

Emerging and Assistive Technologies Table of Contents

- Introduction
- Technology and Social Inclusion by Mark Warschauer
 - Chapter 1:
 - Summary
 - Assigned work
 - Postings
 - Chapter 2:
 - Summary
 - Assigned work
 - Postings
 - Chapter 3:
 - Chapter leader Assignment
 - Presentation
 - Class Postings
 - Chapters 4 and 5:
 - Summary Chapter 4
 - Summary Chapter 5
 - Assigned work
 - Library Interview
 - Chapter 6:
 - Summary
 - Assigned work
 - Postings
 - Chapter 7:
 - Summary
 - Assigned work
 - PowerPoint Presentation
 - Postings
- What Every Teacher should Know About Assistive Technology by Dave L. Edyburn
- Reports & presentations:
 - Trends
 - 3D Worlds
 - TIPs
 - Voice Recognition Software: DragonSpeak
 - Writing Tablet: InterWrite SchoolPad
 - Podcasting
 - Windows Movie Maker
 - Blogs
 - ReadPlease
 - AT for Hearing Impaired
 - Accesslearning.net
- Assistive Technologies: Report
- Resources (5 each, annotated bibliographies)
 - Future trends in education (associated w/ technology)
 - 3-D worlds
 - Assistive Technologies/Accessibility resources
 - Emerging technologies

All About Me...

Hi! I am Lynne and I am in the MED/Instructional Technology Leadership program. I have a BS in Business Education from Bloomsburg University (in PA). I am finishing my 10th year at Chancellor High School in Spotsylvania County. I teach Business and Information Technology....specifically Accounting, Advanced Accounting, Computer Information Systems, Keyboarding, and Information Technology Fundamentals (5 different preps). I am the department chair for the Business and Information Technology and the Career and Technical Education departments and I am the head advisor for the Future Business Leaders of America (FBLA). In addition to all that, I am also the Treasurer for the Spotsylvania Education Association. So, when you hear me talking to myself you know why (sometimes that is the most intelligent conversation I have had all day)!

I grew up in Southington, CT. We (my husband and I) moved here because I was offered a job. We love it here! We just celebrated our 10th anniversary and we have two small children (a boy,6, and a girl, almost 2).

I am not exactly sure what I want to do with my degree. I think I would like to teach classes at a community college. I used to teach Adult Education classes and I enjoyed it very much. I taught Office XP for a number of years before I started this program. After I finish this Master's degree, I would like to take some CISCO and A+ certification classes.

I collect Penguins and enjoy playing SUDOKU and spider solitaire (when I have time or need to de-stress).

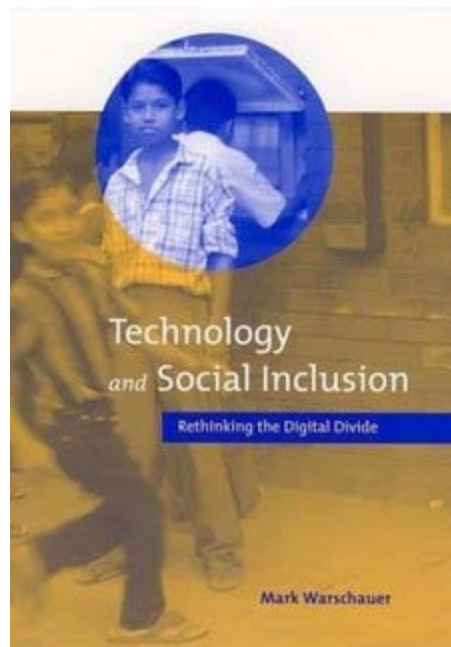
msn messenger: lynneSL8R@hotmail.com

my web page:

http://students.umw.edu/~lslat4da/lslater_501T/index.htm



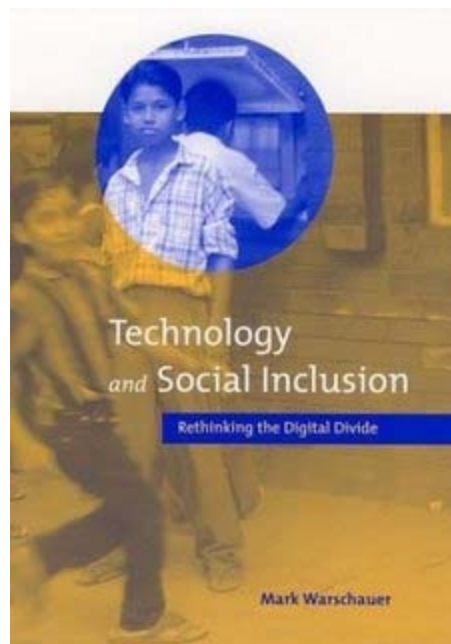
Technology and Social Inclusion



By Mark Warschauer

Chapter 1

Economy, Society, and Technology: Analyzing
the Shifting Terrains



Chapter 1 Summary

Economy, Society, and Technology: Analyzing the Shifting Terrains

The author states that information and communication technology (ICT) has contributed to a profound change in the world in which we live.

The focus from that of the digital divide is shifting to that of social inclusion and it rests on three main points:

1. A new information economy and network society have emerged
2. That ICT plays a critical role in all aspects of this new economy and society
3. That access to ICT can help determine the difference between marginalization and inclusion in this new socioeconomic area.

Informationalism, or Postindustrialism is a new stage of global capitalism. There are 4 features that distinguish this era from the prior industrial era:

1. The driving role of science and technology for economic growth:
Countries that were able to integrate science and technology into the production process thrived where countries that found it difficult to apply science and technology to industrial processes, such as the Soviet Union, failed.
2. A shift from material production to information processing;
There has been a shift from manufacturing to service industries and many of the traditional industries (auto and steel) are relying more and more on information processing in order to produce competitive products.
3. The emergence and expansion of new forms of networked industrial organization:
There has been a shift from the assembly line to a flexible customized production with teams of multi-skilled employees grouping and regrouping to take on complex tasks.
4. The rise of socioeconomic globalization:
Capital, production, management, labor, markets, technology and information are organized across national boundaries.

Economic Stratification – There is a sharp rise in the global inequality among countries over the last 4 decades. There are inequalities between countries and within countries. There are inequalities within rich countries and poor countries. The well-to-do are the people who have access to information and communication technologies and the poor suffer inadequate housing, health care, education and employment.

Computer-Mediated Communication changed existing ways of representing, organizing and sharing information in 4 important ways: Written Interaction, long-Distance Many-to-Many Communication, A Global Hypertext and Multimedia.

The author concludes that ICT is deployed will can contribute toward improved education, government and health care and can be a multiplying factor for social inclusion.

Chapter 1

Assignment:

1. Students will research a scholarly article identifying international technology stratifications. They will write an annotated bibliography on the article and email it to the instructors. Prepare to discuss the article during class.
2. After class, students will summarize our discussion in class as a posting on the discussion board in blackboard. Included in your summary should be how Informationalism can affect the classroom and Computer-Mediated Communication affects society. Students will be expected to respond to at least 3 of their classmates postings. Summaries must be posted on the discussion board by midnight on Sunday, June 25, 2006. All replies to posting must be completed by noon on Wednesday June 28, 2006.
3. Students will give feedback concerning class instruction as no more than a one page paper. This is to be completed and emailed to the instructors by midnight on Wednesday, June 28, 2006.

1. Annotated Bibliography

Macleod, H. (2005, December 31). What role can educational multimedia play in narrowing the digital divide? *International Journal of Education and Development using ICT* [Online], 1(4). Retrieved June 21, 2006 from: <http://ijedict.dec.uwi.edu/viewarticle.php?id=120>.

The paper examines the concept of the digital divide and the “haves” and “have nots.” It also discusses how educational multimedia can play a key role in reducing the impacts of the digital divide, especially in developing nations. This divide does not just encompass the differences between different countries; there is a divide within certain countries as well. Educational multimedia can play an important role in promoting social inclusion and narrowing this divide. The author lists three interrelated issues that could prevent the effective use of ICTs (Information Communication Technologies) in developing countries: the level of electronic literacy, the lack of relevant online materials and the cultural relevance of dominant models of interface design. Developing educational multimedia can help overcome these issues.

2. Summarization of Discussion:

Great job Mike - you will be a hard act to follow!

Informationalism can affect the classroom in several ways. Students have instant access to information about different topics. I will use our 531 classroom as an example; If someone is discussing a new invention, book or interesting website, we can all find out more information with a few clicks of our keyboard. We can read more about something we don't understand or want to learn more about. Our students, if they are in a computer lab can do the same (or they can look the information up later in the day). Teachers can access databases of lesson plans where they can learn to teach things in new ways, hopefully

increasing student interest and participation. Teachers can use United Streaming to find video clips of the subject they are teaching. This can help save lots of time over the old method of having to find a video in the library and pull out the important or relevant parts. Teachers can find pictures or graphics to help illustrate their lessons (for the visual learners). Parents can use computers to check their child's homework (if they are unsure of the answers), to keep in contact with the child's teacher and to keep up with school activities via the schools website.

Computer-mediated communication affects society in many ways as well. My mom lives 9 hours away, it is great that I am able to send her a quick email to let her know about something, rather than place a long distance telephone call. I can send her regular pictures of my children as well without having to pay for a stamp (and she doesn't have to wait for the mailman either). Hopefully, after my DSL is installed next week, I will be able to use Skype to call her for free. I would love for her to see my kids while she is talking to them, she has a hard time figuring out what my (almost) 2 year old is saying to her. Katie knows that she is talking to Grandmas, but I think she would get so much more out of it if she could see Grandma too! I use the internet to keep in contact with friends I am sure I would have lost touch with if it were not so easy to just type up a few sentences and hit "send". As department chair, I send emails to my colleagues to keep them up-to-date of school building going-ons. I share lesson plans and websites that I think would be helpful to several other teachers. I email my state representatives to let them know how I feel about certain bills up for vote. Students (and teachers) can email the author of a book to ask them more in-depth questions or email a NASA astronaut or scientist. The possibilities are endless and offer much for our students.

Reply to fellow classmates postings:

Trish:

I have had students approach me before or after school to work on assignments that they are unable to complete at home because they: don't have a computer, don't have internet access, or because they do not have a printer. You are right, they often don't want their classmates to know that they don't have the technology at home.

I have also taught Office (and computer basics) as an Adult Education teacher. Every single semester, I have had to teach someone how to double click and the difference between left and right mouse clicks. You wrote "Every class reminded me so quickly how much the high school kids know and also how much I expect them to know before they even get to me. The ICT dividing line is very obvious between two generations." I couldn't agree more! (Have I told you how nice it is to have a fellow BIT teacher in class?)

Aileen:

I do love the internet, but you are so right about the types of websites we use with our students. I have to constantly remind my students that just because you found it on the internet, it doesn't necessarily make it true. For example, I had my students completing research for a PowerPoint presentation about the 50 states; part of the assignment was to add the state slogan or motto. One student was presenting the state of New York - she put "At least we're not New Jersey" as her slogan....she had found it on a joke site and didn't realize that it wasn't correct.

The internet certainly does make shopping easier! Katie damaged a book and I wanted to replace it. I went to Amazon and typed in the ISBN number and was able to find the exact book for 10 cents! When I brought into her daycare, they couldn't believe that I was able to find the same book. It only took me minutes to find it online whereas I would have spent hours looking through bookstores for the book (probably with no success).

Jenna -

You have put forth some interesting points. I agree with your description of the global stratification of wealth and how it is likewise reflected in our classrooms. There are always exceptions, but I would agree with your findings.

I agree, also, that there is great disparity among the public schools. Comparing my high school to the newest high school you would find a huge difference in the technology and software that is available for use between the Business departments alone!

Val:

It is amazing to think of the technological advances our own children will get to experience. When I think about just the advancements of the past 30 years I am astonished and can't even begin to imagine what the future holds.

Teaching internet safety and netiquette are really good ideas. As a Business and Information Technology teacher, these are topics I already teach, but as not every student is exposed to BIT classes, I am glad that all students will receive such lessons.

3. Feedback to Mike's Instruction of Lesson 1

Mike Miller presented Chapter 1: Economy, Society, and Technology on June 22, 2006. He did an excellent job covering the material in his PowerPoint Presentation. The presentation was interesting. I enjoyed the two video clips

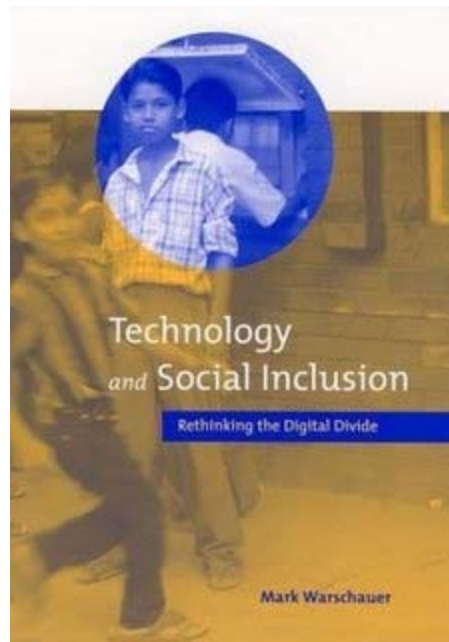
that further explained the different aspects of the chapter. His presentation was very thorough and the resulting class discussion was very interesting. The only thing I might have changed was to add a design template or background color to the PowerPoint presentation. The presentation itself was great; I could tell that Mike put a lot of time and effort into his presentation (even if he claims otherwise)!

The assignments were appropriate for the topic and interesting. They helped to reinforce learning and understanding of the chapter. The annotated bibliography on an article identifying international technology stratifications helped to bring about some class discussion. The summarization of class discussion helped to bring about further class discussion and many more points to consider. The feedback paper concerning class instruction would have also been good as an interactive word document with area for comments at the bottom.

Thank you for an exciting class! As I mentioned before, you are a tough act to follow!

Chapter 2

Models of Access: Devices Conduits, and
Literacy



Chapter 2 Summary

Models of Access: Devices, Conduits, and Literacy

The two most common models of access to new technologies are based on devices and conduits. A third model, literacy also needs to be taken into consideration. Devices are the physical computing apparatus and conduits are the manner in which information is exchanged with other computer users, for example the Internet). Literacy means having the requisite skills to benefit from the computer and its applications and also the potential from engaging with others through conduits).

With regard to devices, the possession of a computer device is only a fraction of what is needed in order to have full access to that computer's potential. The price of computers, software, maintenance, and training may be barriers to use.

In his discussion of conduits, the author discussed the many types of communication conduits. Examples include electricity, telephone service, and cable television. Even with Access to computers and the proper conduit, a person who cannot read or does not know how to use a computer or the languages that dominate software and internet they will have a difficult time using the internet productively.

Lastly, the author discussed literacy as a hurdle for many people and countries. He stated that there are six principal conclusions about literacy:

1. There is not just one type of literacy, but many.
2. The meaning and value of literacy varies in particular social contexts.
3. Literacy capabilities exist in gradations rather than a bipolar opposition of literate versus illiterate.
4. Literacy alone brings not automatic benefit outside of its particular functions.
5. Literacy is a social practice, involving access to physical artifacts, content, skills and social support.
6. Acquisition of literacy is a matter not only of education but also of power.

Physical, Digital, Human and Social resources all contribute to the effective use of ICTs. The help to ensure that ICT can be well used. These resources are also a result of effective use of ICTs. The author states that if these resources are handled well they can serve as a virtuous circle that promotes social development and inclusion. Likewise, if they are handled poorly, these elements can serve as a vicious cycle of underdevelopment and exclusion.

Chapter 2

Assignment:

1. After class, students will summarize our discussion in class, no more than 1 page. In the summary, include why conduits, devices, literacy and the digital divide is important in schools. Also include any questions or problems you have faced or could face in the future. The summary and questions can also be a list. To be posted on Blackboard by Sunday, June 25, 2006.
2. Students will give feedback, instead of comments, to student questions on Blackboard. This is to be completed by Tuesday, June 27, 2006.

1. Summarization of class discussion

Becky - great job! I really liked your cell phone example - it tied it all together nicely!

Why conduits, devices, literacy and the digital divide is/are important in schools.

