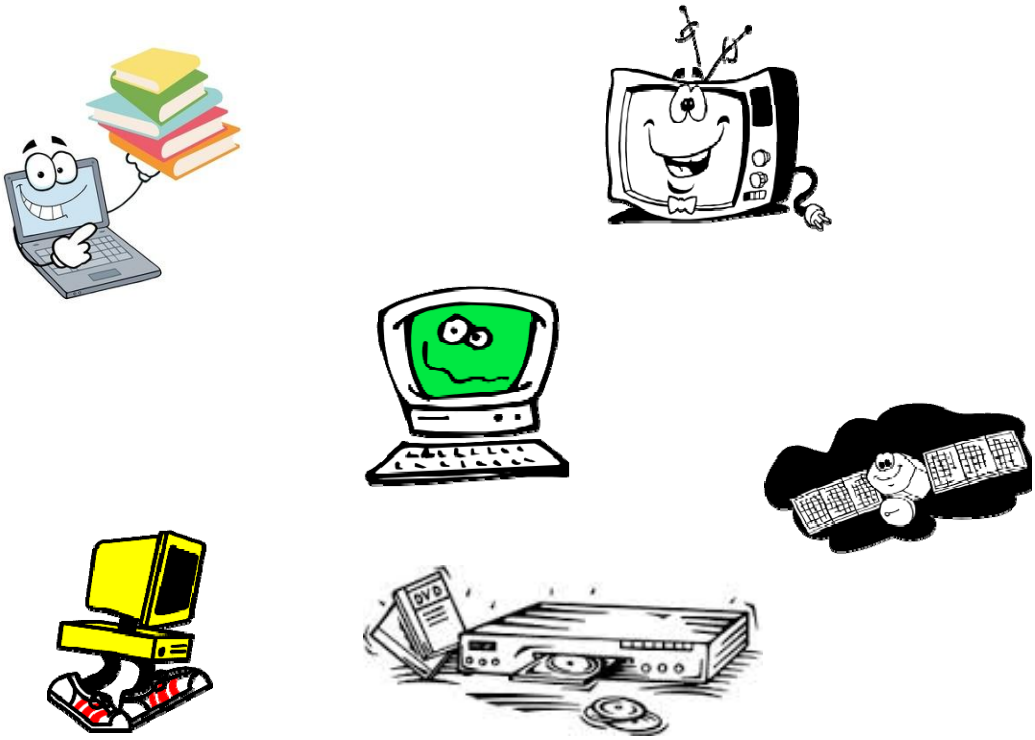
Technical Assistance Sampler

Using Technology to Address Barriers to Learning



*Jessica Michele Neighbors contributed to the revision of this sampler as part of her work with the national Center for Mental Health in Schools at UCLA.

*The Center for Mental Health in Schools is co-directed by Howard Adelman and Linda Taylor and operates under the auspice of the School Mental Health Project, Dept. of Psychology, UCLA.
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Using Technology to Address Barriers to Learning. Los Angeles, CA: Author.

The Center encourages widespread sharing of all resources.

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Introduction

Introduction

Advanced technology offers tools for improving almost every facet of efforts to address barriers to learning and promote healthy development.

Personal computer technology has increased access to the "information highway" and become a multifaceted instructional tool. But this is only the tip of the iceberg. Besides the multitude of computer and internet applications and computer assisted interventions, there is growing use of telecommunications to provide distance learning and consultation and health information and care across distances (telehealth). Technology is expanding, exponentially; the possibilities seem endless.

On another front, the growing need for data in planning, implementing, and evaluating interventions is speeding up development of integrated information management systems.

The attached matrix highlights examples of a range of intervention activity that can benefit from advanced technological applications and some of the categories of tools that are available.

Clearly, a brave new world has emerged. There is much for all of us to learn about advanced technological applications. We all need to grasp the big picture and develop a plan and an agenda for integrating such applications into our daily work. This sampler and its companion, *Examples of Using Interactive Technology to Assist in Addressing Barriers to Learning,* as well as the Center's related online clearinghouse Quick Finds, provide aids for the work ahead.

Advanced Technology: Tools and Forms of Intervention

EXAMPLES OF TYPES OF TOOLS						
FORMS OF INTERVENTION		Personal Computers & Smart Phones	TV/ DVD/ CD	Multimedia	Systems for Integrated, Computerized Information Management	Specialized Technologies for those with Disabilities
	Information & Resource Access					
	Self-help					
	Support Groups, Networking, Conferencing					
	Assessment					
	Referral / Triage/					
	Planning/ Implementation (instruction, enrichment, remediation, care, counseling, and treatment)					
	Accountability / Quality Assurance/ Evaluation					
	Professional Education (including distance learning, supervision, and					

Using Technology to Build Communities of Understanding

A Report to the U.S. Congressional Office of Technology Assessment
Prepared by: Center for Technology in Learning SRI International*

Digital technologies are used to create a web of relationships, engagement, and participation that transforms the educational enterprise and makes it the center of community life. Today, schools, homes, and workplaces function separately -- connected by geography and circumstances but infrequently by common purpose and collaborative action. But in our vision of communities of understanding, digital technologies are used to interweave schools, homes, workplaces, libraries, museums, and social services to reintegrate education into the fabric of the community. Learning is no longer encapsulated by time, place, and age but has become a pervasive activity and attitude that continues throughout life and is supported by all segments of society. Teaching is no longer defined as the transfer of information, learning no longer as the retention of facts. Rather, teachers challenge students to achieve deeper levels of understanding and guide students in the collaborative construction and application of knowledge in the context of authentic situations and tasks. Education is no longer the exclusive responsibility of teachers but benefits from the participation and collaboration of parents, business people, scientists, seniors, and, of course, students of all ages.
*SRI international, 333 Ravenswood Ave. Menlo Park, CA 94025-3493 Ph: 415/326-6200.

Improving Sectors of Society: Health, Education, Journalism and Media, and Government

The information revolution is creating opportunities in many other sectors of society, including health care, education, journalism, and government. … new IT has the potential to help people around the world overcome geographic or income barriers which currently degraded the quality of their lives. By dramatically increasing access information, the advances can enhance knowledge, break down barriers to participation, and improve the accountability of public and private institutions to its people. These developments will prove especially beneficial to individuals in poor and underserved communities around the world.
http://www.globalization101.org/improving-sectors-of-society-health-education-journalism-and-media-and-government/

Reframing Public Space Through Digital Mobilization: Flash Mobs and Contemporary Urban Youth Culture

Flash mobs have spread, like wildfire, across the globe in recent years fuelling new uses of urban public space. The media has wondered if these events are simply pointless pranks, creative public performances, or mass social experiments in community building. Existing research emphasizes only the vital role of digital communications technology in the mobilization process. In contrast, this analysis shows through a broad range of examples from New York, London, Berlin, Budapest to Tokyo that these nascent forms of collective action are also important to examine because they provide insight into the intersection and interaction between new communications media and changing uses of physical urban space. It situates flash mobs in a historical context, constructs a basic typology of flash mob activity based on extensive Internet research, and theorizes it as a new form of sociability. It also explores how these examples of urban creativity have inspired commerce and politics to rediscover urban space, increasingly borrowing the organizational techniques of flash mobs in marketing campaigns and social protests.

Excerpt from:

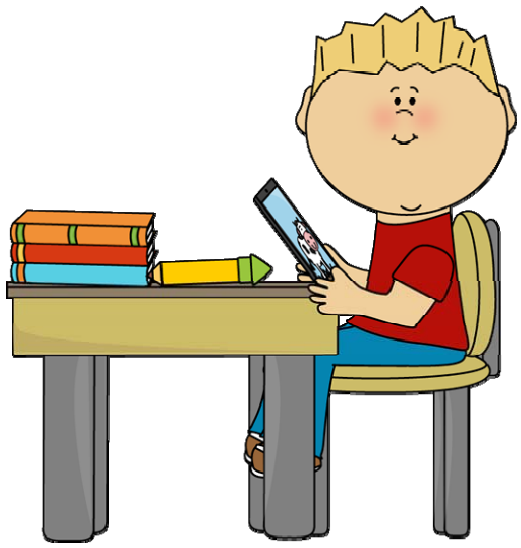
http://sac.sagepub.com/content/early/2013/05/13/1206331212452368

I. Technology for Addressing Barriers to Learning

A. Technology & Education

B. Technology & Mental Health

C. Caveats and Cautions



I. Technology for Addressing Barriers to Learning

A. Technology & Education

National Education Technology Plan 2010

Transforming American Education: Learning Powered by Technology

"By 2020, America will once again have the highest proportion of college graduates in the world."- President Barack Obama, Address to Congress, February 24, 2009

The National Education Technology Plan, *Transforming American Education: Learning Powered by Technology*, calls for applying the advanced technologies used in our daily personal and professional lives to our entire education system to improve student learning, accelerate and scale up the adoption of effective practices, and use data and information for continuous improvement. It presents five goals with the recommendations for states, districts, the federal government, and other stakeholders. Each goal addresses one of the five essential components of learning powered by technology: Learning, Assessment, Teaching, Infrastructure, and Productivity.

Excerpt from: http://www.ed.gov/technology/netp-2010

Federal Initiative to Advance Use of Technology in Schools

The U. S. Department of Education has developed a major initiative for advancing technology for student learning. Here is information from their website – http://www.ed.gov/edblogs/technology/

"The Office of Educational Technology (OET), in the Office of the Secretary, provides leadership for transforming education through the power of technology. OET develops national educational technology policy and advocates for the transition from print-based to digital learning. OET supports the President's and Secretary's ConnectED Initiative by:

- Promoting equity of access by ensuring a device for every learner and connecting all schools to broadband internet.
- Supporting powered-up educators and a robust ecosystem of entrepreneurs and innovators.
- Leading cutting-edge research in learning analytics and data to provide new types of evidence and customize and improve learning.

Re: ConnectED – http://www.ed.gov/edblogs/technology/connected/

"The ConnectED Initiative announced by the President on June 6, 2013 sets four clear goals to transition to digital learning across the country in 5 years:

Upgraded Connectivity: Ensure next-generation broadband and high-speed wireless to is available to virtually all of America''s students in their classrooms and libraries.

Access to Learning Devices: Ensure students and teachers have access to affordable mobile devices to access digital learning resources at any time inside and outside of the classroom

Supported Teachers: ConnectED invests in improving the skills of teachers, ensuring that every educator in America receives support and training to use technology to help improve student outcomes.

Digital Learning Resources ensure availability of high-quality digital learning resources and materials for students and teachers."

The website provides a link to the National Education Technology Plan – http://www.ed.gov/edblogs/technology/netp-2010/

Excerpt: "...The plan recognizes that technology is at the core of virtually every aspect of our daily lives and work, and we must leverage it to provide engaging and powerful learning experiences and content, as well as resources and assessments that measure student achievement in more complete, authentic, and meaningful ways. Technology-based learneing and assessment systems will be pivotal in improving student learning and generating data that can be used to continuously improve the education system at all levels. Technology will help us execute collaborative teaching strategies combined with professional learning that better prepare and enhance educators' competencies and expertise over the course of their careers. ...The model of learning described in this plan calls for engaging and empowering learning experiences for all learners. The model asks that we focus what and how we teach to match what people need to know, how they learn, where and when they will learn, and who needs to learn. It brings state-of-the art technology into learning to enable, motivate, and inspire all students, regardless of background, languages, or disabilities, to achieve. It leverages the power of technology to provide personalized learning and to enable continuous and lifelong learning...."

The site also includes links to each state's technology plan for education – http://www2.ed.gov/programs/edtech/techstateplan.html

Sizing Up Blended Learning

This Education Week special report is part of an ongoing e-learning series about online education. These stories examine the opportunities and persistent questions that surround schools' and districts' implementation of blended learning, the widely used instructional approach that combines technology-based instruction with traditional, face-to-face lessons. See http://www.edweek.org/ew/collections/e-learning-2014-blended/ for the recent articles: see http://www.edweek.org/ew/collections/e-learning-2010/e-learning/index.html for the earlier articles.

