

Language Arts Journal of Michigan

Volume 17

Issue 1 *What's Cool in Your School*

Article 4

1-1-2001

Technology Downgrade: Adapting Tomorrow's Classroom to Today's Schools

Leah Zuidema

Follow this and additional works at: <http://scholarworks.gvsu.edu/lajm>

Recommended Citation

Zuidema, Leah (2001) "Technology Downgrade: Adapting Tomorrow's Classroom to Today's Schools," *Language Arts Journal of Michigan*: Vol. 17: Iss. 1, Article 4.

Available at: <http://dx.doi.org/10.9707/2168-149X.1332>

This Article is brought to you for free and open access by ScholarWorks@GVSU. It has been accepted for inclusion in Language Arts Journal of Michigan by an authorized administrator of ScholarWorks@GVSU. For more information, please contact scholarworks@gvsu.edu.

Technology Downgrade: Adapting Tomorrow's Classroom to Fit Today's Schools

Leah Zuidema

Last August seemed to me like a Star Trek episode, one of the sort where the crew find themselves trapped in a culture with relatively primitive technology. I'd just begun teaching freshman composition at Grand Valley State University in a setting many English teachers would envy: I held class in a computer lab for two hours per week, and for the other two hours of each week we met in a room equipped with a ceiling-mounted media projector connected to a personal computer and a VCR. Many of my new students had never before enjoyed such luxuries in a school setting, and they marveled at having such regular access to technology. I, on the other hand, had been teaching in a comparatively high-tech environment for the past two years, and I frequently found myself reminiscing, "If only I still had . . ." and then thinking back to the technology available to me at Byron Center High School. (In the Star Trek episode, this was the part where the screen would get wavy while dream-like music played in the background.) Forgetting my surroundings, I'd touch my finger to the computer monitor screen in my GVSU classroom, expecting to control the media projector or VCR with a few taps of my fingertips. Nothing would happen, of course, and I'd be jolted back to the reality of my new surroundings.

Out of necessity, I adapted quickly to my

new teaching environment. But my experiences at Byron Center High School left their mark on me and on my teaching. I began to think about ways to use the limited technology available to me in my new situation, and I realized that I could modify much of what I'd learned in the past two years to fit my current setting. The ideas I'm sharing here would, of course, be most conveniently implemented in classrooms with technology comparable to that at BCHS, which I'll describe shortly. But sufficiently advanced planning—and sometimes even some leg-work—would make these ideas feasible in schools with fewer or less-advanced resources, and the effectiveness of the activities wouldn't have to suffer. So take heart: while you may not teach in a high-tech school, there's a good chance you'll be able to capitalize on a few of the adapted ideas I'm sharing here.

The Captain's Chair: The Classroom Resource Management System at BCHS

I actually began teaching at BCHS in 1996, two years before the high school moved into a new building. My first classes were scattered around the school, some meeting in the cafetorium, some meeting in other teachers' rooms during their planning periods. My favorite piece of technology that first year was a rolling cart for storing my supplies. The next year I had a classroom to call my own, as

well as an overhead projector, a temperamental Macintosh abandoned by another teacher, and a television mounted in the corner of the room. I considered a lesson to be a high-tech success when I was able to connect the library's VCR on a rolling cart to my TV without having to ask my students for help. Signing out the cart in advance, wheeling it to my room, and then trying to figure out the hook-up was such a tedious process that I rarely used the VCR or other technology available to me.

Imagine, then, the combination of giddiness and panic I felt upon moving into the new high school building. For the first time, I had a room, a desk, furniture, and equipment never before used by another person. At the front of my room, the Classroom Resource Management System¹ waited for me to take my position at the helm. A bulky desk, bolted to the floor and stretching the length of the whiteboard, was the platform for a single, touch-screen computer monitor. It looked innocuous enough, but at my fingertips were the controls for my personal computer, three video cameras, two full-sized television monitors, two miniature television monitors, a VCR, a multi-server video library, three satellite receivers, and Internet access on a dedicated phone line—all ready for my use at a desk mounted on hydraulics so that I could adjust it to the height I preferred. I remember joking that I'd need a refresher course in driver's education to run the thing.

I was pleasantly surprised to discover that using the CRMS was intuitive. My past experiences with the Windows operating system and with touch-screen ATM machines actually made using the CRMS easy. With a tap of my finger, I was able to display the input from the cameras, VCR, or computer monitor on the TV screens, and in no time I was clicking through PowerPoint presentations, guiding students through Internet sites, and training my cameras onto objects on my desk as if that were the only way I had ever taught. I was hooked.

