Personal Information Management

Mike Eisenberg
University of Washington

2008

Agenda

1. **Review WJ understandings**
2. **Information problem-solving**
   - Developing your own PIM skills
   - Teaching PIM skills to others
3. **Value-Added**
4. **My own “PIM”**
   - Personal taxonomy, tools, devices, approaches
   - Changing PIM

Agenda

1. **Review WJ understandings**
2. **Information problem-solving**
   - Developing your own PIM skills
   - Teaching PIM skills to others
3. **Value-Added**
4. **My own “PIM”**
   - Personal taxonomy, tools, devices, approaches
   - Changing PIM

PIM Is…

“ the practice and the study of the activities a person performs in order to acquire or create, store, organize, maintain, retrieve, use and distribute the information needed to meet life’s many goals and to fulfill life’s many roles and responsibilities. ”

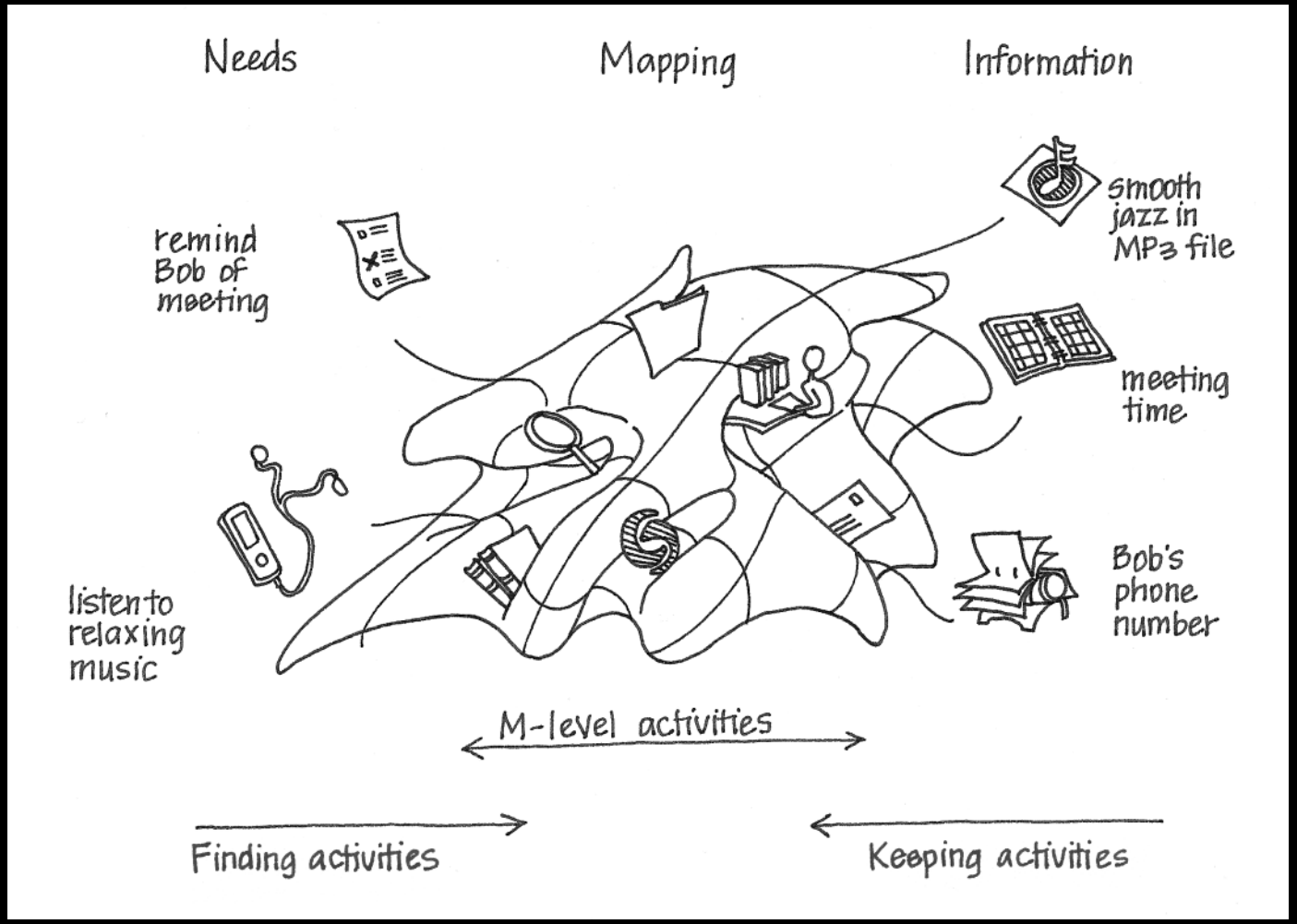
PIM …

- Meta-level activities
- Not specific incidence
- Not spoken for by daily activities

PIM …

- Information overload
- Information fragmentation
- Information attention

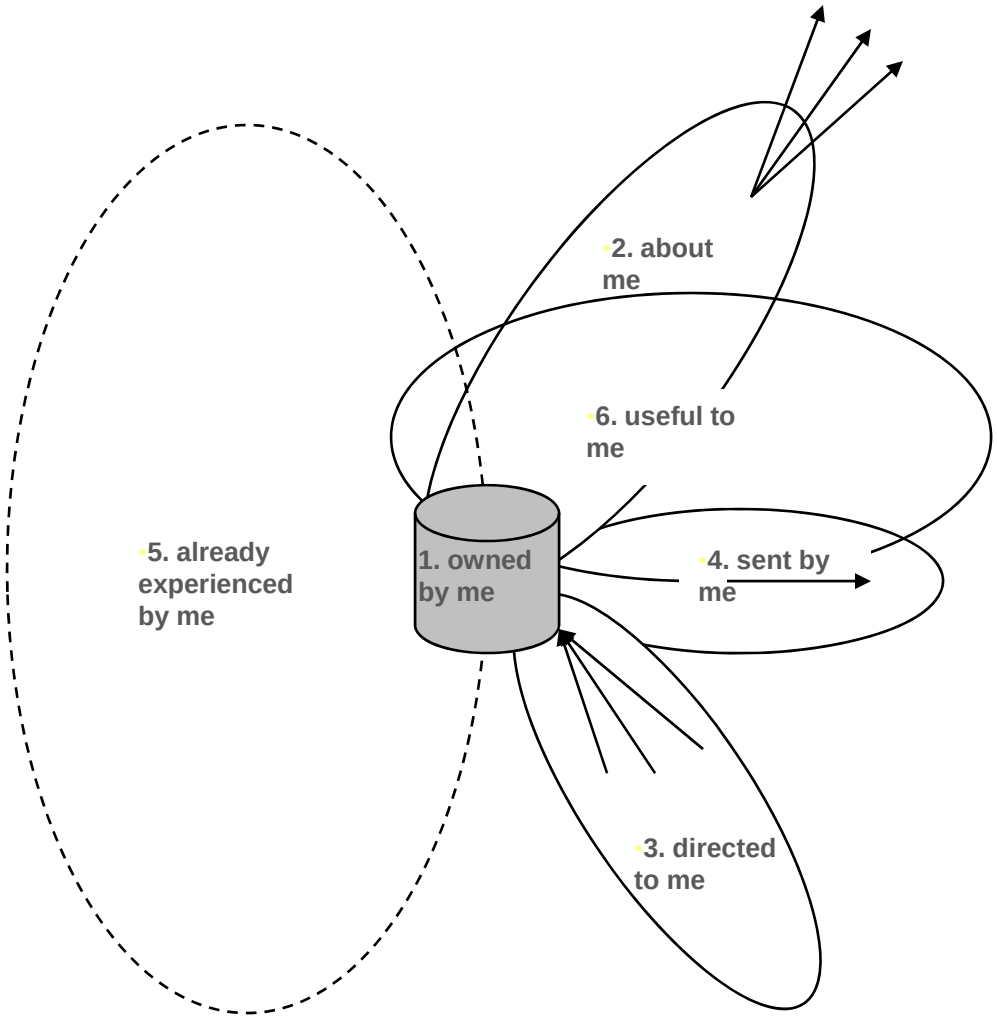
PIM Is about the Mapping Between Need and Information (that We Each Have)



