PORTLAND PUBLIC SCHOOLS

Beyond Accessibility: Universal Design for Learning

The civil and human rights history of the disability movement has taught us many lessons. Through Universal Design for Learning, schools can benefit all users.

Come learn about Portland Public School's needs and efforts to make schools accessible. Help us move forward — toward true accessibility for all students and communities in our schools.

Portland Public Schools presents this in-depth look at universal design, accessibility and our schools in collaboration with the Northwest Down Syndrome Association and the Coalition for Sustainable Universal Design for Living and Learning.

Thursday, March 8, 6-8 p.m.
Grant High School Library
2245 N.E. 36th Ave., Portland

Free pizza dinner, 5:30-6 p.m.

Free child care

Interpretation services will be provided in Spanish.

For interpretation services in Vietnamese, Chinese, Russian, Somali or American Sign Language, please call Christine Gilman by February 28 at 503-916-3817.

Presenters include:

PPS Staff & Parents

Michael Bailey
Chair, Board of Directors,
National Disability Rights Network

Ruth Falco, Ph.D.
Professor, PSU Graduate School of Education

Robert Ford
Director of Special Education, Portland Public Schools

Angela Jarvis Holland
Executive Director,
Northwest Down Syndrome Association

Thomas Keating, Ph.D.
Director, Eugene Research Institute

Dean Westwood, MSW
Training Coordinator, OHSU, CDRC Leadership Education in Neurodevelopmental Disabilities Program; Director, Community Vision-AbleCorps

中文 • Русский • Español • Tiếng Việt

21 March 2012

Beyond Accessibility:
Universal Design for Learning Agenda

		SPEAKER	**PG**
5:30	Pizza		
6:00	Welcome	Anne Donaca Sullivan + Chris Dall (son)	
6:05	Opening	Robert Ford	
6:10	*Why does Universal Design matter to me?*	Alicia DeLashmutt & Kristin Wells	**3**
6:20	*Accessibility and PPS*	Kristin Wells & Jen Sohm	**18**
6:30	How the issue of accessibility has affected my family's life.	Chloe Eudaly	
6:35	Policy/Legislation/History: Review of Section 504, IDEA, ADA	Michael Bailey	
6:50	*Access and Inclusion Universal Design for Living and Learning*	Angela Jarvis Holland	**46**
7:00	*Culture of Disability*	Dean Westwood	**69**
7:15	*Cognitive Curbcuts for Inclusive Schools*	Tom Keating	**90**
7:30	*From Universal Design (UD) to Universal Design for Learning (UDL)*	Ruth Falco	**118**
7:45	Short slideshow (3 minutes)	Angela Jarvis Holland + Daniel	**134**
7: 48	Q&A	ALL PRESENTERS	

PowerPoint Attached

Why Does Universal Design Matter to Me?

Portland Public Schools
March 8, 2012

Closed Captioning

- In a gym?

- In a coffee shop/restaurant/bar?

- In the airport?

- At home so you don't have to have the volume on?

- Because you're unable to hear the words?

Quiet Space

- For reading/thinking?

- To relax?

- For collecting yourself?

Learning Styles

- Lecture Format
- Group Work
- Individual Study

Acoustics

- Reverberation too much?
- Too many people in one space talking?
- Poor acoustics?
- Limited hearing capacity to begin with?

Hearing

- No microphone?
- Space echoes?
- Background noise?
- Limited capacity to hear to begin with?

Visual

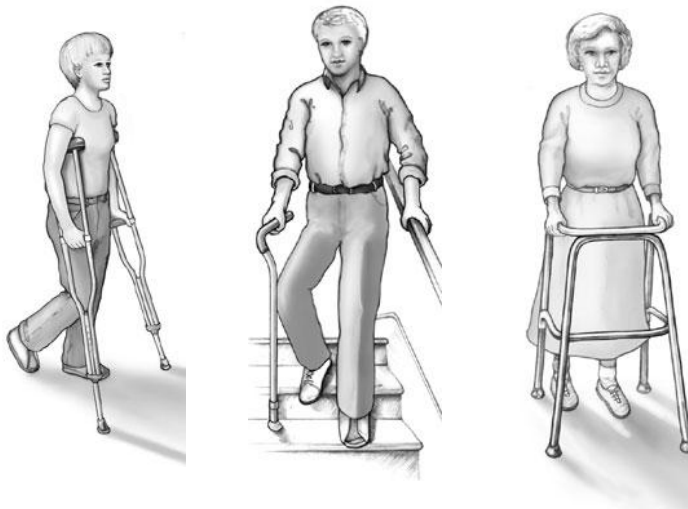- Glare on the computer?
- Text too small?
- Limited eyesight?

Stairs/Ramps

- Pushing a stroller/cart?

- Broken leg?

- Sore knees?

- Wheel Chair?

Curb Cuts

- Pushing a stroller/cart?
- Biking?
- Skateboarding?
- Using a wheelchair?

Automatic Door Openers

- Carrying a load of stuff?

- Door is too heavy?

- Child can open it?

- To push something through the door?

- Unable to grasp the door?

Universal Symbols

So why Universal Design?

Because what we really want is design for

ALL

From Inaccessible

* Photo by Fred Tepfer

To Accessible

*

*

* Photo by Fred Tepfer

To Universal Design

Elegant, Everyone uses the same entrance – no segregation

Portland Public Schools Accessibility

March 8, 2012

Grant High School Library

What has been done so far?

1994 Transition Plan – jointly developed between City of Portland & PPS

- Response to requirements of ADA of 1990

- Defines the proposed methods of implementing a process of transition between District's compliance with Section 504 and the ADA

What has been done so far?

1995 School Construction Bond

- $10.7 million spent on accessibility upgrades (5% of bond total)

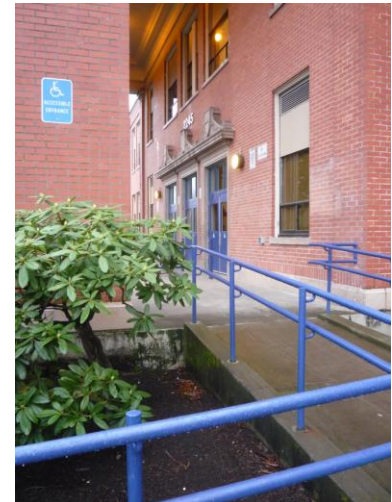- Implemented and exceeded the goals of the Transition Plan

What has been done so far?

1995 Bond Improvements

Building entry

- Power-operated door openers

- Handrails

- Ramps

What has been done so far?

1995 Bond Improvements:

- New or upgraded elevators at 15 schools

- 3 Chair lifts

What has been done so far?

1995 Bond Improvements:

- Ramps
- Student & Staff Restrooms
- Door hardware
- Media centers
- Offices
- Cafeterias

What is being done?

Annual ADA budget

- $50,000/year + additional funds from school and Facilities (FAM) budgets

- Numerous improvements are made every year at the requests of schools & to respond to needs

- Includes: ramps, handrails, power-operated door openers, parking spaces, chair lifts, specialized equipment, restrooms

What is being done?

Inclined lift to access Grant band room

What is being done?

Modular classroom ramps

What is being done?

Portable mechanical lift for stage access

What is being done?

Water fountain replacement as part of the entire 2nd floor upgrade

What is being done?

Front entry ramp &
power-operated door

What is being done?

Cafeteria ramp

What is being done?

CAPITOL HILL SCHOOL
"A great place to grow"

Dear

Thank you so much for helping build the new playground. It is exciting to have some new and different equipment to play no.

My favorite actiley is the swings. I love to swing as high as I can. I like to sit in the special needs swing.

