

Something old, something new:
Designing for the Aging
Population

Krista Coleman

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Agenda

Hour
First 15 minutes: Overview

- Next 30 minutes: Hands on activities – “What does aging do to the user?”– what defines an aging population. What does it mean to be “Elderly”?
- Last 15 minutes What are the guidelines and legal issues related to providing computing for the elderly

Hour
• First 30 minutes: What do we already know about design and usability that addresses the needs of the aging population.

- Next 30 minutes: Hands on activity: Designing for the elderly
- First 30 minutes: Tools and devices for design and reuse

Hour
Last 30 minutes Hands on activity: Was that usable and useful?

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What does it mean to be “Elderly”?

Krista Coleman, Enhanced Mobility
Technologies

Classification of Aging

“Elderly” = > 65 years

“Young Old” = $65 - 74$ years

“Middle aged Old” = $70 - 80$ years

“Aged” = > 75 years

“Chronically Old” = > 70 years

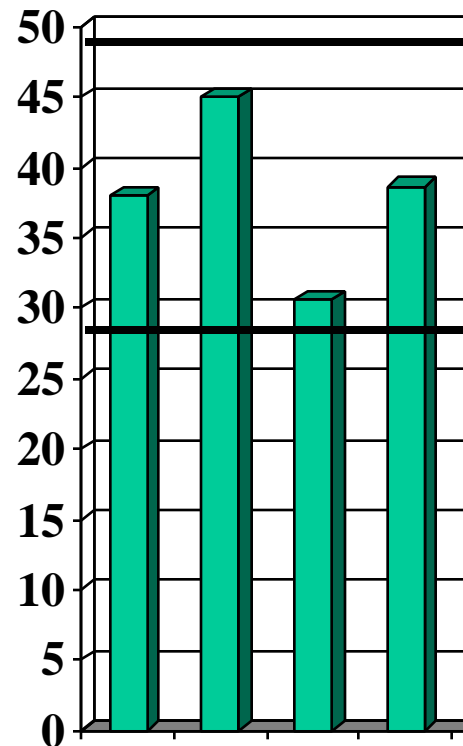
“Oldest Old” = 80 years and more

Everyone has Ability (Capacity to Sense)

Ability varies between individuals

Ability varies within individuals

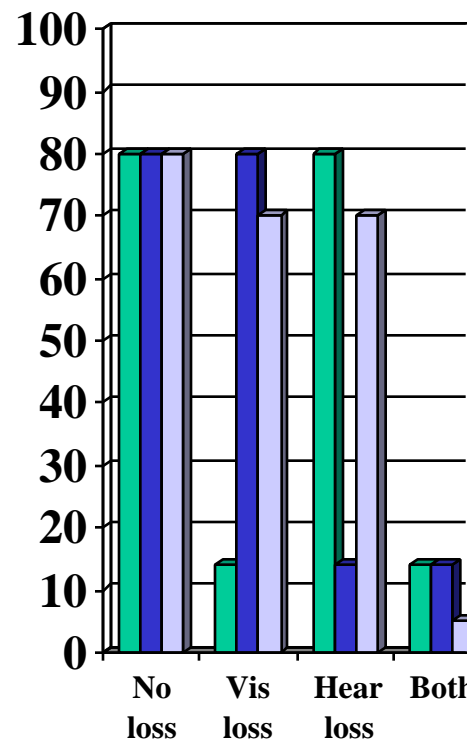
Compensation for changes in one ability



Ability changes over time

Most persons have
enough abilities in
reserve to adapt to
changes and
environmental
restrictions

Interaction between
systems



Classification of Abilities

WHO. ICIDH-2: International Classification of Functioning, Disability and Health.

Website address:

<http://www.who.int/icidh/index.htm>

(1/20/2000). Geneva: World Health Organization; 2000.

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What are the legal and guideline
issues related to providing computing
for the elderly?

Laura Leventhal, BGSU

Topic Summary

- A number of statutes and guidelines relate to universal access for the elderly. In this section we discuss a sample of these.
- Note. None of the instructors are lawyers so we are not experts here! No legal advice will be offered!

Specific Laws and Guidelines Discussed

- US Communications Act of 1934
- The Americans with Disabilities Act
- World Wide Web Consortium (W3C) Web Accessibility Initiative (WAI™) and Web Content Accessibility Guidelines (WCAG) 1.0
- Section 508 of. the Workforce Investment Act of 1998
- eEurope

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What do we already know about
design and usability that
addresses the needs of the aging
population

Shelly Heller, GWU

Dynamic diversity - Crossroads of advancing technology and advancing age

- gerontechnology - new interdisciplinary field of scientific research in which technology is directed towards the aspirations and opportunities for the elderly persons.
- designed flexibility

Usability Testing - Some studies

- Effects of Age and Training on World Wide Web Navigation Strategies -
 - Older users differed significantly from younger they searched less efficiently
 - they had the most problems with tasks that required 3 or more moves
 - they had more difficulty recalling previous moves and the location of previously viewed information.

Some more studies

- Usability and Accessibility of Aging/Health-Related Web Sites -
 - Compared usability (BOBBY and LIFT) sites maintained for elderly by different organizations.
 - US government sites best at less than 50%
- Designing a Touch Screen Kiosk for Older Adults
 - User centered design

Summary and Conclusions of the Tutorial

- What have we learned?
 - Aging is a process of dynamic diversity
 - Designing for the aging population requires designing for changing user characteristics
 - Flexibility is the key
- What BIG questions remain for you?