Conduits are important because they affect the speed at which students are able to access information. When the power goes out so do the computers, so electricity as a conduit is definitely the first necessity. Computers with dial-up modems are much slower than T1 lines. Students using dial-up will not be able to experience some things that students using Ethernet will (such as video and audio clips).

With regard to devices, some of our students may not have access to computers at home. School may be the only opportunity they have to use one. Devices can be computers, printers, scanners, digital cameras, etc. Students enrolled in our science classes have used GPS computers to complete science experiments. These devices helped students understand more about the habitat of grasshoppers.

Literacy is extremely important for students to succeed in this digital world. Students need not only to be literate in that they are able to read, but they must also be computer literate. They need to be able to use a computer to facilitate the learning process, whether it is to understand word processing software or to conduct searches on the Internet. Most employers, today, expect some degree of computer literacy from prospective employees.

The digital divide is something that I think about a lot. I worry that students in Silicon Valley have advantages to those students in Catawissa, Pennsylvania. In many areas of our country parents worry about feeding their children and paying the rent, computers are not even a remote possibility. Globally, this is a concern as well. Students in the USA have a huge technical advantage over those in many parts of Africa or China. I guess, you could say there is a digital divide among teachers as well....teachers who have been in the classroom for

20+ years may be hesitant to use technology in their lessons, whereas a first year teacher may rely upon technology too much.

Questions or problems you have faced or could face.

I am happy to report that I am changing my conduit from dial-up to DSL. I decided that I needed to get with the times, so to speak. I should be up and running by the end of next week. I hope this will help both my husband and myself complete our assignments (he is enrolled at ODU). We have faced problems when trying to download video clips.

I worry about my students using computers to cheat; it is too easy and too tempting to copy someone else's work than create something new. I wonder in the future if we are going to become a society like the Jetsons...I see how far technology has advanced in my lifetime and I wonder what it holds for my children and grandchildren.

2. Reply with Feedback to classmates postings:

Mike, you bring up some valid points.

As a BIT teacher, I rely upon technology working in my classroom everyday. It is always important to have a backup plan. Because I teach in a computer lab I need to be flexible; I have a stack of just in case worksheets or activities for the (very few) occurrences where I am unable to proceed with the planned lesson. I think I showed one video last year and that was during the weeks that I was kicked out of my lab for SOL testing. Showing videos can be much more work than they are worth sometimes. We have to have every video approved by administration before we are able to show them. Also, if the students do not have a worksheet to fill out they will not pay attention or use it as an opportunity to sleep. How do you handle the absent students that missed the video - do you have them watch it later? I haven't figured out how to handle that.

You also brought up that "Teachers need to make sure the students know how to use the program." I couldn't agree more! I have had to help several students create PowerPoint presentations for various classes because their teacher didn't give them any instructions on how to use the software; they expected the students already knew how to create an effective presentation

Val: I would agree that calculator batteries would be a conduit. I would say that they *could* fall into the device category as well. The battery is the conduit to the device (calculator) working properly; if you don't have a battery then the calculator doesn't work.

I took part in a Tapped In session on the Tsunami last semester. It was about what we can do in our classrooms to help those children in the areas affected by the Tsunami, Hurricane Katrina and the earthquake (in Pakistan?). I do agree that what we teach does make an impact.

Jenna :) Great questions!

Do those PDS courses have lasting effects on us, or are we just happy to have all of the boxes checked on our yellow "tickets of leave?"

It depends on the course. There have been many that have provided me with lots of really great ideas, experiences, and tools that I use in my classroom. Some years there is nothing offered for my subject area or at a time that is convenient for me to take. I have had several PD classes that have been a colossal waste of my time.

Given our course here and all of the diverse backgrounds we all come from, how technologically literate do you think your students should be in your particular classes/subject areas?

Well in my accounting class, I expect my students to have a working knowledge of the computer and our accounting software by the end of the year. My other classes - I expect them to be EXTREMELY technologically literate! :) This is where I don't fit in, I teach students the skills they need to be technologically literate rather than as a tool to learn about something else.

Are our schools doing a good job of providing resources for teachers like us so we can achieve these goals, and if not, what are we lacking?

I think that they do a good job. I do, however, wish they were more consistent in making sure that all the schools are the same in regards to the devices and conduits that are available. My principal and CTE supervisor are both very accommodating when I ask to participate in conferences or workshops that would help me become a better teacher.

Finally, when it comes to curriculum alignment, many schools do this anyway when it comes to each subject area. Should we consider doing this as well when it comes to technology as it pertains to each subject area?

This is a good idea. I would like to see certified business teachers at the elementary schools so that all students get an equal start for their technology training. Right now each grade level teacher is responsible for teaching their students in the computer lab (at various levels of expertise). I think 9th grade is too late for a child to learn how to touch type - they have taught themselves bad habits that are hard to change. Having a Business teacher in the elementary grades would be a good foundation and would help to align curriculum.

Aileen - I jumped on the bandwagon and ordered DSL. I have the install kit here on my desk but have to wait until Verizon tells me that it is ready (July 6th).

Our definition of literacy has evolved substantially just within our lifetime, from being able to read and write at a certain level, to now being able to discern what information being researched in relevant and being sufficiently comfortable with current technology to be able to use it effectively.

I really like this statement! We have added a whole new dimension to the word literate.

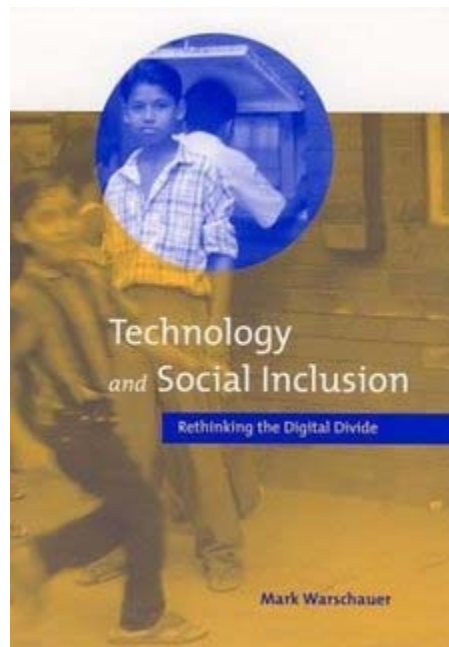
Lynne :)

PS: The top level of Becky's pyramid was "Social Inclusion".

Trish: My 6 year old loves computer games too. We don't let him use the internet without our direct supervision but we do have some games that we let him play (mostly educational games). He is limited to the amount of time that he can play on the computer and watch TV. He does not have his own TV, computer or ipod (heck, even I don't have one)! He will spend HOURS playing with his wooden trains and drawing.

Chapter 3

Physical Resources: Computers and Connectivity



Chapter 3: Physical Resources (Chapter Leader)

Instructional Topic: Computers and Connectivity

Prerequisites: Read Chapter 3. Read the articles listed below:

a. Simputer: the computer for the masses

<http://www.rediff.com/money/2001/apr/24spec.htm>

b. Technology and Social Inclusion

http://www2.evergreen.edu/blogs/students/parjen08/2006/05/technology_and_social_inclusio.html

Goals:

1. Explain the reasons for disparity in Internet access rates
2. Describe the key challenges faced by developing countries in providing internet access.
3. Explain the three issues to achieving greater physical access to ICT: affordability, extension and affordability of telecommunications and provision of public access centers.

Performance Objectives:

6.1 Students will explain the reasons for disparity in Internet access rates around the world. Performance will be satisfactory if each student contributes to class discussion.

6.2 Students will describe the key challenges faced by developing counties in providing internet access. Performance will be satisfactory if each student contributes significantly to class discussions.

6.3 Students will explain the three issues to achieving greater physical access to ICT (affordability, extension and affordability of telecommunications and provision of public access centers). Performance will be satisfactory if each student contributes significantly to class discussion and completes written assignment on Public Access Centers.

Assignments:

1. Students will research Telecenters (or Public Access Centers) based in countries with low ICT access (such as Africa, India or Egypt) before

class. Students will type up 1-2 paragraphs of what they learned and provide a link to the cite they used. During class discussion, students will also explain what they found.

The following links may be helpful:

Lessons from the Field: ICTs in Telecenters -

http://www.digitaldividend.org/pubs/pubs_02_tele.htm

Community Telecenters: Assuring Impact & Sustainability

<http://topics.developmentgateway.org/ict/sdm/previewDocument.do~activeDocumentId=441647?activeDocumentId=441647&activeDocumentId=441647>


2. During class, students will contribute to class discussion.
3. After class, students will post a response to Jenny's blog (article b) to the discussion board.
4. Students will also post to the discussion board aspects of our class discussion that they found to be most interesting or left them with more questions. Students will be expected to post feedback to their fellow classmates (at least 2) postings.

Task Review:

Session 6: Computers and Connectivity	Due Dates
Read Chapter 3 and summarize chapter for Dr. Teabo	June 29
Research Telecenters – type up 1-2 paragraphs on what you learned and provide link (send to Instructor Lynne)	June 29
Contribute to Class Discussion	June 29
Discussion Summary: Posted to Discussion Board	July 2
Response to Jenny's Blog (posted to our Discussion Board)	July 5
Reply Feedback to Postings	July 5

Physical Resources

Computers and Connectivity




Internet Access Around the World



57.2% of North America is Online




Only .5% of Africa is online



Why the disparity?




- Economics
- Infrastructure
- Politics
- Education
- Culture




Physical Access in Developed Countries


- There is also an inequality **within** developed countries stratified by:
 - Education
 - Income
 - Race
- Challenges for these countries include
 - Improve the quantity of access
 - Provide more equal access among citizens

To ensure that everyone has the opportunity to have Internet Service in the home


Finland Vs. France



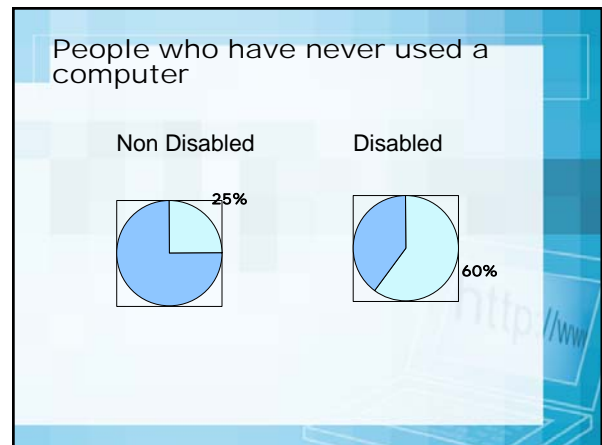
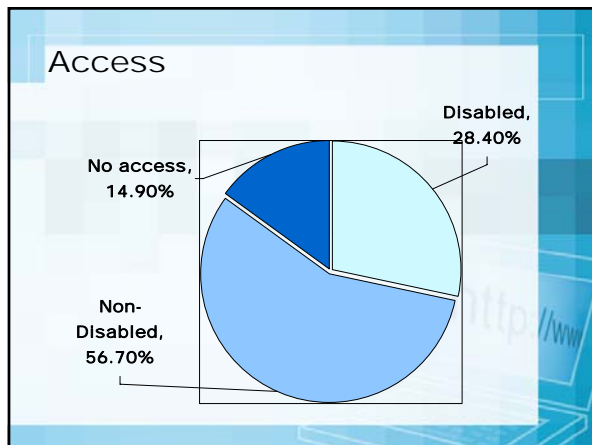


<ul style="list-style-type: none"> • "most wired nation" • Competitive telecommunication • Low Internet access charges • High per capita information technology production • Large level of English • National information society 	<ul style="list-style-type: none"> • Less open and competitive nature of telecom industry • Higher Internet access costs • Fewer people speak English • Competing Minitel system
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Minitel




A Videotex online service accessible through the telephone lines, It was launched in France in 1982 so users could make online purchases, make train reservations, check stock prices, search the telephone directory, and chat in a similar way to that now made possible by the Internet.




Physical Access in Developing Countries

- Goal is to ensure that everybody has the opportunity to make use of the internet *somewhere*:
 - Home
 - Work
 - School
 - Community technology center
 - Rural telecenter



Barriers



- Economic - Few families can afford the costs of purchasing a computer and the Internet access charges
- Teledensity - The number of phone lines per people
- Literacy - The ability to read and to use a computer
- Language Skills
- Uneven development and unequal distribution of resources

What can be done?

- Affordability of Computers
 - Computer prices continue to fall; they may eventually be at a price where every family can afford to buy one
 - “Learn-to-earn” programs: low-income participants get a computer after going through training.



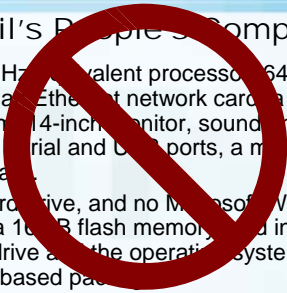
Inventor's Dilemma

Companies are driven to seek higher profit margins in order to survive. They add new values to existing products, targeting the high-margins but narrow upper end of the market instead of bringing new product lines to low-margin mass markets.



Brazil's People's Computer

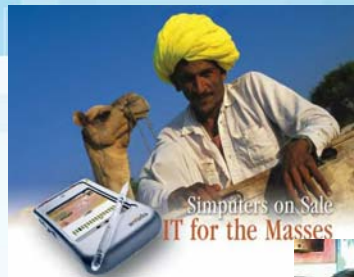
- 500 MHz Pentium processor, 64MB of RAM, an Ethernet network card, a 56K modem, a 14-inch monitor, sound and video cards, serial and USB ports, a mouse and a keyboard
- No hard drive, and no Microsoft Windows. It uses a 1GB flash memory card instead of a hard drive and the operating system is a Linux-based package
- This was very controversial and the idea ended up being abandoned by the Brazilian government



India's Simputer

Simple, In-expensive Multi-lingual People's compUTER

- A small handheld computer, intended to bring computing power to the masses of India and other developing countries
- A local community such as the village school, a kiosk, a village postman, or even a shopkeeper should be able to loan the device to individuals for some length of time and then pass it on to others in the community. Its Smart Card feature allows for personal information management at the individual level for an unlimited number of users.



??

Your thoughts??



Telecommunications



- Extending the basic telephone infrastructure (or broadband access in developed countries)
- Making telecommunications and Internet accounts affordable to individuals (Inventor's Dilemma)
 - Competition
 - Wireless Local Loop can provide simultaneous Internet access and voice communication telephone services using satellite-based connections for 200-2,000 households within a 10-25 km radius

Public Access Centers

Community telecenters use ICTs to support a variety of activities central to community life. They provide information-based services that lead to sustainable developmental results within the communities they serve. The specific activities that are offered depends on the organization operating the telecenter, as well as the local demand for certain specific services.

In many developing countries this is the only method for people to access the Internet.



What did you find?



Homework

- Respond to Jenny's Blog (I will copy her original to our discussion board and you can reply)
- Post aspects of our class discussion that you found to be most interesting or left you with more questions.



Have a Happy 4th!



Class Postings

Respond to Jenny's Blog:

http://www2.evergreen.edu/blogs/students/parjen08/2006/05/technology_and_social_inclusion.html

Technology and Social Inclusion

Mark Warschauer's book *Technology and Social Inclusion* contributes to our previous discussions about the digital divide by taking the argument from theoretical to practical, through in depth discussions about real efforts to bridge the divide and how they succeeded (or failed).

Warschauer offers the idea that rather than giving out computers and internet service and beyond teaching computer skills, efforts to close the digital divide need to be based around the idea of social inclusion, with attention to the fact that technology is neither good nor bad, but neither is it neutral. The diffusion of information and communication technology can foster marginalization and social stratification as easily as inclusion and development. Becoming part of the global network represented by the internet is important today not only for economic reasons, but for education, political participation, community building, cultural production and personal interaction. Exclusion through limited access, skills, content and ignorance of the real needs of the community, serves to limit not the population not only economically, but socially and culturally as well. By focusing attention on narrowing the digital divide, the effects of ICT within developing areas and the effectiveness of ICT in these communities are often ignored which leads to programs that fail to accomplish the goal of social inclusion.