Thanks again for your volunteering. I love the new playground. It is so mouch fun.

from Tilden

What is being done?

PPS Design Review Process

- PPS staff review for project designs
- Reviews all projects, including PPS, volunteer and intergovernmental
- Ensures ADA compliance a minimum
- Encouraging projects to include Universal Design concepts

What are the accessibility needs?

- 2009 PPS Facility ADA Assessment
  - Ankrom Moisan Associated Architects surveyed 28 representative schools
  - Goal: Full program accessibility for each building, to provide access to all programs, activities, and service
  - Based on ADA Amendments Act of 2008
  - Included cost estimates to correct deficiencies

http://www.pps.k12.or.us/departments/schoolmodernization/2053.htm

How were the schools reviewed for the 2009 Facility ADA Assessment?

Site Visits summer 2009

Ainsworth	King
Benson	Lane
BESC	Lincoln
Chapman	Ockley Green
Cleveland	Portsmouth
Duniway	Rigler
Franklin	Roosevelt
Grant	Sellwood
Gray	Skyline
Holladay Annex	Sunnyside
Holladay Center	Vernon
Hosford	Wilson
Irvington	Woodlawn
Jefferson	Youngson

- The existing PPS school assessments and background information were compared with new ADA requirements and online aerial and street level photos at each facility.

- 26% of schools were also reviewed in person. Those schools were distributed across building layout types and grade levels to increase the validity of the sample assessment approach.

http://www.pps.k12.or.us/departments/schoolmodernization/2053.htm

How are the ADA upgrades identified?

- Facility ADA Assessments and Summaries were created for each school.

- The organization matches the new ADA categories for ease of use.

- Often, more than one solution was possible to remove a barrier.

- The assessments mention options that appear to be available.

http://www.pps.k12.or.us/departments/schoolmodernization/2053.htm

Summary   Assessment

GRANT
ACCESSIBILITY SUMMARY

Grant High School
2245 NE 36th Avenue
Portland, OR 97212

SUMMARY

Grant has one existing elevator, but common areas and specialized classrooms are located on levels not currently accessible. Priority should be given to providing another elevator for cafeteria access, another for the north wing basement classrooms, and another for lower level gymnasium access at this school. The elevators and ramp comprise the majority of the upgrade work. The major accessibility upgrades for Grant are summarized on this sheet.

This exercise room at Grant is a good example which illustrate the new requirement for an accessible path and access to one of each type of exercise equipment.

Provide ADA accessible path

ACCESSIBILITY UPGRADES TO MEET 2008 ADA GUIDELINES

Site Elements	Crosswalk and detectable warnings at parking lot
	Accessible ramp to band room
	Walkway slope modifications
Accessible Route & Reach Ranges	Elevator to basement cafeteria
	Elevator to north wing basement classrooms
	Elevator to gym basement wrestling and old gym track
	Handrails at main lobby ramp and stairs
	Classroom lever handle hardware
Plumbing Elements	Accessible boys and girls restrooms at main second floor
	Accessible boys and girls restrooms backstage
	Accessible boys and girls restrooms at north basement
	Accessible sink in science lab
	Accessible unisex restroom for science building
	Accessible unisex restroom at basement cafeteria
Communication Elements	Assisted listening devices in auditorium and choral rooms
	Signage
Special Spaces	Wheelchair spaces and companion seating in auditorium
	Wheelchair seating with adjacent companion seating at new gym bleachers
Built-In Elements	Accessible counter height in library
	Accessible cafeteria serving line height
	Accessible ticket booth at 1st floor auditorium
	Accessible home economics work counter
Recreational Facilities	Accessible clearance at exercise equipment

COST BREAKDOWN

Cost information provided is based on 2009 estimated unit costs for direct construction including general contractor overhead. Additionally, estimated hard costs and soft costs provided by PPS have been included.

Site Elements	$403,357
Accessible Route & Reach Ranges	$1,255,842
Plumbing Elements	$158,432
Communication Elements	$56,971
Special Spaces	$0
Built-In Elements	$23,388
Recreational Facilities	$9,110
Special Education	$4,680
Total	$1,911,780

ANKROM MOISAN ARCHITECTS | AUGUST 2009

PORTLAND PUBLIC SCHOOLS – FACILITY ADA ASSESSMENT

Grant HS
August 31, 2009

Site Accessibility

Parking, NW Courtyard and North Parking Lot	Where the routes from accessible parking to the accessible entries passes through the vehicular route in the parking lot, provide detectable warnings where pedestrian and vehicular ways meet, and provide a striped route across the vehicular way.
Parking, NW Courtyard	Replace existing heave-damaged sidewalk to accessible ramp to provide an accessible route from the ADA parking to the accessible entry.
Entry to Band Room 149	Provide a ramp or lift from the exterior to Band Room 149 (approximately 4' high.)
Entry to Portable Classrooms	If needed for program access, provide accessible ramps to portable classrooms P1/P2 and P3/P4.

**Accessible Route & Features**

Elevator A	This is an existing elevator serving the main building located next to the Auditorium. This serves the main building first and second floors, the auditorium and basement cafeteria.
Elevator B	Provide an elevator to connect first and basement levels of the north classroom wing.

ANKROM MOISAN ARCHITECTURE INTERIORS PLANNING
PORTLAND: 6720 SW MACADAM, PORTLAND, OREGON 97219 | 503-245-7100   SEATTLE: 117 S MAIN STREET, SUITE 400, SEATTLE, WASHINGTON 98104 | 206-576-1600

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http://www.pps.k12.or.us/departments/schoolmodernization/2053.htm

Are there priorities for full program accessibility?

- Yes, the barrier removal that will increase accessibility for most people is to provide elevators, lifts and ramps to inaccessible floors and levels. This is particularly important when common areas are located on inaccessible floors.
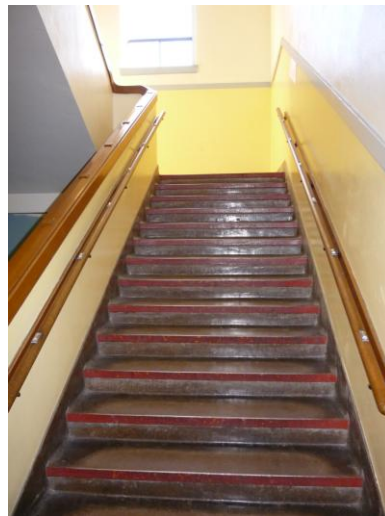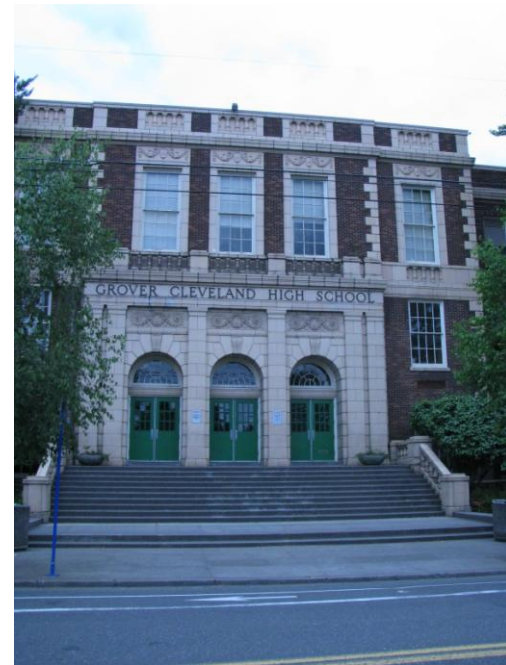
What are the accessibility needs?

