

# *Digital Inclusion: Context & Looking at Recent Data*



Pacific Northwest  
Digital Inclusion Summit

*January 28, 2009*

David Keyes, *City of Seattle Department of Information Technology*  
Mike Crandall, *University of Washington Information School*

## More data this past year...

- Framing Digital Inclusion
- Content: How people use it
- State study of rural counties
- UW research on Community Technology
- Impact of CTOP, Community Tech Opportunity Program
- Workforce research

# Inclusion Framework

- Digital Inclusion
  - The goal of equity in information technology access, literacy and meaningful content
- Broadband Deployment & Adoption
  - Distribution of infrastructure...followed by prevalence and equity in use
- Community technology
  - The strategy, programs and services to help reach digital inclusion

# Digital Inclusion

## **Access** to computers and the internet

- Availability, cost, ease of use for connectivity to the Internet, and end-user hardware and software. Also tech support.

## **Literacy** in using computer and internet technologies

- Skills required in order to utilize the equipment and Internet effectively for essential services, education, employment, civic engagement and cultural participation.

## **Meaningful and useful content and services** available

- Services available for those in need, culturally and educationally appropriate design, marketing and placement appropriate to reach underserved communities, and enabling of content production and distribution by lower capacity residents, businesses and organizations.

*Includes underserved individuals, small businesses and non-profits*

# Some content data from Pew

- In the final days of the campaign, 59% of voters had taken part in some sort of campaign activity online.
- % of adult internet users with a profile on an online social network site has more than quadrupled in the past four years -- from 8% in 2005 to 35% now.
- 75% of adults 18-24 use social networks, compared to just 7% of adults 65 and older.
- Over half of American adults play video games, and four out of five young adults play games.

# Broadband is a moving target of speed & capacity

Upload Speeds	Download Speeds		
	≥ 768 kbps and < 1.5 mbps	≥ 1.5 mbps And < 3 mbps	≥ 3 mbps and < 6 mbps
> 200 kbps and < 768 kbps	Basic E-Mail (upload small files download medium files) You Tube Video	Telecommuting (upload limited) Standard def video – Broadcast quality 1 channel (download only)	Multi channel Internet Protocol Television (IPTV) File sharing medium files (download only)
≥ 768 kbps and < 1.5 mbps	Basic E-Mail (medium files) You Tube Video	Telecommuting Standard def Video – Broadcast quality 1 channel (download only)	Multi channel Internet Protocol Television (IPTV) File sharing medium files
≥ 1.5 mbps	Basic E-Mail	Telecommuting	Multi channel Internet

*Chart snapshot from WA High Speed Internet Strategy report. Based on FCC speed matrix.*

China, Japan, and Korea have a speed advantage of from 10 to nearly 30 times over the US.

- pointtopic.com

# 2008 WUTC rural study

- Five rural Counties (Columbia, Ferry, Grays, Harbor, Lewis, Stevens)
- Seventy-two percent (72%) of residents in the studied counties have Internet access
- But just 32% have wireline broadband
- In some counties like Ferry, just 15% of residents have wireline broadband
- Nationally, 54% of residents have broadband

<http://www.wutc.wa.gov>

## WUTC (cont.)

- In rural areas served by broadband, subscription rates to high speed internet services were generally lower than in urban pockets.
- The research suggests these barriers:
  - the perceived value of high speed not always readily seen.
  - Service not available or not easily available.
  - Relatively high cost of service.
  - Lack of viable, multiple competing options.



# Communities Connect Network

- What is Communities Connect Network?
  - The Communities Connect Network (CCN) is a project of Puget Sound Center for Teaching, Learning and Technology (PSCTLT), and was formed in 2006 by a consortium of Community Technology experts from Washington State's non-profit sector, public universities and local government with funding from the Bill & Melinda Gates Foundation
  - CCN was created as a public-private collaborative for the purpose of discovering and implementing sustainability mechanisms for Washington State's Community Technology field

# Communities Connect Network

- During its first two years, CCN has:
  - Conducted research (visioning process, online needs assessment, telephone survey and site visits)
  - Developed an online statewide directory of CT Programs (including public libraries)
  - Designed and delivered a series of five distinct capacity-building trainings for CT Programs (Message Development, Outcome Evaluation and Measurement, Web Conferencing, Hosting an Open House, Communicating with Policy Makers)
  - Participated in several policy-formation workshops, presented at conferences and national meetings
  - CCN's members made a significant show of support for a WA state bill (SSB 6438) that 1) defined "Community Technology" in the Revised Code of Washington, 2) mandated relevant state agencies to develop a broadband deployment strategy, and 3) made an allocation of \$500K to establish the Community Technology Opportunity Program (CTOP)

# University of Washington Research Findings: How Many People Served?

- Based on information from **about half** (104) of the known community technology providers in the state— we know that these agencies serve:

**99,467 unique users** per year

Weekly counts show that **on average, a user visits 14 times** during the year

Resulting in an estimated total of

**1,392,538 visits per year**

# University of Washington Research Findings: How Many People Served?

- Based on information from **about half** (104) of the known community technology providers in the state— we know that these agencies serve:

**99,467 unique users** per year

Weekly counts show that **on average, a user visits 14 times** during the year

Resulting in an estimated total of

**1,392,538 visits per year**

# Individual Benefits

- **Employment/Economic Benefits**
  - Developed job skills
  - Empowered to obtain additional technical skills
  - Helped gain employment
- **Academic Skills and Literacy**
  - Providing references and/or resumes for college or jobs
  - Academic improvement like raising math scores
  - Preparing users to obtain a GED or go to college
- **Social Inclusion and Personal Growth**
  - Relationship building/friendship
  - Staying out of trouble
  - Developing or expanding interests
  - Tangible skill development (e.g. leadership, public speaking)
  - Providing connections to community leaders
  - Building confidence and elevating expectations

# Family Benefits

- **Employment/Economic Benefits**
  - Helping users to get a better paying job
- **Academic Skills and Literacy**
  - Connecting families to technology
  - Ability to help school aged children
- **Social Inclusion and Personal Growth**
  - Improving family relationships
  - Keeping kids safe by checking their online activities

# Community Benefits

- **Employment/Economic Benefits**
  - More skilled work force
  - Better educated population
- **Social Inclusion and Personal Growth**
  - Develop future leaders
  - Motivate users to take action in their communities
  - Community building
- **Organizational Capacity Building**
  - Staff skills gained
  - Volunteer opportunities

# Preliminary CTOP Findings

- Funded this year by the state under SSB 6438
  - 35 applications → 10 grants, total of \$350,000
  - Administered by Washington State University Extension
  - First evaluation of programs complete last November
- Looked at
  - Policy issues
  - Stakeholders
  - Inputs
  - Activities
  - Outputs
  - Impacts
- In 5 domain areas
  - Employment
  - Education
  - Social impact
  - Access to information





# Preliminary CTOP Findings

- *Policy related issues*
  - 50% identified **poverty** as the major issue confronting their community.
  - 50% reported that **learning new technologies** or new skills was a top reason for using the CTC
- *Barriers to use*
  - Inadequate equipment and space
  - Not enough hours of operation
  - Lack of childcare and transportation

# Preliminary CTOP Findings (cont)

- *Stakeholders*
  - The grantees serve approximately **600 clients per week** and **2,700 unique visitors per year**.
  - 7 centers claimed that **more than half to nearly all of their clients used the CTC as their primary access point**.
  - The local **public library was the most likely replacement** for technology access for 6 centers.
- *Inputs*
  - The grantees had an **average of 3.2 FTE staff** at their centers and used **2,760 volunteer hours** in the past year.
  - The average number of PAC terminals is 13.5
  - The average ratio of PAC terminals to annual visitors is 1:5

# Preliminary CTOP Findings (cont)

- *Outputs & Impacts*
  - 488 clients were provided **employment services** through 7 of the 10 grantees.
    - 9 clients secured **internships** and 35 were hired for **new jobs**.
  - 784 clients used the services of 9 of the grantees to enhance their **education**.
    - The most frequent educational outcome was **completing homework assignments**.
  - 552 clients used the CTC for **social inclusion**
    - Email with family and friends, Internet use top activities
  - 903 clients used the CTC for **accessing information**
    - More than 500 **pursued interests** not related to school or work
    - Nearly **300** accessed information about **community or government resources** or assistance.

## **Basic computer skills training and workforce development in Washington State: The role of NGOs**

- The Center for Information & Society (CIS) is researching the contribution of basic computer skills training to improve employment opportunities for disadvantaged groups in Washington State.
- CIS partnered with 14 NGOs, 5 WorkSource Centers, and 2 Community Colleges in 5 cities: Seattle, Bellingham, Mt. Vernon, Tacoma, Spokane, and Yakima
  - Sent 5340 surveys to people receiving basic computer skills training and other employment services in the last two years at these organizations
  - To date 540 (10% return rate) people completed the survey sharing with us their training experience in basic computer skills and other services, employment status, skills & education needs to improve their employment opportunities, etc.
- Preliminary findings show that (N=273):
  - The vast majority of trainees at these organizations are women (73% of the total)
  - 40% of the survey respondents have a high school degree and 24% have a two-year degree

## Basic computer skills training and workforce development in Washington State: The role of NGOs

- Preliminary findings (cont.):
  - **54% of the survey respondents found a job after completing the training** (of which, 42% found a higher-paying job and only 11.5% found a job after the training but are currently unemployed)
  - On average, 85% of survey respondents think that basic computer skills training is very important for improving their employment opportunities followed by further educational opportunities and on-the-job training.
  - 97% highly value the training and employment-related services received at the organizations and perceive this as one of the most important factors for finding a job
- NGOs play a very important role in re-skilling and up-skilling unemployed people to improve their opportunities in the labor market