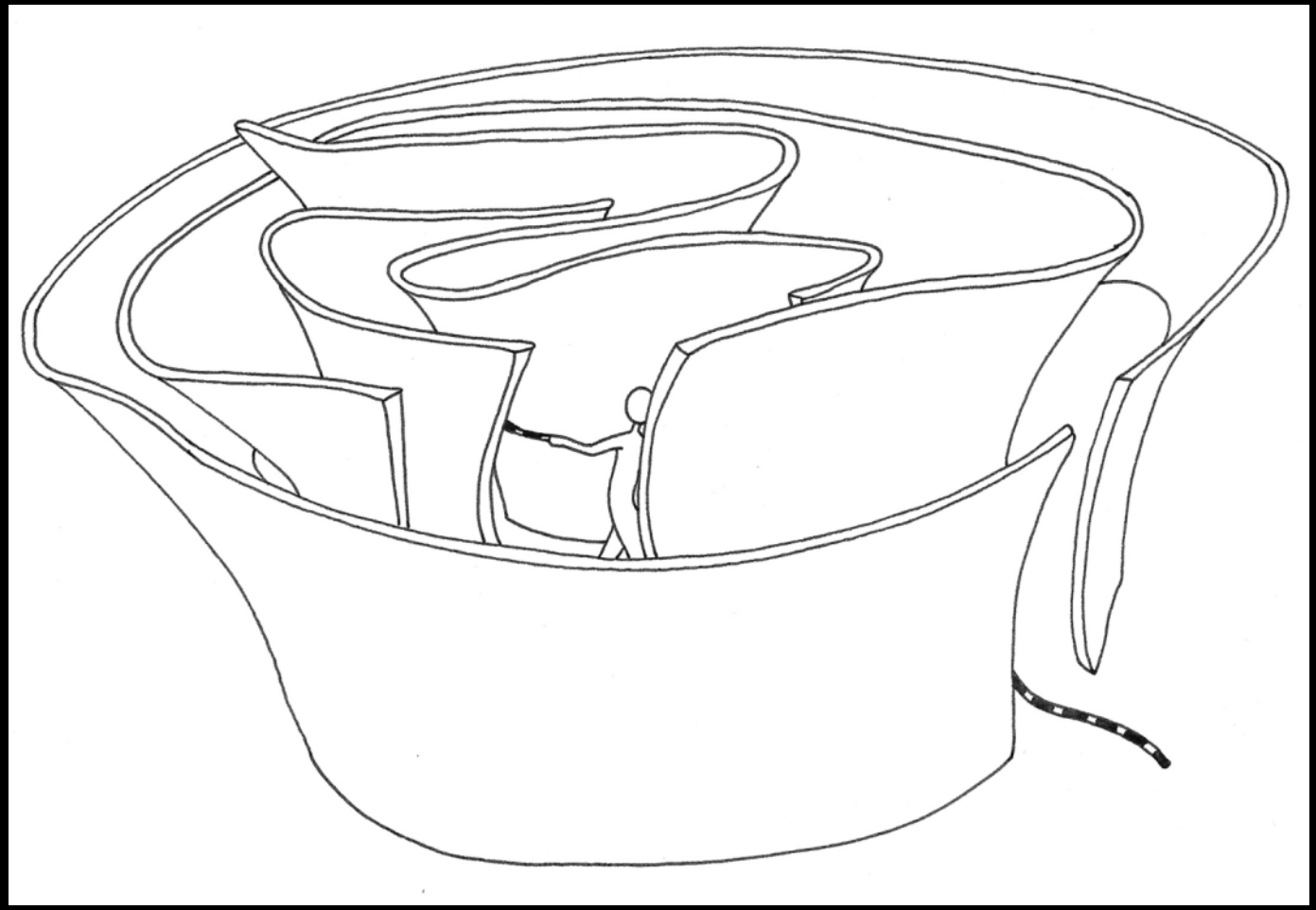
Six senses of PIM

1. Controlled by, owned by me.
2. About me.
3. Directed toward me.
4. Sent (posted, provided) by me.
5. (Already) experienced by me.
6. Relevant (useful) to me (or not).