These special reports from the technology team at Education Week Digital Directions aim to highlight the progress made in the e-learning arena, as well as the administrative, funding, and policy barriers that some experts say are slowing the growth of this form of education

A few examples:

Bringing Blended Models Home No Easy Task (January 27, 2014)
As schools work to expand tech-based strategies, they are trying to find solutions for students who don't have ready access to the devices they need at home.
http://www.edweek.org/ew/articles/2014/01/29/19el-homework.h33.html

Districts Weigh Blended Costs, Savings (January 27, 2014)
School districts find that costs and savings from blended learning vary by factors such as the size of the school system and the technology required.
http://www.edweek.org/ew/articles/2014/01/29/19el-cost.h33.html

Managing the Digital District
The complex challenges of running today's technology-oriented school districts can be daunting. This October 2013 special report aims to provide guidance for school leaders looking for new ideas and approaches for managing the digital evolution of their districts.
http://www.edweek.org/ew/collections/e-learning-2013-district/index.html

Digital Curricula Evolving
This May 2013 special report examines how technological trends are transforming the role of the teacher, pressuring education schools to modernize, putting a greater emphasis on quality content, and reimagining K-12 learning environments.
http://www.edweek.org/ew/collections/e-learning-2013-curricula/index.html

'Flexible' Classrooms: Blended Learning 2.0? (January 21, 2014)
Rocketship Education's new approach to blended learning seeks to increase teacher collaboration and further individualize instruction, but the model poses new challenges for classroom educators.
http://www.edweek.org/ew/articles/2014/01/21/19el-rotation-side.h33.html

Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies

U.S. Department of Education
Office of Planning, Evaluation, and Policy Development
Policy and Program Studies Service

A systematic search of the research literature from 1996 through July 2008 identified more than a thousand empirical studies of online learning. Analysts screened these studies to find those that (a) contrasted an online to a face-to-face condition, (b) measured student learning outcomes, (c) used a rigorous research design, and (d) provided adequate information to calculate an effect size. As a result of this screening, 50 independent effects were identified that could be subjected to meta-analysis. The meta-analysis found that, on average, students in online learning conditions performed modestly better than those receiving face-to-face instruction. The difference between student outcomes for online and face-to-face classes—measured as the difference between treatment and control means, divided by the pooled standard deviation—was larger in those studies contrasting conditions that blended elements of online and face-to-face instruction with conditions taught entirely face-to-face. Analysts noted that these blended conditions often included additional learning time and instructional elements not received by students in control conditions. This finding suggests that the positive effects associated with blended learning should not be attributed to the medi, per se. An unexpected finding was the small number of rigorous published studies contrasting online and face-to-face learning conditions for K–12 students. In light of this small corpus, caution is required in generalizing to the K–12 population because the results are derived for the most part from studies in other settings (e.g., medical training, higher education).

Excerpt from:
http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf

Educational Technology in Social Studies Education

Timothy Green Ph.D., Jennifer Ponder Ph.D., Loretta Donovan Ph.D.

The National Council for the Social Studies, the largest professional organization for social studies educators, indicates that the primary purpose of the social studies is to help youth become responsible citizens who are capable of making informed and reasoned decisions for the good of society.

For this purpose to be met, students need to understand a vast domain of knowledge and have the skills to think critically, problem-solve, collaborate, and act conscientiously in addressing complex issues. This means that teachers need to learn how to use innovative approaches to engage students as thinkers and problem solvers so students may be successful global citizens and leaders of the twenty-first century.

Designing an environment where students have the opportunity to learn and practice these skills while exploring social studies content can be challenging, but not impossible. A key component is the essential role educational technology and twenty-first century skills have in facilitating teaching and learning in the social studies.

See the ***Handbook of Research on Educational Communications and Technology*** (2014) pp 573-582

http://link.springer.com/chapter/10.1007/978-1-4614-3185-5_45

This chapter provides an overview of the research on how educational technology has been used to engage and inspire all learners to be creative and critical thinkers, not only for the good of their individual futures, but for the future of our global society. In providing the overview, the focus is on two major areas within social studies education—historical inquiry and civic education.

Excerpts from: *Technology Briefs for No Child Left Behind (NCLB) Planners*

While no longer active, the Northeast and Islands Regional Technology Consortium (NEIRTEC) created a series of Technology Briefs for NCLB planners. The topics of these Technology Briefs were selected to reflect the U.S. Department of Education requirements for state and local applications, and they provided NCLB planners with effective strategies, key questions to consider, and selected resources for planning.

The following strategies suggest ways technology can be used to support improved academic achievement:

1. Use technology in support of student learning in key content areas by linking to existing district or school initiatives. For example, process writing goals can be supported with portable smart keyboards and webbing tools (e.g., Inspiration). Build technology into the math curriculum in areas such as data organization and interpretation (databases and spreadsheets) or exploration of mathematical concepts (see http://standards.nctm.org/document/eexamples/). Support early literacy initiatives with technologies that incorporate reading, writing, speaking, and listening (e.g., Wiggleworks).

2. Teachers can work within specific content areas to integrate technology rather than making technology a separate subject area. Consider: What do students need to learn, and how can technology promote those learning goals? When revising curriculum in a specific subject area, the committee that is charged with this task could also be specifically charged with looking into the selection of technology tools and resources to support learning in this area. It is best if curriculum and technology leaders work together to create planning documents to ensure that district learning goals are in both the curriculum and technology plans. Working together, they can create curriculum plans that include technology skills and resources where appropriate and beneficial to student learning, identify student and teacher technology skills needed to use technologies for learning, and plan where these skills can be integrated into professional development (for teachers) and curriculum (for students).

3. District leaders can use technology tools to collect, organize, analyze, disaggregate, and report on student achievement data. Student achievement data is complex, but it offers a tremendous opportunity to identify strengths and weaknesses in curriculum and instruction when properly analyzed and synthesized. Data organization and manipulation tools such as spreadsheets, relational databases, and automated student information systems can assist in this task. Administrators can involve teachers in the process of looking at student performance data to inform curriculum and instruction decisions and practices. Teachers' use of portable technology tools (e.g., PDAs, hand-held computing devices) can assist them in classroom assessment.

4. Technology can be used to support different learning styles and meet the needs of all learners in the district. For example, technology supports a district-wide focus on differentiated learning with universal design for learning concepts: multiple means of expression (multimedia presentation tools), multiple means of engagement (simulations, online manipulatives, contentbased software), and multiple means of representation (digital images, digital sound, animation, text-to-speech resources). Curriculum materials should be varied and diverse and should include digital and online resources in addition to traditional text resources. Technology can also facilitate developmentally appropriate learning experiences by providing information in a variety of ways (visual, auditory) and at a variety of levels.

Increased Teacher Capacity

Technology can and should play an important role in curriculum planning, development, delivery, assessment, and administration. Technology must be "institutionalized in schools"- integrated into the culture and classroom practice of a school (Nelson, Post, & Bickel, 2001). Professional development is essential to ensure that teachers are able to choose the most appropriate technologies and instructional strategies to meet district curriculum goals and student learning needs. The primary reason teachers do not use technology is a lack of experience with the technology itself (Wenglinsky, 1998). Teachers need to be supported in their efforts to use technology.

When properly trained and supported, teachers can effectively use technology to find content-based resources, deliver instruction, and support and enhance curriculum.

*1.*The Enhancing Education Through Technology Act of 2001 requires that "not less than 25 percent of funds [will be used] to provide sustained and intensive, high-quality professional development" (Section 5216a). A district can support contentbased professional development with curricula and teaching strategies that integrate technology, particularly in areas identified by the district as areas of concern or focus. For example, professional development focused on "writing across the curriculum" can be supported with technology tools such as graphical organizers (Inspiration) and portable writing devices. This strategy necessitates cooperation and common planning and goal setting between curriculum directors, support personnel, technology directors, and staff. Districts might consider providing a variety of flexible and on-going professional development formats and options (online, after school, summer, staff meetings, release days).

*2.*It is important to allocate appropriate hardware, software, and support resources to encourage the capacity-building process. Consider providing on-site technical and instructional support for the integration of technology. A possible strategy involves using technology integration specialists to support teachers. Training, materials, and modeling should show how technology can be used to support curriculum, making the push for technology and the push for standards complementary rather than competing mandates on teachers. Consider creating professional development centers (real or virtual) in schools or districts where teachers can meet to learn, practice, and share new ideas and strategies.

*3.*Experience has shown the importance of creating school conditions that support and encourage teachers as they work to develop basic technology skills and integration strategies. Consider providing inschool time for professional development, collegial sharing, curriculum planning, and teacher experimentation. Teachers will need easy access to reliable, 1nternet-connected teacher workstations/ presentation stations in their classroom. Possible strategies include making laptops available to teachers for at-home use, ensuring that district software may bbe used by teachers at home for curriculum planning, and allowing teachers to access school/ district servers and networks from outside of school.

*4.*It is important that district/ school goals and expectations support teachers in their integration efforts. Aligning teacher evaluation systems and hiring practices with the system technology goals and vision will support technology integration into the curriculum.

Promotion of Curricula and Teaching Strategies That Integrate Technology

A review of relevant research to justify strategies for effective technology integration shows mounting evidence that educational technology can have a positive impact on student achievement. Organizations such as the Centre for Applied Research in Educational Technology (CARET) have Web sites that provide ready access to some of the best available research. Identifying relevant research and using it to promote strategies that effectively integrate technology into curricula and instruction is critical; by strategically planning and promoting technology integration at the curriculum development stage, schools and districts can align both technology and curriculum directly to teaching strategies and therefore stand a better chance of achieving effective technology integration from classroom to classroom across the organization.

http://www.caret.cam.ac.uk/page/home

(Example of Multiple Technological Applications in a School District)

Dallas Independent School District's Technology Strategic Plans*

The Texas State Board of Education approved a new curricular area entitled Technology Applications within the Texas Essential Knowledge and Skills (TEKS) which was implemented September 1, 1998. Every student must take a year-long course in Technology Applications as a prerequisite to high school graduation.

The integration of appropriate technology within all levels of our educational system is a primary goal for DISD. This plan was developed to provide a road map to support the DISD Vision. Instructional technology and services must receive the greatest attention in the future if the vision and strategic goals for DISD are to be met. Above all, this plan must ensure equitable access by all students to both the technology and the learning resources that it provides.

- The Vision of the Dallas Independent School District Technology Services is to support, facilitate and enhance the use of technology in the educational environment.
- The Mission of the Dallas Independent School District Technology Services is to develop and implement the comprehensive strategies which will support, facilitate and enhance the use of technology in every aspect of the educational environment, so as to enable DISD access to global information resources, communication tools, and in realizing the creative potential which can be provided by technology today and in the future.
- The Strategic Plan for Technology provides the long-range framework for achieving the Technology Mission.
- The Technology Implementation Plan defines the needs of individual areas to activate the Strategic Plan....

The Technology Vision

Any One. Instruction must be available to every student; assistance to every teacher; and information to every administrator without the need for special texts, equipment, or materials. Everything should be available online via computer and communications technology. This will require leading edge computers, advanced video devices, and communications links. This environment will be a school where every educator and every student can get hands-on training and access when or where needed. This environment will be a school where professional colleagues have access to financial data and student performance as well as the analytical tools to effectively use that information.

Any Place. Instruction must be available to every student in any place that has a network hookup or communications access. Every student should have the opportunity to become immersed in the sights, sounds, and languages of other countries, visit museums, explore the inner workings of a cell, or explore outer space from a virtual space suit.

Any Time. Instruction must be available to everyone any time of the day or night, any day of the week, any week of the year. Open entry, open exit; anytime and all the time.Our vision is to free students from the limitations of traditional education. We will increase their capabilities to learn and to take the courses they need when and where they need them for the rest of their lives. This technology vision and its implications are in direct support of the DISD Board Goals and will truly allow our graduates to become global citizens. Education will continue its transformation by the following:

- Curriculum organized as projects involving sustained and complex co-investigations;
- Accelerated curriculum available to everyone;
- Many secondary classes taught via distance education;

(cont.)

(Dallas, cont.)

- Media center resources distributed via network anywhere;
- Student access to worldwide connectivity available anywhere, any time, for resources and interaction;
- Searchable textbooks and other media resources available online;
- Students access any time, anywhere, to class assignments and homework;
- Specific video and audio conferences set up in advance for cooperative projects and debriefings;
- Portable, interconnected, wireless computers with access to multimedia communications for all students and teachers;
- Timely and convenient professional development with access to experts through video-conferencing on portable computers;
- No geographical boundaries for some classes. Students and instructional resources may be accessed all around the world;
- Student scheduling online for a variety of classes on a variety of schedules;
- Help Desk support for all software with dispatch ability to support and schedule every need, from software training and support to installation and ordering field services; and
- Complete and current financial data readily available to guide educators through the development of multiyear budget projections.

Multiple Technology Requirements

DISD represents a unique environment in the application of technology. The District requires technology to support its business activities much like any large company, except that there are over 9,000 local offices (i.e. classrooms). In addition, technology in DISD must serve as both a conduit for curriculum delivery and a part of the curriculum to be delivered. For efficient and economical deployment, technology planning and implementation must be integrated across all of these needs. To meet these requirements, technology development must be considered in the following three areas:

Instructional applications of technology directly support the teaching and learning environment as well as the interaction between students and resources (e.g. libraries, online services guidance services). Development must focus on

- Enhancing the teaching and learning environment.
- Retraining educators and retooling curriculum delivery.

Administrative applications of technology manage material resources, including personnel and financial applications. Development must focus on

- Improving the management of schools.
- Ensuring that all administrators possess the capacity to use technology.

District-wide database applications of technology provide secured, timely, accurate information in a standard format to all who need it. Development must focus on

- Providing all with cost-effective access to relevant and high-quality information by consolidating all student, personnel and financial records, the library system, and longitudinal studies...

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...The integration of appropriate technology within all levels of our educational system is a primary goal for DISD. This plan was developed to provide a road map to support the DISD Vision. Instructional technology and services must receive the greatest attention in the future if the vision and strategic goals for DISD are to be met. Above all, this plan must ensure equitable access by all students to both the technology and the learning resources that it provides.

The **Strategic Plan for Technology** provides the long-range framework for achieving the Technology Mission.

The **Tech Implementation Plan** defines the needs of individual areas to activate the Strategic Plan....

