Web2gether Project
Supporting Sustainable Development of Online Communities

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BVSD Special Education

Overview

- Web2gether Project
  - Problem
  - Demo
  - Project Findings
- Activities and Assessment
- Deployment and Major Achievements
- Next Steps
  - Research Perspective
  - System Perspective
  - Integration with TEA Project
- Implications

Problem in special education

- No lack of educational materials

- But

  - Overwhelming amount of unstructured and disconnected resources
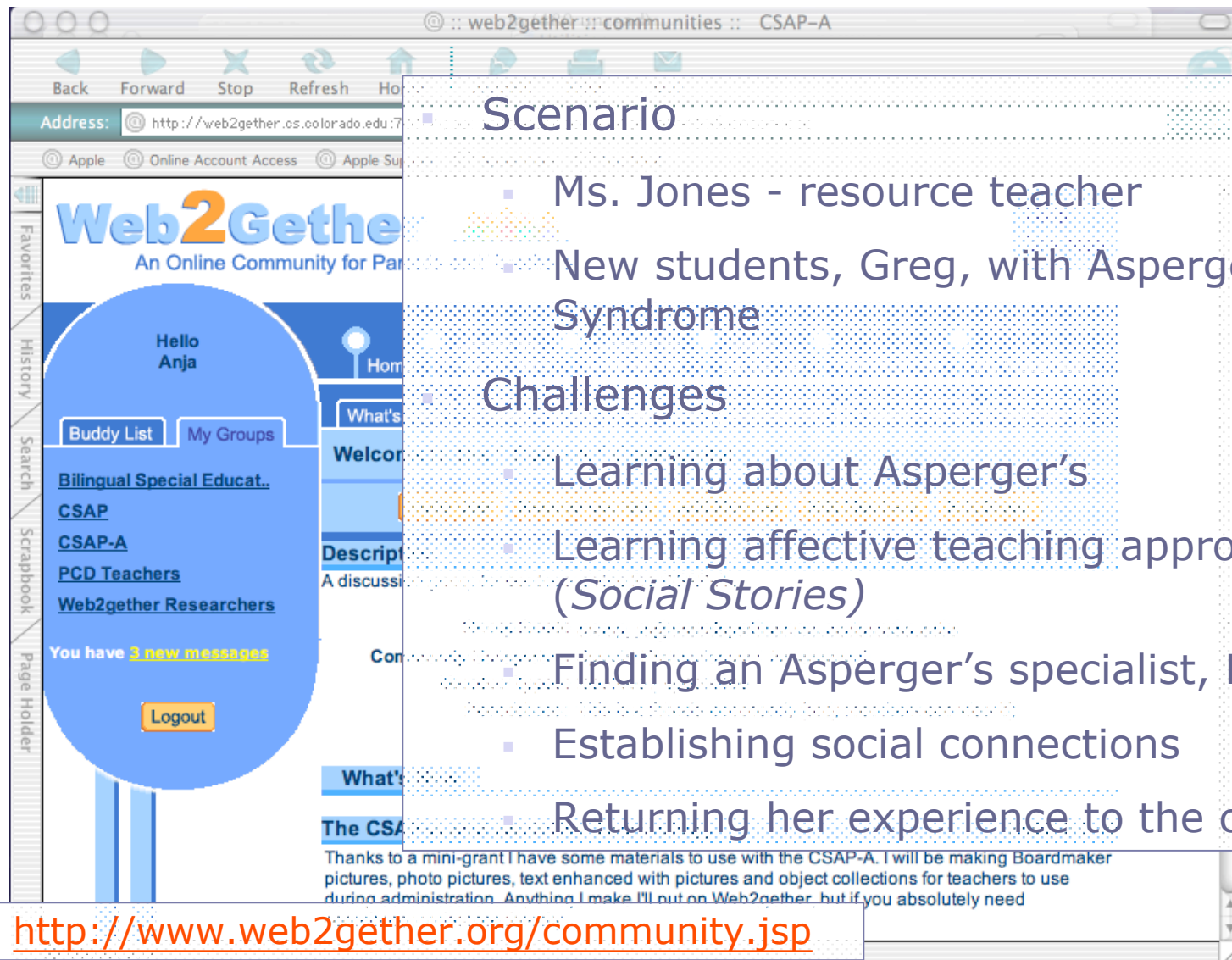
  - Lack of professional and social support

