Universal Design for Learning: Recent Literature

Abstract:
Reports on the launching of the National Center for Accessing the General Education Curriculum in the United States. Funding by the Office of Special Education Programs in the U.S. Department of Education; Universal design's flexible curriculum.

Abstract:
Questions and answers address: (1) connections between access of students with disabilities to the general curriculum and Universal Design for Learning; (2) the changing role of the special educator; (3) differences between assistive technology and Universal Design for Learning; and (4) guidelines for increasing curricular accessibility. (DB)

Abstract:
This article identifies 25 Internet resources concerning research and development in the field of Universal Design for Learning.

Abstract:
Presents highlights of the National Center for Accessing the Curriculum's (NCAC) workshops about electronic text in schools and inclusive education on October 12, 2000. Description of the Universal Design for Learning; Cooperative agreement between the NCAC and the Center for Applied Special Technology in Peabody, Massachusetts.

Abstract:
This brief paper considers the application of "universal design" principles to Web page design in order to increase accessibility for people with disabilities. Suggestions are based on the World Wide Web Consortium's accessibility initiative, which has proposed guidelines for all Web authors and federal government standards. Seven guidelines for general page design include maintain a simple, consistent page layout throughout the site; keep background simple and with enough contrast; design large buttons; and include a note about accessibility. Examples of six guidelines for graphical and audio features are: include appropriate ALT/LONGDESC attributes for graphical elements on your page; include menu alternatives for image maps to ensure that embedded links are accessible; include descriptive captions for pictures and transcriptions of manuscript images; and provide audio description and captions or transcripts of video. Among suggestions for special Web page features are the sparing use of tables and frames; provision of alternatives for forms and databases; and provision of alternatives for content in applets and plug-ins. Finally, the paper
urges developers to test the Web site with various Web browsers. Following a list of 13 resource Web sites, the paper lists contact and other information resources associated with Project DO-IT at the University of Washington. (DB)


Abstract:
This document provides the proceedings of a July 2002, one-day capacity building institute on access and participation of students with disabilities in the general K-12 curriculum. Introductory material provides background information on the institute, the relevance of Universal Design for Learning (UDL) to increased curriculum access, an overview of the institute's organization, and descriptions of the five partner organizations to the two sponsoring organizations. The proceedings section includes summaries of the following presentations: "National Policy Background" (Lou Danielson); "Standards-Based Reform and Students with Disabilities: Creating True Access to the General Education Curriculum" (Margaret McLaughlin); "State Policies that Impact Access to the General Curriculum" (Martha Minow); "The Impact of Standards-Based Reform" (a panel discussion); "Classroom Practice To Improve Access and Participation in the General Curriculum" (Tracey Hall); and "Access by Design, not Afterthought: Advances in Universal Design for Learning" (David Rose). Three appendices include biographies of key speakers, a report on the Comprehensive Planning Process for the IDEA Part D National Program, and a record of the Expert Strategy Panel on Students with Disabilities' Access to, Participation in, and Progress in the General Education Curriculum." (DB)


Abstract:
Reports on the approval of a bill by the U.S. Senate that would renew the federal special education law. Reauthorization of the Individuals with Disabilities Education Act; Issues related to universal design and accessibility of curriculum and instructional materials; Functional behavioral assessments of students who are removed from their regular classroom settings.


Abstract:


Abstract:
Presents information on Web sites that provide help in designing Web pages that comply with the requirements of Universal Design. Web site of CAST; List of Checkpoints for Web Content Accessibility Guidelines 1.0; Web site on how people with disabilities use the Web.


Abstract:
Presents the effort of the National Center on Accessing the General Curriculum (NCAC) in providing a universally designed educational instruction. Web site of NCAC; Universal Design for Learning; Tips on making the curriculum more accessible.


Abstract:
The purpose of this article is to provide a model for helping campus leaders create and sustain efforts to fully incorporate Universal Instructional Design (UID) throughout their institutions. The article uses a multiple dimension model of organizational behavior as the basis for making
recommendations to support this type of institutional transformation.

Abstract from Author


Abstract:
This article discusses using curriculum


Abstract:
Discusses the possible use of universal curriculum design principles in supporting inclusive practice within education. Definition of inclusion; Analysis of inclusion in relation to individual rights; Arguments against increased professionalism of teachers of children with special educational needs.

Burgstahler, S. "Building the team faculty, staff, and students working together: presentation and resource materials."

Abstract:


Abstract:
Worldwide, distance learning programs offer opportunities for education and career enhancement for those who have access to a computer and the Internet. However, some potential students and instructors who have access to these technologies cannot fully participate because of the inaccessible design of courses. These individuals include those with visual and hearing impairments. The University of Washington Distance Learning program and the campus unit that provides computer access for students and instructors with disabilities teamed up with DO-IT (Disabilities, Opportunities, Internetworking, and Technology), a national center that promotes the use of accessible technology, to improve the accessibility of the University's distance learning courses. The authors of this article discuss their ongoing efforts as well as lessons learned so that others might benefit from their experiences. They also provide an overview of access challenges and solutions for people with disabilities, legislation, accommodation and universal design approaches to accessibility, and standards and guidelines. Copyright 2004 Elsevier


Abstract:
This publication contains 2 videotapes, written materials, handout templates, and overhead projection templates developed for those providing professional development to help faculty and administrators in postsecondary institutions become more aware of the rights, responsibilities, potential contributions, and needs of students with disabilities; the rights and responsibilities of postsecondary institutions; reasonable accommodations and instructional strategies for working with students who have disabilities; and campus resources that help provide equitable educational opportunities for all students. The materials are designed for use in departmental and campus-wide presentations to stimulate discussion and action. The presentation lengths vary from 20 minutes to several days and address the following topics: (1) accommodations strategies; (2) universal design of instruction; (3) effective communication; (4) information access; (5) access to computers; (6) making computer labs accessible to everyone; (7) universal design of Web pages; (8) making distance learning accessible to everyone; (9) science/math/engineering access; (10) accommodating students with learning disabilities; and (11) accommodating students with psychiatric disabilities. For each presentation option, a sample script is included to minimize the work that might otherwise be required to prepare a presentation. The presenter may use a script verbatim or extract ideas to customize a presentation. Along with the presentations, a synthesis of research, implementation and institutionalization strategies, presentation tips and case study examples, frequently asked questions, and a glossary of disability-related terms and a list of resources are included. The 2 videotapes included with this notebook can be used in
specific presentations or broadcast on public television. Handout and overhead projection templates are provided in the “Presentation Tools” section of the notebook for easy duplication and use. A Web-based instructional option is also available for faculty and administrators (to access Web-based instruction, see http://www.washington.edu/doit/Faculty/). Also, a distance learning course that can be delivered via electronic mail to faculty and administrators on any campus is available online. (CR)

Burzon, J. K. "The effect of illustrative media on student learning and attitudes in Iowa nonformal education settings."