B. Technology & Mental Health

Use of technology in treatment of mental disorders

From Wikipedia, the free encyclopedia
http://en.wikipedia.org/wiki/Use_of_technology_in_treatment_of_mental_disorders

The use of electronic and communication technologies as a therapeutic aid to healthcare practices is commonly referred to as telemedicine or eHealth. The use of such technologies as a supplement to mainstream therapies for mental disorders is an emerging mental health treatment field which, it is argued, could improve the accessibility, effectiveness and affordability of mental health care. Mental health technologies used by professionals as an adjunct to mainstream clinical practices include email, SMS, virtual reality, computer programmes, blogs, social networks, the telephone, video conferencing, computer games, instant messaging and podcasts.

Excerpt from: ***Current and Future use of Technology and Children's Mental Health*** (http://www.rtc.pdx.edu/FeaturedDiscussions/pgFD33.php)

Goal six of the President's New Freedom Commission on Mental Health identifies improvements in the use of technology as essential to transforming mental health care. Technology provides myriad opportunities to improve information and services for children's mental health. Some of the relevant uses of technology include:

* Enabling consumer access to reliable information about mental health
* Broadening access to self-help and social support groups through synchronous and asynchronous communication (online groups, listservs and chatrooms, instant messaging, video conferencing)
* Integrating mental health services into primary care through shared information, education, screening, and referral to mental health services
* Promoting family involvement
* Improving clinical services (therapeutic interventions, computer-assisted assessment, decision support, evaluation)
* Supporting access to individualized, culturally appropriate care
* Broadening access to under served groups (telehealth)
* Supporting professional training and staff development
* Improving administrative systems (client records, tracking, cross-agency collaboration)
* Disseminating up-to-date research

Technology in children's lives: Opportunities, Barriers and Concerns

In the mental health field, the Internet has become an increasingly important tool for outreach to young people. Agencies such as Befrienders International "work worldwide to provide emotional support and reduce suicide". Online service provision is also likely to increase. For example, professional associations such as the American Counseling Association and the American Mental Health Counselors Association provide ethical guidelines for online counseling and other uses of technology in service provision.

Despite rapid growth in internet use, there are a number of issues to be considered if mental health care is to benefit more fully from the available technology. One general issue to be addressed is the disparity in access to technology. Other system level barriers to be addressed include payment systems, legal and privacy protection, and geographically-based professional licensure and practice restrictions. In addition, many of the concerns common to general internet use, such as identity theft, receipt of unwanted information, and online solicitation, also apply to the use of technology in the field of mental health.

There are also specific social concerns related to internet use by children and youth due to the risks of increased exposure to internet crimes, including internet-initiated sex crimes against minors. Although this is a relatively new area of research, results from the National Juvenile Online Victimization Study indicate that children with mental health difficulties such as depression may be more likely to use the internet in ways that put them at greater risk. It is clear that more needs to be known about this topic.

Technology use generates both new opportunities and problems. However, it is increasing integrated into many aspects of children's lives.

Youtube, Facebook, Blogs, and More: Innovative Ways Local Health Departments are Reaching Adolescents

Given the importance and popularity of the Internet in youth culture, local health departments (LHD) have many opportunities to reach adolescents in new ways by using Internet technology. Developed by NACCHO's Adolescent Health Project, this issue brief discusses the rising use of the Internet among adolescents; describes the Web sites that adolescents visit; and profiles initiatives that LHDs can and have used to educate and empower adolescents to make informed and responsible choices about their health and well-being.

Excerpt from:
http://eweb.naccho.org/eweb/DynamicPage.aspx?WebCode=LoginRequired&expires=yes&Site=naccho

Advances in Computerized Interventions for Youth with Depressed Mood

By Anthony Spirito, Ph.D. and Jennifer Wolff, Ph.D.

Computer-based technology is progressing rapidly and has been applied to several areas of service delivery as either an additive or alternative to clinic-based therapy. For children and adolescents, this approach may hold promise in mental health treatments as a means of increasing willingness to engage in treatment. In addition to a computerized program's inherent appeal to children and adolescents, some additional benefits include ease of use, translatability to community settings, potential reduced need for transportation, and design flexibility of programs to allow the child to pace themselves.

From: The Brown University Child and Adolescent Behavior Letter Vol.29, 8, ISSN 1058-1073
Adolescents, the Internet, and health literacy.

Adolescents, the Internet, and health literacy

From: Gray NJ. *Adolesc Med State Art Rev*. 2007 Aug;18(2):370-82, xiii.

In this article, the development of the concept and measurement of "off-line" health literacy is charted, recent development and interest in adolescent off-line health literacy is explored, and how the Internet could be useful in assessing and improving adolescents' online and off-line health literacy skills is considered. The important issue of content filters will also be considered as it relates to adolescents' ability to retrieve online health information about sensitive issues.

Internet surveys with adolescents: Promising methods and methodologic challenges

From: Sutter E, & Klein JD *Adolesc Med State Art Rev*. 2007 Aug;18(2):293-304, x.

The use of Web-based surveys and methods has grown substantially in recent years. Internet surveys have the potential to produce data rapidly and efficiently, provide access to hard-to-reach populations, and reduce response biases. Although some methodologic questions require further exploration, Web-based survey methods can accurately represent many adolescent and young-adult populations and will be an increasingly relevant part of how we learn about the attitudes and behaviors of youth in our society. This article reviews current literature and some of the strengths and limitations of Web-based survey research with adolescent and young-adult populations.

Has the Internet changed everything or nothing? Thoughts on examining and using emerging technologies in adolescent health research.

From: Borzekowski DL. *Adolesc Med State Art Rev*. 2007 Aug;18(2):305-24, xi.

There are 2 ways to think about emerging technology and adolescent health research. First, one can try to understand the relationship between technology and adolescent health. This line examines whether time spent using emerging technologies or being exposed to messages and applications are associated with poorer or better health. The second way looks at how technology is and can be used through delivering interventions, data collection, or analyses. This article examines both ways of thinking. Given the limited (albeit growing) number of published studies, we use a case-study approach to illustrate relationships and methods. After discussing the purpose and findings, we highlight a study's strengths and weaknesses, not to praise or disparage a researcher's work but to critique the research. We conclude by describing common concerns in adolescent research suggesting ways to advance the field of emerging technologies and adolescent health research.

C. Caveats and Cautions

Excerpt From: **Children and Electronic Media**
The Future of Children. (2008) (http://www.futureofchildren.org/)
Jeanne Brooks-Gunn and Elisabeth Hirschhorn Donahue

Media technology is an integral part of children's lives in the twenty-first century. The world of electronic media, however, is changing dramatically. Television, which dominated the media world through the mid-1990s, now competes in an arena crowded with cell phones, iPods, video games, instant messaging, interactive multi-player video games, virtual reality sites, Web social networks, and e-mail.

American children are exposed to all these media and more. The vast majority of children have access to multiple media. Virtually all have television and radio in their homes, and half have a television in their bedrooms. Most have Internet and video game access, and a significant portion has a cell phone and an iPod. The numbers joining social networking websites like Facebook and MySpace grow daily. Technological convergence, a hallmark of media use today, enables youth to access the same source from different, often portable, media platforms. Thanks to convergence, a teen can watch a television show on a computer long after the show has aired on television and can use a cell phone to surf the Internet. Children, particularly adolescents, thus have almost constant access to media—often at times and in places where adult supervision is absent. As a result, America's young people spend more time using media than they do engaging in any single activity other than sleeping.

What do researchers know about how children and youth use electronic media and about how that use influences their lives? Is media technology a boon, one that leaves American children today better educated, more socially connected, and better informed than any previous generation of the nation's children? Or is it, as many voices warn, a hazard for vulnerable children—an endless source of advertising, portrayals of violence, and opportunities for dangerous encounters with strangers and possible exposure to pornography?

The quantity and quality of research on these questions are uneven. Researchers have amassed a vast amount of solid information on older technologies, such as television and movies. But investigations of newer technologies and of the novel uses of existing technologies are far fewer in number and more speculative in their findings. The pervasiveness of electronic media in the lives of children makes it important for policymakers, educators, parents, and advocates to know what researchers have discovered, as well as what questions remain unanswered.

Effective Instructional Tools or Costly Distractions: An Examination on the Effective Implementation of Technology in the Classroom

Excerpt from: School Leadership Review, Summer 2012 Volume 7, Issue 2
ISSN: 1559-4998

Technological advances have proliferated in the workplace, our daily lives, and even in the area of research. With each passing day different forms of technology are becoming increasingly available to people all around the world. The quick influx of technology has resulted in little time for technological professional development in the field of education. Although the majority of today's youth have grown up in a technological world, the adults educating these students have little exposure and understanding of these new advances (Christensen & Knezek, 1999).

The influx of technology into today's society has had several ramifications. From the time of infancy, children are immersed in technology. This exposure has led many students to grasp new technologies quickly, whereas for those who did not grow in this Digital Era, learning new technology may be time consuming. It is widely believed that the frequent use of technology has affected the attention span of today's youth (Swing, Getile, Anderson, & Walsh, 2010). Quickly answering questions using the Internet and talking with friends anywhere are just a couple examples of how technology has resulted in an increased amount of instant gratification. Technology, however, has also helped to increase learning through Gardner's Multiple Intelligences (McKenzie, 2002). Increasing the use of technology in the classroom could also help students to relate their lives to their education. Between the Internet, cell phones and iPods, students are connected with technology almost every waking moment. Why must this stop just because they enter the classroom?

The extensive availability of resources has led many teacher preparation programs to increase technology exposure to their preservice teachers. Teachers in training are learning which technologies are available and being asked to consider how best to integrate these new methods into their classrooms to both connect with and instruct their students. The purpose of our research was to evaluate the difference in student performance between teacher-centered (TC) and student-centered (SC) technology use in classrooms.

Feb 11, 2014

Teachers have mixed feelings on using social media in classrooms

http://www.bizjournals.com/denver/news/2014/02/11/teachers-have-mixed-feelings-on-using.html

Just 18 percent of U.S. school teachers use social media to connect with students and parents, and only a quarter of teachers report they would like to make it part of their lesson plans, according to a recent survey. That's largely because many of those surveyed expressed concern about using social media as an education tool, seeing it as a place that can invite inappropriate behavior.

The online survey — conducted by Rochester, N.Y.-based Harris Interactive Inc., a market research firm — asked 1,000 full-time K-12 teachers about using social media in their classrooms.
While 47 percent said they believed that student participation in classroom-based social media can enhance a student's educational experience, 80 percent said they worry about conflicts that can occur from using it with students and parents. In fact, 69 percent believed parents might (or have) used social media to monitor teachers' personal lives. Still others expressed concern over students posting inappropriate comments. ...

Integrating social media into the educational system is gaining momentum, with school systems like those in New York recognizing the need to help students learn how to be responsible "digital citizens."

In fact, the New York City Department of Education released a social media code of conduct last January that gives students guidelines to help protect themselves online. ...

Currently, four of five teachers report using social media on a personal level, yet 55 percent of those surveyed said they have not integrated social media into their classroom and have no plans to do so.

Cyberbullying Myths and Realities

Russel A. Sabella, Justin W. Patchin, Sameer Hinuja

Computers in Human Behavior
Volume 29, Issue 6, November 2013, Pages 2703-2711

Bullying has long been a concern of youth advocates (e.g., educators, counselors, researchers, policy makers). Recently, cyberbullying (bullying perpetrated through online technology) has dominated the headlines as a major current-day adolescent challenge. This article reviews available empirical research to examine the accuracy of commonly-perpetuated claims about cyberbullying. The analysis revealed several myths about the nature and extent of cyberbullying that are being fueled by media headlines and unsubstantiated public declarations. These myths include that (a) everyone knows what cyberbullying is; (b) cyberbullying is occurring at epidemic levels; (c) cyberbullying causes suicide; (d) cyberbullying occurs more often now than traditional bullying; (e) like traditional bullying, cyberbullying is a rite of passage; (f) cyberbullies are outcasts or just mean kids; and (g) to stop cyberbullying, just turn off your computer or cell phone. These assertions are clarified using data that are currently available so that adults who work with youth will have an accurate understanding of cyberbullying to better assist them in effective prevention and response. Implications for prevention efforts in education in light of these revelations are also discussed and include effective school policies, educating students and stakeholders, the role of peer helper programs, and responsive services (e.g., counseling).

Excerpt from;: http://www.sciencedirect.com/science/article/pii/S074756321300232X

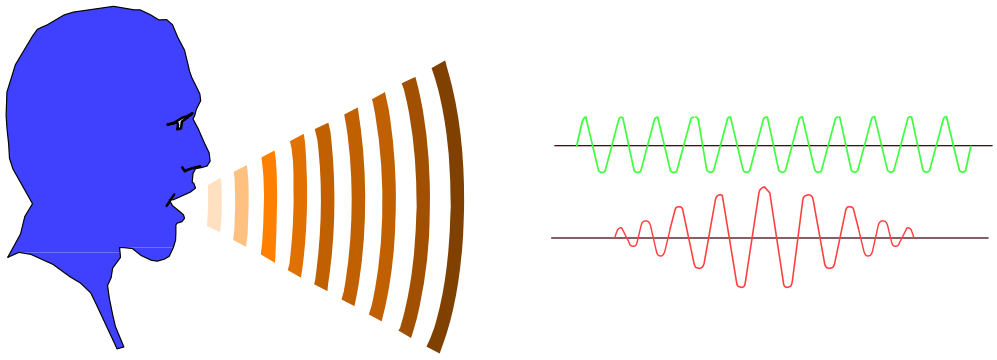
II. Technological / Multimedia Aids to Facilitate Intervention Activities

A. Assessment

B. Clinical Activity in Schools
1. Triage and Referral
2. Care Monitoring and Therapy

C. Promoting Healthy Social and Emotional Development
(mental health education, enrichment)

D. Supporting Special Education with Assistive Technology



Boston Plan for Excellence • 6 Beacon Street, #615, Boston MA 02108 • 617. 227.8055 • www.bpe.org

Composite Learning Index (CLI)

New Tool to Identify Incoming Secondary Students at Risk — *Before* They Start School in September

(http://www.bpe.org)

Research has identified factors that are highly predictive of students who drop out of school, such as failing middle school courses or having poor attendance.

