week, if we are lucky. How do we want to use his time? We are in a building that has six classrooms, which are used for many meetings throughout the week. We have limited resources and need books, teachers, and school supplies.

Scenario Two: Beverly is in the seventh grade and is about to be Bat Mitzvah. She is studying for her Bat Mitzvah with a tutor and is not affiliated with a Hebrew School or a synagogue. The ceremony will be performed at her parents' Havurah. She studies at home. How do we reach her and her parents with Jewish educational materials?

Scenario Three: Shoshanna is a senior at a Hebrew Day School. She is preparing to go to college. She wants to continue with her studies in advanced sacred texts and she wants to become a doctor. How do we prepare our day school students for their exit into the academic and professional world?

Hardware Implementation

A fully loaded computer system costs about $1,000. A computer lab for 30 students with printers, scanners, and servers costs about $50,000, plus $10,000 a year in maintenance. A trained technology-based resource person costs about $50,000-75,000 a year. Training 10 teachers costs about $500 a year, depending on

person costs about $50,000-75,000 a year. Training 10 teachers costs about $500 a year, depending on depth. It is unreasonable to assume that these costs can be borne by schools on their current budgets without substantial input from grants or major contributions from patrons or parents. Given these costs, what are the reasonable uses and priorities for educators in each of the scenarios above?

As public and private schools were faced with buying computers, three trends evolved. First, at a grassroots level, people held book fairs, bake sales, and PTA events to buy one or two computers at a time. Second, districts banded together to increase the numbers of computers that were purchased at one time. Three, computer companies realized that there were financial rewards for offering incentives for discounted large-scale purchases and encouraged group sales accompanied by consultative selling. The Catholic Archdiocese used a model, which the Jewish community might want to review, in which they set up a separate agency to aggregate computer purchases, as well as to coordinate training and technical consulting needs.

The implications for Jewish schools are apparent. In a small Hebrew School, with few classrooms and limited time available, purchasing a large-scale lab is not cost-effective. Also, given the time constraints, having one computer in the school or one per class is probably enough for demonstrations and for teacher use. While a grass-roots effort would work in those instances, Bureaus of Jewish Education would be well served to coordinate group purchases and consulting agreements from manufacturers for these small purchasers, as well as for their larger constituents. This would be especially true for the day school population. To reach parents who are unaffiliated, Jewish Community Centers or Jewish community libraries could aggregate purchases. An incentive for someone to join a synagogue or JCC might be inclusion in a group purchases for Judaic education. In addition, like the archdiocese, JESNA or some other central agency such as CAJE could provide an overall umbrella for aggregating Jewish schools.

Software Development

In order to be an effective learning tool, the computer has to be placed in the context of learning goals. During the early years of microcomputer implementation, seminal thinkers in the overlapping fields of education and computers put together some guidebooks for educators. In the 1980, Robert Taylor edited a book called The Computer in the School: Tutor, Tool, and Tutee. In it, he presented three models of how the computer could be used: to mediate instruction as a teacher, to facilitate learning as a tool, and to carry out instructions created by students programming it. In 1982, I co-authored a book, The Practical Applications of Computers in Education, that discussed how to integrate computers into classrooms, based on various learning goals: drill and practice, simulation, demonstration, games, tools, and programming. Since that time, the ways that computers can be used remain the same, with the addition of e-mail.

Given our scenarios and these models and goals, what uses are most practical and most beneficial? In the small Hebrew schools, neither time nor computers may be available. Thus, it may be useful to invest in the kind of learning goals that students can accomplish at home. Teachers could assign students research papers or lessons that require looking up data that enhance their curriculum goals. A single computer in a classroom might be used for demonstrations or as a reference tool, like a blackboard or encyclopedia. In the larger Day School environments, all of the uses and learning goals present in secular schools are appropriate. Therefore, teachers need to become familiar with the larger world of educational technology resources such as software, websites, magazines, and conferences.

In the world of the unaffiliated, educators are often out of the loop in terms of guiding Jewish educational goals. Parents play a much more important role, as does the Internet. It is incumbent upon Jewish organizations to try to reach out to the parent or child who wants to be Jewish, but doesn't even know where to start. The burgeoning of the Home Schooling Movement and their use of computers can act as a role model for these parents and children. Jewish Family and Life (www.jflmedia.com) supports the unaffiliated in many ways with its websites and webzines as does the Jewish Outreach Institute (www.joi.org).

Whenever teachers are investing their time or their students' time using computers, they need to know that they are going to get an educational payback. This is a problem in the secular world as well. Software and websites that are poorly designed are rampant. Many sources of information on the web are biased and poorly presented. It is incumbent upon us as educators to screen what our students use and to give them a set of guidelines about source materials and plagiarism. Not everything in print should be printed. Some sources are better than others. Criteria for evaluation and use of computer-based materials exist and should be emulated.

The computer also functions best as an interactive tool. Inherently, it allows us to give input and, in turn, it gives us feedback. Therefore, when we fund, design, evaluate, or use software, we want to make sure that it fits criteria that enhance learning in ways that cannot be accomplished by any other instructional media. For example, creating a role-playing simulation of a medieval disputation rather than a text-based description of it would be a better use of the technology and our students' time.