- 32 multi-story schools lack elevators
- Common areas
  - Cafeterias
  - Libraries/Media Centers
  - Music rooms
  - Gyms
  - Computer classrooms

What are the accessibility needs?

Main entrances should be accessible

What are the accessibility needs?

Auditorium/Cafetorium

• Most stages need ramps or lifts

• Wheelchair seating
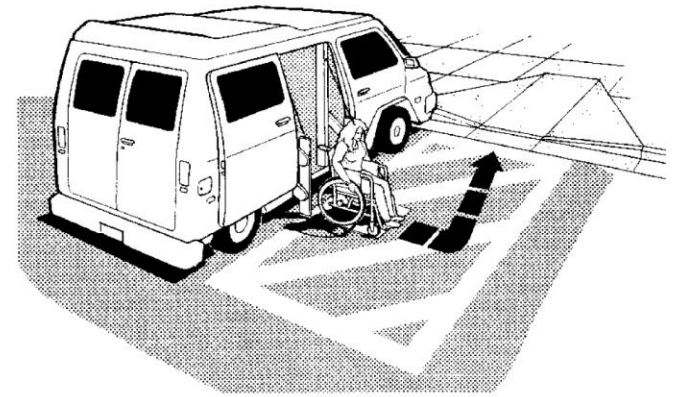
• Assistive listening devices
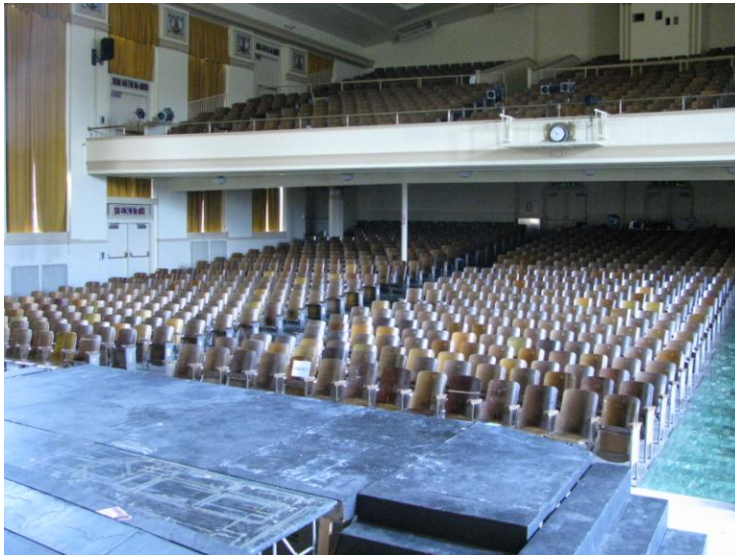
What are the accessibility needs?

- Restrooms
- Door hardware
- Stair handrails
- Playground equipment
- Exercise equipment
- Van parking and accessible route to building entry

PPS Accessibility Guidelines

- Guidelines are a tool to describe what building features will be modified to be accessible in existing buildings.

- The PPS guidelines were updated to include the 2008 ADA requirements and to reflect the goal of full program accessibility for each school.

- The updated guidelines have been applied to each school to develop the assessments.

http://www.pps.k12.or.us/departments/schoolmodernization/2053.htm

PPS Accessibility Standards
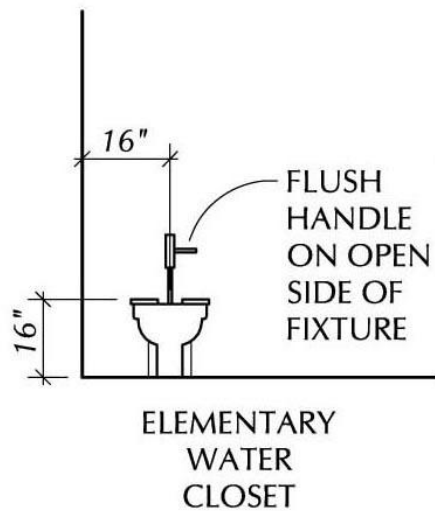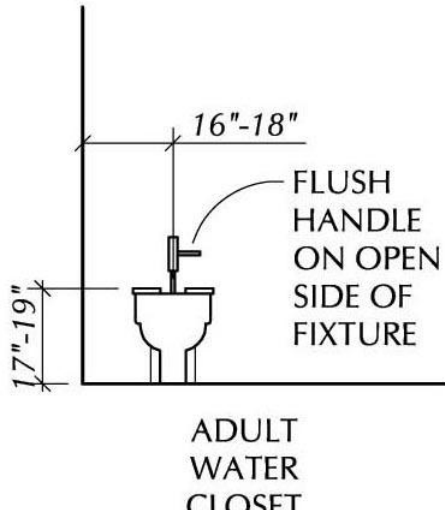
- Standards are a tool to describe how existing building features should be made accessible.

- PPS standards were updated to include the 2008 ADA requirements, including the updated children's reach ranges.

- The updated standards have been provided in text and graphic formats, and they identify tolerances previously established with the City of Portland.

http://www.pps.k12.or.us/departments/schoolmodernization/2053.htm

What is the most appropriate use for the cost estimate?

- The 2009 cost estimate information is most appropriately used as an order of magnitude for ADA upgrades.

- It is a conceptual estimate, and not a substitute for the pricing of construction documents prepared for a building remodel.

- The assessment costs were developed at the time of each site survey.

- Some assumptions were made about the schools not visited based on the existing assessments, observed conditions at schools in general, and discussion with PPS facilities staff.

Assessment Conclusions

- The total cost estimate for the accessibility upgrades is $45.3 million in 2009 dollars. ($48.9 million in 2012 dollars)

- The upgrades include some items required by 1991 ADA and new items required by 2008 ADA.

- Given funding to complete them, upgrades will likely take years to complete since some upgrades can only occur during the summer months.

- Grouping work in larger contracts improves cost efficiency.

Access and Inclusion Universal Design for Living and Learning.

By Angela Jarvis Holland
NWDSA.ORG
Studio photos courtesy of Jodi Collins
Urban photography
Music Daniel Jarvis Holland and Earl Marson,
produced by Quinn JarvisHolland
(PPS students)

Sure, I go to school.

Same as you.

I'm an American.

Each public agency must ensure that, to the maximum extent appropriate, children with disabilities are educated with children who are nondisabled.

-- Least Restrictive Environment, IDEA mandate 1975

In 1882 "undesirables, idiots and the feeble minded" were not even allowed into the U.S.

In 1970, U.S. schools educated only one in five children with disabilities. Many states completely excluded certain groups such as deaf, blind and mentally retarded students.

We now know that the average child with Down syndrome will learn to read and write. They will be able to work in our communities with relevant supports.

PPS Schools are on average 65 years old, which takes us back to the year 1947

When these schools were being built, many children with physical and intellectual disabilities were sent to Fairview Institution and were considered uneducable. So most of our schools, by design, segregate children.

ACCESS IS ALSO ABOUT CURRICULUM

- With supports and differentiation as well as a lot of her hard work. Eleanor Bailey graduated from grant High school with a regular diploma.

- We need universal design of instruction to reach all of the bell curve.

EQUITY

All students regardless of class race or disability need a high quality education.