School staff sometimes know which students have factors that put them at risk. Few schools, however, have a process that looks at all students across multiple risk factors and that shows the combined effect of those factors. With a reliable predictor of risk, the principal-headmaster and teachers know which students to start helping right away, allowing for *prevention* rather than *recovery*.

In response to requests from schools involved in BPE's initiatives to target struggling students, the organization's research team created the Excel-based Composite Learning Index (CLI), which incorporates 15 indicators* of risk: six social/behavioral and nine academic. Each indicator is assigned a weight: the greater the correlation to risk, the higher the weight. Each student's weighted scores are then used to create a single CLI score and to place him/her on a continuum of risk, from "Off Track" to "On Track." The result is a much more complex, holistic profile of each student as he/she starts school, extending beyond the narrow lens of past test performance.

CLI factors in ...

Academic Indicators

- ELA & Math MCAS Performance
- ELA & Math Course Grades
- Benchmark Assessments

Non-Academic Indicators

- Age
- Grade Retention
- Attendance
- Tardiness

Using the CLI color-coded spreadsheet, school data teams can easily sort and filter the data to answer questions for each student:

Q. Is he/she at risk of failing or dropping out? If so, how great is the risk?

Q. What specific academic, social, or behavioral indicators put him/her at risk?

Q. What interventions are most appropriate?

Piloting the CLI this year, school staff sometimes found that their assumptions about students were wrong. In most schools, for example, the majority of students "Off Track" were *not* in special education classes, as expected. In one school, many students at high risk of dropping out had already passed MCAS. The CLI pointed to other needs and different interventions.

As now used by nine schools working with the Boston Plan, the CLI has demonstrated many benefits:

- It tracks risk factors that are recognized by national and local research as highly predictive of failing or dropping out
- It incorporates data from multiple sources and reports data on any indicator or combination of indicators
- Unlike most tools that display data by groups of students, it focuses on the individual student — both assets and needs
- It enables school staff to hone in on helping students with the greatest immediate risk
- It allows school staff to manipulate data based on their contexts and circumstances, look for patterns, and answer their own critical questions
- It informs planning, professional development, social services, and resource allocation
- It can be refreshed regularly, by adding students' grades and attendance after each marking period, for example
- It is available in August for students who are entering the school and is updated through the school year

Why must a district (or district partner, such as a local education foundation) create and manage the CLI? Why can't schools do this on their own? Although the data comes from the central office, it comes from different departments and in different formats, not easily integrated. Other data is not available in the central office and has to be compiled by the school. Finally, few school staff have both the time and the skills to pull together such a complex set of data without errors.

The CLI can also be customized to other districts.

For more information, e-mail cli@bpe.org or call 617-227-8055 x 346.

Excerpts from ERIC Digest: Anna Maria D. Lankes

Electronic Portfolios*

INTRODUCTION

Teachers and administrators are showing increased interest in becoming part of a "new wave" of assessment in the classroom; assessment which includes authentic and performance-based measures. These methods of assessment allow students to demonstrate desired performance through real- life situations (Meyer, 1992). Such methods of assessment are not limited to multiple-choice and standardized tests, but include projects which require students to demonstrate their problem-solving skills as well as their skills in analyzing and synthesizing information. Several school districts across the United States have reported improved student performance associated with new assessment programs (Herman, 1992). Many schools are developing new methods for measuring students' progress in both the elementary and secondary classroom. One of these new assessment measures, the portfolio, has become increasingly popular, and technology is helping with its creation and management.

WHAT IS A PORTFOLIO?

A portfolio at the K-12 education level is essentially a collection of a student's work which can be used to demonstrate his or her skills and accomplishments. An educational portfolio is more than just a group of projects and papers stored in a file folder...

TECHNOLOGY AND THE CREATION OF COMPUTER-BASED PORTFOLIOS

How to store and manage portfolio materials is a concern shared by many educators interested in implementing portfolio programs. In order to keep portfolios which would include papers, projects, and video and audio tapes for a class of students for 13 years (K-12), a school would need several additional classrooms to store this wealth of information. Many educators have been reluctant to implement portfolio assessment programs in their schools because of storage concerns like these. A likely solution to this problem is the creation and storage of portfolios using computer technology.

The terms "computer-based portfolio" and "electronic portfolio" are used to describe portfolios saved in electronic format. Electronic portfolios contain the same types of information as the portfolios discussed earlier, but the information is collected, stored, and managed electronically. Since current technology allows for the capture and storage of information in the form of text, graphics, sound, and video, students can save writing samples, solutions to mathematics problems, samples of art work, science projects and multimedia presentations in one coherent document. A single computer with a large storage capacity can store portfolios for all of the students in a class. With more students creating multimedia projects, however, a floppy or even a hard disk might not suffice for storage. An alternative is to store student portfolios on a CD-ROM (a compact disk which stores text, sound, graphics and video). A CD-ROM can store approximately 650 MB of information or 300,000 sheets of typed text. This might include all of the portfolios for an entire grade level of students. A computer-based portfolio program also allows for easy transfer of information. An individual computer disk or CD-ROM could be created to transport a student's documents from teacher to teacher or school to school...

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Herman, J. L. (1992). What research tells us about good assessment. "Educational Leadership," 49(8), 74-78. (EJ 444 324)
Meyer, C. A. (1992). What's the difference between "authentic" and "performance" assessment? "Educational Leadership," 49(8), 39-40. (EJ 444 312)

ERIC Digest.:* (1995) ED390377: Available from: ERIC Clearinghouse on Information & Technology, Syracuse University, 4-194, Center for Science and Technology, Syracuse, NY 13244-4100 e mail: eric@ericir.syr.edu http://eric.ed.gov **ID#=ED390377

B. Clinical Activity in Schools

1. *Triage and Referral*

2. *Care Monitoring and Therapy*

B. Clinical Activity in Schools

1. Triage and Referral

Using Computerized Adaptive Testing to Reduce the Burden of Mental Health Assessment

Psychiatr Serv 59:361-368, April 2008.

-Robert D. Gibbons, Ph.D., David J. Weiss, Ph.D., David J. Kupfer, M.D., Ellen Frank, Ph.D., Andrea Fagiolini, M.D., Victoria J. Grochocinski, Ph.D., Dulal K. Bhaumik, Ph.D., Angela Stover, M.A., R. Darrell Bock, Ph.D. and Jason C. Immekus, Ph.D.

OBJECTIVE: This study investigated the combination of item response theory and computerized adaptive testing (CAT) for psychiatric measurement as a means of reducing the burden of research and clinical assessments.

METHODS: Data were from 800 participants in outpatient treatment for a mood or anxiety disorder; they completed 616 items of the 626-item Mood and Anxiety Spectrum Scales (MASS) at two times. The first administration was used to design and evaluate a CAT version of the MASS by using post hoc simulation. The second confirmed the functioning of CAT in live testing.

RESULTS: Tests of competing models based on item response theory supported the scale's bifactor structure, consisting of a primary dimension and four group factors (mood, panic-agoraphobia, obsessive-compulsive, and social phobia). Both simulated and live CAT showed a 95% average reduction (585 items) in items administered (24 and 30 items, respectively) compared with administration of the full MASS. The correlation between scores on the full MASS and the CAT version was .93. For the mood disorder subscale, differences in scores between two groups of depressed patients—one with bipolar disorder and one without—on the full scale and on the CAT showed effect sizes of .63 ($p<.003$) and 1.19 ($p<.001$) standard deviation units, respectively, indicating better discriminant validity for CAT.

CONCLUSIONS: Instead of using small fixed-length tests, clinicians can create item banks with a large item pool, and a small set of the items most relevant for a given individual can be administered with no loss of information, yielding a dramatic reduction in administration time and patient and clinician burden.

Development of a Computer-adaptive Test for Depression (D-CAT)

Quality of Life Research. Volume 14, Number 10 / December, 2005.

H. Fliege, J. Becker, O.B. Walter. J.B. Bjorner, B.F. Klapp, & M. Rose

Abstract. Depression is one of the most prevalent mental health problems and measuring depressive symptoms becomes increasingly important in science as well as medical practice. Computer Adaptive Tests (CAT) based on the Item Response Theory (IRT) promise to enhance measurement precision and reduce respondent's burden. Our aim was to develop a CAT application to measure depressive symptoms.

Online screening – The Diagnostic Interview Schedule for Children (DISC-IV) provides an example. This structured diagnostic instrument assesses thirty-four common psychiatric diagnoses of children and adolescents. As described in the *Interviewer Manual*, the online version, "Voice DISC is self-administered, more instructional screens are presented in order to get the youth immediately accustomed to how to respond to the questions and how to use the computer. It also gives the supervisor the chance to check that the youth is able to complete the DISC independently." See Columbia University's DISC Development Group's *Interviewer Manual* –

http://www.cdc.gov/nchs/data/nhanes/limited_access/interviewer_manual.pdf

C. Clinical Activity in Schools

2. Care Monitoring and Therapy

A Few Examples

Welligent: Intelligent Student Health Management

"Welligent is a comprehensive software system which documents student health status and school health services, bills, tracks reimbursable health services and provides information resources to assist school administrators in making sound policy decisions." Developed by the Center for Pediatric Research, a program of Children's Hospital of the King's Daughters and Eastern Virginia Medical School. Consists of five modules, which are; Special Education Module, Billing Module, Administration Module, Wellreports: the Report Module, and School Clinic Module. Meets FERPA (Federal Education Rights and Privacy Act). Also provides a comprehensive training program for new users. Free interactive CD-ROM demonstrates its applications.

http://www.welligent.com

****

Therapist Helper (software)

This software was created to help therapists with billing, reports, and scheduling. A version is available for the Palm Pilot (Therapist Traveler).

www.helper.com

Practice Management Software

Helps with statements, claim forms, reports, scheduling, and managed care paperwork. Available for individual professionals or large group practices.

www.pma2000.com

C. *Promoting Healthy, Social, and Emotional Development (mental health education and enrichment)*

Inspire: Inspiring Young People, Creating Opportunities for Young People to Change their World.

Http://www.Inspireusafoundation.org/our-work/reachout-projects/

Inspire USA Foundation is a California-based Nonprofit corporation dedicated to promoting the mental health and well-being of young people in the United States - and reducing their rates of suicide, depression, and violence. We're launching a unique Reach Out! website (www.reachout.com) that combines research-based mental health content, sophisticated youth involvement programs, and savvy marketing and communications to support young people experiencing tough times and struggling with mental health difficulties.

Inspire's programs are based on evidence and best practice. In addition, our research and policy team partners with academic and mental health organizations to grow the evidence base and systematically measure program outcomes against program objectives and goals.

Reach Out! has launched a sophisticated online game, where young people can learn skills other games can't teach - such as decision-making, resilience and coping techniques to enable them to get through tough times A similar game will be launched in the US as part of the Reach Out! USA site.

Online community

Many young people need a space where they can interact and share their experiences with others. Reachout.com will offer online youth involvement programs, such as peer-moderated forums, where young people can chat, share stories, and support each other through difficult times. Through this supportive community, young people can become more comfortable addressing their problems and are more likely to seek professional help.

Gaming

Among teens, 72 percent of boys and 48 percent of girls play video games either online or on consoles2. The award-winning Reach Out! Central, a "serious game," takes advantage of the explosive growth in gaming to engage youth use and use the principles of cognitive behavioral therapy to help them develop coping skills. The game appeals to young people through its colorful aesthetic, use of popular music, ease of use, and the overall fun of gaming.

Self-expression

More and more, young people look to the Internet to express themselves creatively and document and share personal experiences. Twenty percent of teenagers keep a blog and nearly 40 percent read one - and more than 60 percent of teens aged 13-17 have a profile on a social networking site3. Online content creators are diverse, with overrepresentation of African Americans and Latinos. Reachout.com will leverage these trends by providing rich spaces for sharing personal stories and featuring the autobiographical stories created and edited by young people, using multiple media including "mini-documentaries".

Multiple Platforms

Young people look for multiple ways to access and transport digital content, including podcasting and text messaging. By providing numerous platforms, reachout.com empowers users to define their own experience.

ONLINE MENTORING

The Benefits of Online Mentoring for High School Girls:
Telementoring Young Women in Science, Engineering, and Computing Project*
http://www2.edc.org/CCT/publications_report_summary.asp?numPubId=77

Since 1988, EDC's Center for Children and Technology (CCT) has conducted several investigations into the relationship between gender and technology that shed light on the needs of young women who are working in or considering careers in engineering or computing (Bennett, 1993; 1996; Brunner, Hawkins, and Honey, 1998; Brunner, 1991; Hawkins, 1991; Hawkins et al., 1990; Honey, 1994; Honey et al., 1991; 1994). These studies point to the many tensions and conflicts that young women experience when contemplating or pursuing technical and scientific courses and careers. Girls in high school pre-engineering classes reveal their feelings of isolation and the challenges they encountered when they approached their technical or design work differently from their male peers (Bennett, 1993; 1996). There was no one to validate the difficulties they were experiencing, and there were no female mentors to share similar experiences and help them craft strategies for dealing with these issues. This, in turn, resulted in many of the students questioning their own abilities to succeed in engineering.