Approach taken

- Facilitate the integration of these resource
  - Lesson plans tied to the curriculum that utilize assistive technologies

- Help caregivers receive support
  - Cope with unique challenges of each student
  - Find and adapt appropriate educational material to meet the goals of each student
  - Use assistive technologies

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Web2gether Design (Demo)

- Scenario
  - Ms. Jones - resource teacher
  - New students, Greg, with Asperger's Syndrome
- Challenges
  - Learning about Asperger's
  - Learning affective teaching approach (*Social Stories*)
  - Finding an Asperger's specialist, Mrs. Adams
  - Establishing social connections
  - Returning her experience to the community

http://www.web2gether.org/community.jsp

Scenario Tasks vs. Web2gether Tech

- Learning about Asperger's

- Learning affective teaching approach (*Social Stories)*

- Finding an Asperger's specialist, Mrs. Adams

- Establishing social connections

- Returning her experience to the community

- Search Engine

- Message Boards

- Community

- Buddy list

- Direct Messaging

- Email

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- **Email**

Scenario Tasks vs. Web2gether Tech

- Learning about Asperger's
- Learning affective teaching approach (*Social Stories*)
- Finding an Asperger's specialist, Mrs. Adams
- Establishing social connections
- Returning her experience to the community
- Searching on student profiles
- Organizing students activities
- Interaction in collaborative settings

- Search Engine
- Message Boards
- Community
- Buddy list
- Direct Messaging
- Email
- Content Recommender
- Expert Recommender
- Web-based Applications
- Mobile Application
- Metadesign

Web2gether Project

Ongoing Assessment

1. The **usability** and **effectiveness** of the system

   § Studying online behavior vs. technical features

2. The **impact** on **work practices**

   § The development of *social networks*

   § The impact on the *sharing of resources*

Beyond technical solutions

- Social challenges
  - Caseloads (3435 student vs. 165 Sp. Ed. Teachers)
  - Physical Isolation
  - Culture of sharing
  - Computer experience and expertise
  - Computer Time vs. Student Time
  - Computer Structure vs. Social Structures

Ongoing activities

- Workshops
  - Online Communities
  - Participatory Design (rethinking Web2gether)
- Tech transfer
  - Collaboration with BVSD IT department
  - Web2gether as an "official" BVSD Sp. Ed. Resource
- Publications
  - SWAAAC '02 (completed)
  - LA Conference on Human-Computer Interactions - August 2003
  - 3rd Annual Internet Workshop: The Impact of the Internet on Society
  - 5th Annual Workshop on Persistent Conversation
  - Article on Knowledge Management (co-authored with Gerhard Fischer)

Future

- System building

  - Expert finder and expert recommender

  - Automated information delivery

  - User-modeling and task-modeling

- NSF Grant for a Post Doc (3 years long)