I didn't imagine leaving BCHS anytime soon, but the birth of my first child persuaded me to look elsewhere to find part-time work. Leaving the CRMS technology behind was disappointing, but adapting

to the technology at GVSU wasn't as difficult as I had anticipated. In some ways, my new situation mirrored the conditions at the old high school building. I traveled from one classroom to the next, and some classrooms were better equipped than others. The section of freshman composition that I mentioned earlier met in a classroom with a computer and accompanying media projector, but two other sections met in rooms that forced me back to the blackboard and overhead projector. The difference in my new situation? My experiences with the CRMS now had me convinced that it would be worth the extra effort to use technology regularly in my relatively low-tech surroundings. My hope was that in spite of less-efficient equipment, I would be able to preserve the effectiveness of the activities.

I'm happy to report that the hoped for modifications were in fact possible (in most cases). Some of the adaptations were more practical than others, I admit. And I still wish that my fellow English-Language Arts teachers and I could all have technology like the CRMS, technology as updated and accessible as that found regularly in the business world. Perhaps that day will come sooner than I imagine. In the meantime, however, in the can-do, make-do spirit of teachers everywhere, I submit the following adaptations and hope that you find them useful.

Adapting Tomorrow's Classroom to Fit Today's Schools

The feature of the CRMS most readily available to many teachers is the TV/VCR, so I begin there. In the old high school building, my control over the television was limited to a push/pull switch for the power and a few dials to alter the color, contrast, and volume. The TV monitors in the new high school came with many programming options, and one day while we were watching video clips from *Romeo and Juliet*, a student suggested that I turn on the closed captioning so that he and the other freshmen could better understand the "Old English," as he put it. I was surprised that the student wanted to read the text as he watched, but

I decided that it couldn't hurt to give his idea a try. This strategy was actually a hit with the students, had educational merit, and could easily be duplicated by any teacher with access to televisions or other visual media with closed captioning decoders.

A convenience of using the VCR with the Classroom Resource Management System was that I could access video clips from several different sources in rapid-fire succession by storing brief segments in my computer. Sometimes a few lines from one television show, film, or student presentation were all that I needed to set the tone for a lecture or to spark a lively discussion among my students. Other times, I wanted to flip quickly from one source to the next, and the CRMS allowed me to do so with ease. I liked not having to fast-forward, rewind, and pop tapes in and out of the player as I jumped from clip to clip; the students stayed focused on the topic at hand instead of being distracted by me fumbling with the tapes. To mimic this efficiency without the CRMS, a teacher could use his or her school's A/V equipment to record desired segments to a single VHS tape. While the recording process could be somewhat tedious, the classroom benefits would make it worthwhile—especially if the clips were used in several sections or were used again in another term.

This strategy was actually a hit with the students, had educational merit, and could easily be duplicated by any teacher with access to televisions or other visual media with closed captioning decoders.

One of the features of the CRMS that I enjoyed the most was the overhead document camera, a video camera mounted over my desk with a live feed to the television monitors. As with the other cameras in the room, I was able to zoom in and out and to control the angle of the camera. (Note that I was able to disable the camera easily and at will so that the top of my head or a stack of graded papers wasn't broadcast to the whole room.) My favorite use for the desk camera was to display picture books on the TVs so that students could

view the illustrations close-up while I read the accompanying captions or text. Some of the picture books helped students to visualize historical settings and characters, while I chose others as examples for discussions about point-of-view, characterization, or other elements of fiction. A simple method for modifying this technique takes only a little advance planning: I use a video camera to record close-up shots of the picture books of my choice (think of it as amateur Reading Rainbow). If I know that the VCR I'll be using to show the tape doesn't have a good "pause" function, I read aloud as I record so that each page will be displayed for an appropriate length of time. (Listening to my own voice on tape makes me squirm, so I usually mute the sound and give a live reading or commentary in class.) Another possible adaptation is to make slides of select illustrations, but I've avoided this method because of the cost and delay involved in developing the slides, the hassle of finding a slide projector, and the necessity of "getting it right" the first time or paying for repeated attempts at improvement.

Another way that I frequently used the CRMS overhead document camera was to display student work generated during the class period. As a class we were able to spontaneously analyze charts, webs, tables, maps and diagrams, to discuss the strengths of a first draft or make suggestions for further revision, and to see how a student's poem looked on the page instead of relying only on our ears. As an added bonus, we didn't have to waste class time waiting for students to copy their work to the board. A simple, relatively inexpensive way to duplicate this activity is to make each student the proud owner of an overhead transparency sheet. The teacher can keep fine-tip, dry-erase markers on hand in the room, and students can take responsibility for returning to class each day with their transparency sheets clean and clear. For selected in-class activities, the teacher can then request that students write directly on the transparencies so that their work can be displayed on an overhead projector. If the teacher or student needs a more permanent copy, the student can paperclip a white sheet of paper to

the transparency for short-term use or copy the work—by hand or machine—to regular paper for long-term use.