Of all the components necessary for "access", in many cases ownership of a device is the easiest to come by. The cost of computers is falling steadily and second hand computers are readily available. Skills and an understanding of how to use computers and the internet in a socially relevant way are more difficult. The availability of a machine and the presence of a phone line are less important than the ability to make use of the machine in engaging in meaningful social practices. This is complicated by the design and programming of most software and content on the internet is partial to the west. Reliance on ASCII excluded the characters necessary to program in languages other than English. As of the writing of this book, 65% of web pages were written in English. The metaphor of the desktop, the organizing principal behind many computer applications, files and folders have little meaning to those who are unfamiliar with basic office practice.

Warschauer speaks at some length about the importance of literacy instruction which meets the needs of and social conditions of the learners, which is often achieved through the development of content by the learners themselves. As we saw in *Women and Everyday Uses of The Internet*, allowing learners some measure of control in determining their own projects will insure that skills relevant to the work they do in their communities will insure a higher level of engagement than simply teaching how to use an office suite. Warschauer says "for the most part, active involvement of the targeted populations-- in defining their own needs, collecting data, authoring and publishing content-- is usually required for success.

One of the best examples of a successful program is the Committee for the Democratization of Information, which was started in Brazil and now has centers in Uruguay, Chile, Columbia, Mexico and Japan. Teaching computer skills is the backdrop to a broader curriculum which emphasizes broader concerns of the community. The centers target the poor and other socially marginalized groups (such as prisoners and people with AIDS) and work with a variety of community organizations to develop projects which will teach valuable skills and will be an asset to the community. Though some technology centers may shy from the kind of overt political activism that CDI fosters, Warschauer also points out that a "nonpolitical" approach often means an adherence to the political approach of the funding organization and may deemphasize the value of community participation. Ignoring local political concerns might ultimately lead to the

failure of the projects.

The internet is offering many unparalleled access to political processes, information and a means to organize and network with those with similar concerns. However, as Warschauer points out, unequal access to ICT poses as great a threat as an opportunity to the poor. As demonstrated by his discussion of the dominance of upper middle class white people in the anti globalization movement, the concerns of those with the communicative power of the internet often supersede the more pressing needs of those without.

What we must take away from this book is the need not only to provide access to computers and the internets within libraries, but we must insure that our services and facilities are easily accessed and welcoming to all members of the community. We must seek the input of our communities when developing programs and services to insure that their needs are being met. In order to teach the literacies required for social inclusion through technology, we need to be creative in our approaches and with an eye to which skills would be most beneficial to the learners. This book was a good reminder that providing access to technology and information is a political act and requires the participation of the entire community in order to be both fair and effective.

Posted by Jenny on May 22, 2006

Student Responses:

VW:

In reading the articles about the learn-to-earn program I have always found that a good way to go but there also needs to be some type of follow-up. It is a great way for lower income families to not only obtain computers but also know how to use the tool that they are receiving. It would also be nice for them to have to return on a regular basis for a while to show that they are not only practicing what they have learned but that they are trying new skills as well.

In teaching people Internet skills you need to show them how to find topics that are relevant to their interests. I really like the idea of community centers that not only provide computer and Internet skills but also have people there that understand the technology and can help people that come into the centers.

AC:

Hey Val - hope the islands are wonderful!

The learn-to-earn concept certainly is a great way for families who might not otherwise be able to afford computers! The follow-up idea is an outstanding one...problems or issues with computers are always coming up. If you cannot fix them yourself and cannot afford to have someone to repair it for you, it becomes pretty much useless and therefore a waste. This holds true for issues from virus infections to burnt-out hard drives. Timely and supportive follow-up could alleviate much of the "fixing" issues.

The follow-up is also, in many cases, going to be critical to promoting continued growth in the use of the technology to access applications and the Internet.

A

AC:

This author makes it abundantly clear that equipment alone will not provide access to those who are marginalized. An infrastructure that will reliably and affordably connect to the Internet, support to learn how to use information technology, a perception of a need to access such technology, and a social climate that encourages and fosters the use of information technology are all essential requisites.

Jenny's statement that the "availability of a machine and the presence of a phone line are less important than the ability to make use of the machine in engaging in meaningful social practices" is also well-taken. What is the use of having access if those it is meant to benefit do not perceive a need? In the U.S. it is easy to forget that not everyone on this planet speaks English, or understands our humor, songs, politics. We just assume that everyone else does as we do and we don't often stop to consider what barriers that attitude creates for others. The easy example is that, since we speak English, the majority of the existing web pages are in English, thereby curtailing what is accessible by non-English speakers by more than 50%. As world citizens we need to do a better job of being sensitive to the rest of the world's varied peoples and not just demand what is easiest or most convenient for ourselves.

TJ:

I agree A. I know that I really never gave it much thought that the Web sites I use or need are in English until I worked with chapter 3. When I was researching articles and web sites on the topics I found a site that gave people the choice of english or french. That's not something I've noticed before. I see now that it takes more than selling your business product/service internationally to become global. To become technologically global means to me now to recognize other cultures and language barriers for ICT.

T

BW:

"What we must take away from this book is the need not only to provide access to computers and the internets within libraries, but we must insure that our services and facilities are easily accessed and welcoming to all members of the community."

I thought this quote did a great job of summing up where we need to head not so much in schools but as a country and a world. So many people do not have access like we do. I can see many people being intimidated by technology or being embarrassed that they do not know how to use it so they choose not to use it. In an ideal setting (if everyone doesn't have computers) there would be many places that anyone can go to for any type of technology basics. These places need to have people that can work with all types of levels and people. I would also like to think these places would be up to date in the latest technology including assitive.

MM

In Jenny's blog she points out that 65% of websites are written in English. This is something that needs to be changed. I think we often neglect to consider problems such as this when we want to bring technology into developing countries. If we are to close the digital divide we must include people from various linguistic backgrounds. Software engineers need to create viable translation programs that will allow people from all corners of the globe to read and use the information that is available. If this does not happen, then the technologically rich countries will continue to get richer and the poor will stay in such a way.

Class Discussion

What did you find most interesting?

What questions or concerns do you have about information we discussed?

Please Respond here.

VW:

What I found the most interesting is that we are always talking about ways to close the digital divide yet the almighty dollar is what is keeping us from doing that. Low income families can't afford the device and/or the conduit and business don't find it profitable enough to help solve the problem.

In order for telecenters to work or be successful our readings showed that it had to not only target low-income families but it should empower them as well. I am not sure that we always make these facilities accessible to those families. Bragg Hill has done that by placing such a center inside of their community where families can walk there and have access to the technology. They also provide training and encourage members of their community to attend. It is becoming hard in this area to provide community centers where people have easy access to these services. Schools would be an ideal place if we had people that were willing to supervise these areas.

V,

It's interesting that all of our problems stem from lack of funding. Funding is one reason schools aren't on the same level as one another and here we are talking about centers that businesses don't want to fund for the lack of profit. It's amazing! Schools are definitely one way to get technology out there but you bring up a good point about the transportation. If you look at Bragg Hill, if they did not have the center right in their neighborhood, the closest school is James Monroe. Before the FRED buses started, they would have had to walk. Which isn't that far, but what about the person in a wheelchair? Or the elderly? How are they going to get there?

B

V,

While I think you're right about schools being an ideal location for such computer labs, I have a few concerns when I start thinking of the particulars of such an arrangement. Also, many people from working class families balance multiple jobs, 14 hour days..I'm not sure how successful one would be with convincing a person with such a schedule that to spend additional time in front of a computer is a good use of his/her time. All that being said, it would make for an interesting experiment to open up the computer lab, say, 1 Saturday a month at each of the high schools when the kids are there serving time for ISS.... ;)

JH

J,

My school does open up on Saturdays for the students and their families. This teacher isn't paid and she does get a great turn out (or enough to keep it going). Many parents come in with their students and do work on the computers.

B

V,

I'm really curious about Bragg Hill... who runs the computer station? Who funds it? What kind of hours do they keep? When are the most popular times, and is there any commonality between the reasons for computer usage? And how about security? I ask, in part, because your comments tie in neatly with our next chapter. ;)

JH

I too am tempted to fault profit-driven ventures for creating an environment in which it is such a struggle to provide technology access to those who need it the most. Yet, it's those very businesses that often fund community programs such as Bragg Hill, though Bragg Hill is, to my knowledge, not funded by corporate programs – the building itself was once a juvenile detention facility and, through a religious-based group, on-going volunteer efforts, and many donations, it became a wonderful and much needed community center (Allen, 2003). For example, Microsoft has several corporate giving programs, such as its Unlimited Potential program, a “global initiative designed to help narrow the technology skills gap and aid global workforce development by providing technology skills through Community-Based Technology and Learning Centers” (Microsoft, 2005).

The empowerment aspect seems to be crucial to making ventures that target those with traditionally limited access to technology a success. For those who do not know what “file” or “document” is, even the basics of using most computers will definitely not be in any sense intuitive. The technology has to be perceived as a means of making something better, whether it's job skills, the amount of time necessary for producing products, needed communication. Finding ways to foster that perception and reality is the challenge.

A

References:

Allen, Jessica (2003, November 13). Fredericksburg.com. Retrieved July 2, 2006, from Building a better

Bragg Hill Web site: <http://fredericksburg.com/News/FLS/2003/112003/11132003/1163046>.

Microsoft Corp., (2005, June 30). Microsoft community investment programs. Retrieved July 2, 2006, from

Microsoft Web site: <http://www.microsoft.com/citizenship/giving/programs/>.

A,

I liked this comment: "The technology has to be perceived as a means of making something better, whether it's job skills, the amount of time necessary for producing

products, needed communication." You are completely right about this. Many families that come in on Saturdays at school are from other countries and this is how they communicate with their relatives. But this is normally as far as it goes. For some families, this is as far as they need the technology to go because they don't know any better. This is a free services and it the teacher that is in their with them will answer questions but doesn't teach them how to use the computer.

B

V,

I spend some time at Porter Library in Stafford and it seems that all the computers available to the public are always in use. That tells us that there is definitely the demand!

T

V:

I, too, can't seem to figure out how we are going to bridge the digital divide between the "haves" and the "have nots." I just see the divide growing wider in the future.

I think that computer access in the schools is a good idea. I would even volunteer one Saturday a month to supervise and teach computer skills.

Lynne

One way to help the bridge is to provide computers in our schools for as many students as we can. I know at my high school students can go into the library before/after/ school or during lunch and use the computers/internet. I see students taking advantage of this pretty regularly. This will not help the parents of the "have nots" but will hopefully bridge their children to benefit from the technology available. It seems so small compared to the "divide"....

T

As we begin to learn about more groups that do not have technology we need to find ways to incorporate them into the technological world. Telecenters is one possible method of helping to do just this. In the article that I read a group went in Laos and asked them what technology they need. I think that this is such an important aspect of introducing technology to areas/groups that do not have it. If a group does not have any cameras, there is no sense giving them a computer with various photo programs. As they become more accustomed to the technology that is available, then other hardware/software can be introduced. The same idea should be with our students as well. We need to determine which technology skills they need first and foremost and make sure they know them. However, what skills do they need first?

mm

From the readings and our class discussion regarding chapter 3, I found myself wondering how technology manages to creep out of the high use areas of urban life at

all. It appears that big business and the need to increase profit margins controls many, many things. On the other hand, without the motivation to create and maintain successful (i.e. profitable) businesses, much of the innovation and risk-taking that does occur may never take place at all. So, the entrepreneurs and philanthropists of the world will have find ways to solve the considerable problems of providing appropriate access avenues on smaller scales than big business is willing to entertain.

Unfortunately, it is still not a one-size-fits-all situation. By this I mean that there is no one solution to getting technology access to all the populations that currently have minimal or no access. The problems with implementing the technology are complex and very much related to geographical, political and social issues – all of which affect the manner in which in access to technology can be gained.

My question: if cell phone use has jumped so quickly even in some of the poorest regions, perhaps the “leapfrog” effect can take place for other forms of technology, such as wireless access to the Internet. The technology exists and would circumvent some of the issues of the infrastructure required for traditional phone lines and cable lines.

A

A, I used to live in an area that was very rural and Nortel was putting wireless Internet into the area. One of the problems that they have in rural areas is that you need a lot of transmitters to cover the wide range to get to the customers. Once the system is constructed people need to buy the proper equipment, including ISP plan, to use the system. This can be difficult for many people in rural areas because they have lower incomes. While wireless technology would make better sense in the area of conduits, it's still not an easy fix.

mm

A - good points!

The inventor's dilemma (making a profit over innovation and risk taking) is something we will always deal with. Thank goodness for Dorris Buffet and other area philanthropists that help those that need it.

I think that eventually the technology we have today will become commonplace and attainable for (almost) all. But by then, we will have something bigger and better that everyone will want to have.

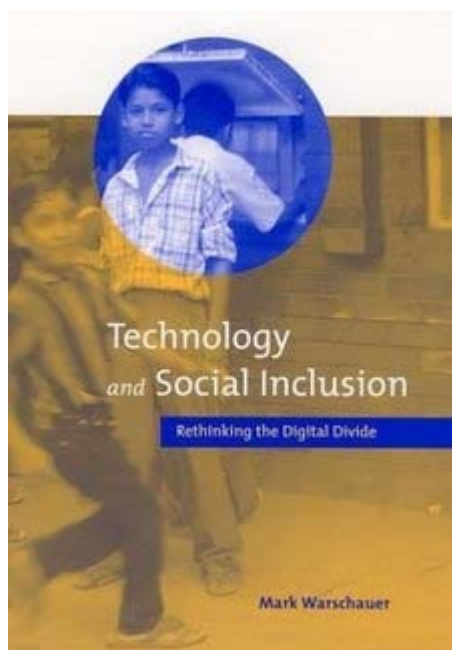
:) Lynne

I find most interesting how small of a percentage actually uses the internet in developing countries. As chapter 3 pointed out, a small percentage of the more advantaged individuals are making the Web work for them. This doesn't surprise me.....just that I hadn't really thought of it before.

T

Chapters 4 & 5

Digital Resources: Content and Language
Human Resources: Literacy and Education



Chapter 4 Summary

Digital Resources: Content and Language

The author states that there are now over 1 billion web pages available on the Internet. 65% of those pages are from the United States, United Kingdom or Germany and mostly written in English. Most of these domain names are located on servers in major cities showing a disparity between rural and city areas.

A new digital content for social development needs to be developed. For this to take place economic development information needs to be considered; the author gives an example of a farmer in India who could benefit from greater access to key information about farming conditions, market values, weather, and strategies for making their crops stronger, more plentiful and healthier. A second consideration would be health care: pre and post natal care, child immunizations, diseases and health care resources available on the Internet would be a great benefit to users in developing countries. A third consideration in the area of education – information about places to study, entrance requirements, fees, courses and schedules that are often not available to many people in rural areas would be easy to access online. A final consideration for increasing social development would be to publish community affairs and culture on the Internet, rather than in print. This would be a cost effective way to let citizens participate in cultural events, learn about local affairs, community services, and neighborhood news.

The author contends that even the United States has content gaps that affect the underserved communities. Information may be difficult to locate and obtain in print and would be good to have available online. It would also be good to have locally relevant information that affects everyday life available online for this group of Americans. There is a gap in content available for Americans that do not speak English and for the disabled as well.

Community participation is vital to the success of developing online content that meets the needs of a community. The author lists three ways that community participation can be achieved: needs assessment, database development and content production. Needs assessment involves using focus groups, interviews surveys, meetings and exercises to maximize a community's involvement in determining what content it needs. Database development consists of listings, maps and databases on local community resources. The community can contribute to these databases through online communication. The third area deals with content production. The citizens of a community can develop web-based information about that focuses on news, current events, culture and other areas of interest to a community.

A major barrier to ICT and social inclusion involves language. As the language of the Internet is 85% English this excludes many people around the world from taking advantage of all the Internet has to offer. The author spends a great deal of time explaining Global English and the role English plays online in countries such as Egypt, India and even in the US with the state of Hawaii.

Chapter 5 Summary

Human Resources: Literacy and Education

The author contends that human resources are “one of the most important factors affecting social inclusion and exclusion.” Human resources revolve around issues such as literacy and education. The author starts off by discussing how online access is divided into macro and micro levels and how education plays a key role in those levels. He uses the Internet as an example to show that both literacy and education are important for people to be able to effectively use and benefit from the Internet.