- We need to celebrate the diversity of our students and support training to encourage competencies related to culture, disability, class, and race.
- Sharing all of our skills across silos will help create truly accessible schools
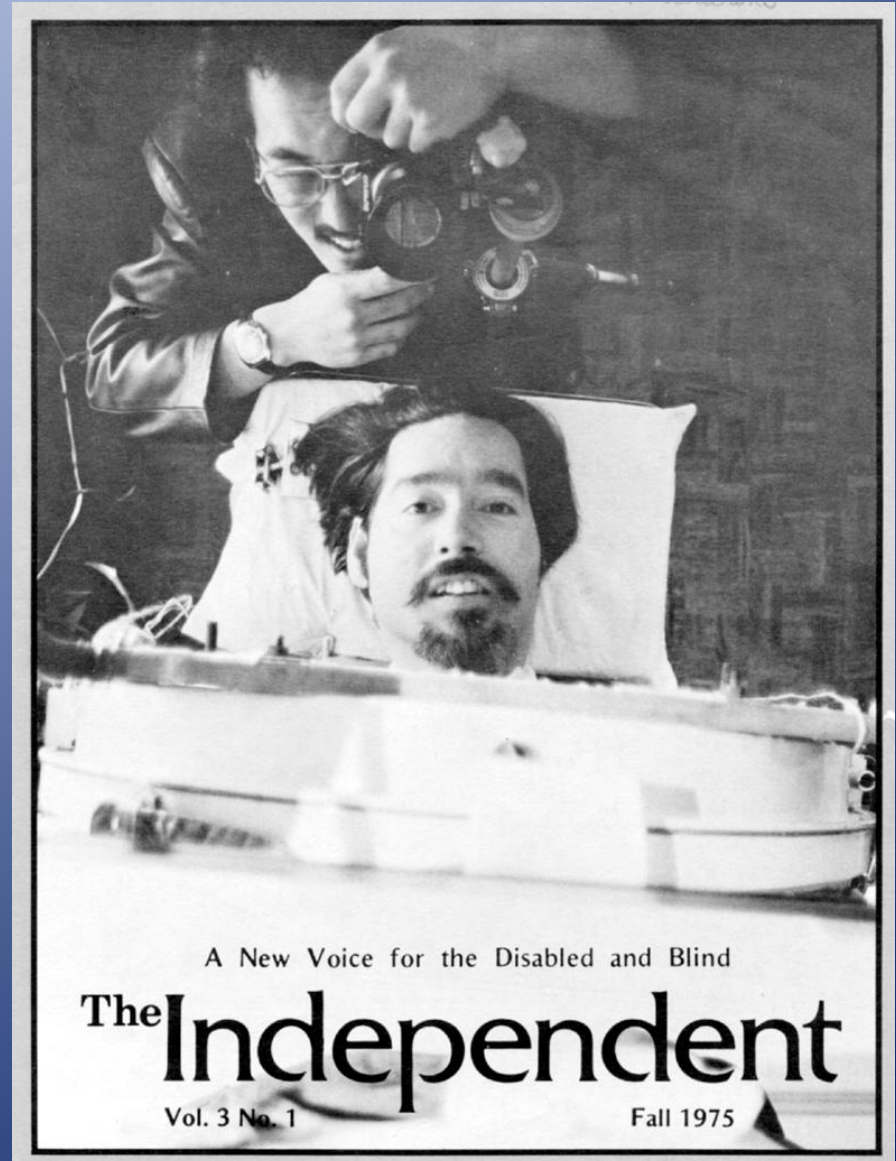
We know what is possible

Curb cuts were one invention we all benefit from

- Pioneers such as Ed Roberts showed us what activists who had a vision could teach us.
- "midnight curb cutters" created solutions before we had laws.

A New Voice for the Disabled and Blind

The Independent

Vol. 3 No. 1   Fall 1975

Lets support great teachers

Where we have success lets

Shine a light on it.

Allow time for sharing

Inspiration.

Special education is often a scapegoat for system wide failures

- If general educators "push out" differences rather than work with specialists to embrace them in the class, we will continue to segregate.

- If we refuse to follow ADA and invest in access we will continue to segregate.

We all need to get involved

A vision of all children learning and thriving together will need leadership and courage.

It will need investment in teachers,buildings and civil and human rights.

It will need you!

Neurodiversity requires differentiation not segregation

- Diversity is the norm, not the exception, wherever individuals are gathered, including schools.

- We need flexible spaces and rich welcoming environments with flexible teachers!

EQUITY AND BELONGING

Community and friendships are among the gifts a school can bring.

We need the experts

Listening to speakers who may make us uncomfortable will help us all grow

Chief Joseph School 1949-2012

No elevator to second floor

No access to stage

Etc

Etc

Etc

Some groups are tired of waiting for their share of the treasure.

ARRRRRRRE you going to honor ADA?

Can we see through anothers eyes?

- Accountability is requirement of the entire school community—not just special education Leadership is needed at all levels—classroom,building,district,

- greater school community—to ensure that all students receive an appropriate education."

- NABSE Focus Groups, 2001

# Rosa Parks School

- Our most accessible school building

It has spaces to share resources teachers and accommodate multiple modalities of teaching and sensory needs of students.

It welcomes parents and volunteers and has a family/volunteer space .

We are all teachers we all learn from each other.

- We need to help students and parents cherish and preserve the ethnic and cultural diversity that nourishes and strengthens this community - and this nation."
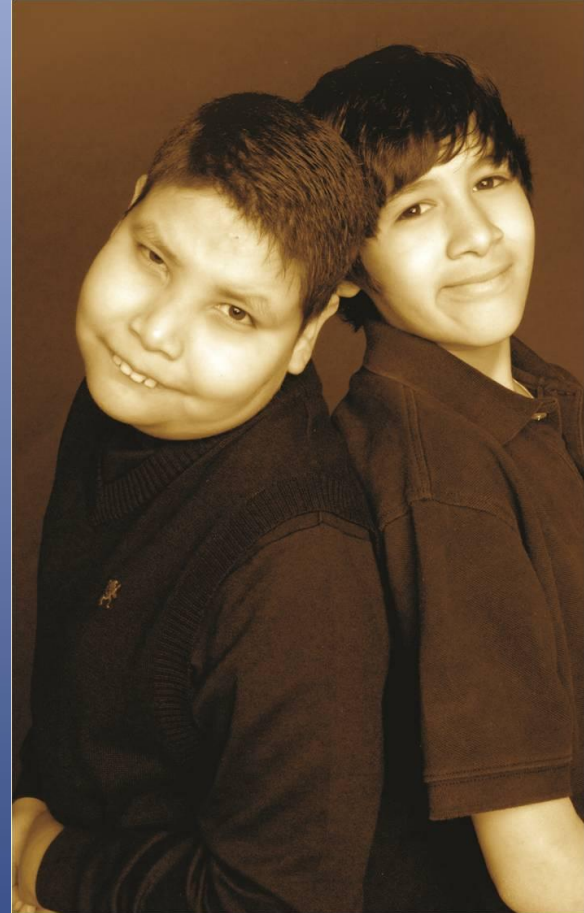
Volunteers come in every shape and size we need to let them all in.

- We cannot continue to ignore classrooms, auditoriums, lunch rooms, gyms that prevent parents, teachers, students and volunteers from being a part of the school community.

