#### Growing Up Past Your Google Years

Generation Shift
Happens: Building
the Library they
need for their Future

Stephen Abram, MLS Micromedia ProQuest

All PPT slides will be available next week at http://www.micromedia.ca

#### Small Disclaimer



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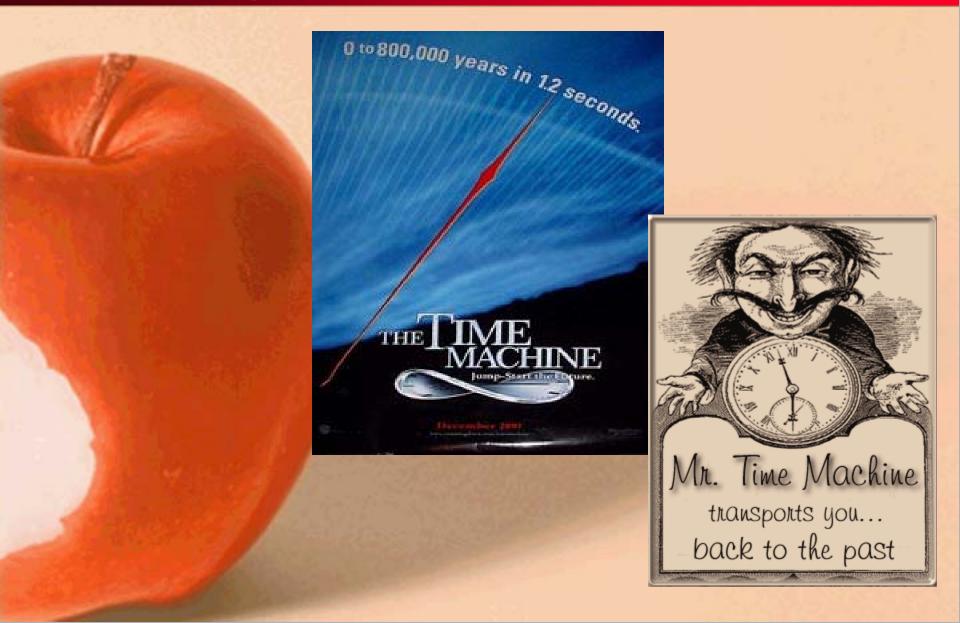