The Six Senses of Personal Information



Finding and Re-finding



6 Kinds of PIM Activitiy

1. Finding
2. Keeping
3. Maintaining and organizing*
4. Managing privacy and the flow of information*
5. Measuring and evaluation*
6. Making sense of things

*Meta-level or “m-level”

Agenda

1. **Review WJ understandings**
2. **Information problem-solving**
   - Developing your own PIM skills
   - Teaching PIM skills to others
3. **Value-Added**
4. **My own "PIM"**
   - Personal taxonomy, tools, devices, approaches
   - Changing PIM

Exercise

- Sense-making
- Choose a recent [information] problem
- List out the actions taken [use cards or PowerPoint]
- [pause]

Information Problem-Solving (Information Literacy Standards)

- ACRL Standards
- AASL Standards
- 21st Century Partnership
- ISTE - NETS
- Information Fluency

Exercise

- Compare actions to the information problem-solving process
- The Big6

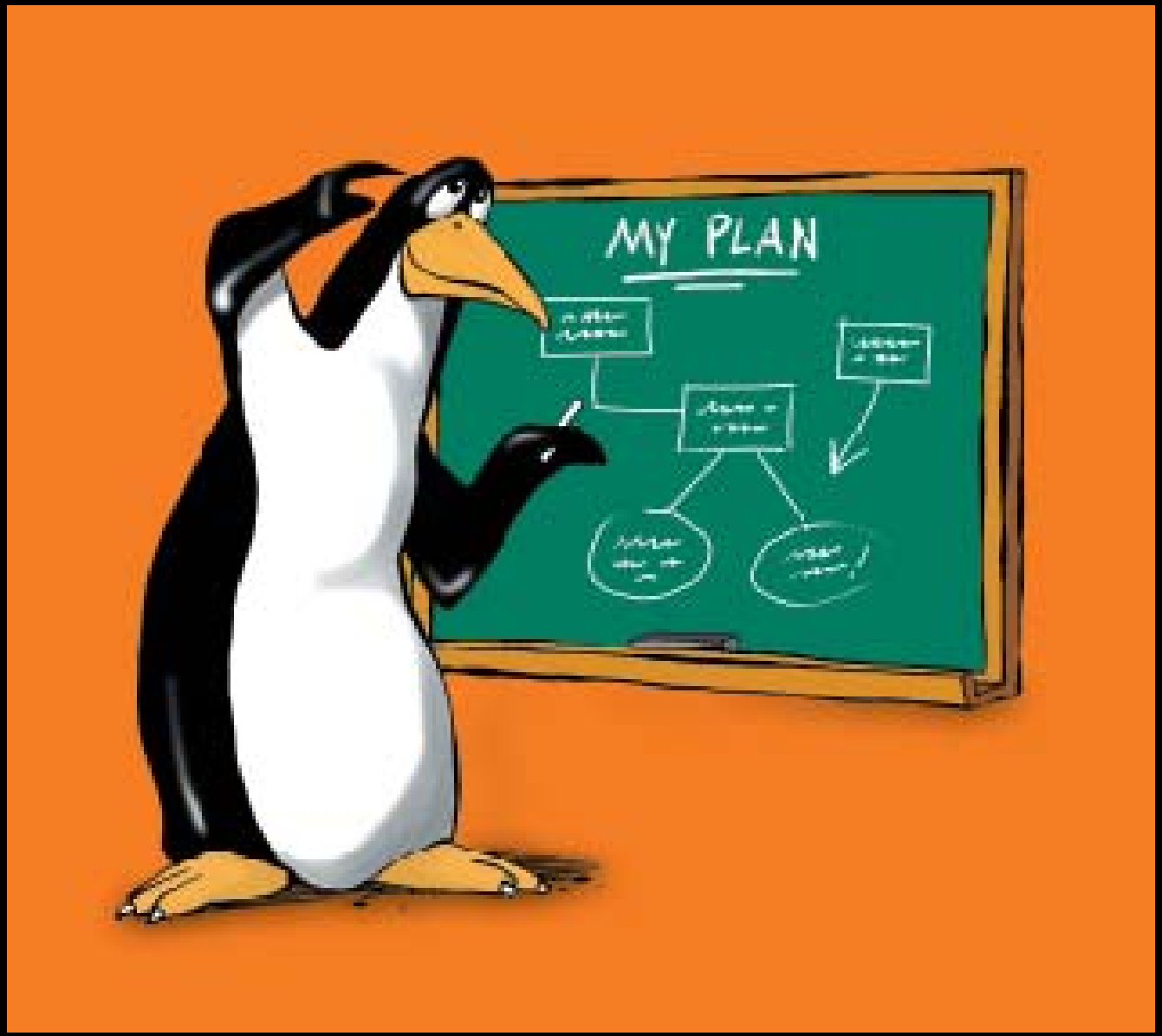
The Super3

BEGINNING: Plan

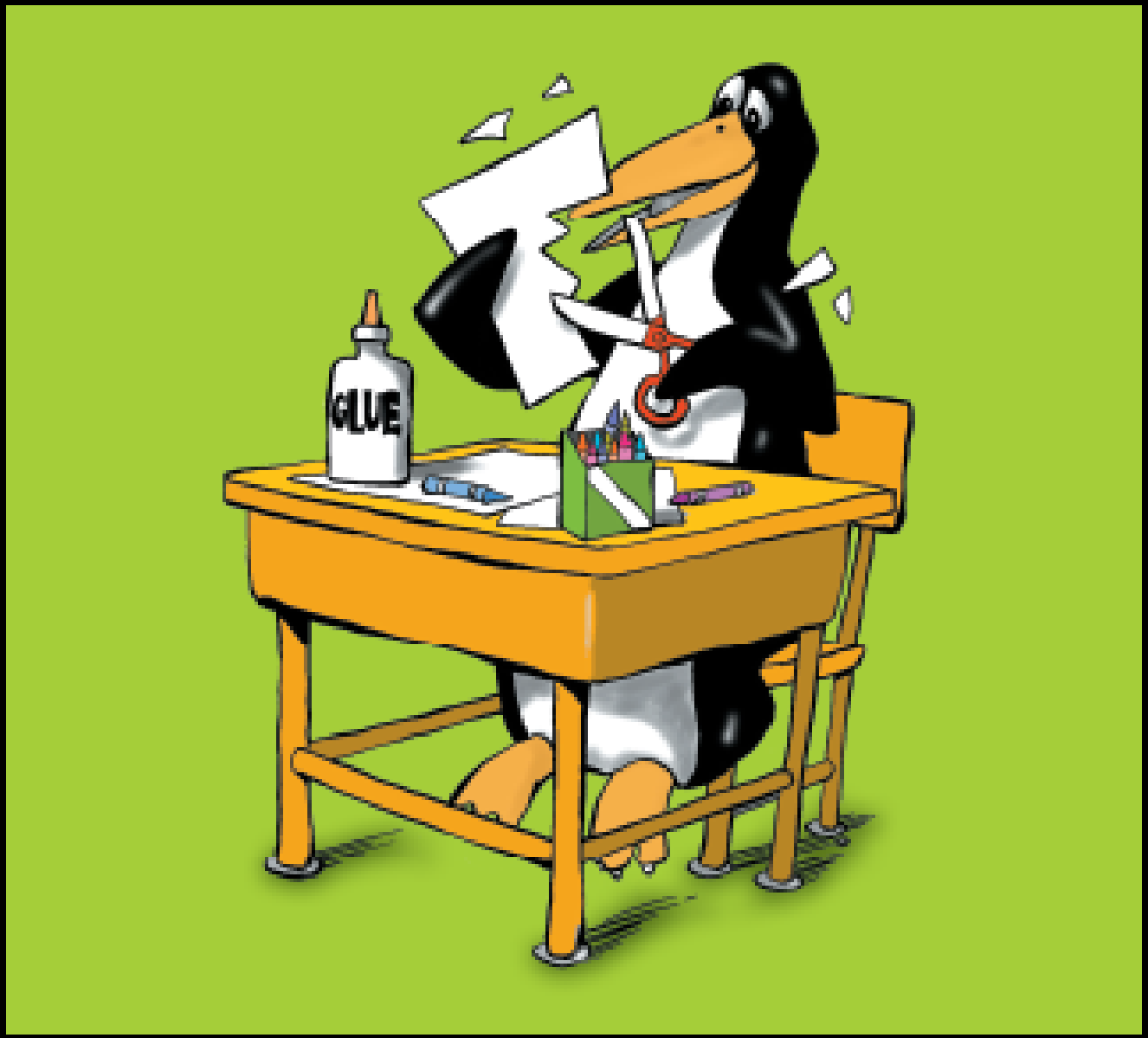
MIDDLE: Do

END: Review

- plan -



- do -



- review -

Information Problem Solving: The Big6™ Skills

1. Task Definition
2. Info Seeking Strategies
3. Location & Access
4. Use of Information
5. Synthesis
6. Evaluation

www.big6.com

The Big6™ Skills Model of Information Problem-Solving

1. Task Definition:

   1.1 Define the information problem.
   1.2 Identify information needed.

2. Information Seeking Strategies:

   2.1 Determine all possible sources.
   2.2 Select the best sources.

3. Location and Access:

   3.1 Locate sources.