Guiding principals should embrace diversity and create equity for all

We respectfully suggest

All students regardless of class race or disability
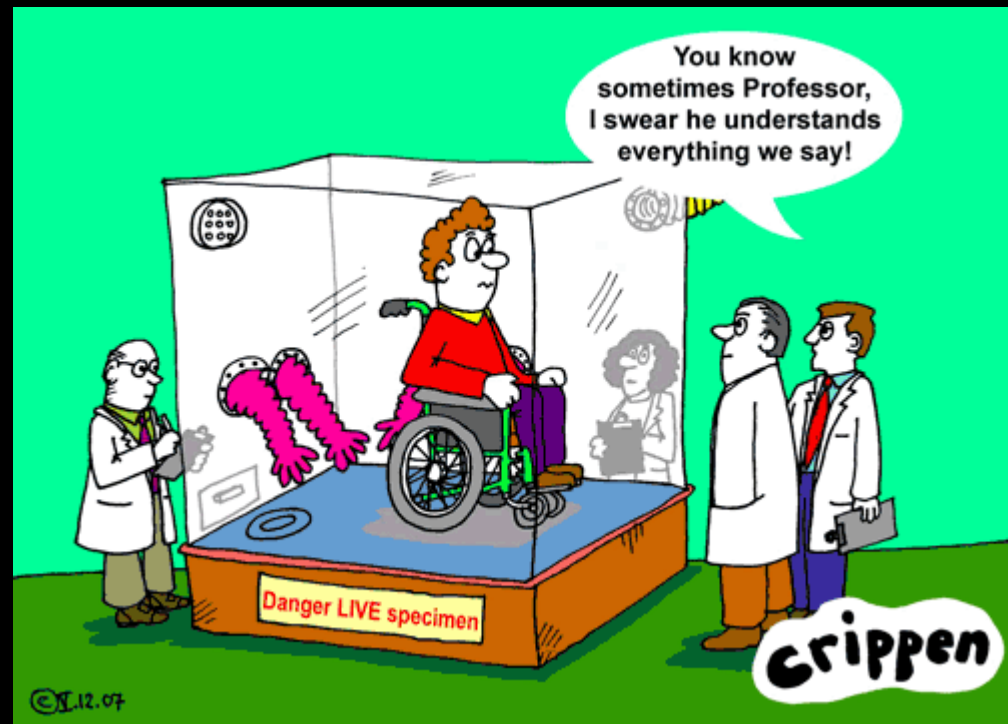
Safe,Warm Accesible And Dry

Honor human and civil rights , IDEA, ADA and 504

They are not just good ideas they are the law.

Culture of Disability

WHO DEFINES the BOX?

Let's Take A Walk

- A "brief" discussion of the history

- Emergence of Disability Culture

- Summary…

One story-

- 1962 - Ed Roberts, a post polio quadriplegic, lifted out of his wheelchair, carried up a mountain of steps, and situated in Room 201 of Cal Hall at the University of California at Berkeley.

- "Helpless Cripple Attends UC Classes.," said one newspaper headline of the Berkeley experiment.

Civil Rights are Civil Rights

- That same school semester James Meredith, escorted to class by U.S. marshals, integrated the University of Mississippi.

- "We both had to sue to get into school". "The only difference: I didn't need soldiers to protect me."

  (Ed Roberts)

Accommodation, Not Pity

- "Disability only becomes a tragedy for us when society fails to provide the things we need to lead our lives – job/educational opportunities or barrier-free buildings – Judy Huemann

- Power of the movement also came from the fact that people with disabilities represent the one minority anyone can join at any time.

ADA

AMERICANS WITH DISABILITIES ACT – 1990

CIVIL RIGHTS LAW PROTECTING PEOPLE WITH DISABILITIES FROM DISCRIMINATION

"To establish a clear and comprehensive prohibition of discrimination on the basis of disability"

ADA

- Justin Dart – Key player

"Most importantly, ADA is a landmark commandment of fundamental human morality. It is the world's first declaration of equality for people with disabilities by any nation.

Dean H. Westwood M.S.W.

What is "A Culture"

- A culture is an integrated system of learned behaviors patterns, ideas, beliefs, values and products that are characteristic of society

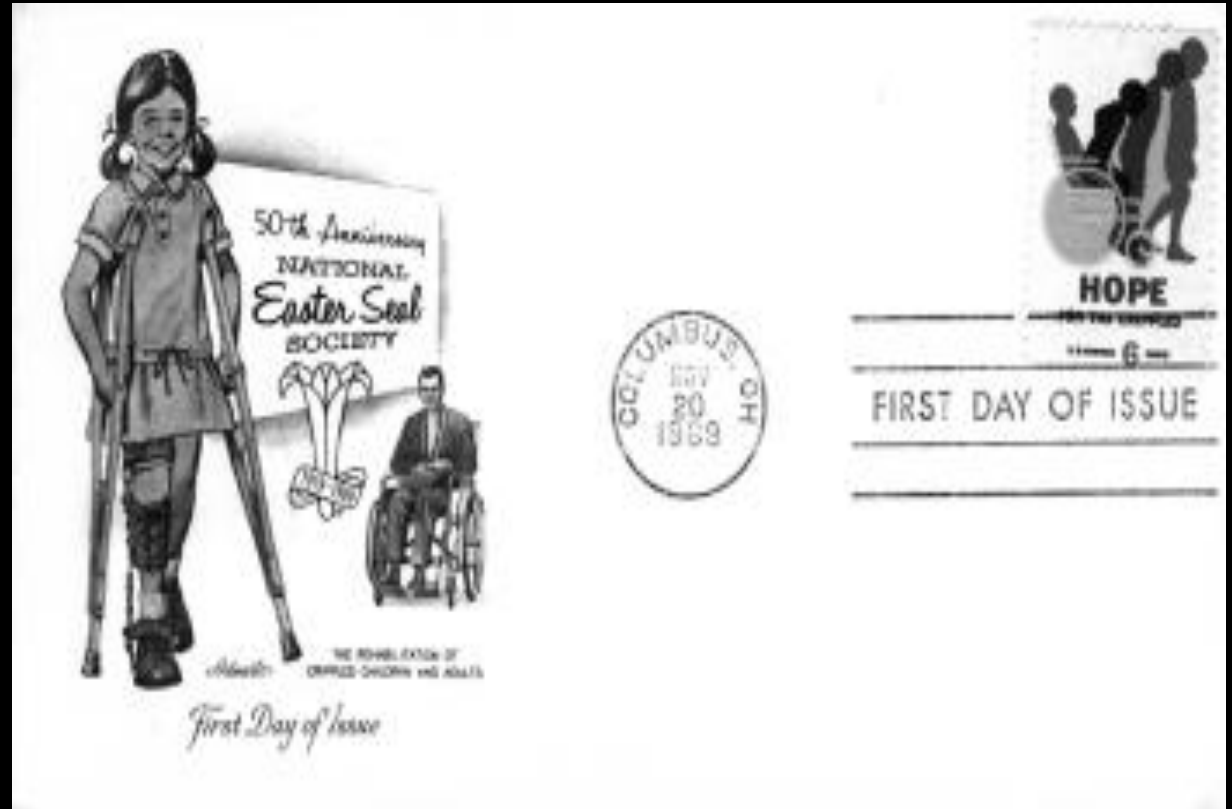(Dr. Paul Hiebert, Cultural Anthropology)

NIDRR Funded

"People with disabilities have forged a group identity. We share a common history of oppression and a common bond of resilience. We generate art, music, literature, and other expressions of our lives, our culture, infused from our experience of disability. Most importantly, we are proud of ourselves as people with disabilities. We claim our disabilities with pride as part of our identity. We are who we are: we are people with disabilities."

(Brown, 1996)

Dean H. Westwood M.S.W.