Software developers have an opportunity to model themselves after the best in the secular world. For example, we can create Jewish Webquests, student project plans developed at San Diego State (http://webquest.sdsu.edu/webquest.html). I used traditional database technology to create the databases of lesson plans in the Jewish Educator's Electronic Toolkit on the website for the Jewish Community Library of Los Angeles (http://www.jclla.org/main.htm, then select Teacher's Lounge, then JEET). CAJE (www.caje.org) and JESNA online materials (http://JESNA.org/cgi-bin/coreareas.php3?op=4) have used models in the secular world to produce their websites and databanks. To create comparable materials, however, we need to be funded at the same levels as secular organizations; we also need to look at how they got their money and how they created their leaders. Moreover, we need to look at the developments in the hand-held world to see what new applications they will bring. Using Palm Pilots to study Hebrew vocabulary words on the way to school is a great application and easy to develop.

Leadership Growth

An infrastructure needs to exist for software to be efficiently created and distributed. Unfortunately, within the Jewish community at large, the software that has been created to date mimics the early software created in the secular world, rather than emulating many multimedia programs that have evolved since. Because there are such low volumes in terms of potential sales, publishers cannot take big risks and cannot develop materials on their own. Israel is a huge source of supply, but the pedagogical approaches and content is often geared at the Israeli schools and is not generic enough for implementation here.

To remedy the situation, we can look to some innovations that arose in the secular environment in its early days. First, much of the major software development was funded through central agencies supported by the federal government. The National Science Foundation, HumRRo, the Office of Technology Assessment, and

other government agencies funded projects based on what they believed to be national goals for implementing computer literacy and creating access as well as for teaching subject areas conducive to computer based instruction. They also funded huge teacher training programs offered challenge grants, supported Star Schools and created numerous organizations such as TERC for people to use as platforms for new technology thinking and implementations. These programs produced leaders.

State and organizations began to play a major role in reaching out to teachers through pre-service and in-service courses. Minnesota, NYC, Oregon, Texas, Florida, and California began to develop large-scale curriculum projects through their local initiatives. Universities became key centers for both teacher training and curriculum development. They offered large-scale curricula to their constituents. Individual principals created visions that resulted in model programs. These schools produced leaders.

Then, the publishers started to become active. There were enough teachers out there to buy books. There were enough school districts to buy materials. Publishers went to the leaders at the federal, state, and local levels to be their curriculum developers and authors. Entrepreneurs became software developers and then website developers. Apple Computer even funded a publisher, Intellimation, to standardize teacher-developed materials and published these materials. These publishers produced leaders.

In tandem, the professional organizations grew up, creating an infrastructure of their own. The National Council of Teachers of Mathematics, the Association for Computing Machinery, and ISTE were among the first. They were soon followed by computer special interest groups in most educational professional organizations. Each of these groups created conferences such as the National Educational Computer Consortium, magazines such as Technology and Learning, and networks of people such as SIAA (Software and Information Industry Association) -- all related to educational technology issues. These professional organizations produced leaders.

Soon, museums were creating computer-based learning environments. After-school centers, libraries, and community centers all got into the act, because they had constituents who demanded to learn through new media applications. These institutions also produced leaders.

In the Jewish community, we need to intensify the development of institutional support that can produce leaders as well. We have many seminal programs already. I mention but a few. CAJE and JESNA provide centralized support. The Jewish Education Center of Cleveland, the Associated Talmud Torahs of Chicago, and the NYC Board of Jewish Education provide state or regional centers. Jskyway provides online training and JTS provides pre-service training. JeMM, Davka, and Jewish Pathway provide exciting new curricula. The Jewish Educator's Network provides professional networking. The Skirball Cultural Center in Los Angeles and the Jewish Museum in NYC create exhibits. Through the leaders of all of these organizations, vision can be expressed and implemented and funds can be found to do many exciting projects.

Ubiquity

However, without the major support of Jewish funding agencies, there are not enough platforms on which to stand to develop enough leaders to do what needs to be done to create a sense of ubiquity of Jewish educational technology. We have to look at the number of agencies that were involved in the secular world to make computers ubiquitous there. Centralized federal, state, and local organizations provided funding and support. Universities and teacher training programs provided expertise. Publishers provided vehicles for output

and distribution. Professional organizations provided forums and collaboration. Altogether, these efforts created a critical mass of institutions, people, materials, and excitement that manifests itself in a self-sustaining infrastructure of creativity and growth. In the Jewish world, we need to find equivalent organizations that can provide the same critical mass.

To What End

As Jewish educators, what do we want to do with the infrastructure that we create both for our own nourishment and for our students and their parents? I would contend that we go back to the axiom presented in Pirkei Avot. We teach Torah. We create user-friendly versions of our sacred texts. We teach service to God. We give in-depth coverage on how to celebrate holidays and what are the mitzvot, the customs and ceremonies, the blessings, the foods, and the perspectives among denominations and across cultures. We teach acts of loving-kindness. We provide students with social action websites and tell them how to collaborate with others, using computers as tools.

As Jewish educators, we want to create an environment for Jewish learning that is stimulating and engaging. One of the most popular and prevalent uses of computers is in creating communities of interest. Therefore, we want to provide educators, parents, and students with access to communicate with each other through e-mail, discussion boards, and chat rooms to discuss Torah and service and social action. To create continuity and commitment, we need to provide experiences with technology that support what it means to be Jewish and what it means to study as Jews. That means that our programs need to be highly interactive, innovative, and controversial, because that is who we are as a people. At its core, then, we need to be able to use computers to discover and experience what it means to be Jewish. We want to learn to formulate the questions that are appropriate for 21st century Jews and we want to teach ours students to ask their own questions. If not now, when?

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