   3.2 Find information within sources.

4. Use of Information:

   4.1 Engage (e.g., read, hear, view, touch).
   4.2 Extract relevant information.

5. Synthesis:

   5.1 Organize from multiple sources.
   5.2 Present information.

6. Evaluation:

   6.1 Judge the product (effectiveness).
   6.2 Judge the process (efficiency).

Task Definition

1.1 Define the problem

1.2 Identify the information needed

types of information

Information Seeking Strategies

2.1 Determine all possible sources

2.2 Select the best sources

brainstorm & narrow

Location & Access

3.1 Locate sources

3.2 Find information within sources

Use of Information

4.1 Engage (read, hear, view)

4.2 Extract relevant, quality information

relevance

Synthesis

5.1 Organize

5.2 Present

medium & message

Evaluation

6.1 Judge the result

6.2 Judge the process

effective & efficient

Association of College and Research Libraries

Information Literacy Competency Standards for Higher Education

2001
www.ala.org/acrl/ilintro.html

ACRL: Information Literacy Competency Standards for Higher Education

1. The information literate student determines the nature and extent of the information needed.

2. The information literate student accesses needed information effectively and efficiently.

http://www.ala.org/acrl/ilintro.html

ACRL: Information Literacy Competency Standards for Higher Education

3. **The information literate student evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system.**

4. **The information literate student, individually or as a member of a group, uses information effectively to accomplish a specific purpose.**