With funding from the National Science Foundation, the *Telementoring Young Women in Science, Engineering, and Computing* project was created to develop and test online mentoring environments in which high school girls could safely discuss their school experiences with practicing women professionals who had "made it" in science and technical fields. Central to the project's goal was the belief that ongoing electronic communication with successful women engineers and scientists could provide girls with validation and advice rarely found in traditional educational settings. Because young women do not have easy access to professionals, we speculated that telecommunications could be a particularly appropriate medium for providing this kind of support. Through online conversations and discussions, professionals could address many of the girls' apprehensions, tensions, and questions by providing expert knowledge, useful strategies for overcoming fears and obstacles, and sound career advice. We also speculated that this additional support could help sustain girls' interest in science and technical fields and broaden their awareness of different career options....

Excerpt from: D. Bennett, M. Honey, N. Hupert, T. Meade, & K. Tsikalas (1998). *The benefits of Online mentoring for high school girls: Telementoring young women in science, engineering, and computing project, Year 3 Evaluation.* Center of Children & Technology Reports.

D. Supporting Special Education with Assistive Technology

A Sample of Articles on Assistive Technology for Students with Disabilities

Assistive Technology: Becoming an Informed Consumer - NICHCY
http://www.nichcy.org/pubs/outprint/nd13txt.htm
This article provides tips on how to become an informed consumer of such technology, offers a parent's perspective on assistive technology, examines federal legislation, discusses effective use of technology with young children and how to integrate technology into a student's IEP, and suggests a process for funding technology. The article concludes with a list of readings and organizations that offer additional information on assistive technology.

Assistive Technology Guide for Students with Learning Disabilities
http://www.schwablearning.org/articles.asp?g=4&r=488
This guide was prepared by the Frostig Center in Pasadena, California, which is devoted to children with learning disabilities. Marshall Raskind, Ph.D., Director of Research of the Center, was the project director and primary author. Dr. Raskind is an authority on technology and learning disabilities.

Assistive Technology for Students with Learning Disabilities
http://www.sedl.org/rural/seeds/assistivetech/atld.html
Despite adequate cognitive ability, learning disabled students' difficulties with basic skills such as reading and writing can prevent full participation in the classroom and later in critical adult life activities. Computer technology provides the answer for many of these students.

Assistive Technology for Children with Autism
http://www.cesa7.k12.wi.us/sped/autism/assist/asst10.htm
This article will discuss how various modes of technology (including technology designed as augmentative communication systems), can be used for children with autism to increase or improve their overall understanding of their environment; expressive communication skills; social interaction skills; attention skills; motivation skills; organization skills; academic skills; self help skills; and overall independent daily functioning skills.

Computer Access Program - From the TRACE Center
http://trace.wisc.edu/world/computer_access/
This article focuses on cooperative efforts by many of the major computer and software developers towards making computers and software more usable - for all.

Technology in Early Childhood Programs
http://www.naeyc.org/resources/eyly/1996/09a.htm
Tips for professionals in evaluating computer programs, which can be used -- like any other learning tool -- in developmentally appropriate or inappropriate ways. From the National Association for the Education of Young Children

Assistive Technology Legislation
http://atto.buffalo.edu/registered/ATBasics/Foundation/Laws/atlegislation.php
Provides a partial list highlighting some of the legislation, with the public laws that directly impact the area of assistive technology shown in bold print.

The Public School's Special Education System as an Assistive Technology Funding
Source: The Cutting Edge http://www.nls.org/specedat.htm
The public school's special education system is a source of a wide range of educational services, special supports, and even AT that may be needed by children with disabilities to benefit from the public school's educational system.

Simplified Technology for Children with Disabilities
http://www2.edc.org/NCIP/library/ec/Burkhart.htm
Describes the general philosophical basis for using augmentative communication with young children and children functioning at young levels.

Technology Related Articles from LD OnLine
http://www.ldonline.org/ld_indepth/technology/technology.html
Technology can open doors and break down barriers for children, youth and adults with learning disabilities. Whether in the classroom or workplace, technology can provide a vital difference. Here we explore new developments in technology, and practical insights into the promise and realities of making technology work for people with learning disabilities.

Web Sites

Alliance for Technology Access (ATA) -- http://www.ataccess.org/
The Alliance for Technology Access to make technology a regular part of the lives of people with disabilities. The Alliance is a national network of 41 technology resource centers which help children and adults with disabilities, parents, teachers, employers, and others to explore computer systems, adaptive devices and software.

Center for Electronic Studying -- http://ces.uoregon.edu/
Center investigating ways computer technology can be used to enhance students' efforts to study and learn content-area material. Funded by the U.S. Department of Education, the Center has launched three projects blending portable computer technology with instruction on computer-based study strategies.

Closing The Gap -- http://www.closingthegap.com/
Closing The Gap, Inc. is an organization that focuses on computer technology for people with special needs through its bi-monthly newspaper, annual international conference and extensive web site.

Disability & Technology: A Resource Collection -- http://home.nas.net/~galambos/tech.htm
This page contains links to web sites that focus on disability and technology. Most sites will refer to assistive/adaptive devices that are computer-based and/or related to computer access. However, since assistive technology can include any device that improves function, other technologies are mentioned on many pages.

DREAMMS for Kids, Inc. -- http://www.dreamms.org/
DREAMMS for Kids, Inc. (Developmental Research for the Effective Advancement of Memory and Motor Skills) is a non-profit parent and professional service agency, that specializes in Assistive Technology (AT) related research, development, and information dissemination. DREAMMS is committed to facilitating the use of computers, assistive and adaptive technologies, and quality instructional technologies for students and youth with special needs in schools, homes, and the community.

Equal Access to Software and Information - K12 Connection -- http://www.rit.edu/~easi/

The philosophy behind EASI's K12 Information Technology Centre is to ensure that students and professionals with disabilities must have the same access to information and resources as everyone else.

Early Connections - Technology In Early Childhood Education

http://www.netc.org/earlyconnections/

Connecting technology with the way young children learn: resources and information for educators and care providers

LD Resources -- http://www.ldresources.com/

This site contains resources for people with learning disabilities, with a focus on the use of assistive technology to help individuals with learning disabilities become successful.

Tools for Understanding -- http://www2.ups.edu/community/tofu/

This site is intended for educators who teach mathematics and are interested in integrating common technologies into their daily instruction.

III. Ongoing Learning: In Situ and Distance Learning For Staff

A. Pre-service
B. Continuing Education
C. Consultation and Technical Assistance

THE VIRTUAL CAMPUS: TECHNOLOGY AND REFORM IN HIGHER EDUCATION

Author: Gerald C. Van Dusen,

(an excerpt)

The virtual campus is a metaphor for the electronic teaching, learning, and research environment created by the convergence of powerful new information and instructional technologies. Today there is a pressing call for technology to provide expanded higher education opportunities to a very wide spectrum of present and potential clientele.

WHAT ARE THE IMPLICATIONS OF TEACHING ON THE VIRTUAL CAMPUS?

A paradigmatic shift, from a professor-centered to a student-centered system of learning, has particular implications for the profession of teaching. One implication is a recommitment to creating an ideal learning environment for students, employing new technologies to address variances from the ideal. A second major implication for faculty is a shift from traditional to new roles and classroom responsibilities. The transition from lecturer to facilitator will not happen overnight and must be accompanied by institutional and professional commitment to incorporate research findings into professional development activities. Beyond merely providing technical training in the latest (and soon obsolete) technology, professional development activities will need to focus on crucial classroom variables that will ultimately determine the level of productive interaction and intellectual engagement apropos to the individual and group. (Barr and Tagg 1995)...

http://www.eric.ed.gov **ID#=ED412815**

ERIC Clearinghouse on Higher Education, Washington, DC.; George Washington Univ., Washington, DC. Graduate School of Education and Human Development.

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From: World Wide Learn

Compelling Arguments for Attending a Cyber Classroom

Why do students flock to the online learning environment?

1. Students can "attend" a course at anytime, from anywhere. This means that parents can attend to their children, then sit down to class; working students can attend classes no matter what their work schedule might be, folks that travel for business or pleasure can attend class from anywhere in the world that has Internet access.

2. Online learning enables student-centered teaching approaches. Every student has their own way of learning that works best for them. Some learn visually others do better when they "learn by doing."

3. Course material is accessible 24 hours a day 7 days a week. Students have the ability to read and re read lectures, discussions, explanations and comments. Often spoken material in the classroom passes students by due to a number of distractions, missed classes, tiredness or boredom.

4. In an online environment, attendance to class is only evident if the student actually participates in classroom discussion. This increases student interaction and the diversity of opinion, because everyone gets a say, not just the most talkative.

5. Online instructors come with practical knowledge and may be from any location across the globe. This allows students to be exposed to knowledge that can't be learned in books and see how class concepts are applied in real business situations.

6. Using the Internet to attend class, research information and communication with other students teaches skills in using technologies that will be critical to workers in the 21st century business community that works with colleagues globally and across time zones.

7. Participating online is much less intimidating than "in the classroom." Anonymity provides students a level playing field undisturbed by bias caused by seating arrangement, gender, race and age. Students can also think longer about what they want to say and add their comments when ready. In a traditional class room, the conversation could have gone way past the point where the student wants to comment.

8. Because online institutions often offer "chat rooms" for informal conversation between students, where student bios and non class discussions can take place, there appears to be a increased bonding and camaraderie over traditional class environments.

(cont.)

9. The online environment makes instructors more approachable. Students can talk openly with their teachers through online chats, email and in news group discussions, without waiting for office hours that may not be convenient. This option for communication provides enhanced contact between instructors and students.

10. Online course development allows for a broad spectrum of content. Students can access the school's library from their PC's for research articles, ebook content and other material without worries that the material is already "checked out."

11. Students often feel that they can actually listen to the comments made by other students. Because everyone gets a chance to contribute, students are less irritated with those that "over contribute" and can ask for clarification of any comments that are unclear.

12. Over 75% of colleges and universities in the U.S. offer online degree programs, with online degrees as respected as "on the ground" degrees. (Lewis)

13. Online classrooms also facilitate team learning by providing chatrooms and newsgroups for meetings and joint work. This eliminates the problems of mismatched schedules, finding a meeting location and distributing work for review between meetings.

14. Students often comment that online learning lets them attend class when fully awake and attend in increments of convenient time block, rather than rigid 2 or 4 hour stretches once or twice a week.

15. Because there are no geographic barriers to online learning, students can find a diversity of course material that may not be available to them where they live or work. This is especially true for professional training such as medical billing training or purchasing training and for students in remote rural areas that cannot support college or vocational training centers.

While "brick and mortar" institutions will never be eliminated, it's easy to see why a growing number of people are attending class in the cyber world. They may be reasons of accessibility, flexibility or quality, all compelling and contributing to the attractiveness of this mode of learning.

Stephanie Coleman
http://www.worldwidelearn.com/education-articles/benefits-of-online-learning.htm

Limitations of Distance Learning

Ryan Larson

Academics, teachers, and educators are all united in one voice on distance learning. It is an effective and efficient way for students of all ages and at all levels to learn. It has a number of advantages that allow it to be cheap and universally accessible to almost everyone who can access the Internet. But they also recognize that in comparison to the traditional classroom, distance learning does have its limitations, and in order to overcome them they are first working to identify them.

Here are a few that they have identified to date:

Limited connection between course material and its explanation. This is in contrast to the traditional classroom where students follow the written material and are guided by the human interaction of the teacher and their peers.

Limited human teacher expression and interaction. Instead of following the human teacher's body expressions and language patterns to learn, distance learners following an inanimate computer screen. Students then miss the teacher's gestures and the full impact of the oral interaction with the teacher.

Lack of human connection. Most of us have become accustomed to receiving direction and instruction from a human, our parents are our very first teachers, and that is how we learn. In distance learning some students find it difficult to relate to an online tutor and they miss and need that human touch.

Limited peer support. Although you can and will develop friendships amongst your co-learners in a distance learning program, we do learn in the interaction with our peers. Think about your first smoke or your first drink, the messages from your peers were pretty crucial to convincing you to experiment. In learning we support one another and that is a little more difficult in distance learning.

Lack of contextual understanding. In the traditional classroom all of our learning is done by using examples to help us understand the context of what we are learning. In distance learning there are fewer examples or explanations past the initial concept or theory and we have to find that contextual understanding by ourselves. For some students who are accustomed to learning through contextual discussion it may be difficult to grasp or understand some basic and important ideas.

None of these limitations are insurmountable by a student who is anxious and eager to learn, but they do slow some people down in their distance learning program. The good news is as the experts have identified these limitations they are already at work to find ways to improve distance learning to remove them. Like education itself there are no limits on distance learning, only limits on ourselves.