For more information on this research contact: Maria Garrido at [migarrid@u.washington.edu](mailto:migarrid@u.washington.edu)

# Thank You



For more information, contact:

David Keyes, [david.keyes@Seattle.Gov](mailto:david.keyes@Seattle.Gov) or  
Mike Crandall, [mikecran@u.washington.edu](mailto:mikecran@u.washington.edu)

Or visit the Communities Connect Network at  
<http://communitiesconnect.org>

# Extra Content

# Removing Barriers to Digital Inclusion

- Communities Connect Network and its members have adopted this framework to help individuals, small businesses and non-profits join the information age
  - *Providing **access** to computers and the internet*
    - Availability, cost, ease of use for connectivity to the Internet, and end-user hardware and software. Also tech support.
  - *Building **literacy** in using computer and internet technologies*
    - Skills required in order to utilize the equipment and Internet effectively for essential services, education, employment, civic engagement and cultural participation.
  - *Making meaningful and useful **content and services** available*
    - Services available for those in need, culturally and educationally appropriate design, marketing and placement appropriate to reach underserved communities, and enabling of content production and distribution by lower capacity residents, businesses and organizations.



# Pew Internet and American Life Project

- Survey of internet leaders, activists and analysts
  - Expect major tech advances as the phone becomes a primary device for online access, voice-recognition improves, artificial and virtual reality become more embedded in everyday life, and the architecture of the internet itself improves.
  - They disagree about whether this will lead to more social tolerance, more forgiving human relations, or better home lives.
- Key findings on the survey of experts by the Pew Internet & American Life Project that asked respondents to assess predictions about technology and its roles in the year 2020:
  - The mobile device will be the primary connection tool to the internet for most people in the world in 2020.
  - The transparency of people and organizations will increase, but that will not necessarily yield more personal integrity, social tolerance, or forgiveness.
  - Voice recognition and touch user-interfaces with the internet will be more prevalent and accepted by 2020.
  - Those working to enforce intellectual property law and copyright protection will remain in a continuing arms race, with the crackers who will find ways to copy and share content without payment.
  - The divisions between personal time and work time and between physical and virtual reality will be further erased for everyone who is connected, and the results will be mixed in their impact on basic social relations.

12/14/2008- <http://www.pewinternet.org>

# Adults and Social Network Websites

- % of adult internet users with a profile on an online social network site has more than quadrupled in the past four years -- from 8% in 2005 to 35% now.
- While media coverage and policy attention focus heavily on how children and young adults use social network sites, adults still make up the bulk of the users of these websites. Adults make up a larger portion of the US population than teens, which is why the 35% number represents a larger number of users than the 65% of online teens who also use online social networks.
- Still, younger online adults are much more likely than their older counterparts to use social networks, with 75% of adults 18-24 using these networks, compared to just 7% of adults 65 and older. At its core, use of online social networks is still a phenomenon of the young.

1/14/2009 Amanda Lenhart <http://www.pewinternet.org>

# Video Games

- Over half of American adults play video games, and four out of five young adults play games. Among adults, computers are the most popular gaming device, but among young adults gaming consoles are the preferred device for game play.
- Our challenge...to translate game playing interests into education and civic engagement interests...

[http://www.pewinternet.org/PPF/r/269/report\\_display.asp](http://www.pewinternet.org/PPF/r/269/report_display.asp)

# Video Games

- Game playing is universal, with almost all teens playing games and at least half playing games on a given day. Game playing experiences are diverse, with the most popular games falling into the racing, puzzle, sports, action and adventure categories.
- Game playing is also social, with most teens playing games with others at least some of the time and can incorporate many aspects of civic and political life.
- Game playing sometimes involves exposure to mature content, with almost a third of teens playing games that are listed as appropriate only for people older than they are.

[http://www.pewinternet.org/PPF/r/269/report\\_display.asp](http://www.pewinternet.org/PPF/r/269/report_display.asp)

## Basic computer skills training and workforce development in Washington State: The role of NGOs

- Researching the contribution of basic computer skills training to improve employment opportunities for disadvantaged groups in Washington State.
- Results based on 540 surveys of participants at 14 NGOs, 5 WorkSource Centers, and 2 Community Colleges in 5 cities: Seattle, Bellingham, Mt. Vernon, Tacoma, Spokane, and Yakima
  - Sent 5340 surveys to people receiving basic computer skills training and other employment services in the last two years at these organizations
  - To date 540 (10% return rate) people completed the survey sharing with us their training experience in basic computer skills and other services, employment status, skills & education needs to improve their employment opportunities, etc.
- Preliminary findings show that (N=273):
  - The vast majority of trainees at these organizations are women (73% of the total)
  - 40% of the survey respondents have a high school degree and 24% have a two-year degree