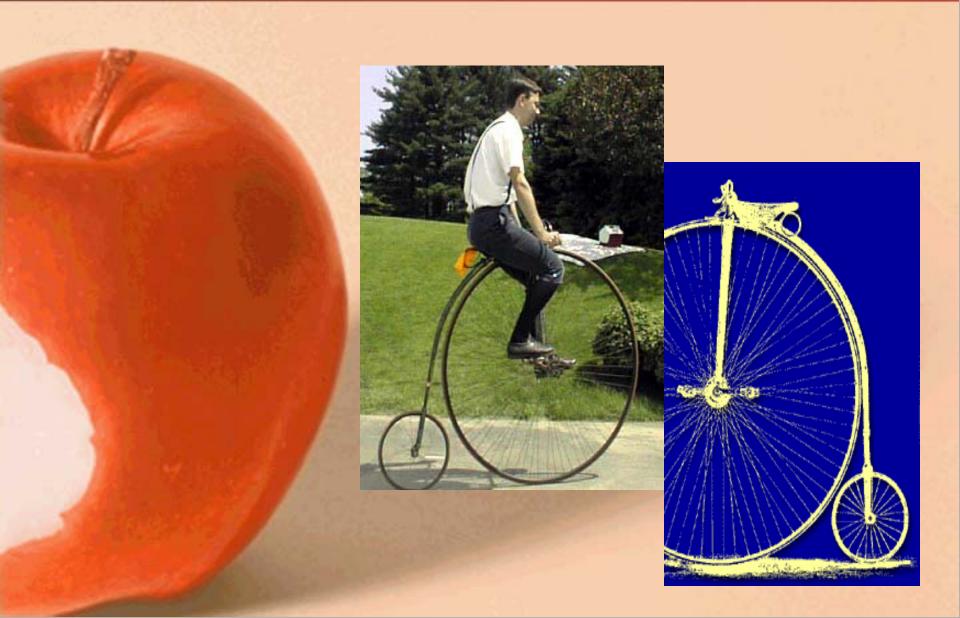
# 2000 Light Stopped



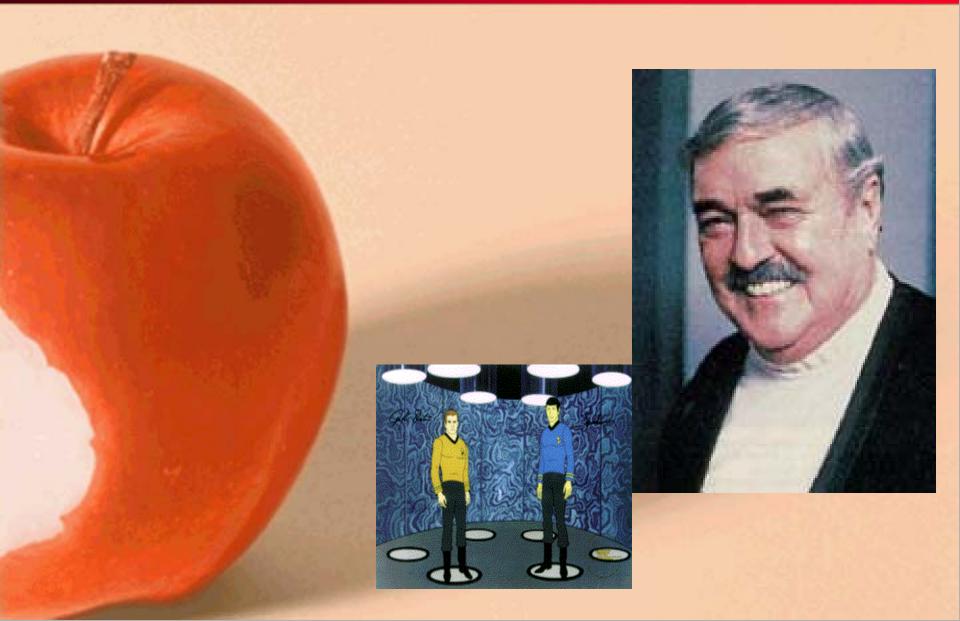
## 2001 Light Sent into Future



#### 2002 Light Slowed to Bicycle Speed



# 2003 Light Transported



## Finding Our Future



## A few early indicators

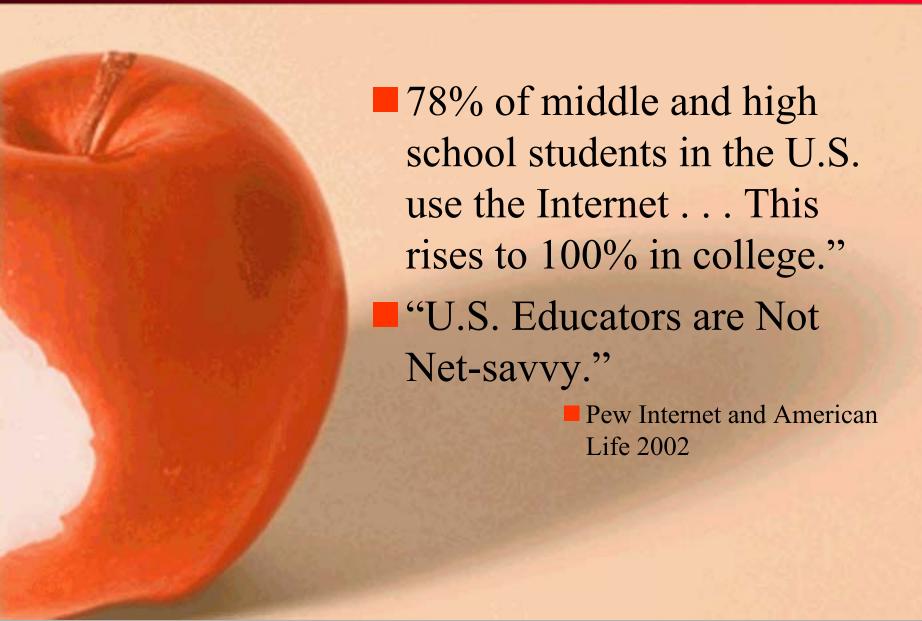


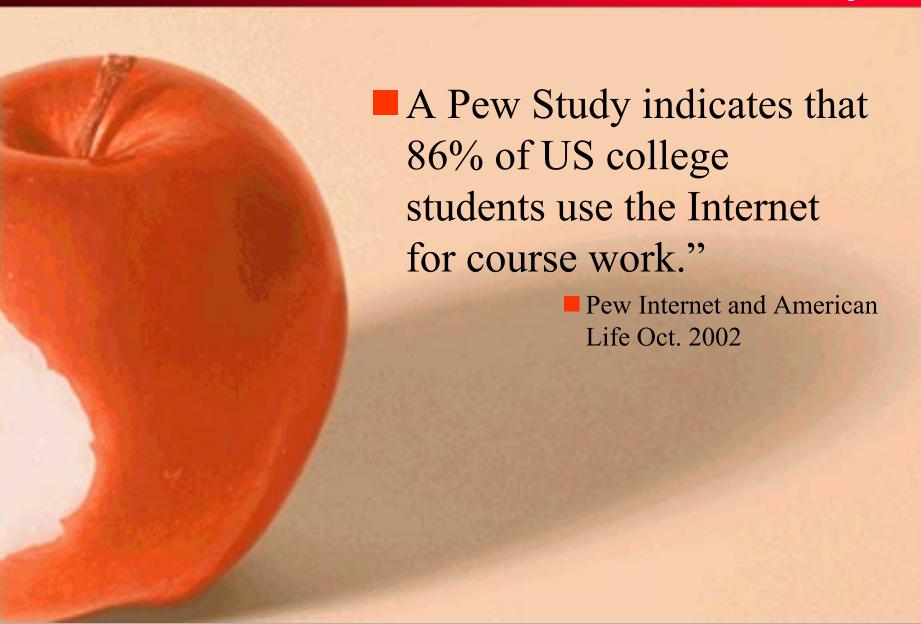
Michigan State U study shows that children introduced to the Internet at home improved their grades and performed better on standardized reading tests. (Globe & Mail, Aug. 4, 2003)

## A few early indicators



- Many studies show that the key (perhaps only major) influence on children's performance on standardized tests is having a quality school library program.
- http://www.micromedia.ca/PDFs/Ha ycockACP2\_v2.pdf







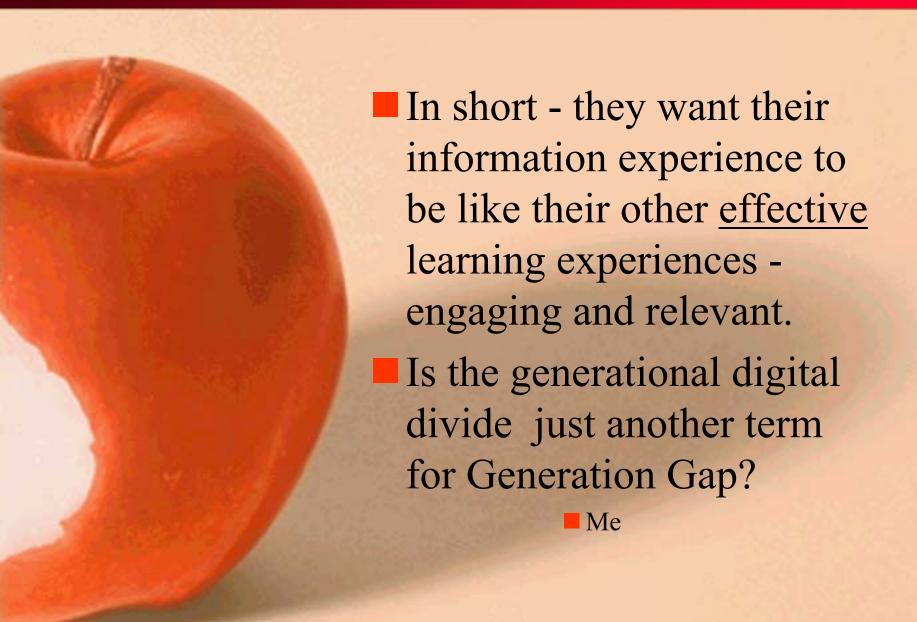




"Teenagers generally believe that educators don't know how or aren't able to use the online tools to help them enrich their studies." "Students rated the quality of Internetbased assignments as low."

Heller Reports - EdNet Aug. 2002

# I got an opinion too!



## A few early indicators



- Students have changed their information seeking and usage behaviors. They are using more, seeking more and exploring more.
- http://www.micromedia.ca/presentat ions/NextGen%20Internet%20and% 20Searching%20Behaviors.htm

# 3 Important Early Studies

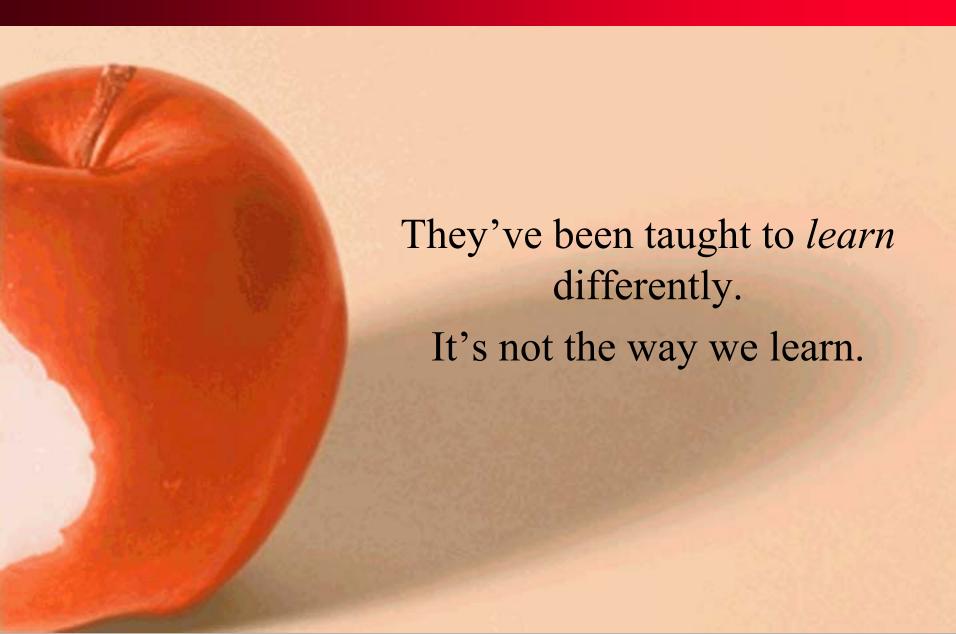
OCLC's "White Paper on the Information Habits of College Students" (www.oclc.org)

"Dimensions and Use of the Scholarly Information Environment" (CLIR/DLF/Outsell - www.clir.org)

"The Digital Disconnect:
The Widening Gap
Between Internet-Savvy
Students and Their
Schools" (Pew Internet
and American Life www.pewinternet.org)

Full webliography at www.micromedia.ca

#### NextGens and X'rs



### **Information Literacy**



- Standard Curriculum Components
  - Mathematics / Arithmetic
  - Science, Biology, Physics & Chemistry
  - English, Languages
  - History, Geography, Politics, Sociology
  - Music, Art, Phys ed.
  - Guidance, Religion

### **Information Literacy**

- Information literacy is integrally tied every aspect of the curriculum:
  - Mathematical logical thinking skills Math and Arithmetic
  - Scientific method Sciences
  - Criticism, interpretation and comprehension - English and languages
  - Analytical thinking History, Geography
  - Interpretive and imaginative- music, art & phys ed.
  - Inter and Intrapersonal skills Religion, Guidance, etc.
  - There is an imperative for people to have a lifelong curriculum a personal learning strategy

## **Information Literacy**



- Information selection and integration skills
- Information organization (micro and macro) skills - taxonomies and ontologies
- Interface selection and design combined with training skills
- Searching, <u>finding</u> and usage (analysis, packaging, reporting) skills
- High level information literacy skills (added to numeracy, critical thinking, analytical, etc.)

