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

Web2gether Project
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 resources
  - 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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- Facilitate the integration of these resources
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- Use assistive technologies
Web2gether Design (Demo)

Scenario

- Ms. Jones - resource teacher
- New students, Greg, with Asperger’s Syndrome

Challenges

- Learning about Asperger’s Syndrome
- 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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- Returning her experience to the community
- Searching on student profiles
- Organizing students activities
- Interaction in collaborative settings

Web2gether Project

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

Web2gether Project
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

NSF Proposals:

- Socio-technical Frameworks and Systems to enhance Assistive Technology Adoption
- Frameworks and Systems for Lifelong Learning, Inclusion, and Independence

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

Web2gether Project
## TEA Collaborators

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