-http://www.exploreonlinedegrees.com/limitations-of-distance-learning.html

A. Pre-service

Online Teaching Degree in North Carolina NC

UNCG ONLINE – For those trying to finish a bachelor's degree or looking to further education with a certificate or master's degree, UNC Greensboro online courses offer a wide range of courses and use "the latest rich multimedia content" to aid in student learning. See http://online.uncg.edu/Programs.php

Center for the Advancement of Mental Health Practices in Schools

The first online program of its kind nationally is the result of a unique partnership between the Missouri Department of Mental Health and the University of Missouri. Housed in MU's department of educational, school and counseling psychology, which has two graduate programs accredited by the American Psychological Association, the master's program includes 24 hours of required course work and nine hours of electives, for a total of 33 hours. The educational specialist requires a total of 30 credit hours.

Each course emphasizes the prevention of mental health problems-within schools, families and communities-and the promotion of positive mental well-being for all children and adolescents, to make you a better, more effective educator, administrator or health services professional.

http://education.missouri.edu/ESCP/program_areas/mental-health/

EdTech Leaders® Online Program (ETLO)

EdTech Leaders® Online enables state departments of education, school districts, regional educational service centers, colleges and universities, and other educational organizations to develop local capacity to provide online professional development for teachers and administrators and online courses for students. EdTech Leaders® Online includes graduate-level online courses to train online instructors and course development specialists, a series of online professional development workshops focused on specific K–12 subject areas and grade levels, and ongoing online support forums for program participants.

http://www.edtechleaders.org

Online and Blended Professional Learning

EDC provides for a range of online and blended professional development models. The aim is to provide an array of convenient, effective, and interactive learning experiences tailored to meet the needs and interests of learners. Working closely with schools, districts, and state departments of education, the focus is on building capacity to use technology to improve educators' access to high-quality professional development.
See their various initiatives at http://www.ltd.edc.org/

E-Learning for Educators

E-Learning for Educators was funded by the U.S. Department of Education's Ready to Teach program. The aim was to establish successful, sustainable, statewide online professional development programs that address teacher quality and student achievement goals. Through its EdTech Leaders® Online program, EDC supported this initiative by establishing a cadre of online professional development instructors and course developers within each state. EDC also provided consultation on online professional development planning and implementation and developed a series of model online professional development workshops to meet high-priority state needs. E-Learning for Educators was a consortium of nine states that involved a partnership between each state's department of education and a public television station within each state. The states involved in this project included Alabama, Delaware, Kentucky, Mississippi, Missouri, New Hampshire, Pennsylvania, South Carolina, and West Virginia, with Alabama Public Television serving as the lead agency coordinating the project.
http://www.edc.org/projects/e-learning_educators_ready_teach

B. Continuing Education

(1) Learning with Others

Technology for Conferencing and Information Sharing

(e.g., Tele-conferences, Tele-seminars, Webinars, Listervs)

(2) Self-Directed Learning

Virtual PD Creates Connections

http://www.edweek.org/ew/collections/e-learning-2011-professionaldevelopment/index.html

This October 2011 report examines how K-12 professional development is taking a more digital and freewheeling approach to educator training. The report shows how professional development programs are now blending face-to-face and online training, incorporating social networking tools, offering administrators more flexible ways to hone their skills, and developing online PD to prepare educators for the common-core standards and assessments.

Download the interactive PDF version of the report

http://www.edweek.org/ew/collections/e-learning-2011-professionaldevelopment/digitaledition-professionaldevelopment2011.html?intc=EW-PD1011-TOC

(1) Learning with Others

Example: *About Tele-conferences*

The National Child Welfare Resource Center for Organizational Improvement links states by telephone to share information and hear from experts on topics you have identified as critical to the management of child welfare agencies. No special equipment is needed, although a speaker phone allows any number of people at the same location to participate. Most sessions last 60 to 90 minutes.

While teleconferencing can never replace face-to-face training, the method saves time and money. There are no food or travel costs, no accommodation costs, and even more important, no time wasted travelling to a central site. That means no loss in productivity. People receive knowledge, stimulation and a respite from the job without losing a day's work.

The teleconference Line is an interactive system. People can talk directly to the presenters and all sessions are structured to allow time for questions. Because we use a "voice-activated" system, only one person can be heard at a time. The voice activates the system. This avoids the confusion of hearing several people at once.

How much does it cost? The National Child Welfare Resource Center for Organizational Improvement offers teleconference programs free of charge.

Register for one or several events by email at helpkids@usm.maine.edu or by calling 1-800-HELP KID (435-7543).
http://muskie.usm.maine.edu/helpkids/teleinfo.htm

Tele-seminars: From Wikipedia the Free Encyclopedia

Teleseminars are used to provide information, training, or promote or sell products to group of people interested in a particular topic. They are similar to traditional seminars, in content and purpose, but they are given over a teleconference or bridgeline rather than at a specific location.

It is an emerging way to communicate, provide teletraining, and conduct business without the cost of travel. The host of the teleseminar will schedule a specific time and date in advance to communicate with his/her audience. The audience can vary in size from a few callers to 1,000 participants depending on the capacity of the bridgeline used and the popularity of the topic being discussed.

These conference calls are typically recorded. There is typically a fixed period of time devoted to the presentation of information followed by another fixed period of time for questions and answers.

Teleseminars provide an opportunity for a host to provide information to a large number of people at one time. It allows a trainer to train many participants at once, one on many rather than one on one. It also eliminates the need for travel, expensive preparation and presentation material costs. These factors make teleseminars a very cost effective delivery method.

Teleseminars can be free or have a cost associated with participation for the students. The cost will vary depending on the content being discussed and the organization hosting the call.

Webinars

Webinars are rapidly becoming the mode of choice in web conferencing. Accessible to almost anyone with an internet connection, a webinar allows interactive meetings as many times as needed at practically no cost. While technically quite easy to pull off and inexpensive, successful webinars depend on the type of preparation done for in-person presentations. You need to be very prepared, with no fumbling or stumbling over your material. Webinars increasingly are being recorded and archived.

Listservs

A LISTSERV* mailing list allows easy mailing to a designated group. Separate lists can be created for specific networks. While some can be established as open access, others can be private or confidential.

*The term **Listserv** (written by the registered trademark licensee, L-Soft International, Inc., as LISTSERV) has been used to refer to a few early electronic mailing list software applications, allowing a sender to send one email to the list, and then transparently sending it on to the addresses of the subscribers to the list. Listserv was freeware from 1986 through 1993 and is now a commercial product developed by L-Soft, a company founded by Listserv author Eric Thomas in 1994. A free version limited to ten lists of up to 500 subscribers each can be downloaded from the company's web site. Several other list management tools were subsequently developed, such as Lyris ListManager in 1997, Sympa in 1997, GNU Mailman in 1998. http://en.wikipedia.org/wiki/LISTSERV

(2) Self-Directed Learning Using the Center's Website

Our Center is attempting to design our website as a place to go for independent learning. See the following for examples of how we guide users to specific learning opportunities on the site and links to other sites.

>First Visit -- http://smhp.psych.ucla.edu/firstvisit.htm

>Online Training & Presentation Resources -- http://smhp.psych.ucla.edu/materials/trainingpresentation.htm

>*Toolkit* for Transforming Student Supports into a Unified & Comprehensive System for Addressing Barriers to Learning and Teaching -- http://smhp.psych.ucla.edu/summit2002/resourceaids.htm

>Virtual Toolbox for Practitioner and Professional Development for Mental Health in Schools --
http://smhp.psych.ucla.edu/summit2002/toolbox.htm

>Online Clearinghouse Quick Finds --
http://smhp.psych.ucla.edu/quicksearch.htm

>Special Resource Packets, Aids, and Topical Reports --
http://smhp.psych.ucla.edu/materials/resources.htm

>Hot Topics & Hot Issues --
http://smhp.psych.ucla.edu/hottopic.htm

>Quarterly e-Journal/Newsletter --
http://smhp.psych.ucla.edu/news.htm

>Monthly Electronic News --
http://smhp.psych.ucla.edu/enews.htm

>Weekly Practitioner --
http://smhp.psych.ucla.edu/practitioner.htm

>Gateway to a World or Resources for Enhancing MH in Schools –
http://smhp.psych.ucla.edu/gateway/gateway_sites.htm

C. Consultation and Technical Assistance

As the following indicates, our Center offers a range of free online and telephonic consultation and technical assistance.

Need Technical Assistance?
The Center for Mental Health in Schools at UCLA offers a variety of ways for you to get help.

***Online Clearinghouse**

Quick Finds -- http://smhp.psych.ucla.edu/quicksearch.htm

Offers a fast and convenient way to access Center technical assistance resources.

***Materials Developed by our Center.**

Go to our on-line resources list--

All resources are can be downloaded at no cost .

http://smhp.psych.ucla.edu/quicksearch.htm

***Center Staff offers Technical Assistance. Email: ltaylor@ucla.edu**

***Our Consultation Cadre offers Technical Assistance.**

Search Our Consultation Cadre -- http://smhp.psych.ucla.edu/websrch.htm.

***Do-It-Yourself -- http://smhp.psych.ucla.edu/selfhelp.htm**

***Locating Information on Available Funding**

Surfin' for Funds -- http://smhp.psych.ucla.edu/pdfdocs/fundfish.pdf

***Networking**

Network and Interact with Colleagues -- .

http://smhp.psych.ucla.edu/newnetexchange.htm

http://smhp.psych.ucla.edu/summit2002/ninhome.htm

IV. Systems to Manage Systems and Information
(including Accountability / Quality Assurance / Evaluation)

A. Systems to connect services and agencies

B. School-wide Systems

1. *Central Administrative System (e.g. accounting, finance, payroll)*

2. *Student Services (e.g. Student records, bus schedules, food service, etc.)*

3. *Infrastructure (e.g. security, telecommunications, building, etc.)*

C. Classroom Level Systems

Technology provides mechanisms for developing and enhancing a systemic approach to planning, implementing, and evaluating all institutional functions, but technology is never a sufficient element.

A. Systems to connect services and agencies

Excerpt from: ***Wrap around Milwaukee Quality Assurance***
http://wraparoundmke.com/quality-assurance/provider-related-information/

Reviewing and evaluating the quality of the delivery of services to children with serious emotional and mental health needs and their families and instituting measures to improve quality as needed is the role of the Wraparound Milwaukee QA/QI unit. It's primary functions include: creating, implementing and tracking family satisfaction – both at the Care Coordination and Provider level; to partner with families and other system stakeholders at the decision making level of policy and program development to assure that strength-based, culturally sensitive care is being provided; to ongoingly create and review/revise program policies and procedures; auditing at the Care Coordination and Provider level; monitoring tracking and reporting on the established performance indicators identified for our affiliated Care Coordination agencies; dealing with complaints/grievances; monitoring the requirements set forth in our Medicaid contract with the State of Wisconsin; and engaging in monthly service utilization review processes ensuring program and fiscal responsiveness.

A wide variety of demographic and risk variables are collected on each child and family served. Clinical measures including the Child Behavior Checklist (CBCL), Youth Self-Report (YSR), and the Child and Adolescent Functioning Scale (CAFAS) provide the program with information from caretakers, youth, and care coordinators at intake, 6-months, 12-months, and discharge. The information collected allows us to evaluate both individual and overall changes in a child's functioning from a variety of informants and in various settings. Service utilization data is also collected for time periods corresponding to the collection of the clinical measures which gives Wraparound Milwaukee information on changes in service utlizaition over time, as well as effectiveness of various services.

Educational data collected includes percentage of days attending school, grade point average, special education placement, reading and math level deficit, and data on intellectual functioning. Juvenile Justice data is collected for periods of lifetime, three year prior, one year prior to enrollment, during enrollment and one and three years following disenrollment. Data collected include number and type of offense and adjudications and amount of time until an offense is committed. The Juvenile Justice data allows us to track and monitor community safety and look at a child's progress through changes in delinquency recidivism rates.

No Technological Innovation Is a Panacea: A Case Series in Quality Improvement for Primary Care Mental Health Services.

"Evaluations of quality improvement efforts targeted at mental health services in primary care pediatrics are rare. We evaluated a short-targeted educational session, a Web-based system, the Child Health and Development Interactive System, and a local area mental health services resource guide. Most physicians believed the information in the educational session was at least somewhat likely to change their practice. However, only 9.2% of the families invited to complete the Web-based system did so. Physicians found access to the Web-based system time consuming and, because the billing code for the screening activity was carved out of most of Ohio's privately-insured contract, physicians received no reimbursement for the screenings. Physicians were unenthusiastic about the local resource guide because the resources were not rated for quality. This quality improvement effort demonstrates that there are not easy solutions to practice change and highlights the need for implementation support when introducing new technology."

-Horwitz SM, Hoagwood KE, Garner A, Macknin M, Phelps T, Wexberg S, Foley C, Lock JC, Hazen JE, Sturner R, Howard B, Kelleher KJ. (2008) *Clin Pediatr* (Phila). 47(7):685-92.
doi: 10.1177/0009922808315215

HEALTH INFORMATION TECHNOLOGY

United States Accountability Office.

http://www.gao.gov/new.items/d07988t.pdf

HHS and its Office of the National Coordinator for Health IT have initiated actions to identify solutions for protecting personal health information through several contracts and with two health information advisory committees. For example, in late 2005, HHS awarded several health IT contracts that include requirements for addressing the privacy of personal health information exchanged within a nationwide health information exchange network. HHS's privacy and security solutions contractor is to assess the organization-level privacy- and security-related policies, practices, laws, and regulations that affect interoperable health information exchange. In June 2006, the National Committee on Vital and Health Statistics made recommendations to the Secretary of HHS on protecting the privacy of personal health information within a nationwide health information network and, in August 2006, the American Health Information Community convened a work group to address privacy and security policy issues for nationwide health information exchange. While its activities are intended to address aspects of key principles for protecting the privacy of health information, HHS is in the early stages of its efforts and has therefore not yet defined an overall approach for integrating its various privacy-related initiatives and addressing key privacy principles, nor has it defined milestones for integrating the results of these activities.