Abstract:
This thesis focuses on the effect of various illustrative media on learning and attitudes within nonformal education environments. Literature from formal education, nonformal education, interpretation, museum research, and graphic design are reviewed. Almost all relevant research found was conducted within formal educational settings. A general lack of cohesiveness is noted in the literature. A standardization of information reported from research projects is suggested as well the universal inclusion of representations of illustrations used in research. Students participating in a scavenger hunt of nature center displays during a field trip activity were pre- and post-tested to determine the influence of different illustrative media (color photographs, color paintings, black and white line drawings, and black and white photographs) as well as the interactivity of an experimental display on learning and attitudes. Total test data, data from particular question groups, and data from individual questions were analyzed. Students did recall textual information from the experimental display. Illustrative media was a significant factor within one question group type measuring factual recall and one question group type measuring attitudes. In that case, black and white treatments were significantly different from color treatments and correlated with higher achievement. Nature center was also a significant factor within that question group. Attitude change did occur and was measured within certain question groups as well as certain individual questions. Interactivity of the display, or the season of the year during which the experiments took place, indicated differences with regard to two questions. Observations of participating classes are given. The scavenger hunt is validated as a learning tool and as a vehicle for attitude change. Comparisons are made to media research of formal learning environments. Suggestions for application and further study are given. Note(s): Typescript (photocopy)./ Includes bibliographical references./ Dissertation: Thesis (M.S.)--Iowa State University, 1998. Responsibility: by Julia K. Burzon. Material Type: Thesis/dissertation (deg); Manuscript (mss)


Abstract:
This article presents a framework for science programming at the elementary school level by incorporating the principles of universal design. Adherence to the principles of universal design shows promise for (a) increasing access to the general education curriculum, (b) enhancing student progress in science, and (c) framing the general education curriculum to make it more appropriate for students with disabilities (Orkwis, 1999). Five models of elementary school science are reviewed, with an emphasis on the principles of universal design: spiral, intensified, theme-based, integrated, and multiple-option. The multiple-option curriculum as exempted by Science for All Children both meets the criteria and expands on the principles of universal design. ABSTRACT FROM AUTHOR


Abstract:
This article proposes incorporating principles of universal design into


Abstract:
Presents a study to examine the effect of a teaching unit on design students' knowledge of
universal design and attitudes toward people with disabilities. Finding that students' knowledge of the seven principles of universal design increased and their scores on the Attitudes toward Disabled Persons Scale became more positive as a result of the teaching unit; Methodology; Results and discussion.

Abstract

The purpose of this research was to examine the effect of a teaching unit on design students' knowledge of universal design and attitudes toward people with disabilities. Thirty-two design students were asked to complete a survey instrument before and after the six week teaching unit. Findings indicated that students' knowledge of the seven principles of universal design increased and their scores on the Attitudes toward Disabled Persons Scale became more positive as a result of the teaching unit.


Abstract:

Reviews several books on educational technology. 'Computer-Aided Assessment in Higher Education' edited by Sally Brown; 'Using Television and Video to Support Learning' edited by Steve Fawkes; 'Good Schools, Real Schools' by Dean Fink.


Abstract:

Reviews several books on educational technology. 'Computer-Aided Assessment in Higher Education' edited by Sally Brown; 'Using Television and Video to Support Learning' edited by Steve Fawkes; 'Good Schools, Real Schools' by Dean Fink.


Abstract:

Focuses on the use of technologies in the Blue Mountain project of Lily Goldberg's universally designed class in New South Wales. Approach of Goldberg to the project; Origins of universal design for education; Consideration given to student diversity in a universally designed environment.

Duranczyk, I. M., J. L. Higbee, et al. "Best practices for access and retention in higher education."

Abstract:


Abstract:
Session emphasizes accommodations for "high incidence/moderate need" special education students and diverse learners in general education classrooms. This presentation will explore strategies for analyzing the curriculum, identifying existing barriers, and applying technological supports to overcome them.


Abstract:
A review was conducted of 198 articles on special education technology. While


Abstract:
This action research study was designed to improve the academic performance of students with special needs in two elementary school classrooms in a parochial school setting. Cooperative learning and curriculum modifications were selected as interventions. Cooperative groups were formed which emphasized teamwork and communication with assigned roles to incorporate accountability. A binder of curriculum modifications was developed that included modifications in reading, language arts/English, mathematics, spelling, handwriting, homework, and organizational and memory strategies. Different subject areas were emphasized in each month. Students' academic progress was assessed using anecdotal records, document analysis, and teacher surveys. Results indicated that all students benefited from the modifications that were implemented, not just the targeted population. Modifications were more effectively implemented on a whole class or group rather than individual basis. Appendices include survey and other forms. (Contains 38 references.) (DB)


Abstract:
Distance education is based on providing learning "anytime, anywhere." The design of many distance education courses, however, may actually erect barriers to the full participation of some students with disabilities, particularly those with hearing impairments. Without careful consideration, distance education could become learning anytime, anywhere, but not for anybody. It is not only unethical, but also illegal to ignore the special needs of these learners. The specific impact of such legislation on distance education for those students with hearing impairments will be addressed. Students with disabilities are often faced with a double digital divide that must be bridged. Universal design uses an excellent proactive approach to closing this
digital divide caused by inaccessible courses. Each medium of transmission in distance education
poses unique access barriers. Even within the same medium, what is best for one student or
class may not be the most ideal accommodation in another situation. Individualized
accommodation methods will be examined, and specific technologies and software will be
discussed.


Abstract:
This paper examines how teachers, as educational designers, can utilize universal design for
learning (UDL) concepts. UDL is a comprehensive approach to the design of educational systems
that addresses elements necessary for the achievement of desired educational goals and
objectives: elements such as equity among the participants, environmental supports, and the
coupling between participant abilities and task requirements. The essential principles of UDL,
which work synergistically, are: equitability, ergonomic soundness, perceptibility, cognitive
soundness, error management, flexibility, and stability/predictability. The UDL principles
presented in this paper draw from Enabling Technology Laboratory experiences as well as the
knowledge and experience of many individuals, ranging from educators to engineers. Educational
designers can systematically apply UDL principles to create more efficient and effective
educational environments. (Contains 15 references, 1 table, and 7 figures.) (Author)

& Rehabilitation, Taylor & Francis Ltd. 24: 607.