The CRMS overhead camera I've been discussing was only one of three cameras in my room. Another camera that I used regularly was mounted from the ceiling near the back of the room, focusing on the desk and whiteboard. The instructor camera, as it was called, was installed—along with a third camera focused on the student—to be used primarily for distance-learning purposes. I found several other ways to take advantage of this camera. On one occasion I was making preparations for a substitute teacher. I had a 15-minute lecture that needed to be presented, and I wanted to avoid the time-consuming work of writing it out for the substitute. I saved myself valuable time by videotaping the lecture in my empty room after school and then leaving the tape for the substitute to show in class the next day. I also used this camera intermittently to videotape myself for self-evaluation, but more often, I used the instructor camera to record student presentations. Doing so allowed me to put down my red pen and paper during the presentations and instead to give my students the full attention their work deserved. I found that I was able to give much more precise and helpful feedback when I waited for the “second screening” to make written comments (or hold a conference with the student(s)). I always promised my students that I wouldn't play the tapes for anyone else without their permission, explaining that I was making the tapes only so that I could listen now and grade later. This seemed to make them more comfortable in front of the camera.

Even when we didn't find the answers to their questions, students were learning about the value of curiosity, about information-retrieval skills, and about evaluating the credibility of sources.

To take advantage of an “instructor camera” in a classroom not equipped with the CRMS, I suggest either mounting a video camera on a tri-

pod or assigning a student (or rotation of students) to run the camera. Allowing students to be responsible for videotaping class activities actually has some advantages over a ceiling-mounted camera. It can, in many cases, make those in charge of the taping session more focused than usual on the activities at hand while serving as a reward for those who have earned the privilege. If student videotaping becomes a regular classroom activity, it can also serve as a springboard for valuable discussions about professional filming techniques and their effects on television and movie audiences.

One last feature of the CRMS that I used frequently was the ability to display my personal computer screen on the television monitors. Several times a week I would find myself opening a word processing document, selecting a large font, and collaborating with my students to draft, revise, or edit a poem or paragraph. The distinct advantage of being able to display the computer screen, rather than relying on an overhead, was that I could model computer-aided writing for my students. It was easy to cut a sentence or phrase from one location, paste it in another, debate the choice with the students, and then move it back again if we chose to do so. Students could see what the changes really looked like instead of trying to imagine them; if we wanted to, we could even save several versions of the same text and flip from one window to the next so that the class could compare the choices.

I also made regular use of the other PC-based capabilities available to me. In some of my favorite literature lessons, I used on-line tours to help students visualize the settings of short stories and novels. Encarta and the Internet also proved invaluable for spur-of-the-moment searches when students asked relevant questions that none of us was able to answer. At first I modeled searches for the students, but I quickly learned to involve them in the process so that soon I was acting as the hand on the mouse while the class took charge of where and how to look for answers. Even when we didn't find the answers to their questions, students were learning about the value

of curiosity, about information-retrieval skills, and about evaluating the creditability of sources. The PowerPoint presentation software was another tool for daily use. I used it for lecture notes (much like an overhead projector but with the added benefits of audio and video clips), and my students learned to use it for their presentations.

In short, the ability to display my computer on the television monitors was the asset of the CRMS that I found most valuable. Unfortunately, it is also the most expensive feature to replicate. The beauty of the CRMS is the ability to access and display information on demand, functions that can't be imitated with overhead projectors, video cameras, or TV/VCRs. Holding class in a student computer lab with Internet access is useful, but it requires advance planning and availability and won't help in spontaneous learning situations. It's also difficult in a lab to keep every student focused when skill levels (low or high) or technical difficulties distract some from the intended lesson. A media projector, then, is the next-best solution to the CRMS for displaying a single computer screen to the whole class. For teachers who have access to laptop computers, a Liquid Crystal Display overhead projection panel (LCD panel) is another option to enable displaying the computer screen to the class. Teachers who are fortunate enough to have access to these devices shouldn't hesitate to learn to use them and start incorporating them into their own classroom instruction.

Class Dismissed

Depending on your situation, some of these adaptations and adjustments will be more practical than others. My goal is not to provide all of the possible options or to decide which ideas will work best for others. I do, however, challenge you to create and share additional solutions to the technology gap so common in today's schools. By implementing short-term fixes like the examples I've listed and developing long-term solutions for adequate technology funding, teachers can create classrooms that will help us to prepare today's students for tomorrow's world.

Notes

¹ For more information (including pictures) on Byron Center High School, the Classroom Resource Management System, or Innovative Communications Inc. (the developer of the CRMS), please see <http://www.byron-center.k12.mi.us/bchs/index.html>.

About the Author

Leah Zuidema, a former high school teacher and Red Cedar Writing Project participant, teaches English at Grand Valley State University.