#### Taking The Knowledge Positioning

Data Information Knowledge *Behaviour* ====> =====> =====>

- ApplyDisplay
- Stand- Chart
  - ards Graph
- StorePublishPicture
  - Move Format

- Knowing
- Learning
- Filtering
- Evaluating
- Gerunds

- Do
- Decide
- Choose
- Apply
- Enact

Action Verbs

#### Information Engagement Levels

**Stimulate/Live** 

Present/Teach

**Argue/Defend** 

**Act on/ Discuss** 

**Content** 

Read/View

**Source** 

**Situation** 

Dr. Thomas Davenport

## Intelligence and Learning Styles

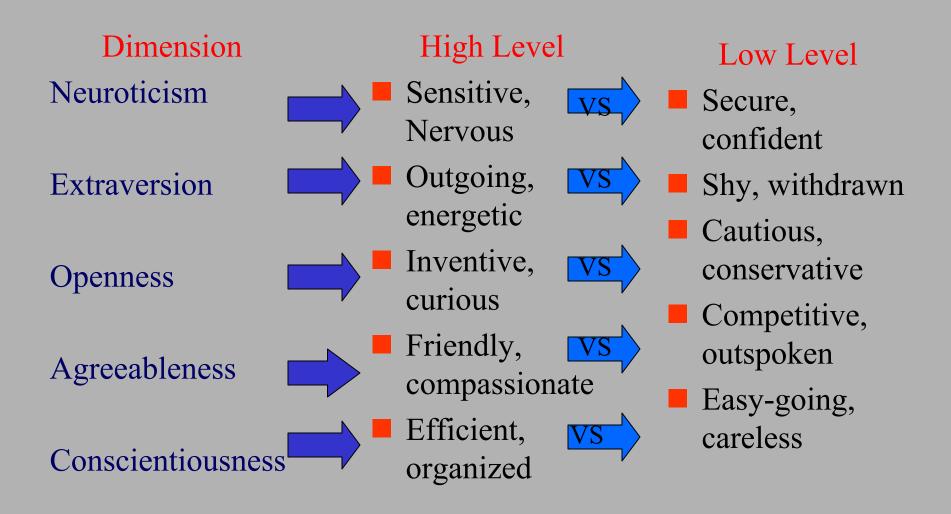


# Personality and Searching



- "Five personality dimensions and their influence on information behaviour"
- Jannica Heinstrom, Abo Akademi University, Finland (Oct. 2003)
- http://informationr.net/ir/9-1/paper165.html
- Central Question: "How does personality influence searching behaviour?"

## Personality and Searching





Neuroticism was related to preference for confirming information, concern over time spent on searching, difficulties with relevance judgement, and insecurity with database searching.



Extraversion was related to informal information retrieval as well as preference for thought provoking documents over documents which confirmed previous ideas.



Openness to experience was related to broad information seeking, incidental information acquisition, critical information judgement, preference of thought provoking documents instead of documents which confirmed previous results. Conservativeness was related to problems with relevance judgement and preference for confirming documents.

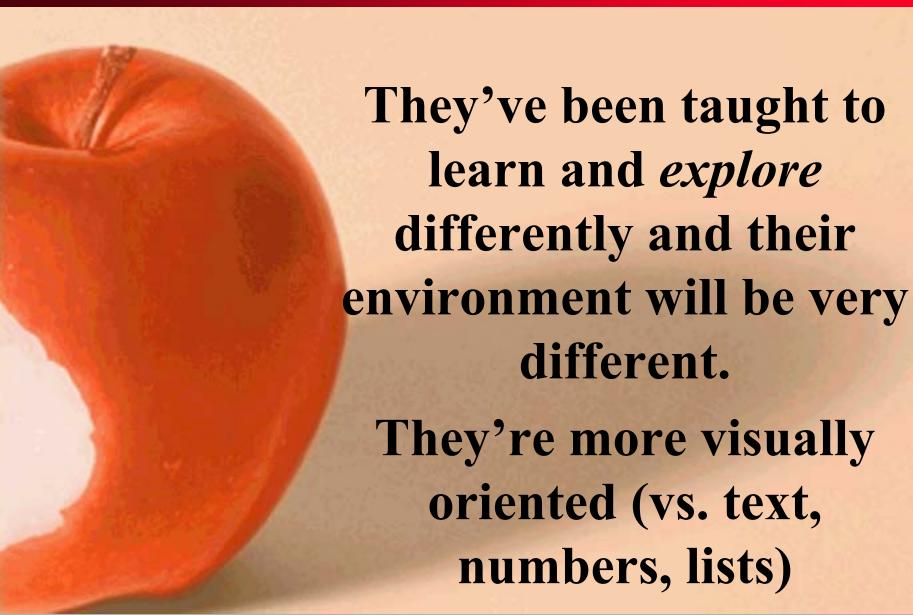


Competitiveness was related to lack of time being a barrier to information retrieval, problems with relevance judgement and competence in critical analysis of information. Low levels of agreeableness forms a base for sceptical and critical thinking.

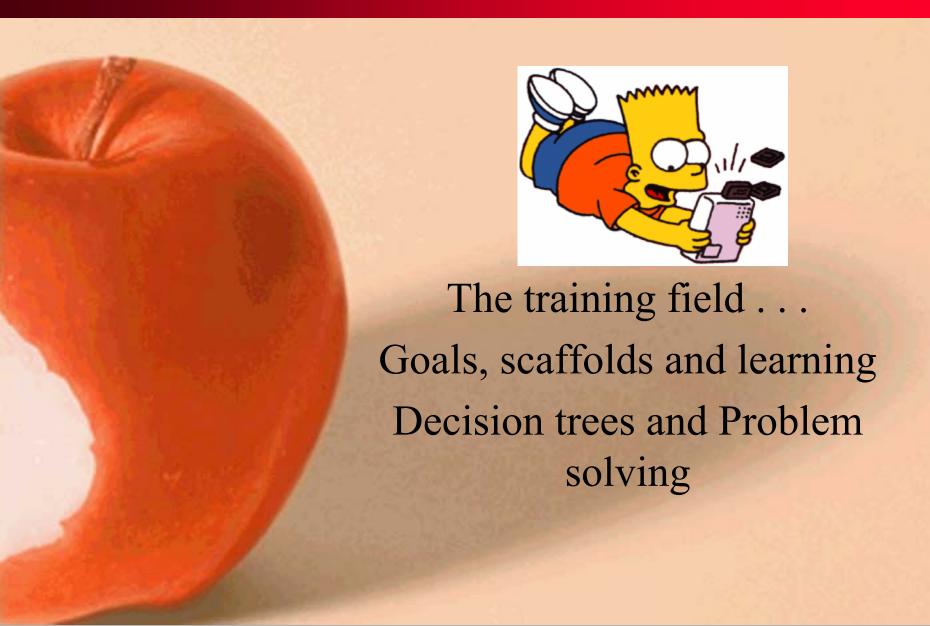


Conscientiousness was related to preference for thought provoking documents instead of documents that confirmed previous ideas and use of effort in information seeking. Carelessness, on the other hand was related to problems with relevance judgement, feeling that lack of time was a barrier to information retrieval and preference for documents that confirm previous ideas.