Abstract:
Purpose: To explore the development of a speech interface to a virtual world and to consider its
relevance for disabled users. Method: The system was developed using mainly software that is
available at minimal cost. How well the system functioned was assessed by measuring the
number of times a group of users with a range of voices had to repeat commands in order for
them to be successfully recognized. During an initial session, these users were asked to use the
system with no instruction to see how easy this was. Results: Most of the spoken commands had
to be repeated less than twice on average for successful recognition. For a set of 'teleportation'
commands this figure was higher (2.4), but it was clear why this was so and could easily be
rectified. The system was easy to use without instruction. Comments on the system were
generally positive. Conclusions: While the system has some limitations, a virtual world with a
reasonably reliable speech interface has been developed almost entirely from software which is
available at minimal cost. Improvements and further testing are considered. Such a system would
clearly improve access to virtual reality (VR) technologies for those without the skills or physical
ability to use a standard keyboard and mouse. It is an example of both assistive technology (AT)
and universal design.ABSTRACT FROM AUTHOR


Abstract:
Examined the computer technology needs and concerns of 725 college and university students
(425 females and 300 males, aged 17-75 yrs) with various disabilities. Findings indicate that the
overwhelming majority of these students used computers, but that almost half needed some type
of adaptation to use computers effectively. Data provided by the students and by a small sample
of professors underscore the importance of universal design in a variety of areas: courseware
development, electronic teaching and learning materials, and campus information technology
infrastructure. Sex and age of students were only minimally related to attitudes toward computers
or their use in our samples. Key findings summarize the problems faced by students with different
disabilities as well as the computer related adaptations that are seen as helpful. These are used
to formulate concrete, practical recommendations for faculty to help them ensure full access to
their courses. (PsycINFO Database Record (c) 2004 APA, all rights reserved)

Fichten, C. S., J. V. Asuncion, et al. (2001). Technology Integration for Students with Disabilities:
EmpiricallyBased Recommendations for Faculty. Educational Research & Evaluation, Swets &
Abstract:
Examines the computer technology needs and concerns of college and university students with disability in the United States. Students' adaptation to computer use; Importance of universal design in courseware, electronic teaching, learning materials and campus information technology infrastructure; Relations of student sex and age with attitudes toward computers.

ABSTRACT FROM AUTHOR

AbstractIn 3 empirical studies we examined the computer technology needs and concerns of close to 800 college and university students with various disabilities. Findings indicate that the overwhelming majority of these students used computers, but that almost half needed some type of adaptation to use computers effectively. Data provided by the students and by a small sample of professors underscore the importance of universal design in a variety of areas: courseware development, electronic teaching and learning materials, and campus information technology infrastructure. Sex and age of students were only minimally related to attitudes toward computers or their use in our samples. Key findings summarize the problems faced by students with different disabilities as well as the computer related adaptations that are seen as helpful. These are used to formulate concrete, practical recommendations for faculty to help them ensure full access to their courses.

ABSTRACT FROM AUTHOR


Abstract:
Self-determination should be a central organizing concept in postsecondary programs for all students with disabilities, including those with learning disabilities. The importance of self-determination is supported by numerous studies, including one by Sarver (2000), who found a significant relationship between the grade point averages of students with learning disabilities and their levels of self-determination. Interviews with students about postsecondary environments demonstrate that specific environmental factors and personality markers are important to postsecondary success. Characteristics of environments that support self-determination are discussed within the context of postsecondary education settings. These characteristics include self-determined role models, self-determination skill instruction, opportunities for choice, positive communication patterns and relationships, and availability of supports. Universal Design for Instruction, a new paradigm for college students with learning disabilities, fosters self-determination by offering students productive opportunities for learning.

ABSTRACT FROM AUTHOR


Abstract:
A summary of research showing that grade point averages of postsecondary students with learning disabilities are correlated with perceived levels of self-determination is followed by discussion of characteristics of postsecondary environments that support self-determination, such as self-determined role models, self-determination skill instruction, opportunities for choice, positive communication patterns and relationships, and availability of supports. Universal Design for Instruction, a new paradigm for college students with learning disabilities, fosters self-determination by offering students productive opportunities for learning.

(Contains references.) (Author/DB)


Abstract:
Determines the principles of the prevention and intervention of Mathematics difficulties to students with learning disabilities in Nashville, Tennessee. Identification of research-based principles associated with primary prevention; Principles of differentiating primary and secondary prevention; Specification of instructional variables.

ABSTRACT FROM AUTHOR

AbstractThree levels of prevention and intervention in the area of mathematics are addressed: (a) primary prevention focusing on universal design, (b) secondary prevention focusing on adaptations, and (c) tertiary prevention focusing on intensive and explicit contextualization of skills-based
instruction. The purpose of this paper is to identify and discuss principles of prevention and intervention in the area of mathematics. First, we identify research-based principles associated with primary prevention. Second, we turn our attention to secondary prevention, with a focus on prereferral intervention. We identify principles that serve to differentiate primary and secondary prevention and specify instructional variables that are promising for use within a secondary prevention mode. Finally, we discuss intervention. We identify principles of effective intervention, which include individually referenced decision making, instructional intensity, and deliberate contextualization of skills-based instruction.

**ABSTRACT FROM AUTHOR**


**Abstract:**


**Abstract:**

This article describes the process of designing the Center for Applied Special Technology Web site to illustrate both the principles and the practice of universal design for learning. How the Web site overcame barriers to learning, information representation, interaction and navigation, and engagement barriers is addressed. (CR)


**Abstract:**

This article describes the process of designing the


**Abstract:**

This digest discusses the most frequently diagnosed mood disorders in children and adolescents, including major depressive disorder, dysthymic disorder, and bipolar disorder. The symptoms of these disorders are described, along with family and genetic causal factors, biological causal factors, and cognitive causal factors. The digest then addresses the diagnosis and assessment of depressive illness in young people and treatment of depressive disorders. Educators are urged to provide a positive and supportive environment, components of which include satisfaction of basic needs, caring relationships with adults, and physical and psychological security. It stresses that any inclusion in a student's program that serves to enhance feelings of self-worth, self-control, and optimism has the potential for ameliorating feelings of depression. Educators are also urged to use instructional strategies that are both positive and effective, so that the student will achieve success and enjoy the learning process. Examples include direct instruction with positive reinforcement, thematic instructional units with varied levels of classroom assignments, learning strategies, and utilization of principles of universal design for learning that promote access to the general curriculum for students with learning problems. (Contains 17 references.) (CR)


**Abstract:**

For years, a computer-assisted methodology called Universal Design for Learning has enabled special needs kids in the Boston area to stay in regular classrooms. Kelly Driscoll's humanities class wasn't nearly as rowdy as the group next door, but it was far from quiet. Her thick black hair wrapped in a messy bun, Anais and her classmates were using software called Thinking Reader to read Bud, Not Buddy, Christopher Paul Curtis' tale of an orphan's childhood during the Great Depression. Its researchers claim that with the right materials, technology, and training, teachers can make all lessons flexible enough to benefit every student included those considered "disabled."

