



Bibliography Review

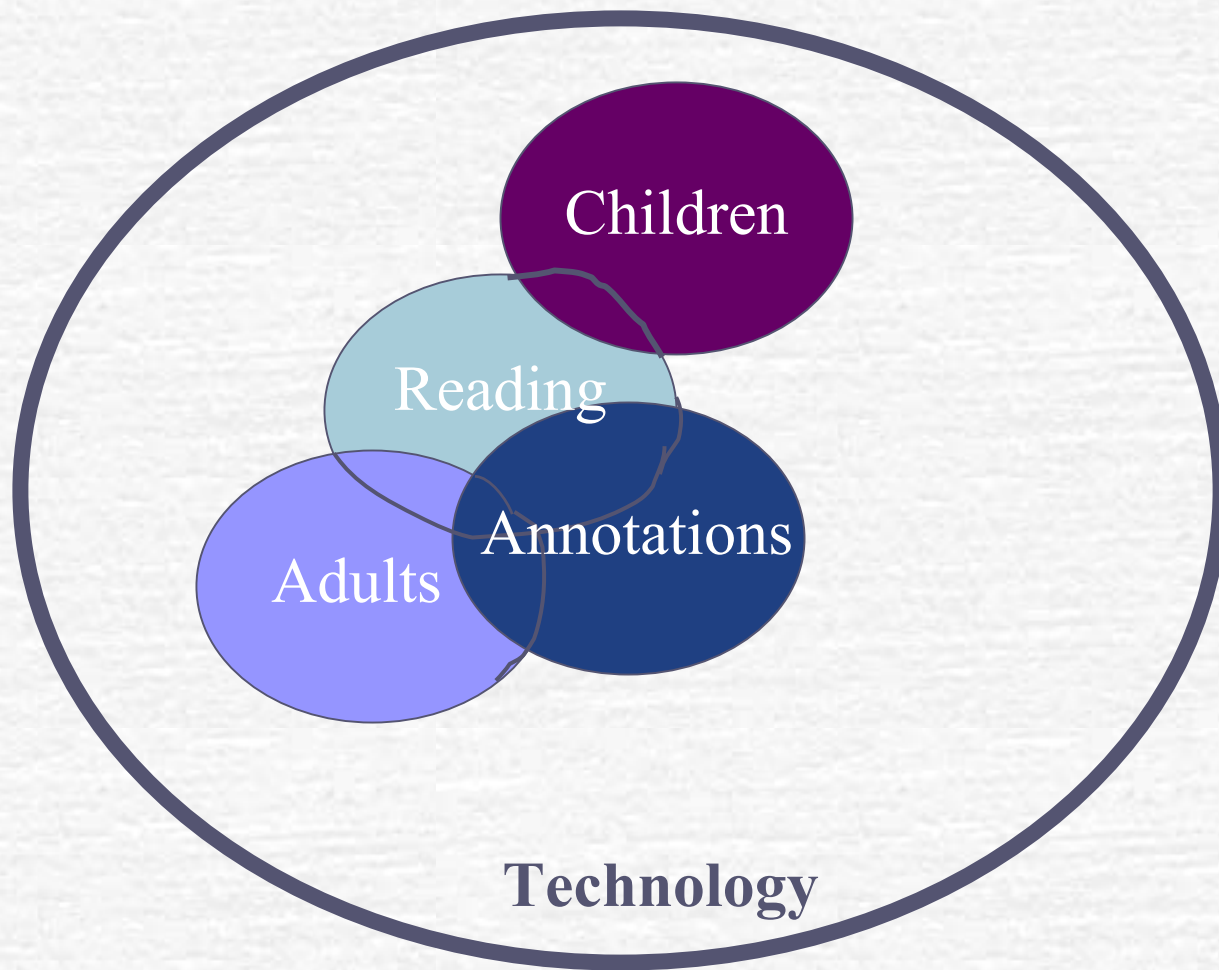
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Project & Goals

- ✓ School Reader for ICDL
- ✓ Annotations to support reading comprehension questions
- ✓ Annotations + note-taking to support book report or essays



Adults & Reading & Annotations Studies

☛ O'Hara & Sellen (1997)

- Comparison of reading paper and online documents

☛ Sellen & Harper (2002)

- MPO Ch 4 (Reading from Paper)

☛ Marshall, Price, Golovchinsky, Schilit (1999)

- XLibris in reading group study

☛ Adler – How to Read a Book (1974)

- Active Reading (Structural, Interpretative, Critical)

Discussion - Studies

- ✎ Inform the technology development
- ✎ Inform how people read
- ✎ Reading and annotation not necessarily separate activities
- ✎ However, all studies college age students and above

Adults & Reading & Annotations Technology

✍️ XLibris Various Papers

- Beyond paper: supporting active reading with free form digital ink annotations (Schilit, Golovchinsky, Price, 1998)
 - Active Reading, Algorithms
- Moving markup: repositioning freeform annotations (Golovchinsky, Denoue, 2002)
 - Robustness