http://www.ala.org/acrl/ilintro.html

ACRL: Information Literacy Competency Standards for Higher Education

5. The information literate student understands many of the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally.

http://www.ala.org/acrl/ilintro.html

Comparison of Information Skills Process Models

Eisenberg/Berkowitz Information Problem-Solving (The Big6 Skills)	ACRL Information Literacy Competency Standards
1. Task Definition 1.1 Define the problem 1.2 Identify info requirements	1.determines the nature and extent of the information needed.
2. Information seeking strategies 2.1 Determine range sources 2.2 Prioritize sources	3.evaluates...sources...critically
3. Location & access 3.1 Locate sources 3.2 Find info	2. accesses needed information effectively and efficiently. 5. accesses and uses information ethically and legally.
4. Information use 4.1 Engage (read, view, etc) 4.2 Extract info	3.evaluates information... critically. 5. understands many of the economic, legal and social issues surrounding the use of info. and acesses and uses info. ethically and legally.
5. Synthesis 5.1 Organize 5.2 Present	3. incorporates selected info. into his or her knowledge base and value system. 4.individually or as a member of a group, uses information effectively to accomplish a specific purpose.
6. Evaluation 6.1 Judge the product 6.2 Judge the process	

Themes of the Big6

1. **The Big6 process can be applied in all subjects, with students of all ages, and across all grade levels (K-20).**

   The Big6 is not just for kids.