He then describes literacy and education, he gives examples and explains the differences between computer literacy, information literacy, multimedia literacy and computer mediated communication literacy. Computer literacy is the physical and operational manipulation of a computer. Information Literacy refers to both computer-specific knowledge and broader critical literacy skills, such as analysis and evaluation of information sources. The author claims that here is a vast difference between information and knowledge, and information literacy is crucial for being able to transform information into knowledge. Multimedia Literacy refers to combining text, backgrounds, photos, graphics, audio, and video in a single presentation. Finally Computer-Mediated Communication Literacy is described as “the interpretive and writing skills necessary to communicate effectively via online media.” Some people may be literate in one area, several, all or none.

Warschauer goes on to explain how social factors play into both the micro and macro levels of education. He describes communities of practice (networks of people who engage in similar activities and learn from each other in the process) and how they can help with education and instruction. He uses the example of U.S. schooling as an example of social reproduction (“educational institutions are structured in ways that reflect and contribute to the broader social, economic, politic, and cultural relationships”).

In his next section, Warschauer describes ICT in Education. He discusses Computer Education and some organizations such as the Committee for Democratization of Information, and Playing2Win, who help to promote social inclusion with technology. He then discusses Computer-Enhanced Education that helps to make effective use of technology to enhance other educational purposes rather than to just provide the skills to marginalized communities.

The author claims there are gaps within the elite and middle/lower class schools; he explains and gives examples of elite schools using technology to help prepare students for further schooling while the poorer schools use technology to help prepare students for the work force. He further claims that this makes the gap wider on the literacy and education levels of online access. He gives examples of teachers in low-income areas finding ways to use technology to support academic success: Project Fresa, in Oxnard, California and Technology Academy and the Foshay Learning Center in central Los Angeles.

Warschauer goes on to explain educational technology in the developing countries of Egypt and China. He then discusses the concept of distance education and how its role in social inclusion. He gives several examples of Distance Education: Network Science (teams of children in classrooms throughout the US and world. Children learn through collecting data and sharing it with other students), Advanced Placement Instruction, and Teacher Training. He also gives challenges and describes characteristics of distance learning.

He concludes by saying that software or the Internet can provide information that they can't provide the social interaction that is at the heart of good education. Technology alone can not guarantee better education.

Chapters 4 and 5

Assignment:

Students will synthesize and assess this lesson in one to two paragraph posted summary on blackboard after our class discussion, where the student will answer the following questions: a.) What did you learn as a result of the interview that you did not know before? (knowledge, understanding) b.) What will you remember most from this class assignment? (analysis, understanding, knowledge) c.) What aspects of this assignment and the readings from chapters 4 and 5 are directly applicable to your future instruction? (evaluation, synthesis, and application)

a.) What did you learn as a result of the interview that you did not know before?

I learned about The Imagination Library started by Dolly Parton to increase the literacy rate. Every child can receive a book each month until they reach the age of 5.

b.) What will you remember most from this class assignment?

I was quite impressed with the Knox County Public Library. They offer so many other activities and events for the public such as movies and music on the lawn. The staff was very nice and helpful. I will always remember Mrs. Hill's comments on how imperative it is to have input as to what assistive technology is needed and other services that the library could employ to help their patrons with disabilities, who speak languages other than English, or are economically disadvantaged.

c.) What aspects of this assignment and the readings from chapters 4 and 5 are directly applicable to your future instruction?

By participating in the interview and listening to my classmates, I am walking away with much knowledge and resources that I can take back to my classroom. I had a student this year in my Computer Information Systems class that spoke NOT a word of English; I am glad to learn about LUCHA ministries. Great job Ladies! Thanks for making it interesting!

Library Interview

1. What is your name, your organization's address, and telephone number?

Jackie Hill
Knox County Public Library
West Knoxville Branch
Bee De Selm Building
100 Golf Club Road
Knoxville, TN 37902

(865)588-8813

2. How long have you worked for this organization, and what is your own background working with people that have disabilities, who are economically disadvantaged, or who have English as a second language?

8-9 Years at this branch, but I have been in the system for about 20 years.

I don't have a specific background in working with the groups you asked me about, but we do get all types of people at this branch. We are at a very diverse location.

3. What services are provided within your organization using assistive technology? What are the greatest needs you see with your organization when it comes to individuals that have disabilities, who are economically disadvantaged, or who have English as a second language? How does your organization meet the needs of these people?

We offer a wheelchair accessible location. Our circulation desk is low on one side to accommodate a wheelchair. We offer books on tape/cd's and also downloadable audiobooks. Our main branch has a large print reader, and I believe a Braille reader, for the visually impaired. The (University of) Tennessee library also has loans of materials for those that need it. We often work with them to get the materials that someone may need.

The greatest needs that I see would be getting these individuals to come into the library.

Several of our branches have materials in Spanish. This branch is one of those that have a section, albeit small, of books and other materials in Spanish.

4. What, in your personal opinion, is needed technologically to really make a difference in the lives of the poor, the handicapped, and people with ESL? What, in your opinion, is necessary to make these citizens more computer literate?

INPUT! We need these individuals to come in and tell us what they need/want/require so that we may be of assistance.

To make citizens more computer literate they need information and computer workshops, which we offer free of charge.

5. What specific technological resources do you offer OR what resources would you like to offer that would have a lasting impact on individuals with disabilities, who are economically disadvantaged, or who have English as a second language? Who on your staff speaks a language other than English that is available to use as a resource for citizens?

The Knox County Library has more than 300 computers for patron use. We offer free computer literacy workshops. (Lynne: When I was leaving, I grabbed a few brochures; I noticed the classes are on "Introducing the Computer," "Surfing the World Wide Web," "Word Processing Basics," "Word Processing II," "Excel Basics," "PowerPoint Basics," and "Publisher Basics.") The main branch offers a computer literacy class in Spanish as well.

We offer a "Books for the Homebound" program that provides reading materials for those that are unable to come to the library, such as the disabled and elderly.

No one at this branch speaks other languages; our main branch does have a librarian that speaks Spanish.

6. When it comes to community involvement, what organizations or individuals would you say have made a huge difference in reaching individuals with disabilities, who are economically disadvantaged, or who have English as a second language? What do these people or groups specifically do that makes such a huge difference in reaching out to others?

Dolly Parton and her Imagination Library has had a huge impact on early literacy. (Lynne: The Imagination Library is a program designed to combat illiteracy and help children learn to read by providing every child from birth

to age 5 with a free book each month. I would imagine this has an impact on those children with parents that are economically disadvantaged and can't afford books, or ESL or even those that are disabled and cannot make it to the library to borrow books). Also, Comcast gave a grant to promote the Summer Library Club. (Lynne: The club is called "Jungle Tales: Hiss, Rumble and Roar". Children are encouraged to read; there are incentives for reaching reading goals).

7. Is there someone that is currently disabled that uses your services frequently that you would suggest that I talk to about his/her needs? If so, what is their name and number?

N/A

8. In terms of making your organization more successful, what sorts of assistive devices would you say that you would either put on your "wish list" or devices that you cannot "live without?" Are there any assistive devices that you have that you would say are obsolete?

I don't believe I could think of anything that I must have at this time. We are currently working on upgrading all of our computers to add more bandwidth. I would never want to go back to the old card catalog system, so I guess you could say I couldn't live without the computerized card catalog. As far as assistive technology, we simply don't have a high demand for that at this branch.

9. Also, what are the most frequently used assistive devices that you have seen during your work here? Which ones seem to be the easiest to use, and which ones are the least successful, and why?

We do not have such devices here. I have seen the large print reader in use at the main branch - it did look easy to use.

10. May I have a tour of your facility, seeing the devices, physical spaces, and resources commonly used for the economically disadvantaged, the disabled, and ESL citizens? (Itec 531 students: as you tour, take notes on what you see, especially noting any of your special concerns (ex: handicap doors not working, handicapped parking spaces, are there enough computers for everyone that needs one, etc.)

There were several handicap parking spaces in convenient locations to the library entrance. There were curb cuts and automatic doors (2 sets). The circulation desk has a large section that is lower to accommodate someone of shorter stature or who is seated in a wheelchair. There were several desks and computer carrels that were also lower or wider to accommodate different types of disabilities. There were two bathrooms marked handicap (one was in the children's section), these had larger doors, handles and the children's bathroom

had a toilet lower to the ground. The "regular" bathrooms also had handicapped stalls. There were plenty of computers but many were not working because of upgrades that were occurring at the time of my visit. There was a large section of audio books, and sections of books in Spanish in the reference, non-fiction, fiction and children's area.

11. What do you think specifically we can do as teachers to help meet the needs of those that are marginalized in our society?

Good Question! Hmm...Continue to educate, inspire and challenge. Publicize events so that these individuals can participate in them or know where to go for help.

12. What technological skills do you think students that are marginalized need to have by the time they graduate from high school in order to be successful in their careers and lives? (Consider asking about the ideas discussed in chapter 5: computer literacy vs. information literacy; multimedia, etc.)

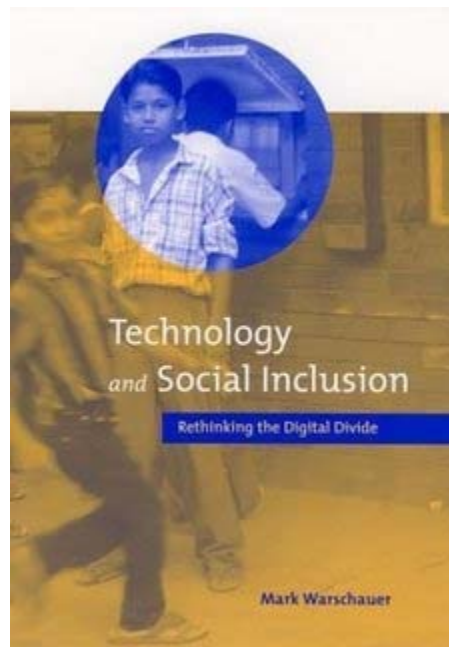
They need to have basic computer skills such as the ability to use Word Processing Software, data input and how to find information on the Internet; they need to disseminate the good information from the bad. I believe that people skills are also important; you need to be able to interact with others.

13. Thank you very much for your time. In closing, is there anything else you would like to say to the class when it comes to meeting the needs of individuals that have disabilities, are poor, or have ESL?

No, I don't think so. Your questions were very thorough and I hope I was able to help. (Lynne: Mrs. Town did tell me that I should visit the main branch, I wish I had the time to go there as well - It was in the center of Knoxville, and I wasn't comfortable driving around downtown Knoxville in an unfamiliar city, with 2 small children and without my husband. My children were co-operative and so well behaved during my first interview that I knew they wouldn't last for a second. long interview. I did have intentions of going with my husband after dinner (so he could help with the kids and driving), but his first day of class ran late and we were not able to make it on time.)

Chapter 6

Social Resources: Communities and Institutions



Chapter 6 Summary

Social Resources: Communities and Institutions

Social Capital is the role of interpersonal relations in human and social development; it deals with social relations and trust. Human and physical capitals alone do not fully describe developmental resources that are available. The author states an important source of this capital is the personal relations people have with family and their community. Bonding Social Capital is described as the strong ties that are “shared among the dense, inward-looking social networks” (such as family and close friends). These strong ties also provided emotional support. Bridging social capital means the ties formed from other social circles, providing new sources of info and support. This type of social capital is needed for economic and social development.

There is a relationship between Internet/Computer use and social capital. For people in a social network that does not involve computer use, it could be overwhelming for someone to learn a computer on their own without help and support of others who have experiences. In other words, if no one in your social circle uses a computer then you probably won't use one either. The Internet can help to build social capital but not at the expense of losing face to face contact and social experiences of learning. Other drawbacks may include using the Internet for purposes other than for gaining information or for social interaction – for example viewing porn or gambling can weaken social capital.

The efforts to make use of ICT to promote Social Capital take place on 3 levels:

Micro Level of SC – these include friends, family, neighbors, colleagues.

Macro Level – The effectiveness of government institutions and relations between government and its' citizens.

Meso Level – voluntary associations and political organizations that allow people the opportunity to form alliances, create joint accomplishment and defend interests.

The author discusses two different approaches for the **micro level**:

Virtual community – groups of strangers can get together to share information, debate ideas, provided emotional support. best when paired with face to face meetings.

Community informatics – social capital is created by building coalitions and networks to support community goal of applying ICT and development.

Community involvement is important on the micro level. Working with community organizations provides organized way for the community to take place in management or leadership and also helps them to take ownership. The author lists several examples of micro level social capital building. Warchauser claims that the micro level is a bottom up method of using technology as a tool to promote both social capital and community building or development.

Macro Level – Warchauser describes the macro level as a top down method, in that government and other large institutions provide resources and support. One important component on this level is the positive relations between the state and society – this is known as Synergy. This relation is sometimes difficult in many countries. The author states that well-designed use of ICT can help with the synergy problems by making government transparent and using citizen feedback.

The **mesolevel** utilizes the power of civil society (networks, groups, organizations, and forms of association that exist between the private specter and the state).It involves “citizens acting collectively in a public sphere to express their interests, passions, and ideas, exchange information, achieve mutual goals, make demands on the state, and hold state officials accountable” There are several opportunities for online networking especially among marginalized groups via the Internet where people with shared interests from all around the world can go to share info and find support. These associations of online groupings can be political or not.

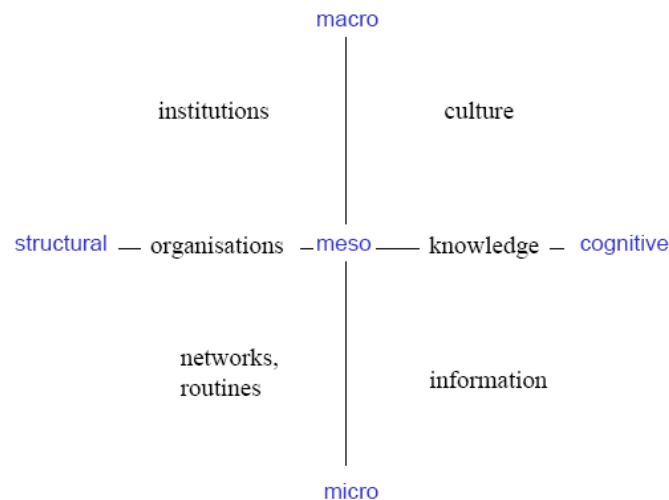
Chapter 6

Assignment:

1. Students will find two examples of each of the 3 levels of social capital (micro-, macro-, and meso-) and write an annotated bibliography of each. Students will also write a few lines explaining how it either benefits or hinders the learning of people with disabilities, who have English as a second language, or are economically disadvantaged and email it to the instructors by noon on Thursday, July 20.
2. After class each student will make a post to two different statements posted on the discussion board in blackboard.
 - a. Statement 1: Discuss your experiences with either an online class that you have taken or with an online group or discussion that you may have been a participant. Relate what you liked, what you didn't like, and whether you prefer face-to-face classes/groups, online groups, or a combination of both.
 - b. In our schools what do we do to promote or hinder social capital among our students, parents and community members.

1. Annotated Bibliography

The Four Quadrants of Social Capital



from: http://www.khanya-mrc.co.za/photo_root/doc/slnewsletter/march-newsletter.asp

MICRO level

FPA. (2004). Welcome to the front porch alliance, Kansas City, MO. Retrieved July 17, 2006, from The Front Porch Alliance Web site:
<http://www.frontporchalliance.org/>

The Front Porch Alliance (FPA) is a church group committed to

community service and involvement in an urban neighborhood in Kansas City . their most urgent priorities are in the areas of housing, education, and employment and economic development. The article shows the strong impact FPA is having at a neighborhood, micro level (e.g., restored parks, a reclaimed house, etc).

This type of involvement helps those that are less fortunate by being given the opportunity to make their lives better. As a result they can then move on to other areas of their lives that are lacking, such as education. These types of groups can help those who do not speak English by offering classes in the English language. They can also provide services for disabled community members by offering services that may be missing and providing tools that may help increase their quality of life (such as wheelchairs and computers).