Hatteberg, G. and C. Wurzer "Class strategies for curriculum access for learners across the spectrum."

**Abstract:**

Features tools to enhance the participation of students with a range of abilities in the general curriculum, comparing Assistive Technology with Universal Design for Learning.

Abstract:
This article suggests a future where accessibility and the universal design of the education environment is no longer an issue and the focus is on universal design for learning. The supports necessary to ensure progress will, from the very beginning, be built into the instructional methods and learning materials. (Contains 1 reference.) (Author/CR)


Abstract:
Discusses the evolution of the general curriculum and special education in the U.S. Framework for curriculum reform; Principles of Universal Design for Learning based curriculum; Diversity of learning needs among students.


Abstract:
This article examines what is meant by access, participation, and progress in the regular education curriculum and suggests a new framework for curriculum reform that holds promise for all students, particularly students with disabilities. The Universal Design for Learning (UDL) is presented and materials and methods of UDL are described. (Contains references.) (CR)


Abstract:
This article addresses the benefits that are likely to derive from shifting


Abstract:
This guide to cooperative teaching provides field-tested ideas and strategies using an organizational analogy of a home remodeling project. Chapters address the following topics: (1) recent changes in the nation's schools and an overview of collaboration in the contemporary educational system; (2) different approaches to collaboration, including distinctions between indirect and direct collaboration and advantages and disadvantages of each approach; (3) cooperative teaching as one form of collaboration, necessary elements for successful cooperative teaching, and principles of universal design for learning; (4) implementing cooperative teaching including issues of time, scheduling, and administrative support; (5) professional communication and collaboration through use of technology; (6) principles of program evaluation and practical procedures for evaluating potential areas of impact of cooperative teaching; (7) interpersonal skills and issues critical to the successful implementation of cooperative teaching and suggestions for minimizing interpersonal problems; (8) implications of change, possible conflicts and strategies...
for conflict resolution; (9) the roles of principals and other change facilitators in leadership and bringing about substantive change in schools; and (10) the importance of sharing results of cooperative teaching with others and ways of doing this. Chapters contain practical examples and field-tested reader activities. (Contains approximately 200 references.) (DB)

Howard, P. J. "The owner's manual for the brain: everyday applications from mind-brain research."  
Abstract:

Abstract:  
Focus groups (n=57) and surveys (n=665) of students with disabilities and faculty suggested that students must learn self- advocacy and educators must apply principles of Universal Design for Learning. Educators must assist students in developing self-determination skills to ensure access to courses and transition to postsecondary education or employment. (Contains 34 references.) (JOW)

Abstract:  
Examines a universal design chart that can be generated for linear time-invariant, continuous-time and discrete-time compensators. Control system design that operates via the frequency domain and the Bode diagram; Principle of the design method; Formulas for various types of compensators which are used in conjunction with the universal design chart.

Abstract:  
Focuses on WebQuest, a type of lesson especially helpful in meeting the needs of handicapped students within general education classrooms. How students are boosting their learning through teacher-led lessons on the Web; Principles of universal design for learning; Steps in designing a WebQuest. INSETS: What Is a WebQuest? Hints for Web Page Creation; Text from Screenshot of WebQuest: S.O.S.--Salvaging One.

Abstract:

Lazzari, M. R. and D. Schlesier "Exploring art a global, thematic survey."  
Abstract:  
This textbook for art appreciation fully integrates western and non-western art traditions by taking a thematic rather than a chronological approach. All the standard introductory topics are presented -- design principles and elements, various media, and the historical development of the arts -- but the core of the book is organized around a set of universal themes evident in art from around the world and throughout history. This thematic organization allows students to make connections between works by artists in different cultures and time periods and emphasizes the role of art as a common human endeavor.-Back cover. Contents: What is art and how does it work? Human phenomenon; Language of art; Language of architecture; Deriving meaning from art and architecture; Looking at art within culture -- Why do we make art? Survival and beyond, Food, Reproduction, Shelter; Religion, Gods and goddesses, Place of worship, Mortality and immortality; State, Power, politics, and glory, War and peace, Social protest/affirmation; Self and society, Body, Clan and class, Race, sexuality, and gender, Entertainment, Nature, knowledge, and technology -- Who are the artists and who uses art? Who makes art? What do humans do with art? Where do you find art and how can you use it in your life? -- Pronunciation guide -- Glossary.

Abstract:
The Internet and World Wide Web (Web) provide instant access to vast quantities of information. Unfortunately, many people with visual, hearing, mobility, or learning disabilities are unable to take advantage of the opportunities afforded by the Web. This is because badly designed and/or inaccessible Web sites prevent them from fully experiencing the graphical and aural benefits of the medium. This paper introduces concepts of accessible Web design and describes how Web designers can build sites accessible to everyone with little added effort. It also provides a brief legal and economic rationale as to why it is important to do so. Principles of universal design and the guidelines developed by the World Wide Web Consortium’s Web Accessibility Initiative are described. An appendix of selected resources is also included.

Lundell, D. B. and J. L. Higbee "Exploring urban literacy & developmental education."

Abstract:

Male, M. "Technology for inclusion: meeting the special needs of all students."

Abstract:


Abstract:
Assistive technology has always been an important component of individualized education programs. The individualized education program process can be used to supply hearing assistive technology to students. One goal of audiologists and educators is to improve the acoustic environment of classrooms for all students by constructing school buildings with better classroom acoustics and by using classroom amplification systems. This article reviews how technology is acquired for individual students, lists problems that impede acquiring appropriate technology, describes the use of classroom amplification for all students, and recommends ways to increase the probability that appropriate listening technology is available for individual students and classrooms.


Abstract:
Discusses the process of developing school music Web pages accessible to persons with disabilities. Example of the applications of the Internet for communicating news about school music programs and as an educational tool; Overview of one of the provisions of the Americans With Disabilities Act of 1990 focusing on public facilities; Information offered by the "Teaching Every Student in the Digital Age: Universal Design for Learning," online resource by David H. Rose and Anne Meyer; Overview of the step-by-step tutorial on how to create a very basic accessible web page using Netscape Composer.


Abstract:
Contends that the principles of universal design when applied to instruction can guide the development of educational tools to accommodate the diverse needs of students. Nature of brain activity of individuals performing a given task; Development of the Universal Design for Learning tools and teaching strategies; How recognition processes occur in the brain.


