Child-Centered Computers: Using Technology to Support DAP

Why Computers?
- Basic societal skill
- Cannot avoid them
- Most effective form of instruction

Quality for the Whole Child
- Physical
- Social
- Cognitive

Physical Needs
- Issues:
  - Fine motor control
  - Ergonomics
- Materials:
  - Mice
  - Keyboards
  - Furniture

Mouse Components
Typical
Better

Good Mouse “Fit”
- Thumb and little finger touch desk
- Thumb rests alongside index finger
- Base of palm touches desk
- Index and middle finger rest on button(s)
- Appropriate complexity
  - Button(s)
  - Track wheel
Mice for Children

- Kidzmouse
- www.kidzmouse.com
- Tiny Mouse
- www.tinymouse.com

Keyboard Components

Good Keyboard “Fit”

- Hands and forearms in alignment
- Finger spread covers keyboard
- Real life skills
  - Alphabet letters
  - Enter & space keys
- Appropriate complexity
  - Number pad
  - Arrow keys
  - Function keys
  - Other buttons

Keyboards for Children

- Kidzmouse
- Tiny Mouse

Things to Watch Out For

- Non-representational keyboards
- Non-functional “child accommodations”

Ergonomic Principles

- Top of head level with top of screen
- Hands in line with arms
  (Ideally arms are supported)
- Feet touch the floor
- Back is supported
Ergonomics

Good!

Not so good

Social Interaction

Social Interaction Strategies

- Shared access
- Clear participation rules
  - Timing
  - Control
- Collaborative goals
- Modeling
  - Confidence
  - Enthusiasm
  - Experimentation

All experiences are learning experiences.

But what are they learning?

Common Issues with “Teaching” Software

- Drill & practice
- Activity unrelated to material to be learned
- Appeal primarily to boys
Math Blaster

Elements of Developmentally Appropriate Practice

- Autonomy
- Risk-free exploration
- Appropriate challenge
- Desirable content

Computers can

- Provide access to “new” environments
- Allow “redos”
- Provide skill-based scaffolding
Build a helicopter

Lego Island

Moves shelves

Places to build with

Shows shape to find

Pieces to build with

Sharon Seidman, Ph.D.
OCAEYC SB6 Accreditation Workshop
But...Watch the Content
- Cultural stereotypes
- Biased gender roles
- Violence

Zone of Proximal Development

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Some Examples