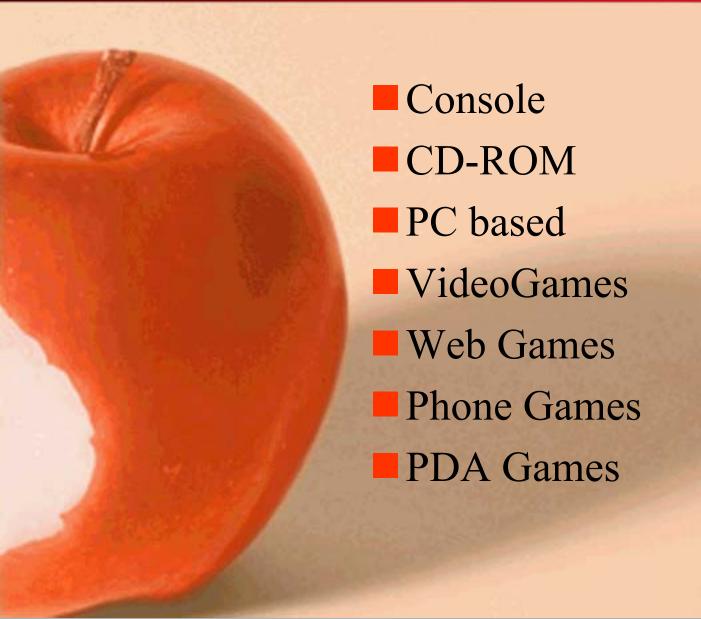
#### NextGens and X'rs



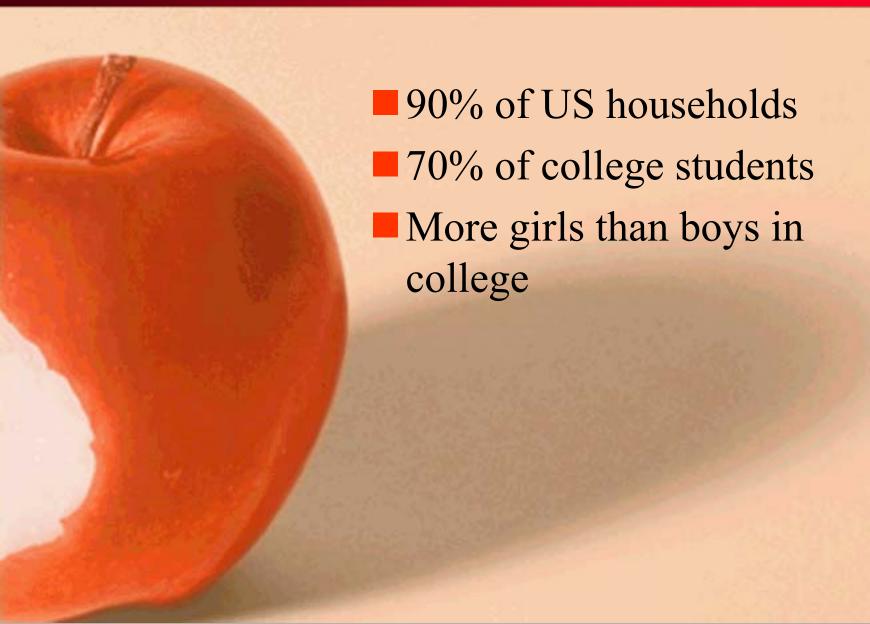
## Video Games, PC Gamers



#### PC Games



#### PC Games



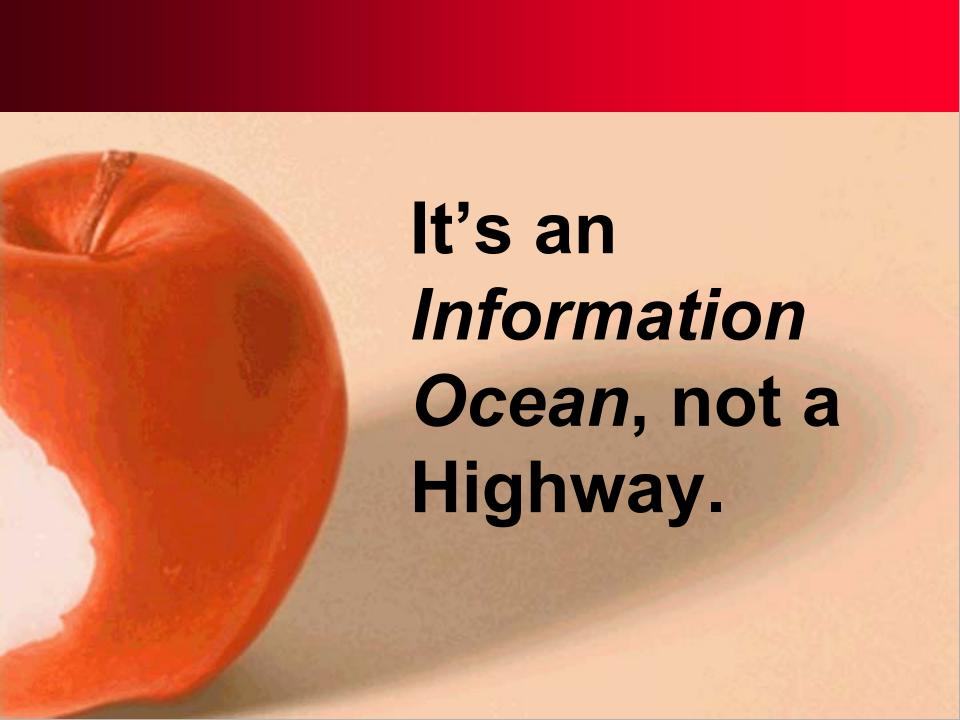
#### PC Games



- Quest
- Collaboration
- Avatar Creation
- Trivia, Word Games
  - Riddles and Codes
- Simulations
- Entertainment
- Blog, chat, opinion

- Strategy,Collaboration
- Team skills
- Creativity,
  Research
- Testing
- Math, logic
- Scenario planning
- Cards, chess, solitaire
- Social skills









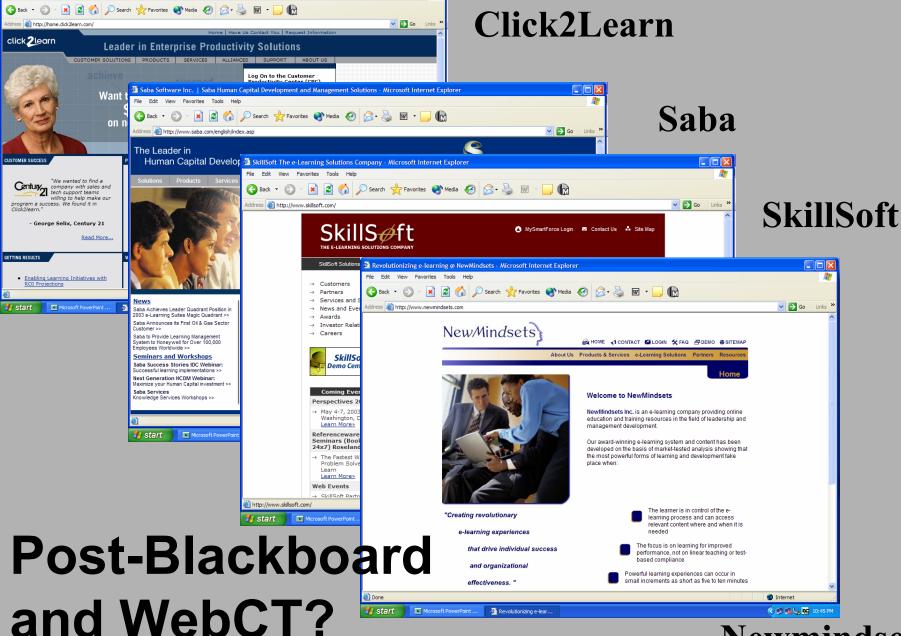


- Link Resolvers and OpenURL
  - Federated Search

### It's a Learning Space

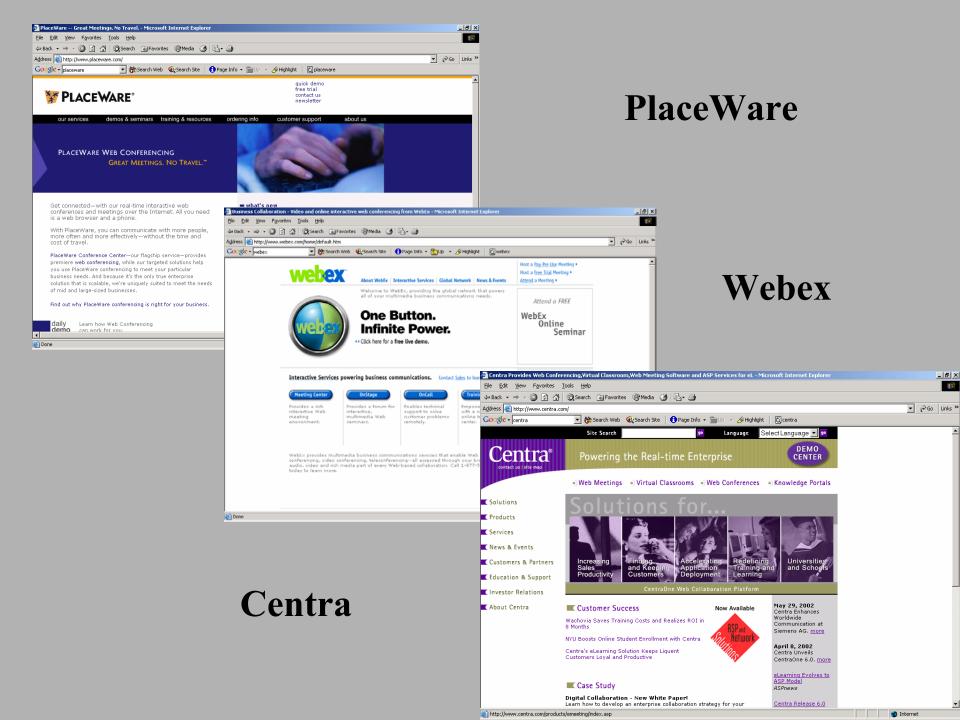
- eLearning, e-reserve, ecoursepacks
- Recombinable learning objects
- Lesson Level Content
- SCORM, ADL, etc.
- OpenURL and durable, persistent linking





Click2learn - Leader in Enterprise Productivity Solutions - Microsoft Internet Explorer