  - Longitudinal study of Adoption

  - User-modeling and task-modeling

  - Development of social networks

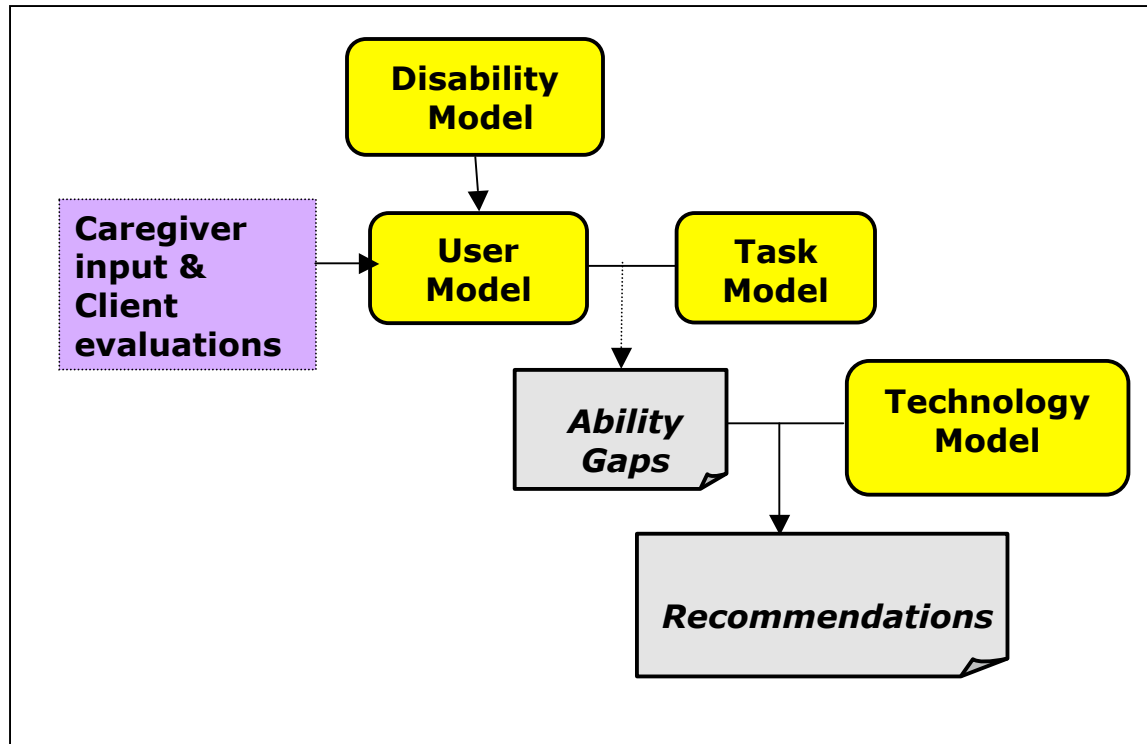 - Mobile application - beyond desktop computers

Integration: Web2gether & TEA Project

Problem

- *From field work:* Caregivers know their clients but face a bewildering number of AT choices

- *From initial research:* Abandonment rate for AT extremely high

- How are we going to match CLever tools to the population?

- For whom is it appropriate and for whom is it not?

The Evaluation Assistant

Proposed Architecture

The integration of distributed knowledge repositories to match technology with individual needs

NSF Proposals:

- Socio-technical Frameworks and Systems to enhance Assistive Technology Adoption

- Frameworks and Systems for Lifelong Learning, Inclusion, and Independence

Web2gether Project

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TEA Collaborators

Collaborators	Collaborative Benefits
Boulder Valley School District, Department of Special Education	Provides access to special education teachers and facilities for Web2Gether workshops
Imagine! - Formally known as the Developmental Disabilities Center	Provides access supported living facilities where field studies are being conducted
Department of Human Development and Family Studies at Colorado State University	Providing information on behavioral genetics to be used in disability models
Dr Robin L. Gabriels at the University of Colorado Health Sciences	Providing information on autism spectrum disorders to be used in disability models
Dr. Andrea Clyne	Providing information on assessment variables

Web2gether Project

Web2gether Contributions

- Special education community
  - Provide effective access to educational resources
  - Reduce physical isolation through social networks

- Scientific community
  - Computer Supported Cooperative Work
    - The process of adoption of community-based systems
    - Relationship between social and technical structures
    - Places of actions - understanding new mobile technologies
  - Knowledge Management
    - New foundation for designing KM systems based on distributed cognition and social networks