Past portrayals

THE FEEBLE-MINDED OR THE HUB TO OUR WHEEL OF VICE, CRIME AND PAUPERISM — Cincinnati's Problem

Different Portrayal of Disabilities
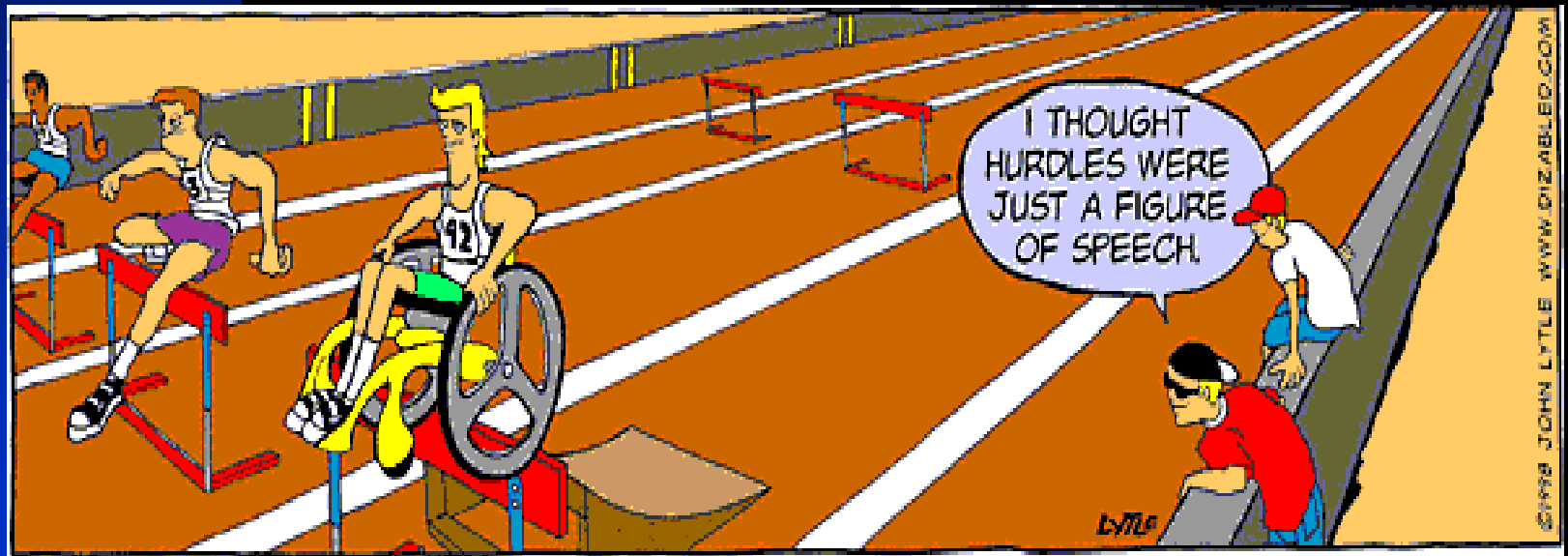
Michigan State University-

Expression of Forward Movement

Dean H. Westwood M.S.W.

College course description

What's there to celebrate about disability? How can people with disabilities say they don't want to be cured? How can they speak of "disability pride?" Is there really a "disability culture?" How are the values of this culture different from those of the non-disabled majority?

This course examines the radical cultural changes that have emerged during the 30 year-old struggle for disability rights. We consider the rejection of the "medical model" of disability and the redefinition of disability as a "social construct." We trace the emergence of minority group consciousness through the constructing of a new "disability identity" to the current flowering of "disability culture." We explore expressions of the disability experience in fiction, poetry, theater and film.

So, what's this all mean?

- Systems will always want to put people in "boxes"
- Equal access is a tenant of Universal Design
- Embracing Disability Culture, leads to cultural Awareness
- Universal design facilitates Diversity

So, what's this all mean?

- Access "in all it's forms" is good business

- Access and Diversity is "great" business

- Universal design for living, learning and life is "Best Practice"

Dean H. Westwood M.S.W.

Training Coordinator, OHSU, School of Medicine.

Director, Community Vision, AbleCorps

westwood@ohsu.edu
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Cognitive Curbcuts for Inclusive Schools

Tom Keating, Ph.D.

Eugene Research Institute

Cognitopia Software

Beyond Accessibility: UDL for Learning

What's a Curbcut?

UDL Zenith

So What's a Cognitive Curbcut?

- Not about physical access to places and spaces

- *Information access*

- But, functional barrier can be the same

What are the barriers?

- Barrriers not curbs, stairs, and doors,

but

- Words, visual complexity, social cues, etc.

Making Information Accessible

- Symbols, icons, pictures
- Spoken information
- Simplified presentation
- Task analysis
- Systematic approach
- Contextual information (where you need it, when you need it)
- What to do; what not to do; what's safe

But what is information accessibility really all about for students?
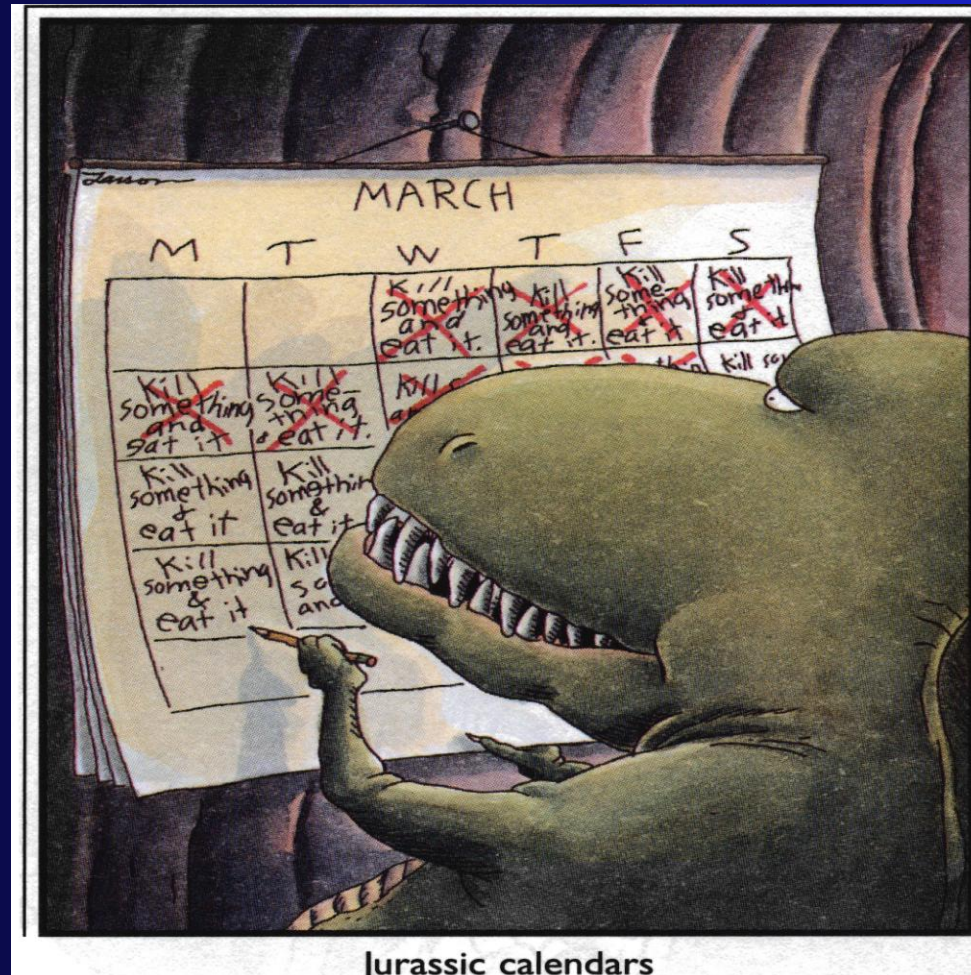
Far Side Gallery 5
- Gary Larson

It's about technology and control
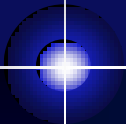
- Most of us would rather be told what to do by machines than by people
- Decrease coercion, increase autonomy
- Bottom line: It's all about control

A Brief Exercise

- Your morning routine….