**Newmindsets** 

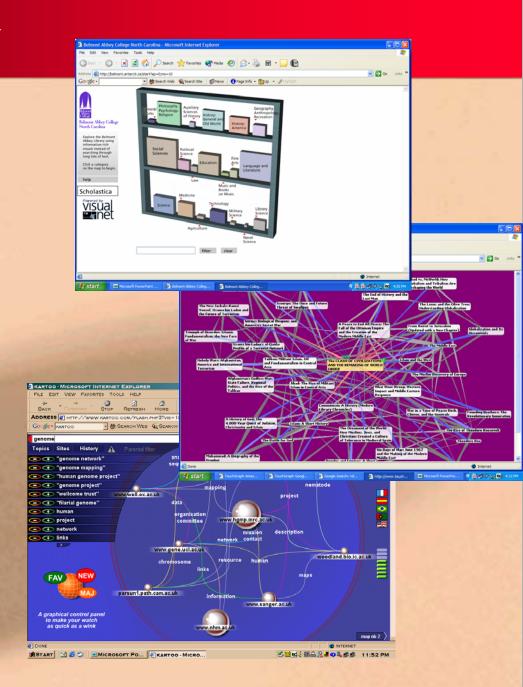


## Simplify These Interfaces



### Visual Display

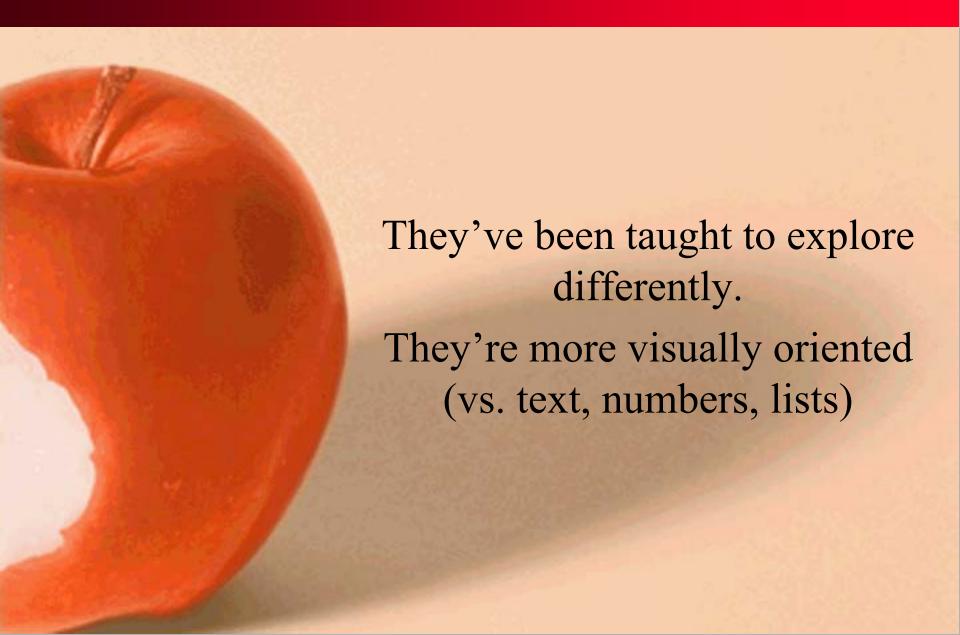
Context
 Text independence
 Visible contextual taxonomies
 Learning Styles



## Federated Searching

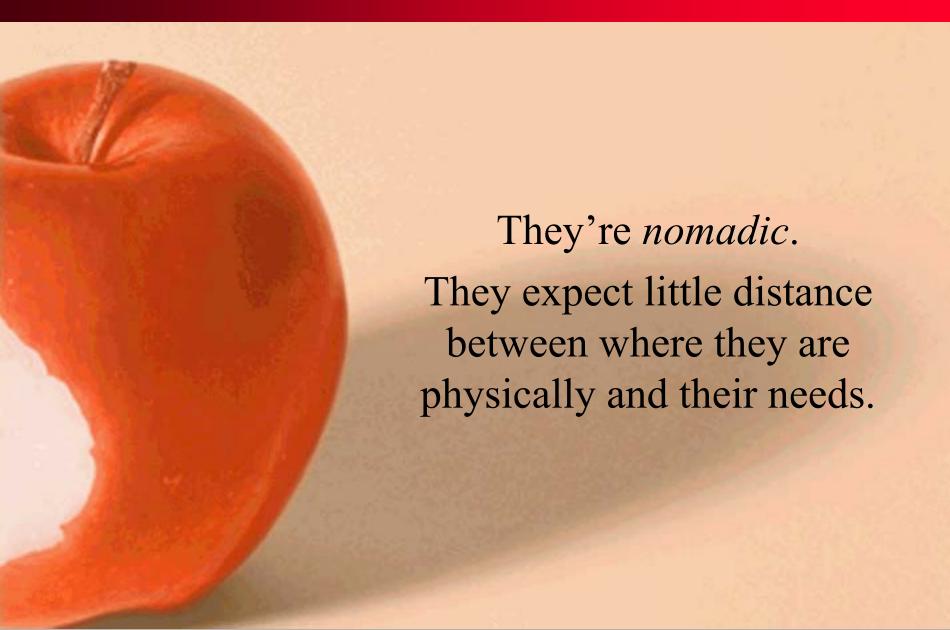


#### NextGens and X'rs





### NextGens and X'rs



### Nomadic Use











# Tablet Computer

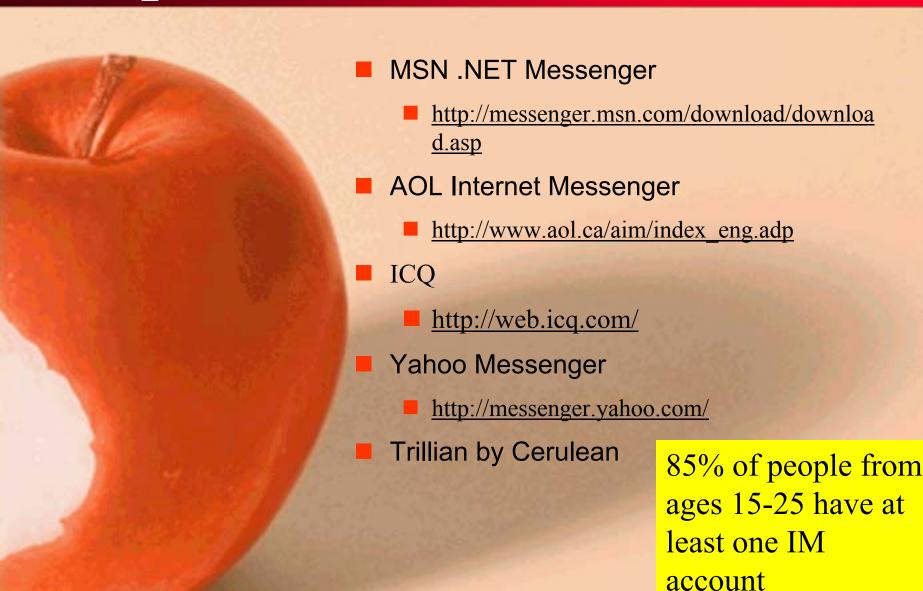
#### Those damn kids . . .

Medium 8-17 year-olds would choose if they could only have one

Medium	All Kids	Boys	Girls
Internet	33%	38%	28%
Television	26%	34%	17%
Telephone	21%	12%	31%
Radio	15%	12%	17%

Source: Knowledge Networks/Statistical Research 2002

### Simple Collaboration Tools



## Blogging



### Discussion Lists



#### WIKI



Wikipedia is a multilingual project to create a complete and accurate free content encyclopedia. We started in January 2001 and are currently working on 177918 articles in the English version. Visit the help page and experiment in the sandbox to learn how you can edit any article right now.

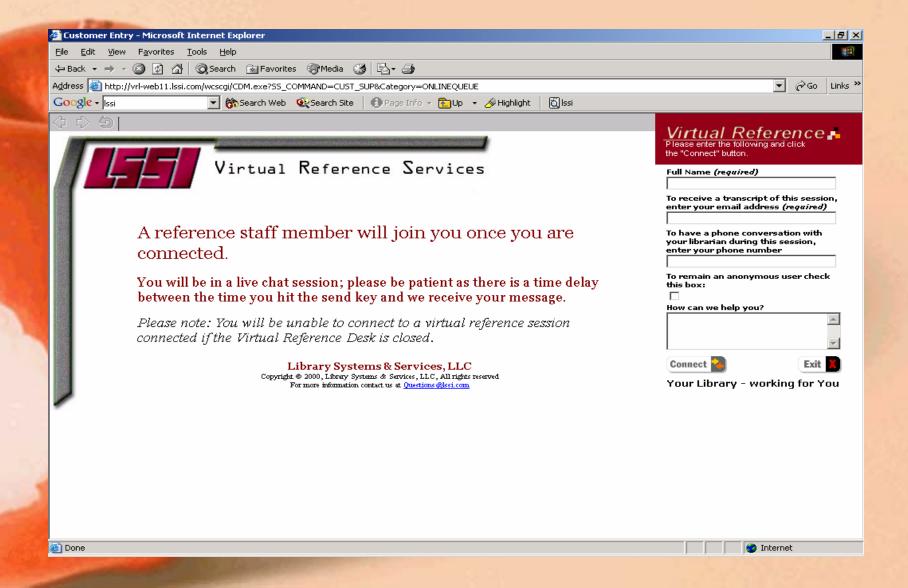
### Collaborative Digital Reference



- Virtual Reference Canada
- CDRS— Library of Congress
- TPL Virtual
  Reference Desk
- OCLC QuestionPoint
- Durham PL
- Real-time live-chat, homework help service
- LSSI Virtual Ref Desk