Stone, W., Gray, M. and Hughes, J. (2003). Social capital at work: *How family, friends and civic ties relate to labour market outcomes*. Retrieved July 16, 2006 from <http://www.mapl.com.au/A13.htm>

This paper explores the links between an individual's social capital and their labor market outcomes. They examine both the structure and quality of social networks and social relationships. They found that a person's networks may affect the value they place on a career or working. Other factors include the household or family system (their needs and level of support). "Individuals are embedded within networks of family, friends, community and institutional ties that support the normative aspects of work, these are likely to reinforce the value of work for that individual, thereby acting to increase a person's likelihood of being employed."

This type of social capital plays an important factor in the lives of the disabled, disadvantaged or ESL. If they have families and friends that value work as a way to self improvement then they will have the same values.

MACRO LEVEL

Drake, W., Kalathil, S, and Boas, T. (2000). "Dictatorships in the Digital Age: Some Considerations on the Internet in China and Cuba." IMP: the Magazine on Information Impacts, Retrieved July 16, 2006
<http://www.carnegieendowment.org/publications/index.cfm?fa=view&id=531>

An article discussing the impact of the Internet in countries ruled by dictatorship. The article does show that there is definitely an economic benefit for these countries in promoting Internet use, however, the Internet can not deliver on the promises of spreading democracy if it is being censored by government.

This type of censorship definitely hinders the learning of people with disabilities, who have languages other than English, and are economically disadvantaged because they are unable to fully experience all that is available. For example, if the government of Cuba is publishing their propaganda and censoring

Fountain, Jane E., and Robert D. Atkinson. (1998). "Social Capital, and the New Economy." Democratic Leadership Council. Retrieved July 17, 2006
http://www.ppionline.org/ndol/ndol_ci.cfm?kaid=140&subid=293&contentid=1371

An article that claims "social capital is as important as physical capital (plant, equipment, and technology) and human capital (intellect, character, education, and training) in driving innovation and growth." The role of networks and the federal government are explained as well as policy suggestions or tools that could help foster innovation.

This article gives several suggestions that would benefit people with disabilities, who have English as a second language or are economically disadvantaged. Collaboration yields skilled labor and education as well.

MESO Level

Health Boards (2006). Retrieved July 16, 2006 from
<http://www.healthboards.com/boards/index.php?gclid=CJ--l6n8mIYCFSCZFQodjmlnwQ>

A website for people all around the world to gather and discuss health concerns. "Dealing with a medical condition is often difficult. Connecting with others who are going through the same thing can make a world of difference. HealthBoards.com is a place where you can make those connections."

This type of website was mentioned in our text as a nonpolitical association online. It has a huge impact on people with disabilities, who have health concerns and even those that are disadvantaged in that it gives them information they need especially if they can not afford repeated trips to the doctor. There is a board with several threads related to different disabilities.

The Democratic Party. (2006). Retrieved July 16, 2006 from <http://www.democrats.org/>

This website is for the Democratic Party. It contains several opportunities for people to get involved. There are blogs and communities of interest where people can learn more about items that are of interest or pertain to them. For example, there are communities for Hispanics and people of disabilities. It can also be translated into Spanish.

This would be an example of a Political Association Online as mentioned in our text. This website would be beneficial for a disabled or disadvantaged democrat and also for democrats that speak Spanish who want to get more involved, learn and communicate with others.

2. Blackboard Postings and Feedback

a. Discuss your experiences with either an online class that you have taken or with an online group or discussion that you may have been a participant.

I have only had one online class. It was last semester. It was a very small class (with only 4 students) and I had taken a class with each of them previously so I don't think it was quite the same as having an online class where you don't have any knowledge of your fellow classmates. I knew my classmates well - their personalities, their strengths. My husband has taken several on-line classes through ODU. I can truly say that his experiences were different.

Relate what you liked – I liked not having to commute or plan my hectic life around having to attend a class. I had several weeks where I was sick - I had the flu, strep throat and seasonal allergies - it was nice to not have to worry about attending class while feeling horrible.

What you didn't like- I tend to procrastinate so I really had to keep myself of a strict schedule of completing assignments.

Whether you prefer face-to-face classes/groups, online groups, or a combination of both

I like a combination. Online classes do involve much planning and work but they seem to fit into my schedule so much better. F2F classes have many positives too. I have forged friendships with the other students in the

ITEC program - I enjoy their company and being around them. We have shared some laughs and I am looking forward to our graduation party!

b. In our schools what do we do to promote or hinder social capital among our students, parents and community members.

We promote social capital by assigning group work. By encouraging membership in clubs and sport teams. I have seen many students become involved in the club I sponsor (FBLA) they make friends, they grow through their travels and through their experiences. For example one student I had was very shy. During a field trip in his freshman year, I had to pair him with some other students so he wouldn't be alone. During his senior year he served as my club president, organizing meetings and school activities. His involvement in the club helped him to realize his potential and he is now enrolled in college studying business (during his sophomore year, he stated he was not going to college). I have had open houses for our department and Internet cyber cafés - where the FBLA members served as helpers for students who wanted to learn more about computers or the programs that we offer through the business department. As a club sponsor I also facilitate social capital with area businesses who serve as guest speakers, judges for competitive events and potential job placements for students enrolled in the cooperative office education program.

Reply to postings

Jenna: I was quite surprised at the number of assignments I had to complete for my online course that involved group work. I never felt that the human connection was lost. The experience was different than I imagined it would be. I imagined completing assignments (solo) and turning them in - this was not the case. I talked with my classmates on the discussion board, in email, in a group chat, Becky and I even talked on the phone for one assignment and Aileen and I met often for our final project (to design an online course).

I too have carpal tunnel - while I do type very fast, it is beginning to slow me down. Online chats can be overwhelming - there is a lot of information and it is coming at you fast. You do have to be able to read, process and type quickly. Sometimes I will be typing a long answer to a question and by the time I finish there have been two more questions posted. We only had one chat in our online class last semester. With only 4 of us it was very easy to keep up with the conversation.

You wrote: I would think it would be necessary for an instructor to communicate electronically frequently about a student's progress and to see if his/her classroom experience is a positive one

The experience I had last semester was exactly like this. She (the professor) was great about giving lots of feedback and clarification if needed. I did not know my professor prior to taking this class - I met her briefly only one time. I didn't know what to expect and was quite nervous about this class. But my worries were not needed, the experience was a positive one.

Aileen: Synchronous discussions, like the TappedIn.org session we had for this course, are difficult for some (including me 😊). However, they are a place for a few to shine and even if I can't contribute a great deal I come away with a lot of information I would not have had otherwise.

Wow - never thought of it that way! I guess everyone has their strengths and weaknesses. 😊

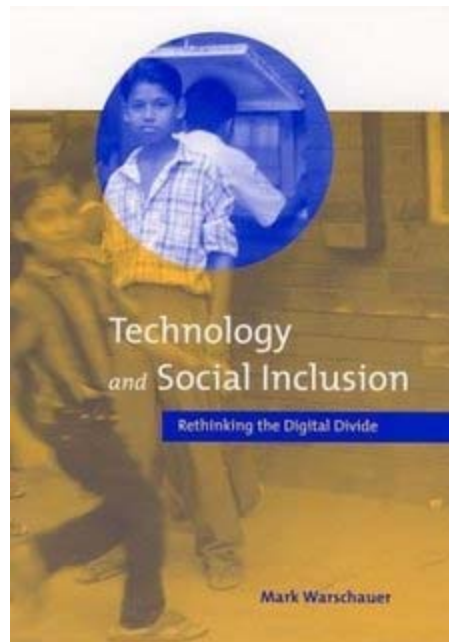
most enjoyed the joint products we created through collaboration. I can usually knock out good quality work on my own but the level of sophistication jumps substantially when working with others.

I totally agree! I would add that your level of comfort rises too b/c you are working with someone else and not "out there alone" possibly misunderstanding the assignment.

It will be strange having Dr. C in a f2f setting next semester - although we have had her as our online class professor we really don't know anything about her teaching style. It will be interesting to see if our impression of her is at all accurate.

Chapter 7

Conclusion: The Social Embeddedness of
Technology



Chapter 7: Conclusion Summary The Social Embeddedness of Technology

The author begins this chapter with the assertions of DiMaggio and Hargittai, two of “the most astute analysts of the sociology of the Internet.” They discuss the Digital divide vs. digital inequality: the difference between the haves and have-nots vs. the differences among people with physical access to the Internet. Digital inequality can involve technical means (bandwidth), autonomy (the ability to log on at will, unmonitored), skill or knowledge, social support (access to advice or support of skilled users) or purpose (using the Internet for entertainment or for social capital). The author believes that these points need to be extended to areas where Internet “penetration” is not as prolific and are just beginning.

The author further contends that social context, social purpose, and social organization are critical in efforts to provide meaningful information and communication technology access. Several factors are important determinants for promoting social inclusion: what constitutes skill, how skill is developed, what purposes are served by gaining access, who develops autonomy (and how), what kinds of social resources are mobilized.

The author discusses the idea of social embeddedness of technology; he claims that technology is not good or bad, nor is it neutral. Technological and social realms are intertwined within organizations, institutions and also in society. Social informatics is a research tradition that analyzes the social embeddedness of ICT. They found that computing could not be understood as a separate tool but part of a package. In other words, a computer is not simply a tool it is a package of hardware, software, skills and beliefs.

The author gives a good example of a microwave and how it has changed the way we prepare dinner and also how the way we prepare dinner has influenced the microwave (in that the microwave manufacturers include different features that help increase its value in the kitchen). He compares this to technology and how technologies do not exert an external impact on institutions but that they are part of them, they have an impact on our lives and conversely we have had an impact on the ever changing world of technology.

The author states that the historical bias for English in regards to the Internet reflects a social, political, economic and technological power of the US over other countries. He states that we are not to try to overcome the digital divide but we should expand access to (and the use of) ICT to promote social inclusion. Warchauer also states that an expanded research agenda is needed especially to target populations threatened with social exclusion (such as the disabled and those that speak languages other than English). It is important to study patterns and types of ICT usage and the outcome that ICT has on a population.

In conclusion, he states that that it is not enough to distribute computer equipment but to work towards helping people “participate fully in the information economy and network society.” People need skills and knowledge, content and language and community and social support in addition to having physical access to a computer. The challenge is to reduce marginalization, poverty and inequality while enhancing economic and social inclusion for all.

Chapter 7

Assignment:

1. Students will choose a country other than the United States and investigate the government's action policy that is currently in place to address the issues of a digital divide/digital inequality. (Note: if the country you choose does not have a formal action plan or if you cannot locate their action plan, please choose another country). Cover the issues of social context, social purpose, and social organization and be certain to cite your source(s).
2. Students will formulate recommendations for enhancing the government's action plan, with the overall goal being to improve "physical access to computers and connectivity... requisite skills and knowledge, content and language, and community and social support to be able to use ICT for meaningful ends" (Warschauer, 2004). Recommendations should be reasonable, considering social and economic conditions.
3. Students will present their findings and recommendations in a summary (either textual or multimedia) that can be discussed or shared with the class. Email summary to both Dr. Teabo (steabo@umw.edu) and Aileen (acamp1xu@umw.edu).
4. Students will follow class discussion by posting their thoughts on how this book has altered their technology education outlook for the coming school year (or teaching in the near future ☺) to the discussion board. Students will respond to fellow classmates' postings (at least 2).

1. Country: United Kingdom

http://www.strategy.gov.uk/downloads/work_areas/digital_strategy/digital_strategy.pdf

Social Context: The UK is a leader in digital television, they have one of the most advanced mobile phone systems in the world and they rank 3rd in the world in broadband availability (only below Japan and Canada). In 1997 they identified the growth and application of ICT and also the development of electronic services and the skills to use them as "crucial" to the economy of the United Kingdom.

Social Purpose: The UK government realizes that access to computers is not the only barrier but that they need to give users the skills and confidence to use computers as well. The UK government is committed to providing computer access to the digitally excluded. They want to make it easier to use for the disabled as well. They realize that the government has a role in reducing the digital divide and social exclusion by providing education, information, support and easy access to ICT.

Social Organization: They are attempting to offer access to ICT at home and make sure that schools can buy the equipment at the lowest prices possible. They also want to have anti-virus software and parental controls installed as standard software. They plan on working with business and industry, police and

banking to create standards and safe, affordable access to technology for all their citizens.

See PowerPoint for more information.

2 and 3. See PowerPoint

4. Blackboard Posting

Students will follow class discussion by posting their thoughts on how this book has altered their technology education outlook for the coming school year (or teaching in the near future ☺) to the discussion board.

This book has made me focus on the other countries of the world and not just the USA. I have tunnel vision when it comes to technology - I forget that not every country is as advanced or fortunate as we are. I was quite impressed with the UK and their action plan for bridging the digital divide. This assignment helped bring all the different chapters of the book together for me. Last semester I participated in a virtual session at www.Tappedin.org on different things that we can have our students do to help students in areas devastated by natural disaster (earthquake, tsunami and hurricanes). I was reminded of that session several times while reading this text and am committed to undertaking some of those projects with my students or club members this school year.

Reply to Other Students' Posts

Val: I also did not think about all the other languages that are not represented on the internet. like you said, it must make them feel isolated. Imagine all the wonderful information that is available but they can not read it - that is just sad.

I would also agree that this course has changed some of my views on technology...I guess I just thought of assistive technology as something to only help disabled users. I never thought of it as something to also assist the poor, under-educated or speakers of other languages.

Great idea to keep a folder in your desk!

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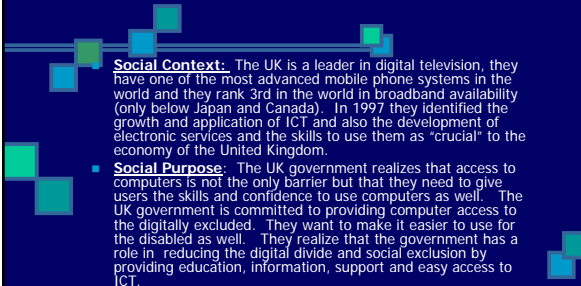
Jenna: I would say the book has been helpful. The text has also been helpful in getting me to see beyond Fredericksburg in terms of how the world is approaching conquering the digital divide

Yes, the assignment that Aileen gave and also the Field Trip that you and Trish sent us on were both great. I may have grumbled about having to visit the library while I was out of state, but I really did glean much from that visit. Like you, I am also walking away from this course with much knowledge and resources that I am sure I will use in the future!



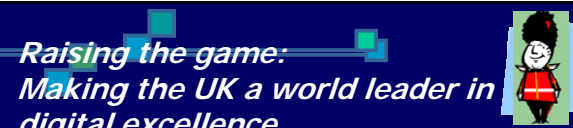
Connecting the UK: the Digital Strategy

http://www.strategy.gov.uk/downloads/work_areas/digital_strategy/digital_strategy.pdf



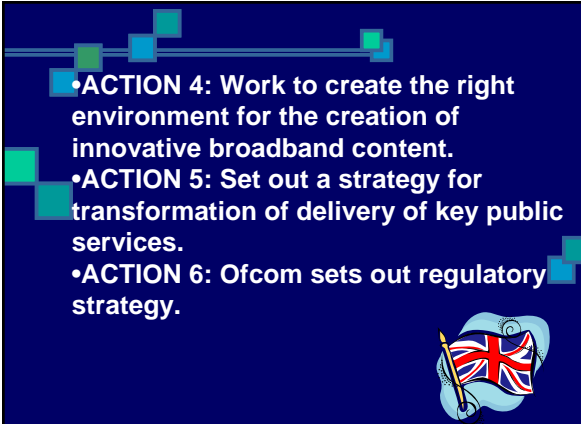
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- **Social Organization:** They are attempting to offer access to ICT at home and make sure that schools can buy the equipment at the lowest prices possible. They also want to have anti-virus software and parental controls installed as standard software. They plan on working with business and industry, police and banking to create standards and safe, affordable access to technology for all their citizens.



Raising the game: Making the UK a world leader in digital excellence

- **ACTION 1:** Transform learning with ICT. (personal laptops, e-portfolios, online learning).
- **ACTION 2:** Set up a "Digital Challenge" for Local Authorities to achieve both excellence and equity in ICT.
- **ACTION 3:** Making the UK the safest place to use the Internet.