Abstract:
This paper summarizes information from interviews with four states regarding their Universal Design for Learning (UDL) initiatives, i.e., state or regional level efforts to promote the principles and practices of UDL via professional development or the production and/or dissemination of
universally designed instructional materials. Discussion of the origins of UDL notes the term's use to describe learning technologies that provide access to the curriculum for students both with and without disabilities. The paper then describes the individual features of UDL efforts in four states, noting also strategies and barriers mentioned by state representatives interviewed. It reports that Kentucky has the most comprehensive and long-standing UDL initiative. This has three goals: integration of UDL concepts and technology across all schools; increased access to digitized text and curriculum; and development of a Web-based state assessment. New York's program emphasizes developing providers of technical assistance in UDL to districts and schools, disseminating information on UDL, and adding UDL to the teacher preservice curriculum. California's program stresses conversion of curricular materials into digital formats and dissemination of UDL information. Ohio's program stresses building organizational capacity, introducing UDL concepts in professional development, and a pilot project providing six school-level teams with training and support. (DB)


Abstract:
Provides information on universal design. Examples of universal design; Details of universal design for learning; Implications of universal design for the school library; List of resources in print and online, that offer guidance for teacher-librarians on universal design.


Abstract:
A study examined accommodations and adaptations for students with special needs in four teacher edition textbooks for the elementary and secondary grades. Results found that all mentioned special populations, and suggestions for students with various characteristics took the form of a page or two of general suggestions in the front matter. (CR)


Abstract:
With demographic and social trends in mind, technical communicators should be examining the online communication needs of elderly people who may share certain characteristics with other Internet users, particularly the disabled community. Although education, universal design, and accessibility initiatives help us address many of the developmental and cultural barriers elderly Internet users face, this article examines some current offerings, analyzing the growing elderly audience to better incorporate usability into Web design. ABSTRACT FROM AUTHOR


*Exceptional Parent* 31(12): 22.

Abstract:


Abstract:
Explains the Universal Design for Learning that provides students with multiple representations of information. Highlights include a graduate course that offered printed materials, online text, movies, videotapes, and a Web site; providing multiple representations of content for students with disabilities; and multiple options for expressing knowledge and for engaging learners. (LRW)

Orkwis, R. "Curriculum access and universal design for learning." *ERIC/OSEP digest; # E 586; Report No: EDO-99-14.*

Abstract:

Abstract:
This digest discusses the Individuals with Disabilities Education Act requirements which state that all students, regardless of their abilities, be given the opportunity to become involved with and progress in the general education curriculum. It describes how educators can use a curriculum that has been universally designed to ensure accessibility. Essential features of universal design for learning are discussed, including: (1) the curriculum provides multiple means of representation, allowing subject matter to be presented in alternative modes for students who learn best from visual or auditory information, or for those who need differing levels of complexity; (2) the curriculum provides multiple means of expression to allow students to respond with their preferred means of control; and (3) the curriculum provides multiple means of engagement that allow students' interests in learning to be matched with the mode of presentation and their preferred means of expression. The digest warns against "dumbing down" the curriculum, and urges teachers to maintain the curriculum at a sufficient level of difficulty to allow student progress. Support for a universal design curriculum is discussed, and groups who are working on universal design issues are identified. (CR)


Abstract:
This publication addresses issues involved in universal design for learning as they relate to full access to the general education curriculum for students with disabilities. It begins by discussing curriculum access and student engagement according to the federal mandates, which require students with disabilities to be given the opportunity to participate in the general education curriculum. Universal design for learning is described as providing flexible curricula materials and activities that offer alternatives for students with disparities in abilities and backgrounds. Charts illustrate how universal design for products and environments differs from universal design for learning, with its three essential curriculum qualities (representation, expression, and engagement). The publication closes with suggested first steps in implementing universal design for learning. An appendix provides a framework that summarizes the salient principles of universal design in a practical context to help teachers and other interested individuals consider how the tools employed in the classroom can realistically provide broader access to the curriculum for all students. It describes alternatives that reduce perceptual barriers, cognitive barriers, motor and cognitive barriers to expression, and describes alternative ways of encouraging engagement in the learning environment. (CR)


Abstract:
Issues related to stigma and its impact on assistive technology (AT) use with persons having developmental disabilities are addressed. While stigma has been known to be associated with presence of disability for many years, relationship between stigma and AT usage, particularly when working with families across cultures, has only just begun to be examined. Issues confronted by AT decision-making teams related to stigma include family expectations of AT, visibility resulting from use of AT in public settings, and perceptions that children will not attain important developmental skills if they become reliant on devices. While numerous approaches for AT decision-making have been implemented in the field, absence of validity and reliability data related to such approaches emphasizes importance of understanding potential influences of stigma associated with AT use. Specific areas that can contribute to stigmatization include (a) device aesthetics/cosmesis, (b) gender and age appropriateness, (c) social acceptability, (d) sublimation and professional deference, (e) teachers and acceptance of disability, and (f) universal design principles. Importance of future research that explores stigma and government policy and impact on AT decision-making is noted. (PsycINFO Database Record (c) 2004 APA, all rights reserved) (journal abstract)

Abstract:
This booklet summarizes three forums on current issues related to the use of technology for youth with disabilities. Forum 1, "Accessing the General Curriculum: Promoting a Universal Design for Learning" (November 3, 2001), featured David Rose and Chuck Hitchcock examining how universal design, recent neuro-scientific research, and technology have combined to create universally designed curriculum products useable by all students. Forum 2, "Creating Accessible Technologies--Practical Ways To Enable Youth To Reach Their Potential and To Overcome Barriers Faced in Employment, Education and Daily Living" (December 8, 2000), featured Gregg C. Vanderheiden in a presentation on creating accessible technologies with such key points as: how universal design benefits multiple populations; how changing technology is creating both new challenges and opportunities; and advantages and disadvantages of technology for persons with disabilities. Forum 3, "Preparing Youth with Disabilities for an Increasingly Technical Work Place" (January 26, 2001), featured a panel discussion on ways to prepare youth with disabilities for an increasingly technical work place. It addressed: (1) the Bridges Program to provide employment services and training to youth; (2) a study showing that successful high school work experience by youth with disabilities leads to higher adult employment rates; (3) a review of recent work force trends; and (4) the use of technology and accommodations in the work place. A list of resources includes forum presenters, Web sites, and examples of national policy on technology and individuals with disabilities. (DB)


Abstract:
The federal government has passed numerous laws that have focused on everything from civil rights legislation to accessibility mandates. This paper looks at the cumulative effects of federal legislation and nonlegislative activities on breaking down the wall of inequality for persons with disabilities and promoting the concept of universal design and universal access.


Abstract:
Reviews the book 'Teaching Every Student in the Digital Age: Universal Design for Learning,' by David Rose and Anne Meyer.


Abstract:
Focuses on the application of the computer program Universal Design for Learning in the development of educational curricula and material in U.S. Key elements in the design of educational curricula; Implication of UDL on stakeholders; Role of teachers in the educational curricula.