#### LSSI and Tutor.com



#### **Comparing IPS Stages and ACRL Competencies**

#### **IPS Stages**

- Task Definition
- Info-seeking strategies
- Location & Access
- Use of Information
- Synthesis
- Evaluation

#### **ACRL Standards**

- Determine information need
- Access information
- Evaluate & incorporate information
- Use information for specific purpose
- Understand info. use, use ethically & legally

Joanne Smyth & Patricia Johnston

#### Online and F2F Reference

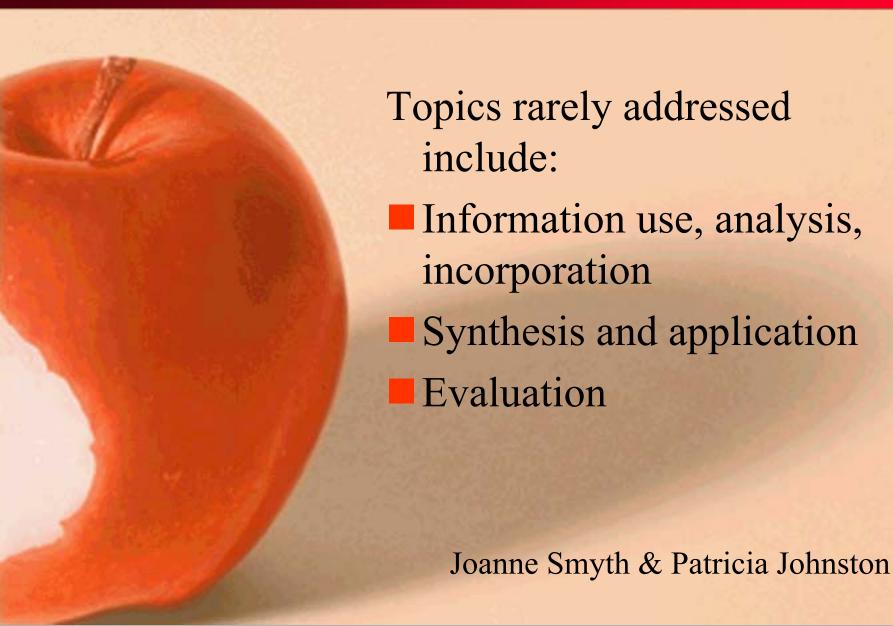


Topics frequently addressed include:

- Task definition, problem definition
- Developing a search strategy
- Locating and accessing information