- **ACTION 4:** Work to create the right environment for the creation of innovative broadband content.
- **ACTION 5:** Set out a strategy for transformation of delivery of key public services.
- **ACTION 6:** Ofcom sets out regulatory strategy.



Tackling social exclusion & bridging the digital divide

- **ACTION 7:** Improve accessibility to technology for the digitally exclude and ease of use for the disabled.
- **ACTION 8:** Review the digital divide in 2008.



Communal Online Centers

- "Because the barrier for many people getting online is to do with knowledge and confidence, government should focus its investment on communal Internet access points, through schools and online centers, with a focus on reaching hard-to-reach groups and providing enhanced support at such locations. This would build on the strong foundation created by UK Online Centers."
- This also provides an opportunity for those who do not have access at home (or can not afford the hardware or Internet access) to utilize the Internet.

E-mail



- “We will ensure that every adult who enrolls on a basic skills course is given an email account. A problem for adult learners is the interruption of study due to life circumstances.”

Reform the Home Computing Initiative



In a bid to boost the penetration of computers into the home, the then Office of the e-Envoy, with the DTI and the Department for Education and Skills prepared guidelines for companies who wished to offer home computing initiatives to their staff (www.ukhomecomputing.co.uk). These initiatives allow an individual through their employer to have the use of a personal computer up to the value of £2500 per annum as a tax free benefit. However, **the scheme should be reformed further to benefit those most in need of Government help in accessing ICT.**

Improve access for people with disabilities



“ICT and the internet in particular have real potential to improve the quality of life of people with disabilities. However, many websites present barriers to accessibility for many people with disabilities. The challenge is how we utilize new technologies in a way that generates benefits not barriers.”

New Measures

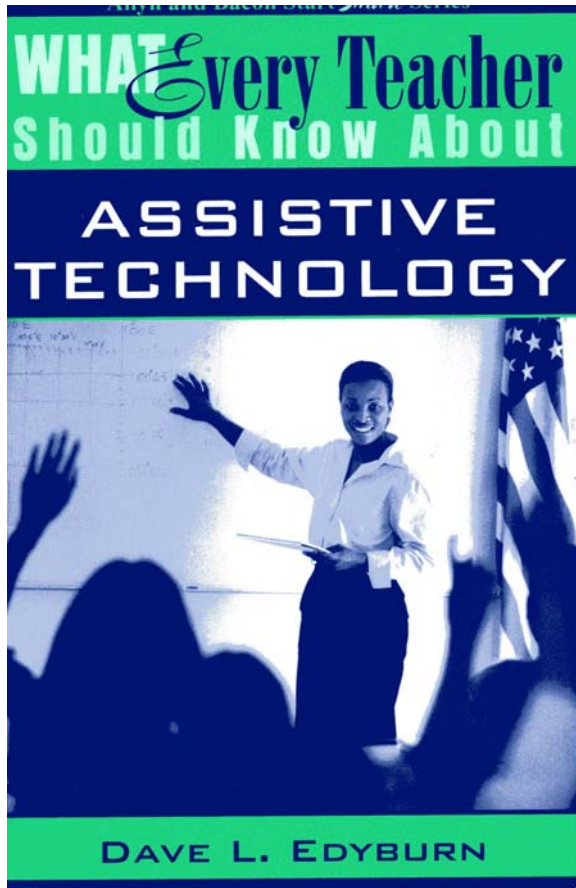


- But more could be done. Government will:
- Give a clear commitment to ensuring that all government **websites and online services** present no barriers to use for those with disabilities.
 - Facilitate the development of **best practice guidance** for accessible website development and an accreditation process
 - **Raise awareness** both in private and public sectors about these barriers. The UK will also take a lead on promoting action and raising awareness on this issue within the EU when it assumes Presidency this year

Recommendations



- This is an EXCELLENT action plan to help bridge the digital divide for the citizens of the United Kingdom. I am having a difficult time adding anything – they provided a very clear and comprehensive plan for making the UK a world leader in ICT. I found that this plan corresponded nicely to “Technology and Social Inclusion” by Mark Warschauer. It really helped bring what the author was discussing into focus for me.



This was the second required text for ITEC 531.

It is a great source for teachers, explaining the foundation of Assistive Technology -- what it is and who can benefit from it. It explains the many types of assistive technology devices that are available as well as information that every teacher would find useful. Several resources are also provided for more information or where teachers could go for help.

Reports and Presentations

- Trends
- 3-D Worlds
- TIPs
- Access E- Learning



Future Trends of Technology and Education

Bill Gates, in his introduction to “A vision for life long learning – year 2020” states that “All the computers in the world won’t make a difference without enthusiastic student, skilled and committed teachers, involved and informed parents, and a society that underscores the value of lifelong learning (Hinrichs, 2002).” I believe that that the future of education will be entirely different than it is now; with each new technological advance comes new opportunities. These changes can make a huge change on education as we now know it if everyone works together and sees the value in doing so.

Online training will continue to increase. This type of training has many benefits including the facts that it is cheaper (no overhead costs), and it is convenient (the learner can learn at his/her own pace at a time that works for them).

I don’t believe that technology will replace teachers. I believe it was Thomas Edison who predicted movies would replace text books, and that did not happen. I believe that technology will enhance our teaching. It will create possibilities for teachers that were not possible without technology. Students will be able to connect to other students across town, across the country and even across the world. They will be able to communicate in their own language but will understand what their partner is trying to communicate to them through instant translation software. Students will be able to work at their own pace and on subjects they are interested in or need to learn more about. We will be able to skip the “one size fits all” approach that every student needs to learn the same thing at the same time. While textbooks will not be replaced by movies, I do believe that they will be replaced by e-books. These will be easier to keep up-to-date and more cost effective.

In the future, students will have access to the best teachers; they will be able to participate in classroom discussions with teachers and students who are spread out around the world. In addition, teachers will have access to teams of people who each have their own area of expertise. English speaking students can learn a foreign language (for example French) by pairing with a student in France who wants to learn English. They can use teleconferencing software to talk back and forth to each other.

Teachers will become guides or facilitators to student learning. We will be able to monitor student success. The learning will shift from the teacher leading the class to the learner leading the course of study. Teaching will become more personalized.

Students with vision problems will be able to use technology to fully participate in classroom activities with their sighted peers.

Younger children will begin to use computers at earlier ages. They will use game based learning. These games build critical thinking skills.

Possible trends that scare me:

One article I read discussed data chips that can be embedded in students’ skin. These chips allow parents, the school system and even the government to know where they are located and allow them to listen in on what these children are doing. I do believe that children deserve some privacy. I do see some positives to this but they are overridden by the negatives.

Children in poor or depressed areas will be falling further behind. Every child needs to have the same access to the technology.

It is difficult to guess what the future holds in regards to technology and education. I do believe that teachers need to continue to learn so they are prepared for what lies ahead. If we continue to learn and adapt then our students will continue to learn and find success. In the best of classrooms, technology (electronic or otherwise) should support the curriculum, not determine it (Hall, 2000). We need to use the technology to enhance our teaching, not determine what or how we teach.

References

Hinrichs, R.(2002) “A vision for life long learning – Year 2020.” Microsoft Research. Retrieved May 31, 2006 from <http://www.technology.gov/reports/TechPolicy/2020Visions.pdf>

Hall, M. (May/June 2000) “Teaching with electronic Technolgy” Knowledge Quest on the Web. retrieved May 31, 2006 from:
<http://www.ala.org/ala/aasl/aaslpubsandjournals/kqweb/kqarchives/volume28/285Hall.htm>

3-D Worlds

Some Trends that may have an impact in tomorrow's education include:

Immersion Worlds – www.Wikipedia.com defines an immersive digital environment as “an artificial, interactive, computer-created scene or "world" within which a user can immerse themselves. Immersive Digital Environments could be thought of as synonymous with Virtual Reality, but without the implication that actual "reality" is being simulated.”

3-D worlds – these mimic the real world. With this technology students and teachers do not necessarily need to be occupying the same space. 3-D worlds will allow a student to go places they wouldn't ordinarily get the opportunity to explore, such as into a volcano, or into the deepest part of the ocean. These activities enhance existing lessons and are wonderful tools for distance learning as well.

Some Examples of 3-D worlds include:

www.activeworlds.com

www.habbohotel.com

www.secondlife.com

www.toontown.com

www.whyville.com

www.cybernetworlds.com

www.moove.com

www.there.com

www.virtualJamestown.org

www.virtualbusiness.com

Virtual Jamestown

“The Virtual Jamestown Archive is a digital research, teaching and learning project that explores the legacies of the Jamestown settlement and "the Virginia experiment." As a work in progress, Virtual Jamestown aims to shape the national dialogue on the occasion of the four hundred-year anniversary observance in 2007 of the founding of the Jamestown colony”.

Tour the fort



View Artifacts from different angles



Habbo Hotel

“Habbo is a FREE virtual community for anyone aged 13 years or older where you can hang out with your friends, make new ones, create and design your own personal room, and take part in many activities and contests or even make your own!



Habbo Hotel is a virtual Hotel, where teenagers can hang out and chat. Each person in the Hotel is represented by a personalised character called a Habbo. It's a bit like a computer game, but all the characters are real people in different places.

Habbo Hotel is moderated 24 hours a day, every day by professional moderators. The moderators are fully trained and players can ask them for help at any time by clicking on the blue question mark.

Conversations in all parts of Habbo Hotel are logged and can be monitored at any time without warning. Any questionable behavior is reported to the police.

Every conversation in the hotel passes through the Bobba Filter before it appears on the screen. This filters out swearing, racist and sexist terms and other words unsuitable for children. It also filters out email addresses and phone numbers so that they can't be given out. The filter covers Habbo names and missions, as well as room names and descriptions. The filters are updated on a daily basis and contain many hundreds of words and terms.”

I found gift cards at CVS for parents or others to purchase coins for their children. These coins can be used to decorate your room with [Habbo Furni](#), buy gifts for friends, join Habbo Club (their exclusive VIP club) and to play games (for example: Wobble Squabble and Battle Ball).

Virtual Business

“Virtual Business is a suite of business and marketing simulations designed with the educator in mind. These computer-based simulations engage students so they can learn more. Topics covered include Marketing, Introduction to Business, Management, Supervision, Sports Management, Sports Marketing, Retailing, and Entrepreneurship. This software-based simulation of a convenience store motivates students to want to learn more about business and marketing. Students control pricing, promotion, merchandising, market research, and more. Great for teaching Marketing, Entrepreneurship, Introduction to Business, and Retailing.”

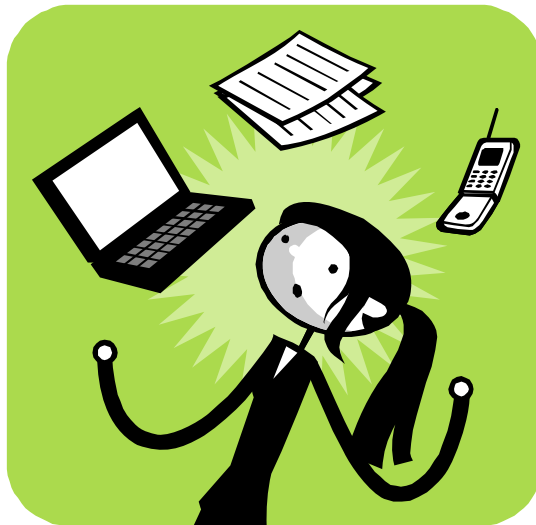


There.com - There is an online getaway where you can hang out with your friends and meet new ones

http://www.there.com/there_movies/there_explore_hi.html



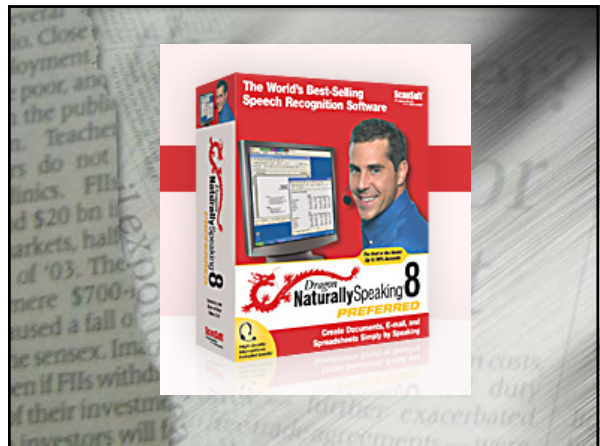
Technology TIPS



- Voice Recognition Software: DragonSpeak
- Writing Tablet: InterWrite SchoolPad
- Podcasting
- Windows Movie Maker
- Blogging
- ReadPlease
- Assistive Technology for the hearing impaired

Voyce Recogtion Voice Recogtion Voice Recognition

By  Aileen



A Short History

- 1936 – AT&T’s Bell Labs produced the first electronic speech synthesizer Voder.
- 1968 – *2001: A Space Odessy* - HAL.
- 1970s – HMM (mathematical pattern matching strategy) invented.

A little more history...

- 1978– Speak and Spell – speech chip
- 1982 – Dragon Systems founded.
- 1995 – discrete word dictation.
- 1996 – world’s first voice portal, Val

Currently...

- Voice-recognition is now thought of as continuous speech dictation. (you no longer need to pause between words for the computer to understand what you’re saying.)

What is Voice Recognition?

- Speech-recognition technologies allow computers equipped with a source of sound input, such as a microphone, to interpret human speech, for instance for transcription or as an alternative method of interacting with the computer.
- En.wikipedia.org/wiki/Voice_reconition

Who uses it?

Issues

- Don't play nice w/ networks
- Training can be frustrating
- Audible to nearby folks
- Speech patterns can change
- Many view as "lazy"
- Screen block

Advantages

- Mobile, hands-free ability to dictate
- Faster for those who cannot type
- More accurately represents verbal abilities
- Allows greater independence

The future of voice recognition?

[Windows Vista](#)

Resources

- [En.wikipedia.org/wiki/Voice_recognition](http://en.wikipedia.org/wiki/Voice_recognition)
- History of Speech Recognition: The Timeline
<http://www.netbytel.com/literature/e-gram/technical3.htm>
- Chris Henley Podcast of Vista's Voice Recognition
<http://blogs.technet.com/chenley/archive/2006/02/21/42019raslx>
- Writing by dictation: Speech recognition guide. 2005.
Nancy Icke, Rachel Perella, Cheryl Temple



InterWrite SchoolPad™ by GTCO CalComp

GTCO CalComp's **InterWrite SchoolPad** was designed with the teacher in mind. This Bluetooth™ wireless pad gives the teacher the ability to teach from anywhere in the classroom.



The InterWrite Interactive Classroom family of products provides the most effective, powerful interactive system on the market today. Any combination of InterWrite SchoolBoards, SchoolPads, iPannels and InterWrite Software provides a dynamic collaborative environment that both engages your students and encourages participation.

InterWrite Software provides the tools to make the interactive classroom a reality. InterWrite Software is the primary focus of the tutorials in this section. It will explore the functions, features and tools of InterWrite Software so you can see how they can be used to prepare, present, save, and distribute lessons that will keep your students engaged, motivated and inspired to learn.

Highlights

- First interactive wireless pad for the classroom.
- Bluetooth wireless device lets you teach from anywhere in the classroom (up to 300 feet!) or pass it to a student and let them contribute from their desk.
- Use with the [InterWrite SchoolBoard](#), or project computer images on any surface to create an interactive whiteboard.
- [InterWrite Software](#) included to make your lessons fully interactive.
- Now includes [RM Easiteach Software](#) Starter Pack, for added content-rich lessons. (US & Canada)
- Windows and Mac compatible.

[Click Here to see a video on the Interwrite Board](#)



Podcasting

Combining the words broadcasting and iPod

Presented by:
Becky



What is a Podcast?

- Audio program you can listen to through the Internet
- Any topic you want to discuss and share with people all over the world



Examples

- [Teachers](#)
- [Ministers](#)
- [Students](#)



Useful Sites

- [Five Steps to Free Podcasting](#)
- [The Discovery Educators Network Blog](#)
- [Podcasting: Wikipedia](#)
- [How to Create a Podcast Tutorial](#)

Windows Movie Maker



You can edit video clips, import pictures, sound, music clips.