GAO identified key challenges associated with protecting electronic personal health information in four areas (see table).

Challenges to Exchanging Electronic Health Information

Area:	
Understanding and resolving legal and policy issues	* Resolving uncertainties regarding the extent of federal privacy protection required of various organizations; * Understanding and resolving data sharing issues introduced by varying state privacy laws and organization-level practices; * Reaching agreements on differing interpretations and applications of the HIPAA privacy and security rules; * Determining liability and enforcing sanctions in case of breaches of confidentiality.
Ensuring appropriate disclosure;	* Determining the minimum data necessary that can be disclosed in order for requesters to accomplish their intended purposes; * Determining the best way to allow patients to participate in and consent to electronic health information exchange; * Educating consumers about the extent to which their consent to use and disclose health information applies.
Ensuring individuals' rights to request access and amendments to health information	* Ensuring that individuals understand that they have rights to request access and amendments to their own health information; * Ensuring that individuals' amendments are properly made and tracked across multiple locations.
Implementing adequate security measures for protecting health information	* Determining and implementing adequate techniques for authenticating requesters of health information; * Implementing proper access controls and maintaining adequate audit trails for monitoring access to health data; * Protecting data stored on portable devices and transmitted between business partners.

Source: GAO analysis of information provided by state-level health information exchange organizations, federal health care providers, and health IT professional associations.

IV. Systems to Manage Systems and Information [cont.]

B. School - Wide Systems

1. Central Administrative System (e.g. accounting, finance, payroll)

From Council of the Great City Schools Website
Best practices: *Human Resources & Personnel Management*

Budget and Position Management –
http://www.sfusd.edu/en/about-sfusd/budget.html

Developed by the Business and Administrative Services Division of the San Francisco Unified School District to oversee the development, monitoring, and forecasting of revenues and expenditures for the District including the analysis and forecasting of revenue from the Federal, State, and Local sources and the monitoring and forecasting of staffing and expenditures.

Human Resources Information System Project–
http://www.mcps.k12.md.us/departments/technology/organization/business-systems.shtm

A project undertaken by the Montgomery County Public Schools to implement a commercial application to fulfill the administrative functions of human resources, payroll, and benefits for the Montgomery County Public Schools (MCPS).

Policies -- http://www.asdk12.org/school_board/policy/

A database containing the on-line, electronic version of the Personnel Policies provided for Certificated Personnel of the Anchorage School District.

2. Student Services (e.g. Student records, transportation, food service, etc.)

Records Management -- **http://window.state.tx.us/tspr/brownsville/ch01c.htm**
An on-line Records Management Service adopted by the Brownsville Independent School District.

Food Services -- **http://www.tusd.k12.az.us/contents/depart/food/menu.html**
An on-line service of the Tucson Unified School District providing information on School Meals and Services, Menu and Nutrient Analysis, Nutrition Information & Resources, The Fun Side of Food and Activities.

Customer Service --
http://www.lausd.k12.ca.us/lausd/offices/Business_Services_Division/transportation/service.htm
An on-line service developed by the Transportation Branch of the Business Services Division of the Los Angeles Unified School District to provide a one-stop, one-call level of service, available from 7:30a.m. to 5:30 p.m., to handle questions and concerns from the parents of our traveling students, school administrators, or anyone who is in need of assistance.

Dispatches --
http://www.lausd.k12.ca.us/lausd/offices/Business_Services_Division/transportation/dispatch.htm
An on-line dispatch service developed by the Transportation Branch of the Los Angeles Unified School District's Business Services Division to coordinate and mitigate school bus emergencies, accidents, incidents, breakdowns and "no one home to receive" Special Education Student situations.

Safety and Security --
http://www.lausd.k12.ca.us/lausd/offices/Business_Services_Division/transportation/safety.htm
An on-line service developed by the Transportation Branch of the Los Angeles Unified SchoolDistricts Business Services Division dealing with Safety Issues including School Bus Safety During Field Trips, Bus Stop Safety Rules, Bus Pass Requirements and Riding Instructions and related topics.

Emergencies --
http://www.lausd.k12.ca.us/lausd/lausdnet/assistance/Oliver/emergency_services/emerg_prep.htm An on-line directory of tools and checklists for dealing with emergencies offered by the Office of Emergency Services of the Los Angeles Unified School District.

Police Department -- **http://www.laspd.com/**
An on-line directory of services provided by the Los Angeles Unified School District Police Department to assist students, teachers, administrators, and other staff in providing a safe and tranquil environment in which the educational process can take place.

3. Infrastructure (e.g. facilities management, heating, telecommunications, etc.)

Plant Maintenance and Operations Management System in Amarillo Indep. School District
http://maintenance.amaisd.org/

Materials Management and Systems Control -- **http://supportops.dadeschools.net/**
An on-line directory of ancillary services such as mail service, property tagging, auctions, textbook services, donations, and furniture acquisition of the Materials Management and Systems Control Division of the Miami-Dade County Public Schools.

Monthly Clean Campus Inspection Checklist of the Brevard County (FL) Public Schools
http://www.oppaga.state.fl.us/reports/pdf/bfmpbrevardch10.pdf

Satisfaction Survey -- **http://atweb.dpsk12.org/dss2001/select.asp**
Developed by the Denver Public Schools to give sites the opportunity to evaluate and rate the services provided by the Department of Facility Management/Maintenance.

C. Classroom Level Systems

See ***Examples of Using Interactive Technology to Assist in Addressing Barriers to Learning*** **--** http://smhp.psych.ucla.edu/pdfdocs/technol/pdf *for* discussion of a Unified and Comprehensive System of Learning Supports in and out of the classroom.

Information Technology Experiences for Students and Teachers (ITEST) Learning Resource Center -- http://www.edc.org/itestlrc

The Information Technology Experiences for Students and Teachers (ITEST) program is designed to increase opportunities for students and teachers to learn about and use information technologies within the contexts of science, technology, engineering, and mathematics. The program supports both youth-based projects with strong emphases on career and educational paths, and comprehensive projects for students and teachers. The National ITEST Resource Center collaborates with and supports project staff in order to achieve program goals, weave together and disseminate promising practices, and leverage combined achievements into new knowledge.

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From an article in Education World -- http://www.educationworld.com/teachers/index.shtml

"Technology can be used to engage students in ways that other tools cannot. So what are the most fun or creative ways principals have seen teachers use the technology they have at hand?

Opportunities to integrate technology stretch across the grades and the curriculum. The variety of tools at teachers' fingertips help them integrate technology in many ways.

[A Few Examples:]

- In Kindergarten, students created Kid Pix slideshows that demonstrated what they learned about monkeys or their favorite insects.
- First graders asked essential questions about penguins and illustrated what the answers might be. They also used Kid Pix to create a class book of clouds. They used the picture feature to create pictures of the types of clouds they studied. Those slides were turned into a Kid Pix slideshow. The class enjoyed the slideshow, so the teacher printed smaller versions of their pictures to bind into a book.
- Third graders work on 'All About Me' slideshows to introduce themselves to their classmates at the beginning of the year. Students also use Inspiration software to help them organize information. For example, a parent volunteer created a template that listed regional areas of the Native Americans (for example, Far North, Northwest…). The vertical side of the template listed Shelter, Food, Clothing, and Tools. As students studied the various characteristics of tribes in each region, they recorded their findings. Then they used the printed template as a reference tool for studying and creating a report.
- Our older students worked cooperatively on presentations on topics such as the colonial period and the Oregon Trail. They presented information within their groups and discussed what they'd learned.
- Our special education staff uses presentation software as well. Students use the PowerPoint outline view to create storyboards for model "social stories." Social stories are like rehearsals for social encounters. They help prepare students to respond in appropriate ways to typical social situations.

Teachers have found dozens of ways to capitalize on the use of digital photography in the classroom.

[And, of course]

The Internet is a rich resource that many wise teachers are mining for the purpose of exposing students to new information about almost any topic.

Resources for Using Technology in the Classroom

Technology can be used in many ways as an integral part of the curriculum to meet the needs of diverse learners. For example, it can introduce into the classroom exciting curricula based on real-world problems; provide scaffolds and tools to enhance learning; give students and teachers more opportunities for feedback, reflection, and revision; and build local and global communities where people gather and share information. Technology can help students recognize, organize, and represent knowledge.

> Technology tools are defined as materials, media, and devices that can potentially increase, maintain, or improve students' functional capabilities, access to instructional activities, meaning-making, and motivation. Technology tools fall within a continuum of low-tech, mid-tech, and high-tech tools.

Here are some resources

- 12 Easy Ways to Use Technology in Your Classroom, Even for Technophobic Teachers
  http://www.teachhub.com/12-easy-ways-use-technology-your-classroom-even-technophobic-teachers

- 50 Education Technology Tools Every Teacher Should Know About
  http://fluency21.com/blog/2013/03/26/50-education-technology-tools-every-teacher-should-know-about/.

- 10 Social Media Tips for Reaching World Language Learners
  (From Edutopia by Sarah Wike Loyola)
  http://www.edutopia.org/blog/social-media-for-world-languages-sarah-wike-loyola

- *'Flipped' PD Initiative Boosts Teachers' Tech Skills* (news article)
  http://www.edweek.org/dd/articles/2013/06/12/03whatworks.h06.html

- Using Student Achievement Data to Support Instructional Decision Making
  http://ies.ed.gov/ncee/wwc/PracticeGuide.aspx?sid=12

- See the Center's Quick Find on *Data Management Systems* –
  http://smhp.psych.ucla.edu/qf/datasystems.htm

More specialized applications can be found in centers focusing on students with disabilities. For example, see

- National Center for Learning Disabilities: Assistive Technology
  http://www.ncld.org/students-disabilities/assistive-technology-education/overview-assistive-technology

- Assistive Technology for Students with Mild Disabilities: Update 2002 by Michael Behrmann and Marci Kinas Jerome -- http://ericec.org/digests/e623.html

- Using Technology to Enhance the Writing Processes of Students with Learning Disabilities by Charles A. McArthur -- http://www.ldonline.org/ld_indepth/technology/tech_writing.html

V. Additional References to Books, Chapters, Articles, Reports, & Other Printed Resources

What Works in K-12 Online Learning. Cavanaugh, C; Blomyer R. L, (Eds.) (2007). Eugene, OR: International Society for Technology in Education.

Keeping Pace With the K-12 Online Learning: A review of State Level Policy and Practice. Available online from the North American Council for Online Learning (NACOL) at: http://www.nacol.org. (June 2007). By Pape, L; Revenaugh, M; Watson, J. and Wicks, M.

***The Effects of Distance Education on K-12 Student Outcomes: A Meta Analysis*.(2004)** (Naperville, IL: North Central Region Laboratory. Cavanaugh, C; Gillian, K.J; Kromrey, J; Hess, M; & Bomeyer, R. http://www.ncrel.org/tech/distance/k12distance.pdf

A Synthesis of New Research on K-12 Online Learning. Smith, R; Clark, T; & Blomeyer, R. (2005). Naperville, IL: Learning Point Associates. Http://www.ncrel.org/tech/synthesis/synthesis.pdf

Kate Anthony, DeeAnna Merz Nagel and Stephen Goss (eds). (2010). ***The Use of Technology in Mental Health: Applications, Ethics and Practice.*** Springfield, IL: Charles C. Thomas Pub Ltd.

> In this book, the reader is introduced to how technology is revolutionizing the delivery of mental health services and to a broad sampling of technologies used by mental health professionals. It contains 30 chapters on different aspects of technological innovation in mental health

Clinical, Ethical, and Legal Issues in E-Therapy. Families in Society. Kanani, K. & Regehr, C. (2003). *Journal of Contemporary Human* Services, 84, 155-162.

International Society for Mental Health Online. (2004) Suggested Principles for the Online Provision of Mental Health Services. www.ismho.org/suggestions.html

Clinical-supervision.com: Issues in Provision of Online Supervision. Kanz, J.E. (2001). *Professional Psychology: Research and Practice, 32,* 415-420.

Online Mental Health Treatment: Concerns and Considerations. By Wells, M., Mitchell, K.J., Finkelhor, D., & Becker-Blease, K.A. (2007). *Cyber Psychology and Behavior. Volume 10.*

Goss, S. & Ferns, J. (2010). **Using Cell/Mobile Phone SMS to Enhance Client Crisis and Peer Support.** In Kate Anthony, DeeAnna Merz Nagel and Stephen Goss (eds). *The Use of Technology in Mental Health: Applications, Ethics and Practice.* Springfield, IL: Charles C. Thomas Pub Ltd. pp. 56–67.

