Technology brought the writing center to life because of the word processor, but new technology is actually going to create robotic life that thinks with us, for us, to us. It will offer portability all from a microchip stored in a coat pocket. Technology will continue to expedite today's hurry up world, and this will carry over into the writer's world. The demand for instantaneous feedback provided by a computer that can out-think any one human tutor coupled with the complete portability of a computer, fax machine and telephone all carried on a belt loop will eliminate the functional use of a writing center. Contains 13 references. (EF)
Writing Centers in 2020-- Gone!

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Conference theme - Looking Forward

For fifteen years, I have directed a writing center at Calvert Hall College in Baltimore, Maryland. The lab is replete with computers, scanners, proxima monitors, Altiris network vision, Internet, and 40 student peer tutors who are trained weekly. So what could be different twenty years from now? We have it all now!

Shockingly, the research points one way--writing centers in 2020 will be gone. Technology created the center, and technology will bury it. Before I substantiate my claim that labs will be gone, let us first remember how they came to be. When the word processor, not the Internet, came into existence,
it was shortly thereafter that colleges filled rooms with word processors for student use. The evolution of a writing center had begun. Students realized that the processor was not a typewriter. The cut and paste feature gave one the impetus to draft, revise, edit, and do it all recursively. One did not have to pull the paper out of the typewriter and start all over. It was not necessary to work laboriously by hand with lots of scratch outs and circles around phrases on paper. In effect, the word processor was technology that created the birth of writing centers.

The 1968 movie 2001 Space Odyssey featured the computer character Hal who could communicate with humans. Rather than respond to commands, Hal gave commands. That computer profile is exactly what scientists predict for the future. An April 1998 Reuters article, "Gates Predicts Breakthroughs" unveiled that "Microsoft is investing big bucks to develop systems to recognize and understand human conversation. This will happen within a decade...every personal computer will have seeing, listening and learning." (Gates, Predicts).

The September 26, 1997 article "Gates Ponders Techno Future" declares that Microsoft is integrating basic speech technology into its Windows NT system. Gates calls this computer vision --technology that brings video images to the screen in real time on voice commands. "Forget
the keyboard and mouse," it won't be necessary (Gates, Ponders). Apple Computer is devising a portable TV top entertainment device that offers Internet access. "The device will connect to any ISP running any operating system on its servers. It will be called an information appliance with hooks to internet web sites that are accessed without having to wait for a PC to load."

Communication from within the car started with the CB radio. Then, cell phones were hard wired in the vehicle. Now, the cell phone is handheld for portability. In 2005, the wristwatch will serve as a cell phone/PC communicator with GPS, global positioning system. The Dick Tracey watch will become reality. (Yurko 48). Even today, Auto Exec Pro offers the internet with car mounted platforms and iGo offers Lap Dog a 2.5-pound notebook PC including batteries (Syarto 44). $50.00 buys software from WinFax that literally stores a fax machine in a shirt pocket with the 3Com Palm Pilot. This palm version of Symantec's desktop fax package sends and receives documents from a Personal Digital Assistant (PDA) without a modem (Broida 32).

Where am I going with this? Computers will communicate with us, analyze data and offer options. The computer will not be restricted to use in school or at home. It will be so portable and mobile that we become a
walking writing center. In 2002, videoconferencing cameras will become standard features on laptop and desktop computers (Yurko 47). The Internet will operate from the car. Faxes are sent/received from a shirt pocket. Wristwatches become telephones. Computers will talk and think with us. A tutee can hookup on a videoconference, send an e-mail or fax of text, and get a tutorial evaluation without ever going to a writing center.

The 1956 film *Forbidden Planet* introduced the real, moving, thinking computer robot named Robbie. The fantasy provided in that film is nearing reality. Just as a chess computer analyzes a chess move, and wins most of the time, a writing program will store millions of combination responses and syntactical arrangements to offer a helping hand. So, why would one need a writing center?

The Industrial Revolution proved that machines DO very capably take the place of people. The tutor will be replaced. Additionally, I propose that because of society's "Burger King" mindset, writers will not take the time to drive to a college writing center, wait a turn, and listen to one individual reflect on essay choices. People will carry a pocket-sized computer that offers hundreds of options for revision. Writers want the same hurry up service with their writing as they do with other lifestyle patterns.
Hurry up -- get the hamburger from the drive thru window

Hurry up -- Close deal #1 on the cell phone while driving to setup deal #2

Hurry up -- cook with the microwave and not the oven

Hurry up -- where is the remote TV clicker?

Hurry up -- use the grammar checker to get through this document quickly

So, does it not follow that the student writer wants *hurry up* help?

The concept of the writing center *per se* developed because the cut and paste feature of the word processor outweighed continued use of a typewriter. The word processor facilitated the "hurry up" mentality.

Listen how the tutee will get that help without going to a writing center.

*ABCNews.com* reports that the Internet will be the telephone. It is called e-telephony. "Consumers can now point, click, buy and make a phone call -- all simultaneously" (Arvedlund). You may have already done this. With the ICQ & AOL Instant Messenger service, we NOW can talk live in split screen with another or open up the microphone and chat. It is the retail battle over the Internet that has developed the voice technology.