- How many different technologies do you use?

- How do they compensate for your limitations and quirks?

- How do they let you express yourself and exert personal preferences and environmental control?

- Would you want it to be any different if suddenly dependent on others to make it happen?

Tom's Morning Routine

- HVAC
- porch lights: cats or paper?
- alarm clock (options, redundancy, snoozability)
- coffee pot (gurgling!)
- newspaper
- wireless weather station
- personal care (backscratcher, toothbrush, shaver, radio, accessible shower and toilet, anti scald feature)
- faucet handles!
- dress (mirror at correct height)
- eat (toaster just so)
- remember what I'm doing today
- leave (open door, get in car or on bus or on bike)

"For people without disabilities, technology makes it better;
For people with disabilities, technology makes it possible…"

John D. Kemp
www.usicd.org

Designing for Cognitive Accessibility

- All single click operation
- Clean interface with limited controls
- Tri-modal icons: graphic, text, TTS
- Customizable icons: photos, symbols
- "Hub and spokes" navigation vs. webbed
- Management of graphic transitions
- Metacognitive, task analytic design
- Social connectability potential
- Intelligent features

Week View

Gradient shaded rows

Familiar "media" type controls
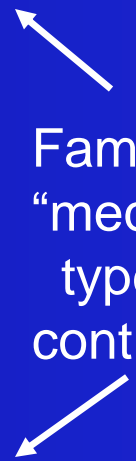
Limited set of tri-modal tool buttons

http//www.cognitopia.com

Activity Builder

Meta-cognitive steps →

4 viewable details

unlimited additions

8 printable

Activity Builder

Filter by life area

Enter new items on the fly with onscreen keyboard

Persistent Pop-Up Reminders

Implementation Research
(Keating, 2006)

- Students aged 16-21 with mild to moderate intellectual disabilities, autism, traumatic brain injury, cerebral palsy and learning disabilities (N= 28)

- Two secondary school community transition/apartment living skills programs:
    - One large urban school district
    - One mid-size district

- 5 point rating of level of prompting needed for user actions

    required to schedule a complex activity

Findings

- Surprising levels of independent skill: 54% independence with 8 weeks of 1/2 hour instruction. (verbal reminders only for activity details; Range: 29-82%)

- *Interdependence is key:* Independence is great but not the Holy Grail.   Software design should address staff support factors (e.g. level of skill, assisted use, usability)

- Accessible software applications can be important tools for development of self-management and self-determination. Choices = Control

Findings

- The gap between available technology and its implementation is significant and formidable. *Has to be easy to use for families or changing staff.*

- There are implementation challenges with even the seemingly simplest of technologies; e.g. awareness, staff training, technical support. *Again, has to be easy to use with minimal setup.*

- Self-management is central to school and life skills because they're key to intensity of supports, vocational success, and level of independence in adult settings.

Common UDL for Cognitive Access

- What can hard environment do to facilitate cognitive accessibility?
  - ◆ Signage – parking lot example
  - ◆ Visual cues – fuel tank example
  - ◆ Visual instructions - parking meters
  - ◆ Street crossings - multi modal info
- How do transient environments support use? (e.g. hotels, parks, malls)
  - ◆ Without technology support any environment can be transient and unfamiliar

UDL Tech in Schools

- Orientation and wayfinding within school environment (cognitive, sensory)

- Location based services

- Context aware prompting (social cues, free time and after school menus)

- Information kiosks

- desks and workstations

- Suites and caves

What's role of IT vs. AT?

- Training and troubleshooting for windows vs. iPad apps?

- Mobile access to wireless networks (NETP, 2010)

- Individualized solutions facilitated by mobile devices and app stores

- Delivery of instruction in ways that accommodate individual differences and levels of mastery, e.g. SmartBoards

Who Needs Assistive Technology?

- "To be successful at home, school, work, and in other environments, to achieve our hopes and dreams, and to simply get through each day, *everyone* needs assistive technology, accommodations, and supports."

> \- Kathie Snow (March, 2006)
>
> www.disabilityisnatural.com

Take Aways

- Bottom line is that it's all about ubiquitous information access and that means technology access.

- How can we ensure that everyone has full access to the tools they need and that the environments in which they operate support their use.

- No one ever lost money or market share by making things easier to use.

Follow Up Sources

Center for Applied Special Technology
- http://www.cast.org/udl/

National Education Technology Plan
- http://www.ed.gov/technology/netp-2010

Further Information

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Author's comments and opinions do not in any way reflect official positions of the US Department of Education

From Universal Design (UD) to Universal Design for Learning (UDL)

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What is Universal Design (UD)?

- "…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" (Center for Universal Design, http://www.design.ncsu.edu/cud)

- "…a framework for the design of places, things, information, communication and policy to be usable by the widest range of people operating in the widest range of situations without special or separate design. Most simply, Universal Design is human-centered design of everything with everyone in mind." (Institute for Human-Centered Design, http://www.humancentereddesign.org)

Purpose of UD

- Assures that places, things, environments, products, information, communication and policies meet needs of a wide variety of users
  - Ability/disability is just one of many characteristics to consider

- Places value on both diversity and inclusiveness

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Evolution Towards UD

- **1950's** - Europe, Japan & the US design barrier-free environments for people with physical disabilities
- Social policy began to support moving people with disabilities from institutions to the community
- **1970's** - Ideas of normalization & integration for persons with disabilities
  - Disability rights movement: UD was recognized as a necessary condition for achieving civil rights
- Legal requirements evolved for those receiving federal funds
  - **1973** - Section 504 of the Rehabilitation Act
  - **1990** - Americans with Disabilities Act
  - **1991** - Fair Housing Act
  - **1998** - Standards for design of communication and information technology

Development of UD

- **1970's** - Michael Bedner, American architect, introduced idea that everyone benefits when barriers are removed for those with disabilities
  - Beyond accessibility to "universal design"
- **1987** - World Design Conference passed resolution that designers should consider disability and aging in all of their work
- **1990's** - Interest in UD grew as designers realized:
  - UD improved usability for all people
  - UD broadened the market and appeal to variety of users for all products

- **UD Today** –
- Universal Design and Green Design are seen as "two sides of the same coin."
  - Green Design = Environmental sustainability
  - Universal Design = Social sustainability

  (Institute for Human Centered Design, 2012)

UD Framework

- "…Universal Design is a framework that accepts diversity … as the most ordinary reality of being human and evaluates strategies and solutions based on how well they meet the needs of the widest possible group of potential users and enhance everyone's experience. It demands a quality of creativity and invention that can energize generations of designers to become partners with users in a revitalized appreciation of design as intrinsic to social sustainability."

  (Institute for Human Centered Design, retrieved March 1, 2012, at www.HumanCenteredDesign.org)

Principles of UD

- Equitable use for all
- Flexible use
- Simple & intuitive
- Communicates to all
- Tolerance for error
- Low physical effort
- Size, space, manipulation available to all

Experts use UD

- Architects design built environments using UD!

- Product developers design products for sale across diverse populations!

- Marketers are experts in applying UD to communication!

- Architects, product developers, and marketers in education increasingly use UD!

- Why not educators?

Diversity & Inclusiveness

- Universal design combines the concepts of **diversity** and **inclusiveness**!

- Consider the implications of UD in schools and classrooms…
  - Built environments
  - Organization within environments
  - Resources provided within environments
  - Organization of social environments
  - Organization of the educational policies/programs

Developing a School with UD: Considering Diversity of <u>All</u> Students

- Let's consider the range -
  - Diversity of race/ethnicity/ culture
  - Diversity of size, physical abilities, mobility abilities, space needs
  - Diversity of sensory perception
  - Diversity of language/communication
  - Diversity of cognitive understanding/information processing
  - Diversity of social/emotional coping
  - Other areas of diversity?