A special section of the Journal of Clinical Child & Adolescent Psychology (2014) http://www.tandfonline.com/toc/hcap20/43/1 focuses on "Technology and Children's Mental Health" – see the following articles:

> "The Feasibility and Acceptability of Virtual Environments in the Treatment of Childhood Social Anxiety Disorder"
> "Internet-Delivered, Family-Based Treatment for Early-Onset OCD: A Preliminary Case Series"
> "Technology-Enhanced Program for Child Disruptive Behavior Disorders: Development and Pilot Randomized Control Trial"
> "Understanding Adolescent Response to a Technology-Based Depression Prevention Program"
> "Using Videoconferencing to Provide Psychological Services to Rural Children and Adolescents: A Review and Case Example"
> "Future Directions in the Design, Development, and Investigation of Technology as a Service Delivery Vehicle"

See Our Center's TA Sampler

Examples of Using Interactive Technology to Assist in Addressing Barriers to Learning
http://smhp.psych.ucla.edu/pdfdocs/technol/pdf

See Our Center's Quick Finds

Technology as an Intervention Tool
http://smhp.psych.ucla.edu/qf/techschool.htm

Mental Health Related software and multimedia
http://smhp.psych.ucla.edu/qf/mhmultimedia.htm

VI. Examples of Programs and Guides

A. Education

B. Telemedicine / Telehealth

C. Guides

A. Education

Challenges and Strategies in Using Technology to Promote Education Reform

The vision for technology-supported reform-oriented classrooms is one in which student groups work on long-term, multidisciplinary projects involving challenging content that is interesting and important to them with the support of technology tools for collecting, analyzing, displaying, and communicating information. Making this vision a reality poses many challenges, including: Providing Adequate Technology Access; Equalizing Technology Access; Involving a Majority of Teachers; Providing Technical Support For Technology Use And Maintenance.

http://www.ed.gov/pubs/EdReformStudies/EdTech/approaches.html

Apps before naps: Nashville pre-K classrooms use tablets to help kids learn

http://www.tennessean.com/article/20140126/NEWS04/301260043/1970/

"With pre-K programs under the microscope, classrooms use innovative approaches - and technology - to challenge young minds. Vanderbilt researchers find promise in the tablet's ability to teach a whole gamut of skills at once, from obvious ones, such as reading and writing, to some that aren't as traditional - but are nonetheless valuable. These include comfort with digital technology and taking pride in being bilingual. ... Part of the research looks straight at the proliferation of touchscreens, smartphones and hand-held video games in daily life, acknowledging that failing to bring similar tools into the classroom could make schools 'obsolete.'

Pros and Cons Indicated About Tablets in the Classroom

Pros

Speed:	Children can draw or snap photographs and instantly write about those visuals.
Audio:	Bilingual students can record and play back their voices in English and native languages.
Touch:	Touchscreens can be physically easier for young children to use than computers with a mouse and keyboard.
Bravery:	Students must move out of comfort zones with technology.

Cons

Distraction:	Hunting and pecking across the keyboard can distract children from delivering their messages.
Pacing:	With so many app tools, teachers could push students to compose multimedia too soon.
Cost:	At the moment, students must share technologies such as touchscreen tablets."

Technology in the Classroom: A 2:1 Laptop Learning Initiative

http://www.stillwater.k12.mn.us/schools/junior-high-schools/stillwater-junior-high-school/learning-technology

"Stillwater Jr. High has a rich history of technology integration to assure that our students have the skills needed to be successful twenty-first century learners. We started with a large-scale integration effort in the fall of 2002. ... all teachers were provided with laptops, a building-wide wireless network, servers, extensive training, support, software, peripherals and curriculum writing time. In March of 2003, more than 400 new laptops and 100 desktop computers were rolled out on mobile carts for student use in the classroom.

Starting in September 2013 ... classes will be using multiple online tools and sources.... The centerpiece ... will be a moodle course ... accessible from outside of school using other devices like computers, tablets, smartphones, etc.

All classes at Stillwater Jr. High use cart-based, wireless laptops. Emphasis is placed on the creation and electronic publication of challenging, real-world projects. All students have storage locations on the school server and each is provided web publishing capabilities. A typical year-long class would use computers and related technologies for 8-12 weeks of the school year. Visitors from around the country and the world visit the school's website to view videos of the technology-rich lessons that students experience.

The school uses a comprehensive web-based program called Skyward to provide parents and students with instant access to student projects, grades, assignments, file transfer between home and school, communication links to teachers and other valuable features. Parents may also subscribe to weekly e-mail updates from the school as well as RSS subscriptions to news pages on this website."

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Flipping the classroom

http://cft.vanderbilt.edu/teaching-guides/teaching-activities/flipping-the-classroom/

"Flipping the classroom" means that students gain first exposure to new material outside of class, usually via reading or lecture videos, and then use class time to do the harder work of assimilating that knowledge, perhaps through problem-solving, discussion, or debates....

By providing an opportunity for students to *use* their new factual knowledge while they have access to immediate feedback from peers and the instructor, the flipped classroom helps students learn to correct misconceptions and organize their new knowledge such that it is more accessible for future use. The immediate feedback that occurs in the flipped classroom also helps students recognize and think about their own growing understanding

What are the key elements of the flipped classroom?

I. Provide an opportunity for students to gain first exposure prior to class. The mechanism used for first exposure can vary, from simple textbook readings to lecture videos to podcasts or screencasts....

II. Provide an incentive for students to prepare for class. Students complete a task associated with their preparation….

III. Provide a mechanism to assess student understanding. The pre-class assignments that students complete as evidence of their preparation can also help both the instructor and the student assess understanding....

IV. Provide in-class activities that focus on higher level cognitive activities. If the students gained basic knowledge outside of class, then they need to spend class time to promote deeper learning"

B. Telemedicine / Telehealth

Telemedicine Report to Congress

Telemedicine, in one form or another, has been practiced over thirty years. Today, telemedicine applications employ advanced image as well as audio capabilities. These technologies can range from high resolution still images to sophisticated interactive teleconferencing systems. Telemedicine can improve the delivery of health care in America by bringing a wider range of services, including mental health, to communities and individuals in underserved urban and rural areas. In remote rural areas, where the distance between a patient and a health professional can be hundreds of miles, telemedicine can mean access to health care where little had been available before. In emergency cases, the access can mean the difference between life and death. In particular, in those cases where fast response time and speciality care are needed, telemedicine availability can be critical. In addition, telemedicine can also help attract and retain health professionals in rural areas by providing ongoing training and collaboration with other health professionals.
2 reports available: http://www.ntia.doc.gov/reports/telemed/index.htm

http://www.ntia.doc.gov/legacy/reports/telemed/cover.htm

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Successful models for telehealth.

Krupinski EA, Patterson T, Norman CD, Roth Y, ElNasser Z, Abdeen Z, Noyek A, Sriharan A, Ignatieff A, Black S, Freedman M. Otolaryngol. (2011). *Clin North Am., 44*, 1275-88, vii-viii. doi: 10.1016/j.otc.2011.08.004. http://www.ncbi.nlm.nih.gov/pubmed/22032481

Abstract: Telemedicine and telehealth programs are generally more complex than their traditional on-site health care delivery counterparts. A few organizations have developed sustainable, multispecialty telemedicine programs, but single service programs, such as teleradiology and teledermatology, are common. Planning and maintaining a successful telemedicine program is challenging, and there are often barriers to developing sustainable telehealth programs. This article reviews some important aspects of developing a telehealth program, and provides two examples of currently operating successful model programs.

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Telehealth Psychotherapy: Promise and Concerns

Excerpted from article entitled: Study *probes how patients are affected by telehealth**

Psychotherapy delivered by an audio-video link or speaker phone appears to be just as effective as face-to-face therapy, according to early data on one of the first controlled studies on the use of behavioral telehealth. "Even though these findings are suggestive, they provide initial evidence questioning the notion that telecommunication-mediated therapy has a negative effect on the relationship between clients and counselors," says Robert Glueckauf, PhD, an associate professor at Indiana University Purdue University Indianapolis. Preliminary results also show that the bond between the client and practitioner is unaffected by the delivery system.

Glueckauf will have an opportunity to corroborate his initial results this summer when the three-year study will move to the University of Florida in Gainesville, where Glueckauf will direct the new Center for Research on Telehealth and Health care Communications—the first psychology-based telehealth center. It is being partially funded by the Arthur Vining Davis Foundation and the Columbia Health care Corporation.

Since telehealth has been gaining popularity in rural areas, many practitioners have been calling for more clinical research on telehealth's effectiveness. Studies like this are necessary to determine how telecommunications can affect the delivery of health care, says Russ Newman, PhD, JD, APA's executive director for practice.

"The real issue is how do we know that the method of delivering services doesn't end up influencing, in a negative way, the services that are being delivered," Newman says. "That's what happened with managed care and cost-containment strategies, if you look at it as a technology that was intended to help deliver services more cost-effectively. Now it is driving the health-care service rather than simply delivering the health-care service and negatively affecting the service."

"We would want to make sure the same thing wouldn't happen when telecommunication technologies are used to deliver services."

*Author: L. Rabasca (1998). In the . *Monitor, Vol.29*, No.8. The newsletter of the American Psychological Association. Available at http://www.apa.org/monitor/aug98/tele.html

My Virtual Shrink – Online Therapy **http://masteringmylife.com/**

This online therapy program "emulates the methodology of a live therapist and helps individuals identify and sort out key issues." For a modest fee, individuals who could not afford to see a traditional therapist, do not have the time, or are concerned about the stigma of seeing a therapist vent problems online and engage in therapeutic conversations with a program primarily geared toward stress management and recommended for people with less severe psychological problems.

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Design and evaluation guidelines for mental health technologies. (2010). G. Doherty, D.Coyle, & M. Matthews *Interacting with Computers*, *22*, 243–252,.
http://dx.doi.org/10.1016/j.intcom.2010.02.006

Abstract: It is increasingly recognised that technology has the potential to significantly improve access, engagement, effectiveness and affordability of treatment for mental health problems. The development of such technology has recently become the subject of Human–Computer Interaction research. As an emerging area with a unique set of constraints and design concerns, there is a need to establish guidelines which encapsulate the knowledge gained from existing development projects. We present an initial set of design guidelines extracted from the literature and from a series of development projects for software to support mental health interventions. The first group of guidelines pertain to the design process itself, addressing the limitations in access to clients in mental healthcare settings, and strategies for collaborative design with therapists. The second group considers major design factors in the development of these technologies, including therapeutic models, client factors, and privacy. The third group concerns conduct of the evaluation process, and the constraints on evaluating mental healthcare technologies. We motivate and explain these guidelines with reference to concrete design projects and problems.

Tele-health clinics for schools – An example is described in a news article from Michigan (**http://www.thedailyreporter.com/article/20140102/NEWS/140109911**).

"Students aged 12 to 21 will have access to health care without having to go to the doctor's office. The Community Health Center of Branch County (CHC) received a State of Michigan Department of Community Health transformational grant in 2013. The clinics will provide primary healthcare services via tele-health equipment through the CHC Adolescent and Pediatric Center on the CHC campus. The clinics work with, and are not meant to replace, the student's family physician. The clinics will provide primary care services for acute illnesses and minor injuries such as strep throat, ear infections, rash, and influenza; and preventative care such as immunizations. Parental consent must be provided before any student is seen. No student will be denied services. Insurance will be billed for services provided in the clinic. For those students that are uninsured or underinsured, insurance enrollment assistance will be provided. A registered nurse will be located at each site who will examine the student using the tele-health equipment. The equipment will transmit the information and video to the physician or physician assistant (PA) at the Peds Clinic. The physician or PA will then make a diagnosis and can write and send in a prescription to the pharmacy if needed...."

C. Guides

>Learn the Net Your Online Guide --
http://www.learnthenet.com/index.php

>Technology Guide --
http://www.technologyguide.com/

>Teachers' Ultimate Digital Kit: 30+ Great Educational Guides from *Educational Technology and Mobile Learning*
http://www.educatorstechnology.com/2012/08/teacher-educational-technology-guides.html

Below is a sample of the 30+ guides:

>Teacher's Guide on the Use of Facebook in Education --
http://www.educatorstechnology.com/2012/06/ultimate-guide-to-use-of-facebook-in.html

>Teacher's Guide on the Use of Skype in Education --
http://www.educatorstechnology.com/2012/06/complete-guide-to-use-of-skype in.html

>Teacher's Guide on the Use of iPad in Education --
http://www.educatorstechnology.com/2012/06/teachers-guides-on-use-of-ipad-in.html

>Teacher's Guide on the Use of Personal Learning Networks in Education --
http://www.educatorstechnology.com/2012/06/simple-comprehensive-guide-on-use-of.html

>Teacher's Guide on the Use of Blogs in Teaching --
http://www.educatorstechnology.com/2012/06/ultimate-guide-to-use-of-blogs-in.html

>Teacher's Guide on the Use of Wikis in Education --
http://www.educatorstechnology.com/2012/07/teachers-guide-on-use-of-wikis-in.html

VII. Education Technology Organizations

For a list of such organizations, see
http://www.informns.k12.mn.us/Educational_Technology.html

VIII. Glossaries

The most direct way to find a terms definition is to use an internet search engine (e.g., go to http://www.google.com/ or http://www.google.com/advanced_search?hl=en) -- type in "define" and then the term in quotations "tweeting").

Alternatively, go to an online Glossary for technology:

>The Interactive Glossary: Defining the Net --
http://www.learnthenet.com/glossary/adware

>Technology Glossary -- http://4teachers.org/techalong/glossary/

>Find a Tech Definition -- http://whatis.techtarget.com/