Windows Movie Maker 2.1 makes home movies amazingly fun. With Movie Maker 2.1, you can create, edit, and share your home movies right on your computer. Build your movie with a few simple drag-and-drops. Delete bad shots and include only the best scenes. Then share your movie via the Web, e-mail, or CD. Using third-party software you can even take movies you've made and turn them into DVDs. You can also save your movie back to the video tape in your camera to play back on a TV or on the camera itself.



Technology In Practice (TIP):
Blogs
by Mike

Over the past few years blogs have been sweeping through the digital world.

Blogs are an electronic communication device. It combines chatting and emails. As a user posts a message to their blog, visitors can read and reply to the posting. As more visitors read and reply to the original posting, discussions ensue. The topics vary as widely as the number of blogs available.

Through Google people can create their own blog with the site Blogger located at <http://www.blogger.com>. This site is pretty easy to create your own Blog. Simply begin by creating an account. The website walks you through the short process. While it may not provide the user with glitz and glamour for their blog, it will allow them to have a basic blog.

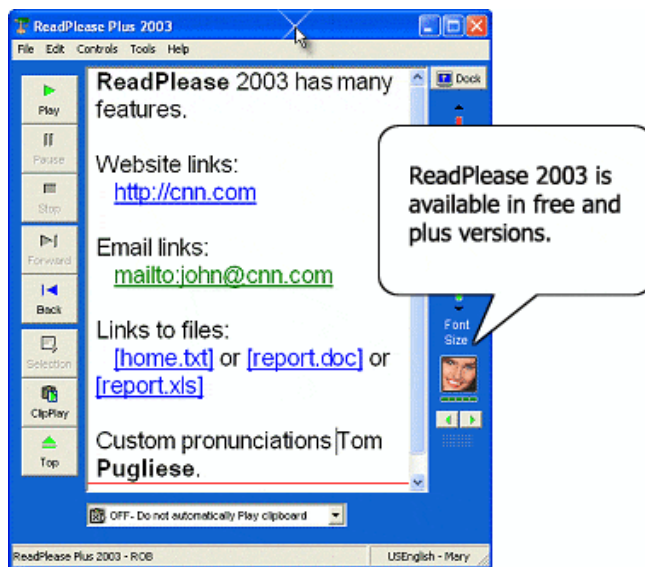
Blogs can be rather useful in the classroom environment. Students can create an online debate by using a blog. The teacher can create the debate topic and students can reply according. One great feature of Blogger is that the user can choose if all comments are posted automatically or with their approval. A teacher can ensure that all the comments are appropriate for school before it is posted. Another way that blogs can be used is by students offering feedback to an essay or assignment that a student wrote. After a student completes the work, they post it to the blog and their classmates can reply with constructive criticism. To see an example of a blog, you may visit my blog at <http://www.mikeitech.blogspot.com>



Free Download!

<http://www.readplease.com/>

Reads any text you see on your screen - all purpose text-to-speech software.



There are 4 different voices you can listen to. You can change the font size and speed at which it is read as well.

Features:

- Microsoft voices: Mike, Mary, Sam, Marilyn
- Customize font and background color
- Reads text via Windows clipboard from any program (copy/paste)
- Control reading from system tray
- Reads e-mail emoticons such as :) or :(
- Adjustable voice speed (rate)
- Low vision color option

Independent Lives Through Assistive Technology

for Children with Hearing Loss
Jenna Conner Harris

7/20/2006

1

Introduction

- People with hearing loss need to access assistive technology to use in their home environment, schools, higher education, work and their community to enhance their hearing with the hearing aids and cochlear implants.
- Audiologists are vital in providing information and resources to their clients for their safety and independence.

7/20/2006

2

Individual Technology



Hearing Aids



Cochlear Implants

7/20/2006

3

Importance of the Telecoil (T-Coil / T-switch)

- Optional component of the hearing aid. Many cochlear implant companies are working to make the T-Coil a part of the BTE feature.
- Functions with telephone and other assistive devices

7/20/2006

4

Three Types of Hearing Assistance Technology

- Assistive listening devices
- Telecommunications equipment
- Alerting devices (I won't cover; there isn't enough time)

7/20/2006

5

Assistive Listening Devices

- "Binoculars" for the ears
- Increase loudness of specific sounds
- Bring sound directly to the hearing aid or cochlear implant
- Minimize background noise
- Override poor acoustics
- Used in large areas, one-to-one, restaurants and for television viewing

7/20/2006

6

Assistive Listening Devices (ALD)

- Each is cordless
- Each works well and has advantages
- Each can experience interference

7/20/2006

7

ALD Considerations

- Prices vary/ comparison shop
- Maintenance, check batteries, staff training
- People setting up the system should check it
- One system might not work for all people with hearing loss

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8

ALD Use

- **The speaker must use a microphone at all time.**
- **An individual's willingness to use ALD's is a consideration.**

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9

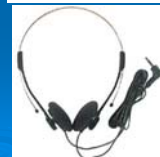
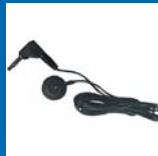
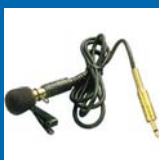
Microphone



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10

Assistive Listening Devices



11

FM System

- Commonly used in classrooms and where movement of speaker is required
- Can cover up to 1,000 feet
- Portable
- Multiple frequencies allow several uses in same place
- Susceptible to radio interference
- Transmits radio waves to receivers

7/20/2006

12

THE INTERNATIONAL SYMBOL OF ACCESS FOR HEARING LOSS:



- Symbol is typically white with a blue background
- Identifies attention to hearing loss
- Identifies equipment to assist hearing loss
- On armband and/or medical record at Mary Washington Hospital, identifies patient with hearing loss
- Internationally used symbol

7/20/2006

13

Closed captioned television and video tapes or DVD.



- Above is the symbol that is used for all closed captioned videos or DVD
- All televisions larger than 13" must have the closed caption chip



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14

Telecommunication Equipment for Use of the Phone

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15

Hearing aid compatible telephones and amplified telephones



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16

Telephones



Cordless Phone

Ameriphone Dialogue CI-40

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17

Speaker Phones



- AT&T has a corded speaker phone Model Number 958 which is also good for those that difficulty in use of their hands; this is an option for people with hearing loss as it is also hearing impaired compatible
- May be a tool for developing listening skills with their hearing aid or cochlear implant

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18

Sorenson VRS



7/20/2006

19

Equipment Used for VRS



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20

Video Relay



7/20/2006

21

Interpreter voices and signs for Sorenson VR.



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22

Hearing person receives call from Video Relay



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23

Speech Impaired



- Make use of their hearing
- Technology; for example, Uniphone TTY.
- The more stress placed on an individual with speech difficulties, the harder it is to convey what they want to say (Ex: stuttering)

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24

Visor Alert Program



Assistive Technology Support Services

- Technology Assistance Program at the Virginia Department for Deaf and Hard of Hearing for people with hearing loss. Audiologist and speech therapist can sign the application form for TAP as long as their client has hearing loss.

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26

Virginia Department for Deaf and Hard of Hearing (VDDHH)

Ratcliffe Building, Suite 203
1602 Rolling Hills Drive
Richmond, VA 23229-5012
(800) 552-7917 Voice/TTY
(804) 662-9502 Voice/TTY
Fax: (804) 662-9718
Email: ddhhinfo@ddhh.state.va.us
Web: www.vddhh.org

7/20/2006

27

Assistive Technology Loan Fund Authority (ATLFA)

- 1602 ROLLING HILLS DRIVE, RICHMOND, VIRGINIA 23229
- ATLFA at (866) 835-5976 (toll-free), or accessing the ATLFA website at www.ATLFA.org.
- **Consumer Service Fund**, which has repayment terms based on the individual's ability to repay.
- Loans to Small Businesses and Non-Profit Organizations

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28

Some Resources for Deaf and Hard Of Hearing Students

- Disability Resource Center in Fredericksburg
- Department of Rehabilitative Services
1-800-552-5019
- Mental Health Local Community Service Board
- Local Lions Club

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29

FYI- this is a cool web site I found that has absolutely nothing to do with this presentation, yet I had to share:

<http://deafsurvivors.blogspot.com/>

7/20/2006

30

Works Cited/Works Consulted

- http://www.zak.co.il/deaf-info/old/tty_faq.html
- **Council on Education of the Deaf at Gallaudet University.** Found on the web at: <http://tap.gallaudet.edu/>
- The Consumer Service Fund. Found on the web at: <http://www.atifa.org/csf.htm>
- Cochlear Implants. Found on the web at: <http://www.nidcd.nih.gov/health/hearing/coch.as>
[p](http://www.nidcd.nih.gov/health/hearing/coch.as)

7/20/2006

31

Works Cited/Works Consulted

- "Communication Considerations for Parents of Deaf and Hard of Hearing Children." Found on the web at: <http://www.nidcd.nih.gov/health/hearing/commopt.asp>
- "About Cochlear Implants." Sponsored on the web by the Mayo Clinic. Found at: <http://images.google.com/imgres?imgurl=http://www.mayoclinic.org/cochlear-implants/images/cochlear-implant.jpg&imgrefurl=http://www.mayoclinic.org/cochlear-implants/about.html&h=293&w=560&sz=20&hl=en&start=5&tbid=EXDc-IPIShJVIV.&itbnh=70&itbnw=133&prev=/images%3Fq%3Dcochlear%2Bimplants%26svnum%3D10%26hl%3Den%26lr%3D%26ie%3DUTF-8%26sa%3DG>
- National Public Website on Assistive Technology. Found on the web at: http://www.assistivetech.net/at_reports/assistive_listening_devices.php
- Deaf Survivors Blogspot. Found on the web at: <http://deafsurvivors.blogspot.com/>
- Priola, Arva. Personal Interviews and Shared PPT Presentations and handouts. July 2006.
- "Together Deaf" at TogetherDeaf.com. Found on the web at: http://www.togetherdeaf.com/disc1_tocf.htm
- Meador, Page. Personal Interview. 18 July 2006.

7/20/2006

32

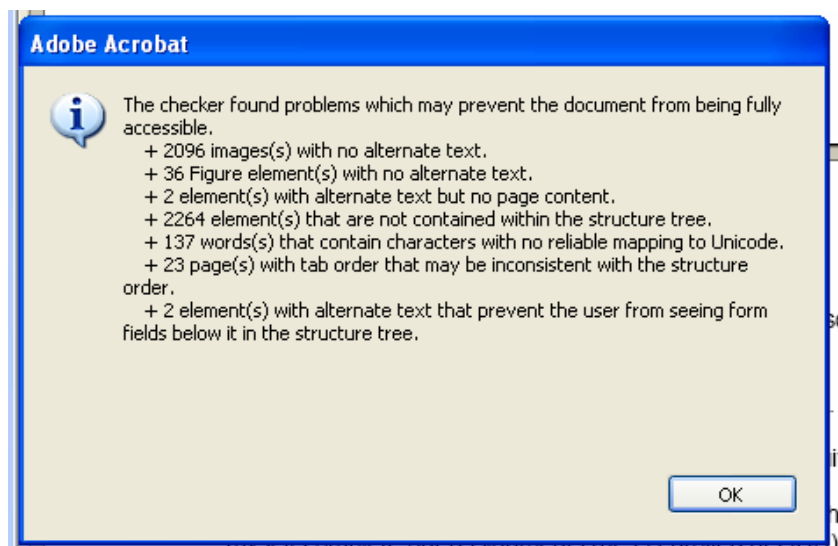
access e learning

http://www.accesselearning.net/mod8/8_11.php

Module 8: Making PDF Documents Accessible.

This module showed the features of Adobe that support accessible document creation and also helps ensure better comprehension for the user.

When running the accessibility checker on this document several problems were found:



In order to make this document accessible, I would have to spend many hours changing the tag structure or recreating the documents into .pdf form from their original form. From now on, I will add alternate text to all of my Word documents – this would save me many hours of work in the future when I am creating PDF documents such as this.

This module was very helpful; I can now create documents for any visually impaired students that I may encounter in the future.

Assistive Technologies Report



Assistive Technology, Federal Laws, Benefits, and Implementation

Lynne Slater

ITEC 531

Dr. Sharon Teabo

July 26, 2006

Assistive Technology, Federal Laws, Benefits, and Implementation

According to the United States 2000 census, approximately 49.7 million Americans have one or more physical or mental disabilities. This number represents 19.3 percent of Americans age 5 and older (or 1 in every 5 Americans). About 9.3 million Americans have sensory disabilities that involve their vision or hearing, 21.2 million have conditions that limit physical activities, 12.4 million have physical, mental or emotional disabilities that cause difficulty in learning, remembering and/or concentrating (Census 2000). Assistive technology (AT) devices help people that have disabilities to live, learn, work and play. Devices may be high tech (such as a computerized synthetic speech device) or low tech (such as a wheelchair ramp). Assistive technology helps improve mobility, speech and daily life skills of disabled persons. Assistive technology, according to educational law, is defined as “any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of a child with a disability (USC, IDEA).”

There are many benefits for using assistive technology tools in the classroom. A study completed by the National Council on Disability (1993) surveyed 136 individuals with disabilities in order to evaluate the costs and benefits associated with assistive technology. This survey found a considerable impact of AT on many aspects of their lives; three findings that impact education include:

1. The majority of infants with disabilities benefited by having fewer health problems because of AT,
2. Almost 75% of school age children were able to remain in a regular classroom, and

3. 45 % of those children were able to reduce their use of school-related services. (NCD, 1993).

Several laws have been passed that deal with Assistive Technology in the classroom. The Rehabilitation Act of 1973, Section 504 became the first federal civil rights law to protect the rights of individuals with disabilities stating:

"no otherwise qualified handicapped individual in the United States shall, solely by reason of his/her handicap, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance." (GSA, 2006, Section 504 section, ¶ 2)

The Americans with Disabilities Act, 1990 is an extension to Section 504. It prohibits discrimination in public and private sector employment, public accommodation, transportation, state and local government services and telecommunications. In regards to education, it ensures that schools that are both eligible and not eligible for federal funding do not discriminate in the educational programs and services they provide.

The 1992 Reauthorization of the Rehabilitation Act, Section 508 further strengthened the rights of individuals to be provided access to technology. This act requires that Federal agencies' electronic and information technology (for example: federal Web sites, telecommunications, software, hardware and information kiosks) to be accessible to people with disabilities. The act has provisions to establish overall standards for accessibility to technology.

The Technology Related Assistance for Individuals with Disabilities Act of 1988 (or Tech Act) was the first act to define AT devices and services. It provided federal money to state governments for the development of training and delivery systems for

assistive technology devices and services. It also promoted the availability and quality of assistive technology devices and services to all individuals.

The Assistive Technology Act of 1998 amendment upholds that technology is a valuable tool that can be used to improve the lives of Americans with disabilities. The act extended federal funding to develop permanent, comprehensive, statewide programs of technology-related assistance.

The Individuals with Disabilities Education Act (IDEA) was first passed in 1975. This law used to be known as the Education for All Handicapped Children Act, or the EHA. It guaranteed that eligible children with disabilities would have a free and appropriate public education (FAPE) available to them that would be designed to meet their unique educational needs. This law has had several amendments and revisions, the most recent being in 2004. The year 1990 was the first time the school district's responsibility to provide AT to students with disabilities was addressed. It contained a specific statement about the school district's role:

[IDEA] 300.308 Assistive Technology. Each public agency shall ensure that assistive technology devices or assistive technology services or both, as those terms are defined in 300.5 - 300.6 are made available to a child with a disability if required as part of the child's:

- (a) Special education under 300.17;
- (b) Related services under 300.16; or
- (c) Supplementary aids and services under 300.550(b)(2).

In 1997 there was an amendment to IDEA stating that assistive technology should be "considered" on all IEPs. It recognized that assistive technology may help aid the students' access to a FAPE outside the school environment such as in a student's home (or other settings). The federal government agrees:

"...for all individuals, technology can provide important tools for making the performance of tasks quicker and easier, but for some individuals with disabilities, assistive technology is a necessity that enables them to engage in or perform many tasks" (ATTO, 2005 Assistive Technology Legislation Section, ¶ 2).