UD & Inclusiveness

- Consider the implications of inclusiveness for schools

- Inclusiveness is the opposite of segregation and
  isolation!

Are students with significant disabilities served best in separate classrooms?

- In our work, we have found that when students are served in separate classrooms:

  - Students and teachers tend to isolated from the school community
  - Expectations for students' learning and achievement are low
  - Students have limited access to the general education curriculum
  - Students lack age-appropriate communication partners & the supports they provide
  - Students lack age-appropriate social interaction partners & the supports they provide
  - Opportunities are lost for peer mediated learning (modeling, reciprocal learning activities, peer tutoring)
  - Lack of parent involvement with the school community

  (Falco, Moreno, Loman & Jessell, 2011)

How can we educate all students in general education classes?

- UDL provides
  - Principles for curriculum development that give all individuals equal opportunities to learn
  - Blueprint for creating instructional goals, methods, materials, and assessments that work for everyone
  - Not a single, one-size-fits-all solution
  - Flexible approaches that can be customized and adjusted for individual needs
- http://www.youtube.com/watch?v=bDvKnY0g6e4
- http://www.cast.org/library/video/udl_intro/index.html
- UDL Guidelines.docx

I. Provide Multiple Means of Representation

II. Provide Multiple Means of Action and Expression

III. Provide Multiple Means of Engagement

Universal Design for Learning Guidelines

I. Provide Multiple Means of Representation

1: Provide options for perception

1.1 Offer ways of customizing the display of information

1.2 Offer alternatives for auditory information

1.3 Offer alternatives for visual information

2: Provide options for language, mathematical expressions, and symbols

2.1 Clarify vocabulary and symbols

2.2 Clarify syntax and structure

2.3 Support decoding of text, mathematical notation, and symbols

2.4 Promote understanding across languages

2.5 Illustrate through multiple media

3: Provide options for comprehension

3.1 Activate or supply background knowledge

3.2. Highlight patterns, critical features, big ideas, and relationships

3.3 Guide information processing, visualization, and manipulation

3.4 Maximize transfer and generalization

Resourceful, knowledgeable learners

II. Provide Multiple Means of Action and Expression

4: Provide options for physical action

4.1 Vary the methods for response and navigation

4.2 Optimize access to tools and assistive technologies

5: Provide options for expression and communication

5.1 Use multiple media for communication

5.2 Use multiple tools for construction and composition

5.3 Build fluencies with graduated levels of support for practice and performance

6: Provide options for executive functions

6.1 Guide appropriate goal-setting

6.2 Support planning and strategy development

6.3 Facilitate managing information and resources

6.4 Enhance capacity for monitoring progress

Strategic, goal-directed learners

III. Provide Multiple Means of Engagement

7: Provide options for recruiting interest

7.1 Optimize individual choice and autonomy

7.2 Optimize relevance, value, and authenticity

7.3 Minimize threats and distractions

8: Provide options for sustaining effort and persistence

8.1 Heighten salience of goals and objectives

8.2 Vary demands and resources to optimize challenge

8.3 Foster collaboration and community

8.4 Increase mastery-oriented feedback

9: Provide options for self-regulation

9.1 Promote expectations and beliefs that optimize motivation

9.2 Facilitate personal coping skills and strategies

9.3 Develop self-assessment and reflection

Purposeful, motivated learners

15 **CAST**

UDL & Inclusive Classrooms

- UDL enhances the learning experience for all students

- Inclusive classrooms maximize the benefits of UDL

- Research evidence supports the benefits of inclusive classrooms for students with and without disabilities (Jackson, Ryndak & Wehmeyer, 2010)
  - Learning benefits for all through UDL
  - Added services and supports for all
  - Social benefits for all

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UD and UDL: Foundations for Inclusive Schools

- Inclusive schools serve diverse students, including those with disabilities, in natural proportions in general education classes

- Inclusive schools <u>do not</u> segregate students in separate classes
  - Inclusive schools <u>do</u> use UDL to address all students' needs
    - Flexible groupings and instructional methods
    - Differentiated instruction
    - Adaptations & accommodations to address individual needs if necessary

- Inclusive schools support general educators, special educators & related services personnel as they collaborate to use UDL to address <u>all</u> students' needs

- All students benefit!

In 2000, over 200,000 students in federally funded programs had some form of physical impairment, such as deafness, blindness, or multiple impairments.

National Clearinghouse for Educational Facilities, *Creating Accessible Schools*

An estimated six million children in the U.S. have a disability that makes it hard or impossible for them to play on traditional playgrounds.

U.S. Department of Education, *The Digest of Educational Statistics*, 2001

Application of accessibility's best practices to facilities design is key to enabling all who use our schools to function with ease, safety, independence, and dignity.

James Ansley, ADAPT Associates, *Creating Accessible Schools*, 2000

Accessibility's goal is larger than building barrier-free structures, and its achievement is far more challenging than simply adhering to standards and codes.

James Ansley, ADAPT Associates, *Creating Accessible Schools*, 2000

To meet the challenge of educating students, school designers must go beyond barrier-free buildings by embracing a broader concept of accessibility-that of providing students with disabilities the maximum possible access to education.

Allen C. Abend, R.A., *Planning and Designing for Students with Disabilities*, 2001

Knowledge is the most democratic source of power.

Alvin Toffler

In the United States, nearly one in five Americans has some level of disability.

- Microsoft in Education, Accessible Technology: *A Guide for Educators*

Use the term universal design, rather than accessible design, as a reminder of what it's all about: creating an environment for all learners.

Trung Le, OWP/P

Universal design accommodates people with disabilities, older people, children, and others who are non-average, in a way that benefits all users.

Get accessibility aware.

There's more to accessibility than meets the eye. Making a learning environment truly inclusive means designing from multiple developmental perspectives.

The Third Teacher

The key features of an inclusive play environment are: person-accessible, activity-based, sensory-rich, developmentally appropriate, and flexible.

The Third Teacher

The process, as well as the outcome, of building an accessible playground can bridge all sorts of community divides.

The Third Teacher

We need to design a variety of different spaces in schools, and provide for informal as well as formal learning spaces. We trying to make learning a more vibrant activity, more accessible to all students, and make schools joyful places to learn.

Victoria Bergsasel, Architects of Achievement

Access to the physical environment is a big step towards inclusion.

Sona Jose

Inclusiveness should be the guiding principle of a prosperous society.

Shobha Shukla, Editor, Citizen News Service

Inclusion has a broad, positive impact on all students. It provides students with lessons in diversity, cooperation, and respect for all people and abilities.

Life-long Inclusion and Participation Begins in School.

"Real inclusion only comes when communities, programs and individuals look beyond a person's disabilities and see their right to belong."

Loretta Butler-Turner, Minister of State, Minister of State, Ministry of Labour and Social Development, Bahamas

"When you have an environment that is truly inclusive, individuals feel comfortable being themselves. They feel more comfortable sharing ideas, and it's through all these different perspectives that you come up with innovation."

Lynette Chappell-Williams, Associate Vice President of Workforce Diversity and Inclusion, Cornell University

"You don't ask everybody to conform to the same system. You ask the system to include everybody."

Gerard Etienne, Diversity Consultant

"When people are included in and connected to their community they are happier, healthier and more productive."

Community Development Minister Lily D'Ambrosio, Australia

"When you build inclusion into a structure, what you build is trust, cohesion and unity."

Lillian Rodriquez Lopez, Hispanic Federation