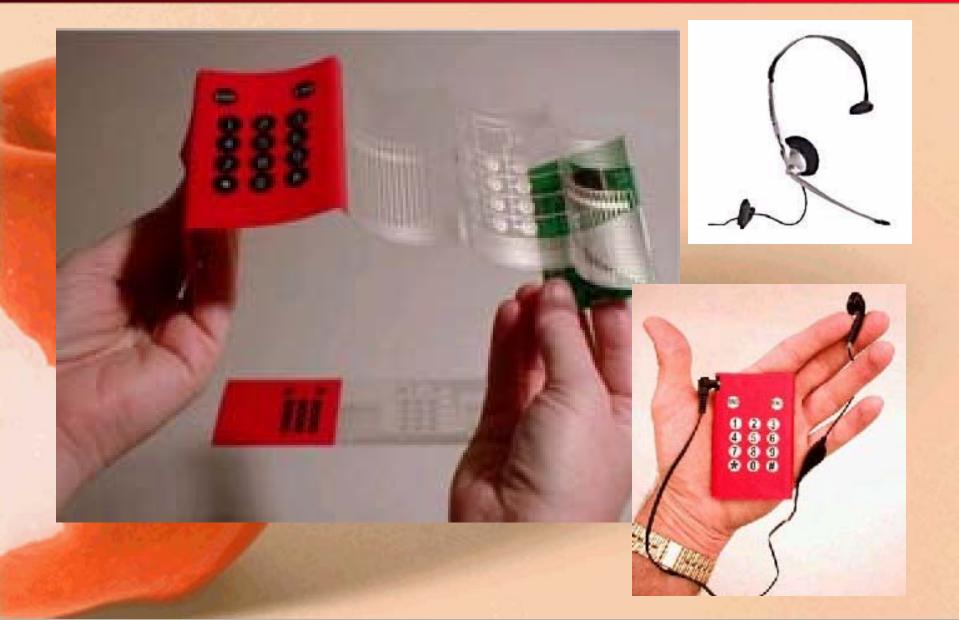
Joanne Smyth & Patricia Johnston

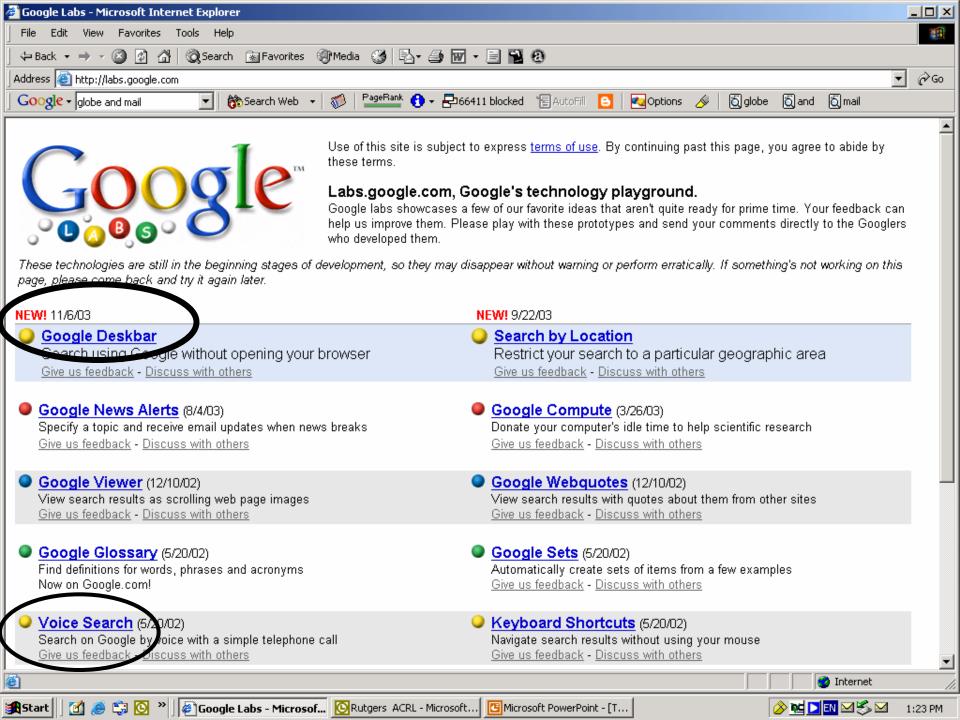
#### Online and Face-to-Face Reference



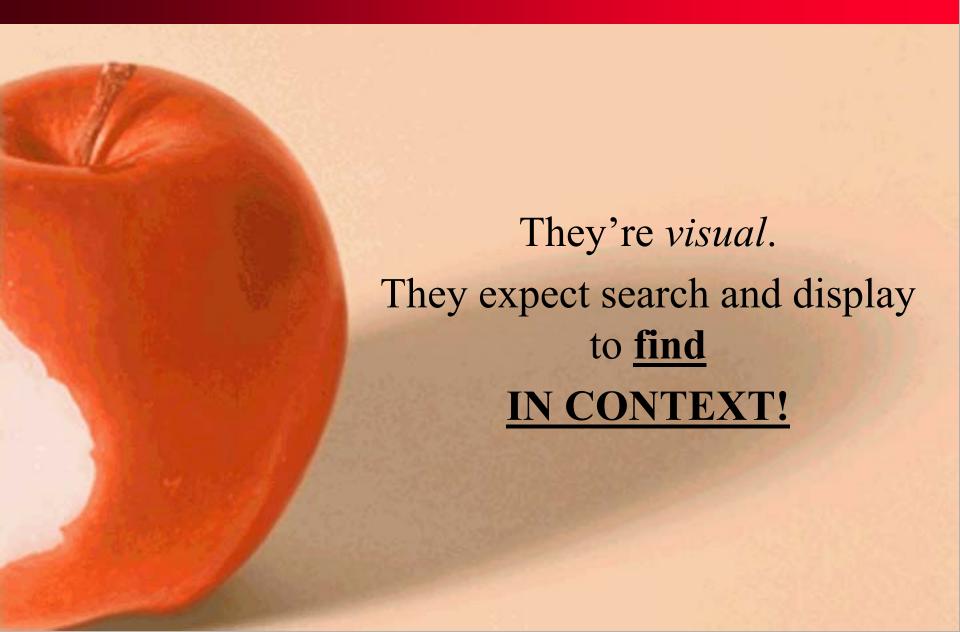


## Disposable phones

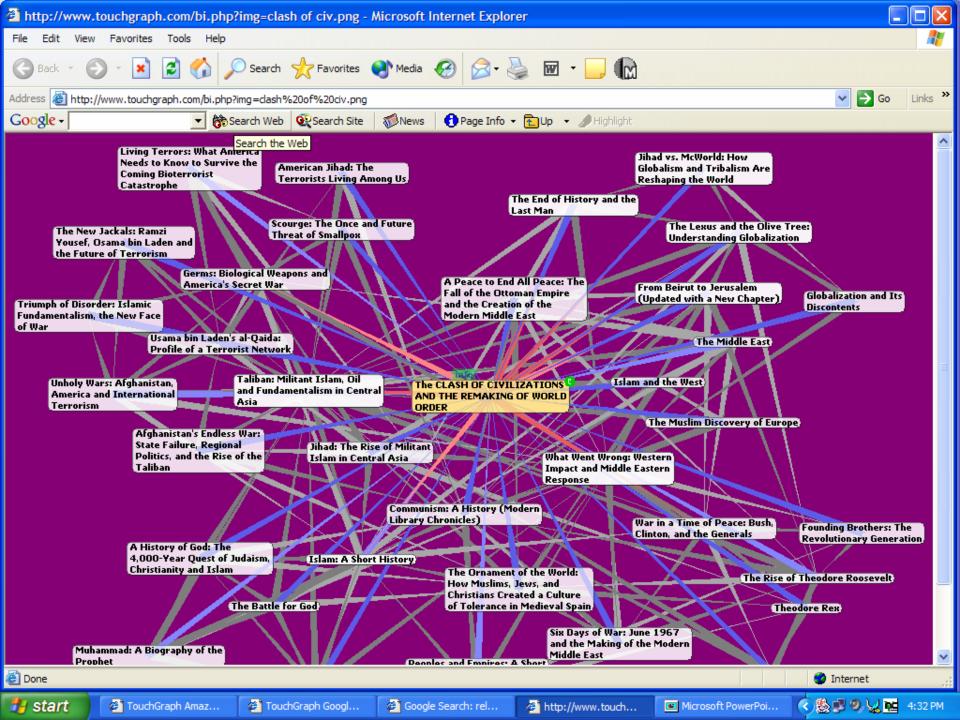


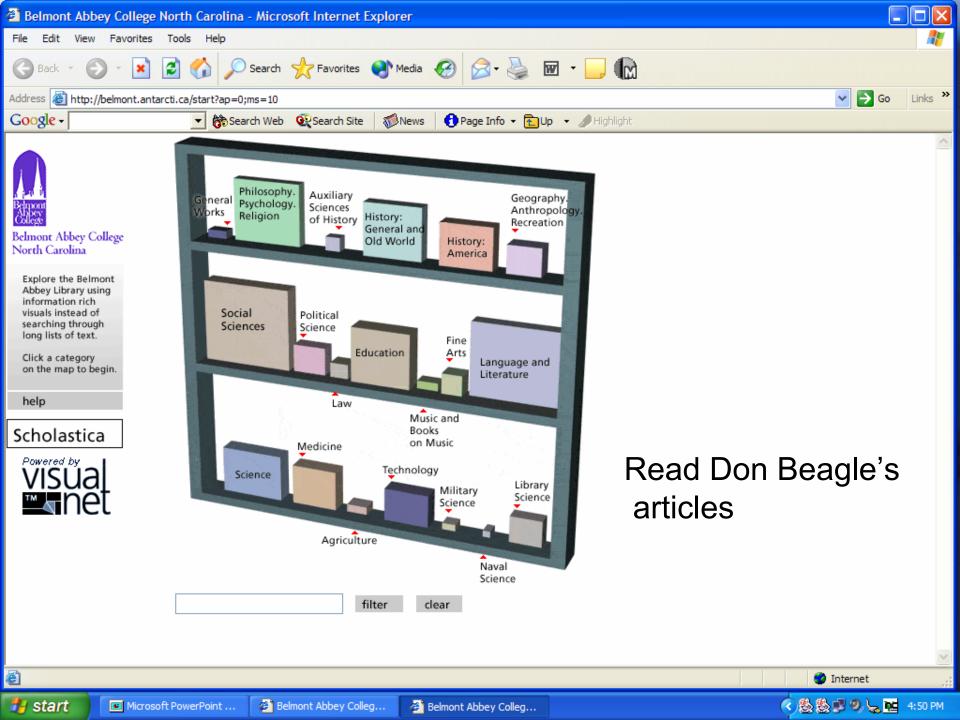


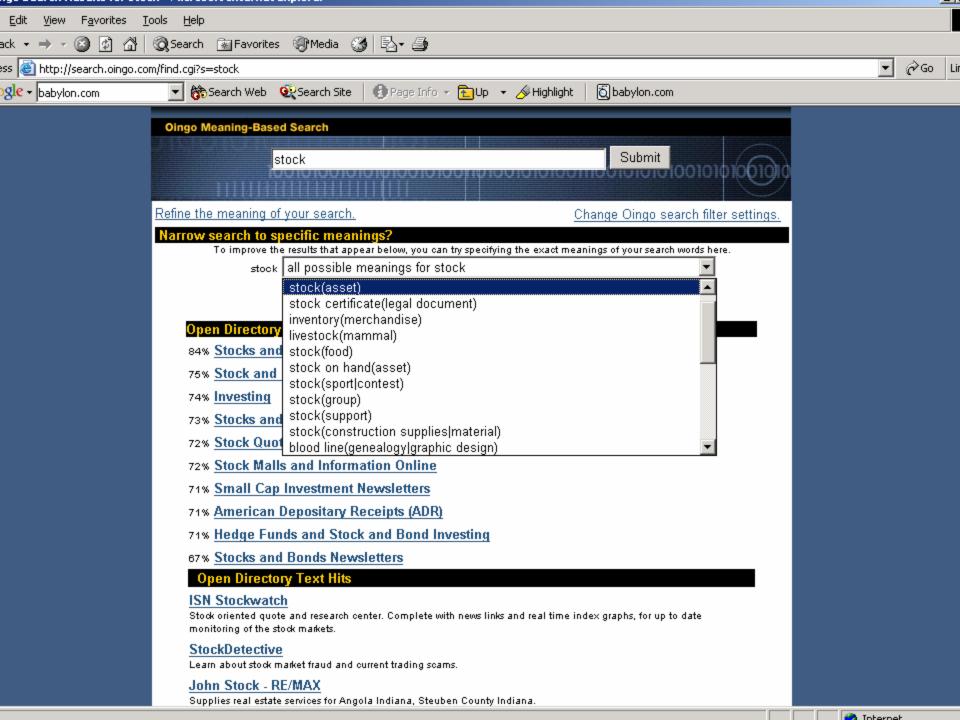
#### NextGens and X'rs

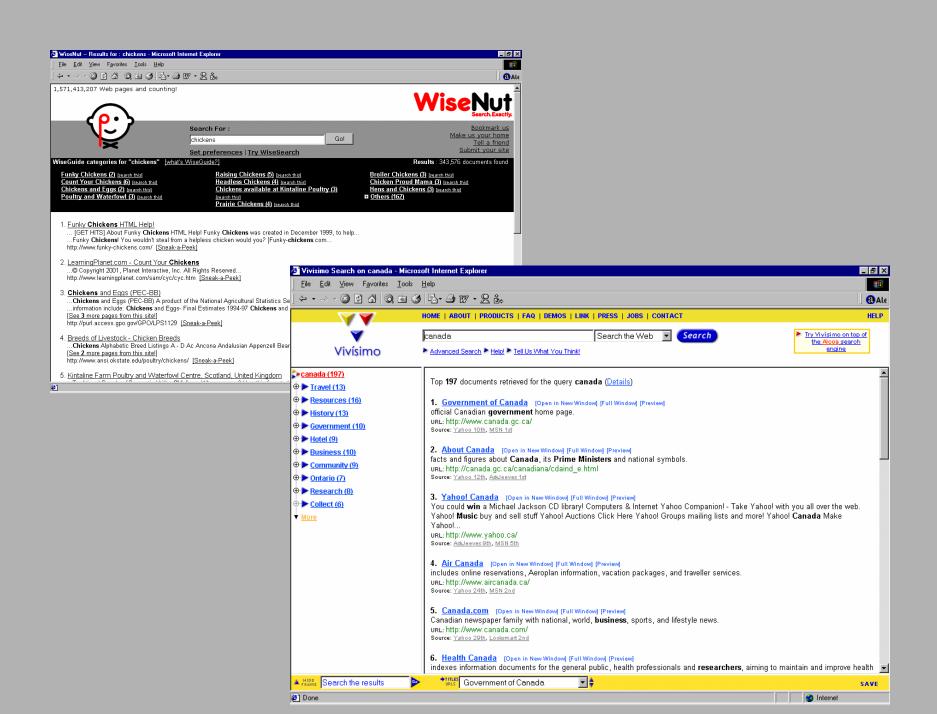








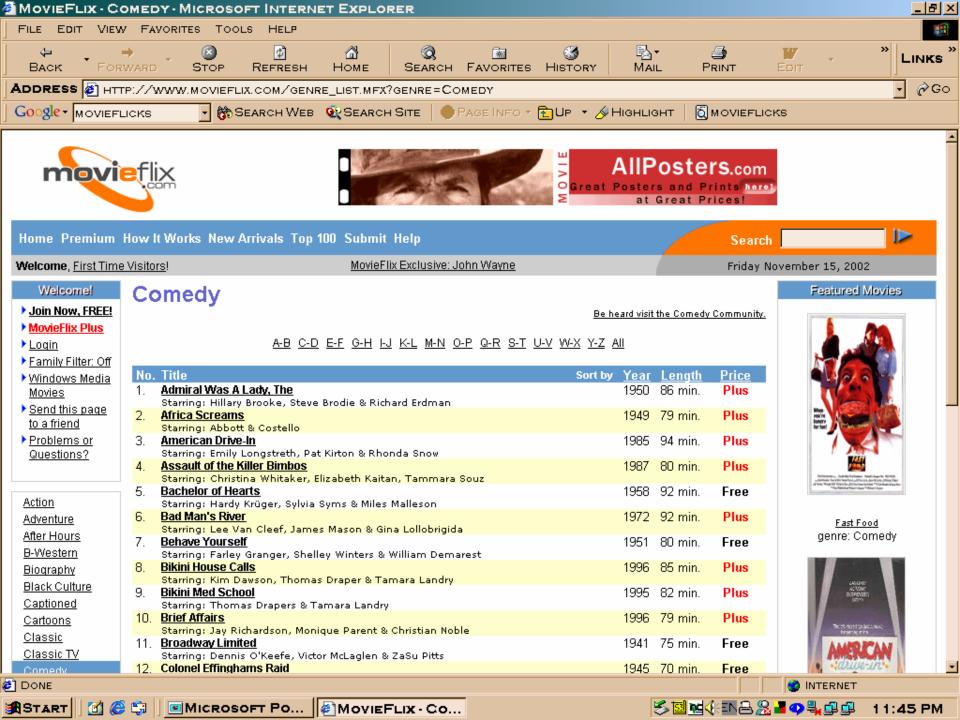






#### Streaming Video and Audio



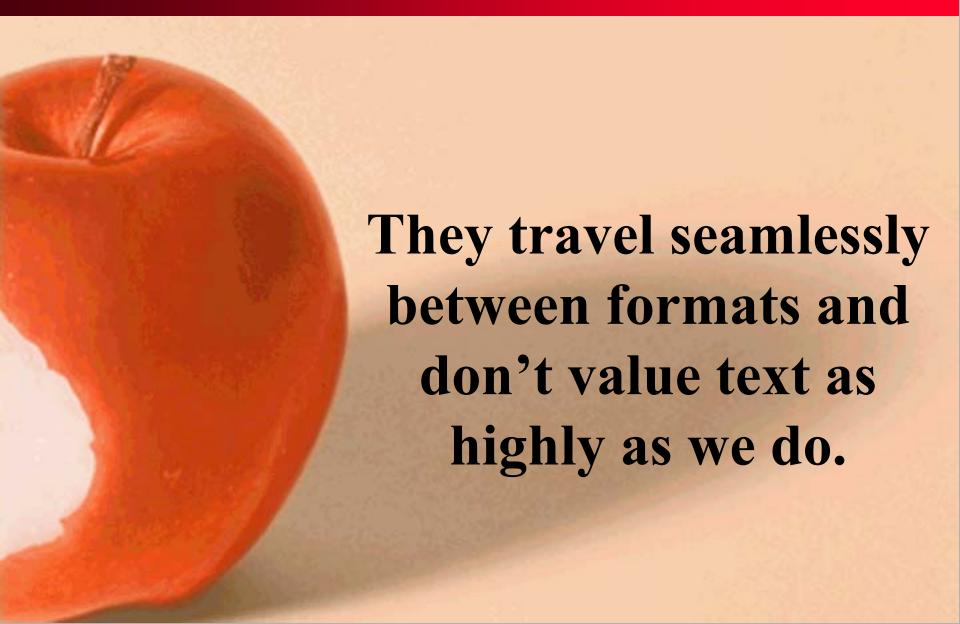




#### NextGens and X'rs



#### NextGens and X'rs



## Zac's Story



#### Finding Our Future



- ■They learn differently
- They're nomadic
- They converse online with IM