Many school systems struggle with how they should effectively integrate assistive technology for students with disabilities. Assistive technology can "seldom be pulled off the shelf and serve a student with disabilities with maximum effectiveness (Heward, 2003)." There are several factors that an IEP team, that includes the student, should take into consideration before choosing a technology tool. These factors include, but are not limited to, the child's academic skills, social skills and physical capabilities, the child's preferences, the availability, simplicity of operation, initial and ongoing cost, adaptability to meet the changing needs of the child, and the reliability and repair record of the device. It is critical to have the input and support of everyone who works with the student if we desire to experience the impact that can be realized with technology (Richardson).

Dave Edyburn (2003) in "What Every Teacher Should Know About Assistive Technology," states there are three levels that teachers reach concerning assistive technology: awareness, working knowledge and transformation. On the lowest level, teachers need to be aware of the possibilities of assistive technology and what it could offer the student. Teachers on the second level have a working knowledge of AT; they can assume responsibilities associated with AT consideration and evaluation. Teachers on this level are also able to locate AT that would be appropriate for their students. On the transformation level, teachers are able to advocate for their students and measure the benefits of AT.

In her article "Making Better Technology Choices: Where Do We Begin?" Cindy Richardson (2000) lists several solutions that may be available to assist students. She suggests identifying the task(s) that the student is currently unable to perform as the first step to help guide this process. She suggested the following guide for technology implementation:

1. Explore several options; solutions that work for one student do not always work for another. The more options that are explored, the more likely you will be to find one that will make a difference.
2. Success is not immediate; technology, like any other new idea or strategy, takes time and practice to master.
3. Adequate training needs to be provided for all individuals who support the student.
4. Student buy-in and input is paramount for success.
5. Technology should never be implemented into a teacher's classroom without proper support staff in place to address issues that may arise; classroom teachers should never have to feel they are alone during this process.
6. Modification and adaptations may be necessary (2000).

Ms. Richardson also mentions that in Virginia we are fortunate to have the T/TAC, so that teachers and IEP teams are not alone as they consider the technology needs of the students they serve (2000). The T/TAC is a program housed at the College of William and Mary that has the goal "to improve the educational opportunities for school-age students with mild/moderate disabilities by providing a variety of services and assistance to educational professionals that enhance their professional practices (T/TAC).

With proper tools, information and guidance, teachers can help students with disabilities to increase access to various activities and educational opportunities. "As a result, assistive technology devices and services enhance the performance of

individuals with disabilities by enabling them to complete tasks more effectively, efficiently, and independently than otherwise possible” (Edyburn, 2000). As technology continues to improve, so do the opportunities for students with disabilities.

References

Assistive Technology Training Online Project. (2005). AT Laws. Retrieved July

2, 2006 from

<http://atto.buffalo.edu/registered/ATBasics/Foundation/Laws/printmodule.php>

Edyburn, D. (2003). *What every teacher should know about assistive*

technology. University of Wisconsin–Milwaukee: Pearson Education, Inc.

GSA. (2006). Section 508. "Section 504 of the Rehabilitation Act." Retrieved July

3, 2006 from

<http://www.section508.gov/index.cfm?FuseAction=Content&ID=15>

Heward, W. (2003). *Exceptional Children: an introduction to special education*.

The Ohio State University: Pearson Education, Inc.

National Council on Disability (1993), Study on the financing of assistive

technology devices and services for individuals with disabilities: a report

to the President and the Congress of the United States. Retrieved July 1,

2006 from

<http://www.ncd.gov/newsroom/publications/1993/assistive.htm>

Richardson, C. (2000). *Making better technology choices: where do we begin?*

Retrieved July 1, 2006 from

<http://www.wm.edu/ttac/articles/assistivetech/betterchoices.html>

T/TAC (n.d.) *T/TAC Online. Retrieved July 5, 2006 from*

http://ttaonline.org/staff/s_home.asp

United States Government (2000). *Disability status: 2000, Census 2000 Brief.*

Retrieved June 28, 2006 from:

<http://www.census.gov/prod/2003pubs/c2kbr-17.pdf>

United States Congress. *IDEA (Individuals with Disabilities Education ACT (IDEA)*

20, USC, Ch 33, Section 1401 (25) US, Retrieved July 2, 2006 from:

<http://www.section508.gov/index.cfm?FuseAction=Content&ID=12>

United States Congress. (1997). *Individual with Disabilities Education Act*

Amendments of 1997. (P.L. 105-17). (1997). 20 U.S.C. 1400 et seq.

(Congressional Record 1997). Retrieved July 2, 2006 from:

Resources

Annotated Bibliographies

ITs and Future Trends in Education
Immersion or 3D Worlds as Learning Environments
Assistive Technology and Accessibility
Emerging Technologies



ITs and future trends in education

A. US Department of Commerce, Technology Administration. Visions 2020: transforming education and training through advanced technologies. Retrieved May 31, 2006 from <http://www.technology.gov/reports/TechPolicy/2020Visions.pdf>

This is a collection of visions of the future, written by several people in technology and education fields. These visions describe the potential of technology in educational settings and also describe some possible challenges that we, as educators, may face.

B. Davis, J and Sabeen, R. (2004) Perspectives and Future Trends on. Instructional Technology in a. Research University. http://www.che.utexas.edu/cache/newsletters/spring2004_davisperspectives.pdf

A PowerPoint presentation that describes the challenges faced by today's educator at UCLA. Today's student is quite different from that of yesterday and so are the ways that students learn. An amusing section describes the mindset of the 2007 and 2010 student. They state that education for tomorrow requires innovation for today.

C. Whelan, R. (2005). A Look at Past, Present & Future Trends. Accessed July 8, 2006 from: http://www.nyu.edu/its/pubs/connect/spring05/whelan_it_history.html

The author defines Instructional Technology and gives a timeline for its development as well. He discusses the "broken promises" of educational TV and the 1980s promise of one computer per student by 1990. He describes the 20th century learning theories that helped to form IT and the European viewpoint of IT. He describes his vision of the future with e-learning and being able to obtain a customized degree from several universities at once.. He also describes the current trends in the infrastructure and in instructional content as well as the emerging trends in research.

D. Parrish, P. (2004) Prominent Trends and Issues in Instructional Technology, Instructional Design, and Sponsor Requirements and Their Implications for the COMET Program. Accessed July 5, 2006 from: [http://www.comet.ucar.edu/presentations/Trends%20and%20Issues%20\(v%202.0\).doc](http://www.comet.ucar.edu/presentations/Trends%20and%20Issues%20(v%202.0).doc)

The author addresses three different areas: trends in sponsor environments that are changing requirements for how training and education is delivered; trends in instructional

technologies that have implications for development processes; and trends in instructional strategies, based on current educational research and shifting philosophies about learning and instruction, as well as new technologies that have recently become available. There is much discussion about accessibility as well.

E. Lee, C. (2000). Trends make education's future a mystery. Accessed July 12, 2006 from: <http://www.post-gazette.com/regionstate/20000903future3.asp>

The author gives several thoughts on the future of technology and education. She believes that schools of the future will be smaller, more modern and wired for computers. She also describes several theorists conflicting ideas of what educators will face in the future.

Immersion or 3D worlds as learning environments

A. Cooper, J. (2003) Educational MUVES: Virtual Learning Communities. Accessed June 20, 2006 from <http://bcis.pacificu.edu/journal/2003/09/cooper/cooper.php>

This journal article describes Virtual Learning Communities (VLC) and how they can be used in the classroom. Reasons why a teacher should use them, where they can find VLCs to use, tutorials, and links to academic papers about VLCs are provided. The author is a familiar face in the Tapped-In community.

B. Brdicka, B. (1999) *Multi User Virtual Environment and its possible use in Education*. Accessed June 4, 2006 from <http://it.pedf.cuni.cz/~bobr/MUVE/muveen.htm>

The author describes the features of MUVES and how they can be used in the classroom and also the future applications we can expect to see as well. He gives a brief but interesting history of MUVES and how they began. He also describes two popular MUVES, Tapped-In and Moose Crossing and provides links to several 3-D MUVE websites.

C. Metrick, S. (1999) *Emerging Technologies for active learning*. Accessed June 22, 2006 from <http://www2.edc.org/LNT/news/Issue10/feature3a.htm>

The author describes MUVES and how they can be used to help teach reading and writing, in engaging students and for Project-Based Learning. She gives several examples of how MUVES can be used by the student such as: to relive history, to for science experiments or theater performances. She discusses some concerns and challenges that teachers may face while using MUVES but also some strategies to overcome these challenges. Several links where one could learn more information are provided.

D. Corbit, M. (2005). *Game Worlds for Learning*. American Library Association. Accessed July 12, 2006 from: <http://www.ala.org/ala/aasl/aaslpubsandjournals/kqweb/kqarchives/volume34/341corbit.htm>

The author describes several different games that can be used by educators to enhance student learning. She contends that teachers often equate games with wasted time but there are several games available that are wonderful learning tools. She lists and describes several games that teachers could use and provides links to each one.

E. Peterson, M. (2005). Learning interaction in an avatar-based virtual environment: a preliminary study. Accessed June 26, 2006 from <http://www.paccall.org/Journal/V-1-1-papers/Peterson-Avatars.pdf>

The author describes the benefits of how using an avatar-based virtual environment, such as Active Worlds, can be used to help teach second language acquisition. He describes avatars and the Active Worlds Interface in great detail as well as giving several examples of how students can learn another language by participating and interacting with other "native" speakers.

Assistive Technology and Accessibility

A. Making Educational Software and Web Sites Accessible

Design Guidelines Including Math and Science Solutions . Tools for Access: Types of Assistive Technologies. Accessed June 6, 2006 from:
<http://ncam.wgbh.org/cdrom/guideline/tools.html>

This website lists several different types of assistive technology that could help disabled people to “live, learn, work and enjoy life.” Some of the topics covered include: Screen Readers (for blind users – software that vocalizes material on the screen or monitor), Refreshable Braille Displays (a tactile device that raises or lowers dot patterns from a computer), Screen Magnifiers (help people with low vision see what is on the screen), Adaptive Keyboards (for users with physical disabilities or who are unable to use a standard keyboard), Voice-Recognition Software (the user can input data or control the computer by speaking), and Single Switches (hardware solutions for users with physical disabilities who can control the computer only with one or two specific movements). Resources are also listed as well as other information that could be helpful for teachers and parent.

B. Kurzweil 100. Kurzweil Educational Systems. Accessed June 6, 2006 from: http://www.kurzweiledu.com/products_k1000.asp

Kurzweil 1000™ is a type of screen reader or software that makes printed or electronic text available for people who are blind or are visually impaired. This could be used for other students with disabilities as well, for example students with reading problems or dyslexia. You can request a free trial disk at this website.

C. Hawaii Education Literacy Project (HELP). HELP Read™: the Freeware Reader Project. Accessed June 7, 2006 from: <http://www.helpread.net/>

HELP Read™ is free software that reads along with a student while he or she is reading the computer screen. This could be used for students with visual impairments or by students who need extra help with reading.

D. Natural Motion. SmartNav. Accessed June 7, 2006 from: <http://www.tfeinc.com/eshop/10Expand.asp?ProductCode=04-45-SN>

SmartNAV is a tool to help people who are unable to move their hands to type or operate a mouse. It was designed to complement the natural head motion of looking around. Moving your head less than a quarter inch easily maneuvers the cursor across your entire screen. With this hardware and the virtual keyboard program software users are able to type on a computer screen with small head movements.

E. Learning Independence Through Computers (LINC). Accessed June 4, 2006 from: <http://www.linc.org/index.html>

"LINC is a non-profit computer resource center that provides opportunities for people with disabilities, their families, professionals, and members of the business community to explore adaptive technology, computer systems, software, and the Internet. The organization's objective is to help people with disabilities fulfill their potential for productivity at home, at school, at the workplace, and in the community. LINC serves people with all types of disabilities without regard to economic circumstances or age." The website provides a wealth of information for parents and teachers and includes resources and descriptions of various assistive technology.

F. Closing The Gap, Inc. Assistive technology resources for children and adults with special needs. Accessed June 4, 2006 from: www.closingthegap.com

Closing the Gap contains wonderful information about assistive technology for people with special needs. The website included links to a bi-monthly NEWSPAPER and articles by leading experts in the field of AT. The resource directory link includes a guide to over 2,000 AT products. Also provided is an online network of support in the form of a forum where teachers or parents can discuss assistive technology. Much of the information is for (paid) subscribers, but there are still many valuable resources available to non subscribers.

G. Schwab Learning. E-ssential Guide: A Parent's Guide to Assistive Technology. Accessed June 3, 2006 from: <http://schwablearning.org/articles.asp?r=488>

Contains a link to a downloadable guide that explains how assistive technology (AT) can help kids with learning disabilities. The guide helps parents/teachers to select technology tools that will be the most help for the child. This guide would be very helpful to teachers who have never had a student with disabilities in their classroom or for parents who are just starting to have to advocate for their child. Several articles and descriptions are provided. A worksheet is given to help match AT tools to a child's

individual needs and strengths. Also discussed are consumer tips for evaluating different assistive technology products.

H. Curtis, D. Assistive Technology: Enabling Dreams. EDUTOPIA: The George Lucas Educational Foundation. Accessed June 3, 2006 from:
http://www.edutopia.org/php/article.php?id=Art_1241

This article discusses several students and the different assistive technology that helps them to communicate and learn. The AT discussed included: voice-activated software, a customized laptops and a joystick that is attached to a musical instrument to help a disabled student with limited hand control to play in the band. The website includes many other resources for AT and also includes video documentaries on technology integration.

Emerging Technologies

A. Dede, C. (2000) The role of emerging technologies for knowledge mobilization, dissemination, and use in education. http://www.virtual.gmu.edu/ss_pdf/knowlmob.pdf

The author discusses three ideas about using IT in education: that “emerging IT can enable a shift from the transfer and assimilation of information to the creation, sharing and mastery of knowledge;” “Dissemination efforts must include all the information necessary for successful implementation of an exemplary practice, imparting a set of related innovations that mutually reinforce overall systematic change;” and “a major challenge in generalizing and scaling up an educational innovation is helping practitioners unlearn the beliefs, values, assumptions and culture underlying their organization’s standard operating practices”.

B. Penn State University. (2006). Emerging Technologies. Accessed July 12, 2006 from: <http://et.aset.psu.edu/>

This website lists several different Emerging Technologies as researched by the IT staff at Penn State. The goal is to reduce “the time to market for new information services which will help Penn State achieve its goals in teaching, research, and outreach in conjunction with the University’s mission.” For example, the blogging ET gives a description of Blogging, and also lists publications about Blogging and additional resources where one could learn more. Other information includes the level of ET involvement, the initiative start date and the time frame for the ET to be delivered.

c. eSchool News. (2005). Emerging technologies in the education field. Accessed June 26, 2006 from: <http://www.eschoolnews.com/resources/reports/emergingtech2005/index.cfm>

This is a collection of news articles and related links about Emerging Technologies that relate to education. The authors claim that schools are among the earliest adopters of new technology. They hope this list will help introduce new technology and ideas to teachers that will help them find new solutions and creative ways to teach.

D. Slater, D. (2002). How to keep up with emerging technologies. Accessed July 6, 2006 from: <http://www.cio.com/archive/010102/keepup.html>

The author gives five steps to keeping up with the advancements in technology. These steps are to: prioritize ruthlessly (the software or ET you think is most worthwhile), delegate (people to research ETs), read (to learn more), use your consultants and vendors (for recommendations and to learn more about ETs) and forget trade shows (the author contends they are a waste of time).

E. Australian Capital Territory, Department of Education and Community Services. (2005). Emerging technologies : A framework for thinking. Accessed July 12, 2006 from: <http://www.det.act.gov.au/publicat/pdf/emergingtechnologies.pdf>

A very detailed report of the trends and context of Emerging technologies as well as the Environmental contexts (political, legal, social, cultural, educational and technology). Several teaching and learning tools such as whiteboards, online tutors, storage devices, personal digital entertainment devices, podcasts, blogs, wikis, modblogs, peer-to-peer networking, smartcards, solar powered computers are discussed and defined as well as the topics of teacher acceptance and teaching and learning outcomes.