In a few short years, Universal Design revolutionized access to public spaces with a simple message: Consider the needs of all potential users from the beginning. Universal Design for Learning (UDL) promises another revolution--this time in the development of educational curricula and materials that include potent supports for access and learning from the start, rendering them effective for a far wider range of students than traditional materials. This article traces the development of UDL from its origins in the field of architecture and CAST Inc.’s early work, and then it describes a project that developed both a model digital U.S. history textbook incorporating UDL features and publisher guidelines that facilitate the creation of digital textbooks to support the access and learning needs of the broadest possible range of users, including students with disabilities.


Abstract:
Concepts from universal design in architecture are applied to development of

Abstract:
Concepts from universal design in architecture are applied to development of educational curricula and materials that include supports for access for a range of students including those with disabilities. This article traces the development of Universal Design for Learning (UDL) and describes a project that developed both a model digital U.S. history textbook incorporating UDL features and publisher guidelines. (Contains references.) (Author/DB)


Abstract:
PURPOSE: A collaborative partnership model was used to develop and implement a state-wide community education program on universal design. DESIGN AND METHODS: University faculty, extension professionals, older adult service agencies, service learning students, and a community retail chain made up the original partnership. RESULTS: This collaboration resulted in a five-stage partnership model. The model was used to develop and disseminate a consumer education program to promote aging in place. The five stages include (a) identifying partner strengths and shared learning, (b) program development, (c) implementing the universal design program, (d) facilitating collaborative outreach, and (e) shifting toward sustainable outreach. IMPLICATIONS: A lack of knowledge exists among consumers, builders, and health care professionals regarding strategies for aging in place. Collaborations between educators, outreach professionals, students, and a retail partner resulted in increased interest and awareness about universal design changes that enable seniors to age in place.


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Purpose: A collaborative partnership model was used to develop and implement a state-wide community education program on universal design. Design and Methods: University faculty, extension professionals, older adult service agencies, service learning students, and a community retail chain made up the original partnership. Results: This collaboration resulted in a five-stage partnership model. The model was used to develop and disseminate a consumer education program to promote aging in place. The five stages include (a) identifying partner strengths and shared learning, (b) program development, (c) implementing the universal design program, (d) facilitating collaborative outreach, and (e) shifting toward sustainable outreach. Implications: A lack of knowledge exists among consumers, builders, and health care professionals regarding strategies for aging in place. Collaborations between educators, outreach professionals, students, and a retail partner resulted in increased interest and awareness about universal design changes that enable seniors to age in place.

ABSTRACT FROM AUTHOR


Abstract:
Focusses on the accessibility issues while using electronic and information technology for persons with disabilities. Information Technology (IT) is increasingly an integral part of rehabilitation education. Information technology (IT) includes products that store, process, transmit, convert, duplicate, or receive electronic information. Many access barriers can be eliminated when technology environments are developed using universal design. The Web and other information technologies present new accessibility challenges. One common barrier is the lack of meaningful text descriptions for non-text elements on a web site. Unidentified images often present difficulties for individuals with vision impairments. Individuals with severe upper extremity impairments may use speech recognition to execute keyboard and mouse functions. Hearing loss presents a disadvantage when Web information is presented via audio files. Accessible web sites are no less attractive and are often easier to navigate for all users, especially people accessing the Web through alternative means such as personal digital assistants (PDAs), cell phones, and other devices. The rehabilitation educators should aim to address accessibility for web-based or
distance learning applications. (PsycINFO Database Record (c) 2004 APA, all rights reserved)

Ratner, J. "Human factors and Web development."

Abstract:


Abstract:
The purpose of this article is to assist parents and professionals in developing effective educational programs that promote a lifetime of successful inclusion for individuals with severe disabilities. We first establish the principle of normalization as the philosophical basis of inclusion. We next describe conditions and practices that reflect the principle of normalization and that foster inclusion across the life span. These conditions and practices consist of universal design, person-centered planning, self-determination, and positive behavior support. We end by suggesting that inclusion may be viewed as a continuum and that with the appropriate supports and skill development, all people, regardless of disability level, can successfully move up the continuum to more inclusive environments. (PsycINFO Database Record (c) 2004 APA, all rights reserved) (journal abstract)


Abstract:
Discussion of ways to promote inclusion for individuals with severe disabilities first establishes the principle of normalization, then describes conditions and practices that reflect this principle and foster inclusion across the life span. These include universal design, person-centered planning, self-determination, and positive behavior support. The article urges viewing inclusion as a continuum with appropriate supports where needed. (Contains references.) (Author/DB)


Abstract:
Discussion of ways to promote inclusion for individuals with severe


Abstract:
Application of the seven principles of universal design of instruction in occupational therapy education is intended to meet the diverse learning needs of students and provide full access to educational experiences without disadvantaging some students (Bowe, 2000; Burgstahler, 2001; McGuire & Scott, 2002). The intended outcome is success for all students. Further, universal design of instruction is congruent with the occupational therapy core value of mutual respect, whereby. We treat people fairly and equitably. We acknowledge and support others regardless of differences. We appreciate their qualities, capabilities and contributions (American Occupational Therapy Association, 2003). While the benefits of universal design of instruction in occupational therapy curricula appear to be extensive, a caveat must be included. Use of any instructional design tool is legitimized when grounded in research. Though literature in multiple disciplines is expanding related to universal design of instruction, we need research specific to occupational therapy education.


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Abstract:
This volume documents the work that resulted from the Chicago Public Schools Design Competition, explaining research and policies underlying the competition's criteria. The volume has three parts. Book 1, "The Chicago Experience," written by the competition's organizers, describes the competition's process and explains how it allowed community members, educational experts, and architects to collaborate in the design of schools that will foster the education of students, support quality teaching, and increase community involvement. It also chronicles the changing trends in public school architecture in Chicago. Book 2, "New School Designs," offers plans and ideas for schools designed for the 21st century. The competition's two winning designs and those of the finalists are extensively documented in drawings and renderings. Book 3, "Policies and Principles," explores policies that provided the impetus for the Chicago competition. It discusses the advantages of smaller learning environments; the benefits to students, teachers, and communities of universal design; application of sustainable design to the creation of public schools; and the importance of cost feasibility when building on a public budget. The section ends with a complete list of the winning, finalist, and notable architectural firms involved in the competition and a list of professional resources for creating new schools.