✍️ Discussion

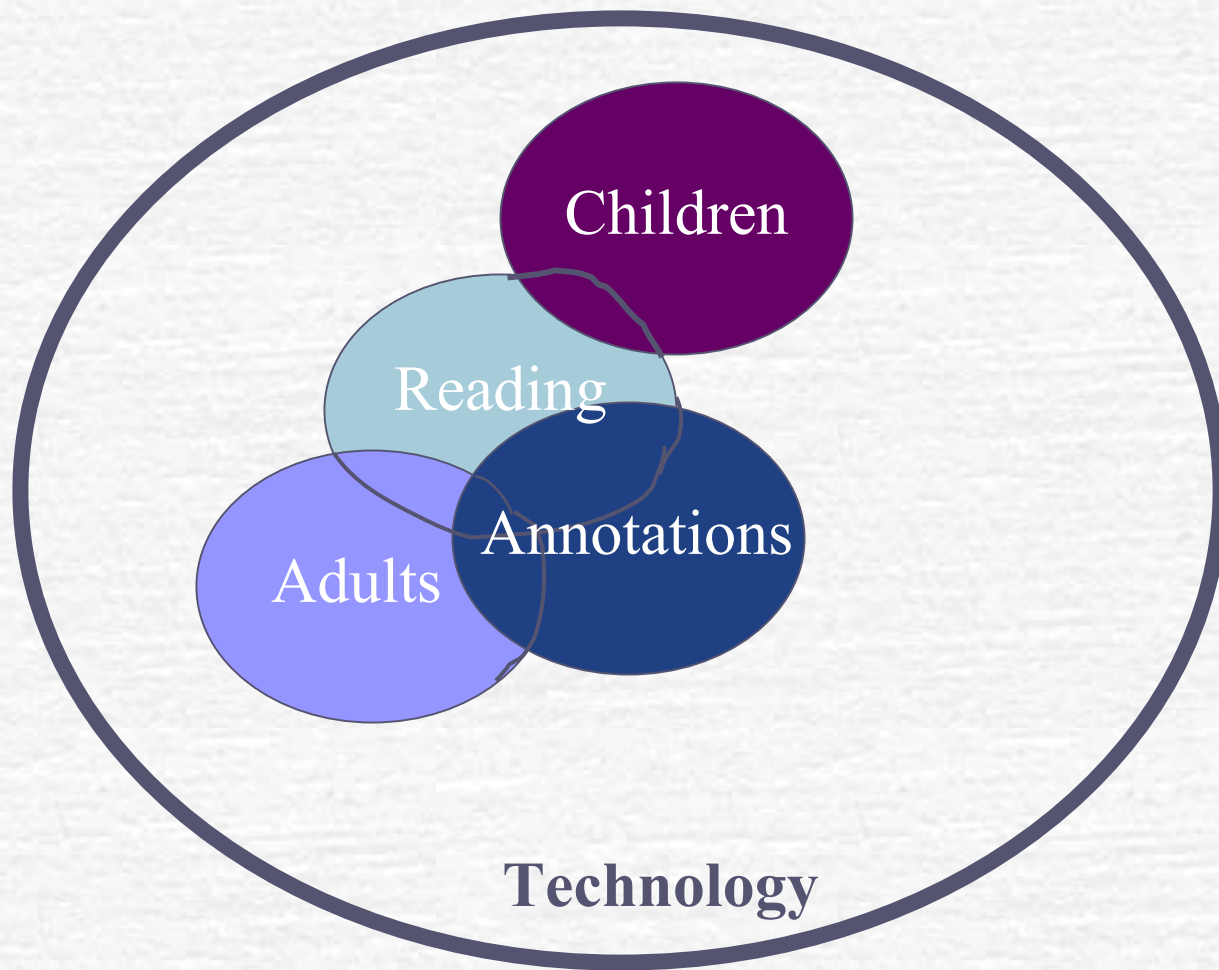
- Most sophisticated reading/annotation tech
- Expensive, Made for lawyers
- Dedicated special device with stylus

Adults & Reading & Annotations Technology

- The Intelligent pen – toward a uniform treatment of electronic documents (Gotze, Schlechtweg, Strothotte, 2002)
 - Cool virtual pencil case idea
 - Discussion:
 - Categories of markings (Different support)
 - Not much of a system (no known implementation)

Adults & Reading & Annotations Technology

- Robust annotation positioning in digital documents (Brush, Barger, Gupta, Cadiz, 2001)
 - Keeping annotations relevant with changing documents (anchors)
 - Discussion:
 - Deals with style changes (font, etc)
 - Zooming = solution w/out difficulties of robust annotations