The Internet telephony market will go from one hundred fifty million dollars in 1999 to two billion in 2001.

As I said, hurry up -- why go to a store if one can stay at home and make the purchase?
Hurry up -- why go to the writing center if one can:

(a) call the tutor with a Dick Tracey watch
(b) use the internet for live chat
(c) send the tutor a faxed essay from my vest pocket palm corder
(d) videoconference with the tutor from the automobile
(e) or just let my home "Robbey robot" organize and re-write the draft with multiple good options to choose from?

If the ideology of "hurry up" can be accepted and if there is believability that technology will have speech recognition and thinking respondent computers, then the handwriting is on the wall. The student writer won't need to be inconvenienced. The computer rarely loses a chess game. Should a pre-programmed language response machine be any less efficient than the possibility of programming thousands of chess moves within a matter of seconds?

The computer of the future will be wearable. It will not be anything like the status quo. Computers will not sit on desks. They will not weigh twenty-nine pounds. Monitors will not take two people to lift and they will not have to be plugged into a wall.

The article "The Rodent Revolution" illustrates that in the near future, one's hands will "feel" what the eyes can see. The mouse, first invented 30
years ago by Doug Englebart with the point and click, will evolve first to what scientists call "force feedback." The mouse will not scurry over a pad. It will change completely to track what the eye looks at. Roger Matus, VP of Marketing for Dragon Systems, says that "the computer will recognize you and even know what you are thinking, detecting frowns, and expressions." Dave Kelly, president of Ideo says that the goal is not to get the "computer moving better but to get the computer better at understanding us" (Rodent).

Okay - a computer without a mouse or keys. What next? How about a flat panel screen and no separate PC tower or frame? Packard Bell NECs Z-1 is a flat panel screen. The iMAC fused the monitor and the hard drive thereby reducing space and creating portability (Miles). No longer is the question, where do I put this big box? Several tech companies demonstrated at PC Expo 99, June 21 1999, that they have flat panel screen technology. Instead of using traditional motherboards, the machines use compact boards found in laptops (Martinez, Banning). Eventually, we will wear our computer.

Is there such compact circuitry to make things all hand-held? Kenneth Chang writes in his article "Organic Circuitry" that researchers have built an "electronic device using a specially designed organic molecule
instead of the silicon of present day computer chips." The Hewlett-Packard Company team wrote in the journal *Science* that the organic molecule will lead to ultra-tiny processors 100 billion times faster than the most powerful ones available now. "Many Pentiums on a grain of sand... and that is not an exaggeration. We could have a prototype of a molecular computer in five years and something that you might buy in 10 years" (Chang).

The essay "It's the Age of the Microchip" declares that the isle of Manhattan with all of its plumbing, wiring and phone lines can be shrunk to the size of a postage stamp, on one microchip (Smith). Certainly then, the future of writing centers will be effected.

Computers are an integral part of a writing center. They are not the only means as many centers are tutorial oriented only. Why though, would a person want to travel, park, use gas, wait a turn, to consult with a tutor when the same evaluation can be accomplished without leaving home. My PC will know me, understand me, talk to me, and is loaded with a million combinations of writing options when given the essay draft for examination. If I talk with a stockbroker on the Internet, if I speak with friends on the Internet, if I buy from retailers on the Internet, is there any reason I should not speak with a writing tutor in this way?
Martinez's article "A Computer You Can Wear" conceptualizes that the future will have us "constantly connected to e-mail and your cell phone without having to carry either." You will have instantaneous access to the Web, wherever you are. Simple voice commands through the introduction of the Palm III from US Robotics are just the beginning. The Massachusetts Institute of Technology has a wearable computer called the Lizzy. Xybernaut's 133P model has a wearable computer that works on voice activated commands. A computer we can wear? How do I wear a monitor?

"Computer chips are being designed right now to augment the eye and other parts of the human body...If you want to have a little video teleconference, you really could call it up on your watch." MicroOptics Corp. has created a system that projects an image onto a pair of "specially designed eyeglasses, which are infused with liquid crystal. It gives the illusion of a free-floating, full size monochrome screen, without impairing the user's vision" (Martinez, Computer).

In twenty years, we will wear our computers, talk with anyone anywhere from a wristwatch, converse with our computer without using keyboards or mice, talk with a tutor using satellites or see the tutor in face-to-face video contact. We will send text documents from vest pocket fax
machines produced from a completely compact wearable computer. Or I might even get my robot to write the paper!

Technology brought the writing center to life because of the word processor; but new technology is actually going to create robotic life that thinks with us, for us, to us. It will offer portability all from a microchip stored in a coat pocket. Technology will continue to expedite our hurry up world and this will carry over into the writer's world. The demand for instantaneous feedback provided by a computer that can out-think any one human tutor coupled with the complete portability of a computer, fax machine and telephone all carried on a belt loop will eliminate the functional use of a writing center.
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