- They're visual learners
- They use all formats
- Games are a model for them
- They're gonna be alright!

### Solutions Worth Exploring

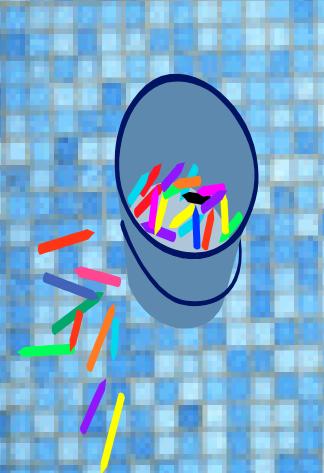


- Tiered and Tunable Interfaces
- Visual Displays in Interface
- OpenURL
- Personalization of interface and results
- Content diversity and integration
- Supporting Multitasking
- Mapping displays
- Information Literacy Curricula (OSLA www.accessola.com)

#### Balance and Fairness



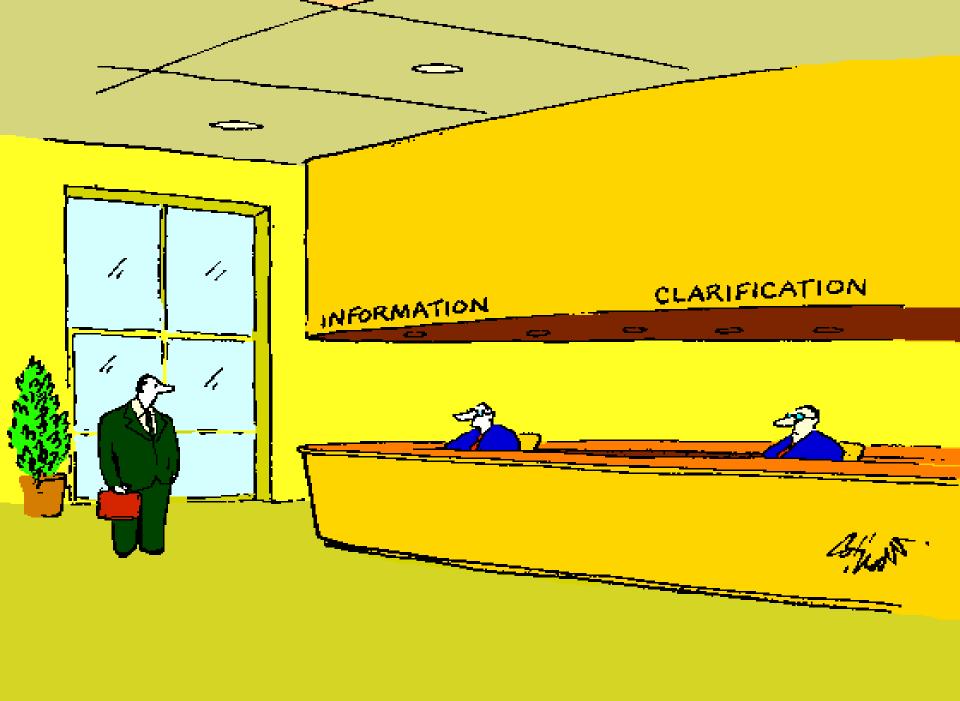
# Let's Share Our Passion



- Work
- **Profession**
- **Science**
- Craft
- Art
- **Talent**



# Context is King, not Content.



#### **Thanks**





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