Kids & Reading Studies

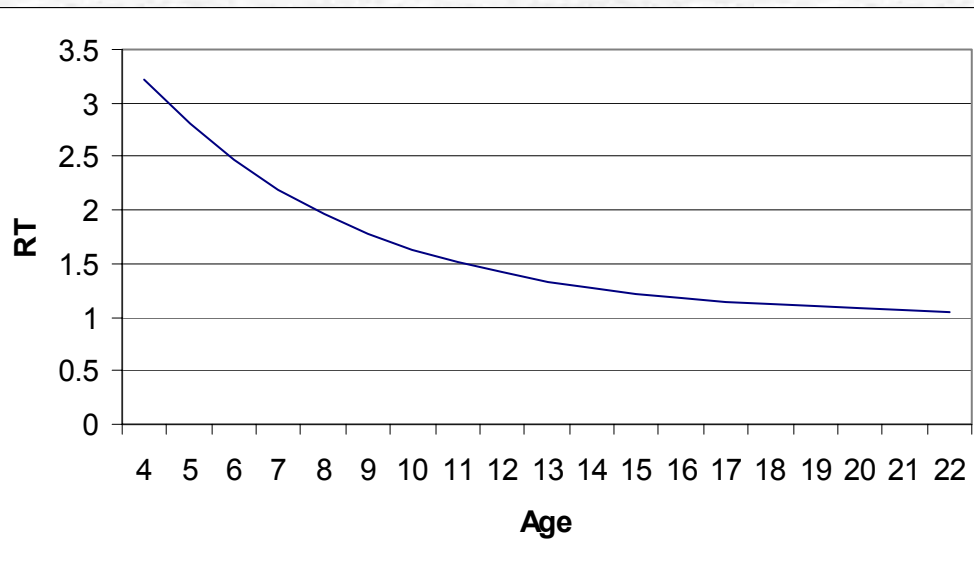
- Not many about HOW kids read! (Current research at UMD)
 - Teaching kids reading (Education publications)
- Evaluation of an Automated Reading Tutor that Listens: Comparison to Human Tutoring and Classroom Instruction (Mostow et al., 2003)
 - Speech recognition to listen to a child read aloud, and gives spoken and graphical assistance
 - Discussion:
 - Deals with mechanics of reading, not with active reading

Kid's Reading Abilities

- ✓ The Development of Children (Cole&Cole, 1993) – Reading Stages
 - Stage 2: Grades 2-3: Increasing fluency
 - Stage 3: Grades 4-8: Reading to learn
 - involves relating of print to ideas (generally from one view point)
 - Stage 4: High school: Reading from multiple viewpoint

Kid's Motor Abilities

- Accuracy, target reentry and Fitts' law: performance of preschool children using mice (Hourcade, Bederson, Druin & Guimbretiere, in press)



A plot of Kail's model:

$$Rt_{child} = (1 + be^{-c*age}) Rt_{adult}$$

Kid's Motor Abilities

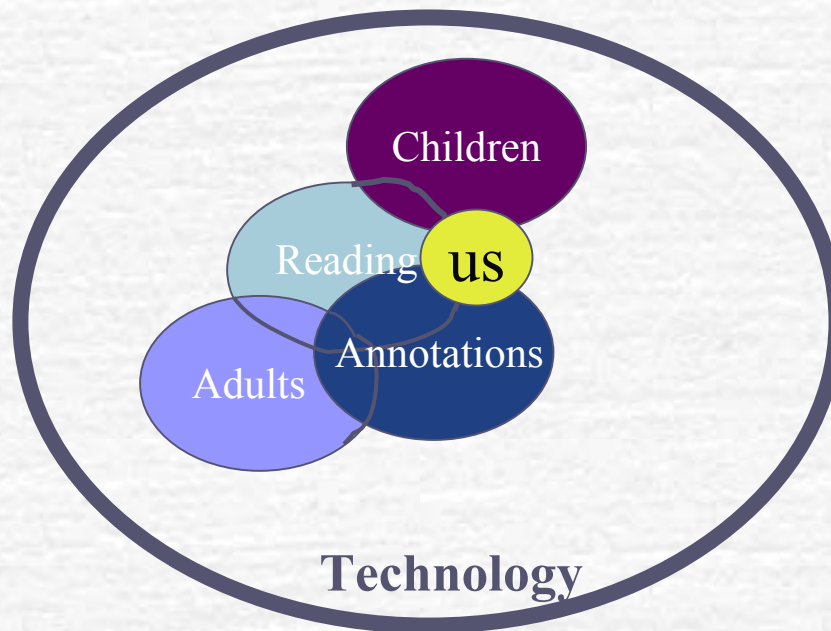
- ☞ Motor skills affect use of GUIs
- ☞ Keep in mind guidelines for GUIs
- ☞ Discussion:
 - "Special Population" – unique needs
 - 4-5 year olds – what happens during middle school?

Design Partnering

- Working with children to create technology for children
 - (Druin, 1999, 2002)
 - critical members of the team who bring their particular strengths and experiences to the research process
 - Discussion:
 - Design methods

Our contribution

See us



Our contribution

- ✎ Extending previous technology research in reading & annotation to support children
- ✎ Apply knowledge from reading studies to our system