(RM)


Abstract:
This article elaborates on three universal design for learning principles that guide the process of selecting materials and methods according to individual differences and minimize barriers: provide multiple, flexible methods of presentation; provide multiple, flexible methods of expression and apprenticeship; and provide multiple, flexible options for engagement. (Contains two references.) (CR)


Abstract:
This paper posits that when new technologies in education move beyond their initial stages of development, innovations in curriculum design, teaching strategies, and policies will be driven by the needs of students "at the margin," those for whom present technologies are least effective, students with disabilities, and that all students will be the beneficiaries of these innovations. After discussing the present assistive technologies and their benefits for students with disabilities, the future of universal design for learning is discussed. New technologies are highlighted that are changing our concept of the nature of learning, of media, of the learner, of teaching and learning, and of assessment. The paper concludes that the particular benefits for students with disabilities are that the new technologies will, by necessity, recognize both the reality and virtue of diversity. The technologies of the future will be more, not less, diverse, and they will engage many kinds of learners. It is predicted that the implicit goals of education will change from homogenization to diversification—identifying and fostering the inherent diversity among all students, identifying new kinds of learning, new kinds of teaching, and new kinds of success. (CR)


Abstract:
This column introduces Universal Design for Learning

**Abstract:**
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This guide to universal design in the classroom is divided into two sections.

**Abstract:**
This article discusses some of the limitations of current educational assessment and how application of universal design for learning (UDL) concepts can improve assessment accuracy and its applicability to instruction. Benefits of UDL are described and include allowing for multiple means of representation and expression, and multiple means of engagement. (CR)

**Abstract:**
This guide to universal design in the classroom is divided into two sections. The first addresses the concept of universal design for learning (UDL); the second addresses the practical application of UDL in the classroom. Each chapter opens with a summary of key ideas and a graphic organizer that illustrates how the concepts fit together. The eight chapters address the following topics: (1) "Education in the Digital Age;" (2) "What Brain Research Tells Us about Learner Differences;" (3) "Why We Need Flexible Instructional Media;" (4) "What Is Universal Design for Learning?" (5) "Using UDL To Set Clear Goals;" (6) "Using UDL To Support Every Student's Learning;" (7) "Using UDL To Accurately Assess Student Progress;" and (8) "Making Universal Design for Learning a Reality". An appendix offers four classroom templates to help teachers apply the UDL framework. The templates address: a class learning profile, curriculum barriers, UDL solutions, and creating systematic change. Each template includes an introduction and three parts: an example of how the template might be used, collected sample items to use in the blank template, and a framework for applying UDL. (Contains approximately 150 references.) (DB)

**Abstract:**

Saenz, B. L. "Student perceptions of social presence and its value in an asynchronous web-based master's instructional program."
**Abstract:**
This study examines the theory of social presence and its relevancy to distance learning. Short, William, and Christie (1976) originally designed social presence to evaluate the difference between types of dyads (one-to-one interactions) and the quality of the communication media used for those interactions (Rafaeli, 1988; Rice, 1984; Walther, 1992). However, the theory of social presence was not design to explain mediated communication between multiple individuals. Although studies have investigated the effects of social presence in computer-mediated conferencing, little field research exist on the importance of social presence with multiple individuals communicating together within a Web-based instructional program. Moreover, it is evident from the body of literature that a universal meaning of social presence is lacking. For this reason, social presence in this study referred to the degree to which adult learners perceived that they had established some form of rapport with members of an online community. This includes interactions with other learners and support personnel (i.e., faculty, staff, technical support, graders, etc.).

Sampan, S. "Neural fuzzy techniques in vehicle acoustic signal classification."
**Abstract:**
Author's abstract: Vehicle acoustic signals have long been considered as unwanted traffic noise. In this research acoustic signals generated by each vehicle will be used to detect its presence and classify its type. Circular arrays of microphones were designed and built to detect desired signals and suppress unwanted ones. Circular arrays with multiple rings have an interesting and important property that is constant sidelobe levels. A modified genetic algorithm that can work directly with real numbers is used in the circular array design. It offers more effective ways to solve numerical problems than a standard genetic algorithm. In classifier design two main paradigms are considered: multilayer perceptrons and adaptive fuzzy logic systems. A multilayer perceptron is a network inspired by biological neural systems. Even though it is far from a biological system, it possesses the capability to solve many interesting problems in variety fields. Fuzzy logic systems, on the other hand, were inspired by human capabilities to deal with fuzzy terms. Its structures and operations are based on fuzzy set theory and its operations. Adaptive fuzzy logic systems are fuzzy logic systems equipped with training algorithms so that its rules can be extracted or modified from available numerical data similar to neural networks. Both fuzzy logic systems and multilayer perceptrons have been proved to be universal function approximators. Since there are approximations in almost every stage, both of these system types are good candidates for classification systems. In classification problems unequal learning of each class is normally encountered. This unequal learning may come from different learning difficulties and/or unequal numbers of training data from each class. The classifier tends to classify better for a well-learned class while doing poorly for other classes. Classification costs that may be different from class to class can be used to train and test a classifier. An error backpropagation algorithm can be modified so that the classification costs along with unequal learning factors can be used to control classifier learning during its training phase.


Abstract:
Significant demographic and ideological changes affecting who we are, what we can do, and where we live require a world that is more accommodating to variances in mobility, vision, hearing, cognition, and manual dexterity. Universal design, in contrast to specialized design, is an approach to creating everyday environments and products that are usable by all people to the greatest extent possible, regardless of age or ability. Universal design implies responsiveness to the needs of diverse users. This paper explores how consumer participation is essential to ensure that design is responsive to user needs and that it is universally usable. Four areas of participation are examined: consumer involvement in defining user needs; consumer evaluation to inform industry and educate the consumer; consumer participation to impact regulatory requirements; and consumer assessment in design exploration and education. Moreover, consumer participation is a two-way exchange. It not only benefits designers by providing much-needed information for the design of products and environments, but also has direct and indirect benefits for those who participate. These benefits are also discussed. (c) 1998 Elsevier Science Ireland Ltd. All rights reserved.

Abstract:
This report summarizes the work of a Universal Design (UD) Think Tank


Abstract:
Universal design for instruction is presented as a new paradigm for


Abstract:

Abstract:
Examines Universal Design (UD) applied to instruction as a means of promoting educational access to higher education for students with disabilities and other diverse learners. Overview of UD; Recommendations for effective teaching practices; Process for validating the Principles of Universal Design for Instruction.


Abstract:
Postsecondary education has experienced rapid change in its student population. College students with learning disabilities (LD) represent a growing presence on college campuses across the country. Traditional means of meeting the learning needs of college students with LD through retrofitted changes and accommodations to classroom instruction have proven limited. Universal Design for Instruction (UDI) offers a new paradigm for approaching equal educational access. This article will describe UDI and discuss its implications for enhancing learning for students with learning disabilities and other diverse learners.ABSTRACT FROM AUTHOR


Abstract:
Universal design for instruction is presented as a new paradigm for approaching equal educational access for college students with learning disabilities. Topics covered include changing student demographics, instructional challenges, the universal design concept, universal design in educational settings, and applying universal design to college instruction. (Contains references.) (Author/DB)


Abstract:
As I move toward the completion of my term as Director of the National Institute on Disability and Rehabilitation Research (NIDRR), I see many examples of renewal in our field. For example, disability studies and rehabilitation science are emerging new areas of academic specialization, and we will all be involved in shaping the future of these endeavors. The field is recapturing its identity and relevance locally and internationally. Also, I see a considerable number of challenges that range from acute care in medical rehabilitation to universal design in engineering to overall technology policy. I see a challenge in moving research to practice, a challenge in funding, a challenge in service delivery locations, and a challenge in defining the role of the professional in order to build capacity for the future. I believe that the research field ignores practice at its own peril, including practice in older fields such as vocational rehabilitation and in newer fields such as cognitive science and access engineering. Practice must be determined by today's needs and those we foresee for tomorrow. For the NIDRR family, the Long-Range Plan provides a beacon to direct us into the new millennium.

Sellnow, D. D. "Basic communication course annual: volume 14."

Abstract:


Abstract:
This digest summarizes the issues involved in the instruction of college students with learning disabilities and offers a practical approach to teaching these students. It notes first that disability law at the college level is not as prescriptive as that for the elementary secondary level. Since the instructional climate in higher education is changing toward an increased emphasis on pedagogy, the digest suggests the Universal Design for Instruction (UDI) model as appropriate for serving
these students. It briefly explains each of the nine principles of UDI: (1) equitable use, (2) flexibility in use, (3) simple and intuitive instruction, (4) perceptible information, (5) tolerance for error, (6) low physical effort, (7) size and space for approach and use, (8) a community of learners, and (9) instructional climate. Examples are offered for the practical application of two of these principles. (DB)


Abstract:
This article describes online instruction in the context of online technologies, instructional environment, and home environment of students with disabilities. Topics covered include advantages, cost effectiveness, Web accessibility, universal design for learning, tools for accessing and organizing resources, tools for communication, learning material delivery, student portfolio assessment, teacher preparation, professional development, and parent resources. (Contains 23 print and 58 Web site references.) (DB)


Abstract:
Language First! is a supplemental reading program designed to build vocabulary for English and Non-English speaking students in grades K-5. The goal of Language First! is to build oral language by introducing students to a wide range of vocabulary using a universal theme-based design.


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**Abstract:**
This column explains the National File Format, a proposed voluntary standard


**Abstract:**
The Center for Universal Design at North Carolina State University has developed a set of seven Principles of Universal Design that may be used to guide the design process, to evaluate existing or new designs, and to teach students and practitioners. This article presents preceding design guidelines and evaluation criteria, describes the process of developing the Principles, lists The Principles of Universal Design and provides examples of designs that satisfy each, and suggests future developments that would facilitate applying the Principles to assess the usability of all types of products and environments.


**Abstract:**


**Abstract:**
Industrial design and technology are lab-based disciplines with highly visual products, hands-on activities, and frequent interactions between faculty and students. As a result, the ways that online resources are used in these courses tend to be different from other subject area with more lecture-oriented modes of learning. This article addresses trends in industrial design and technology education that support expanded use of online materials. Universal Design Education Online is a Web site that is a specific example of a teaching and learning resource that could be used in the industrial design and technology lab.


**Abstract:**
Discusses on Web sites and search engine designs to ensure quality delivery of information and knowledge to all students. Collaboration of educational institutions on the development of the Universal Design Education Online; Features of the design on variety of materials; Popular search engines for kids.


**Abstract:**
This article discusses developments in information technology that underscore the need for greater awareness, facilitation of universal design, and a focus on nontechnological barriers to implementing technology. Trends in mainstream products and assistive technology are summarized and suggestions for analyzing products for accessibility and for addressing nontechnological barriers are provided. (Contains references.) (CR)


**Abstract:**
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**Abstract:**
Provides a background on articles about inclusive education presented in the November 1999 issue of 'Support for Learning' journal. Discussion on inclusion within the framework of 'universal design' principles; Analysis of the status of initial teacher education in relation to special educational needs provision; Article on how a local authority in Great Britain responded to

Abstract:
Museums with interactive, hands-on science exhibits face the dual challenge of providing reasonable accommodation for visitors with disabilities while fulfilling a mandate of education and public service for all visitors. Evidence from both existing literature and original research strongly suggests that principles of universal design provide an optimal solution to both problems. Universal design is defined as the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design. A review of the literature discusses the development of disability theory since the early nineteenth century, examines applications of universal design theory in selected fields outside the museum, looks at the social role of museums as centers of informal learning, and analyzes applications of universal design theory in museums, with a particular focus on hands-on science museums. Original research findings are based on a survey of exhibit and senior administrative staff at 158 museums with hands-on science exhibits, detailed follow-up telephone interviews with seven museum professionals with expertise in universal development, and on-site case studies. (Abstract shortened by UMI.)

Turnbull, R. "Exceptional lives special education in today's schools."

Abstract:


Abstract:
Beginning with a description of three 4th-graders, all in the same classroom and all with quite diverse learning inclinations, backgrounds, and abilities, this chapter introduces the concept of access to curriculum (for all students) through universal design. The authors contrast universal design to what they call "retro-fitting" that attempts to find education solutions after the fact and to fit a student into what already exists. "Universal design is a concept that refers to the creation and design of products and environments in such a way that they can be used without the need for modifications or specialized designs for particular circumstances" (M. Fortini and M. Fitzpatrick, 2000, p. 581). The three goals of universal design learning (UDL) are to provide students with multiple means of representation, engagement, and expression. The authors discuss access to content, process, and product of learning. (PsycINFO Database Record (c) 2004 APA, all rights reserved) (from the chapter)


Abstract:


Abstract:
Presents an interview with Bonnie Jones, an education program specialist from the United States about the effective use of student portfolios. Assessment of a selective collection of student work;
Criteria of the teachers for the development of portfolios; Integration of portfolio assessment with the concept of universal design for learning.


Abstract:
The promise of social inclusion, reinforced by online technologies, has not become the reality for most people with disabilities. In 2002, over 10 years after the implementation of the Americans with Disabilities Act (ADA), more people with disabilities were unemployed than at any time in the last 30 years. Most online educational environments are still not accessible to students with disabilities or those using assistive technologies. While enrollment of people with disabilities in colleges and universities has increased, few have been able to graduate, find successful employment, and move on to independent lifestyles, free of government assistance. This paper discusses the progress towards accessible online education by summarizing the impact that accessibility case law has had on reaching accessibility goals in education and employment and evaluating alternate approaches to defining and reaching accessibility in online education. Copyright 2004 Elsevier


Abstract:
This article presents a multi-step process and multi-level model to promote


Abstract:
Provides a paper for the universal design of lag-lead compensators. Inclusion of a design chart; Information on the Bode design, which is a fundamental tool for control system design.