Themes of the Big6

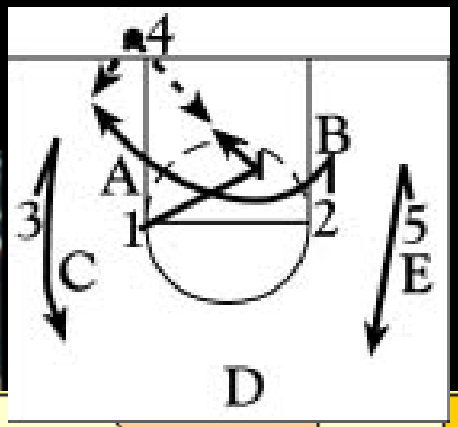
2. The Big6 is an adaptable and flexible; it can be applied to any information situation.

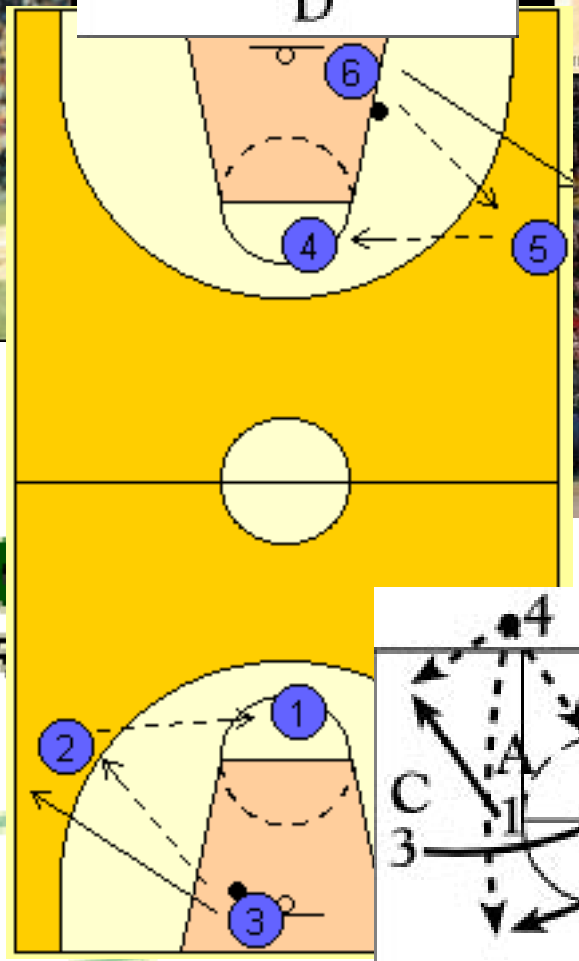
School

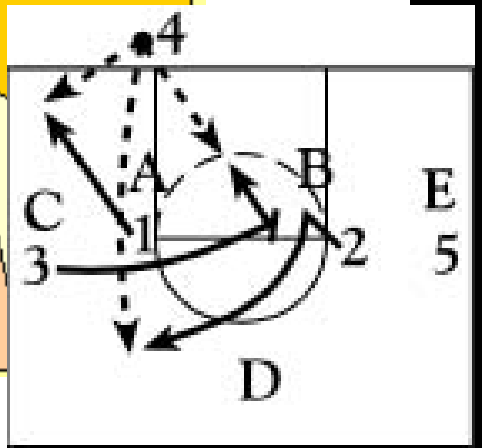
UNIVERSITY OF WASHINGTON
BOTHELL SEATTLE TACOMA

Work

Play







The Big6 Examples
Personal Information Problems

Work	Keeping up with e-mail.
Recreation	Should I go skiing on Saturday? If so, where?
Life	Career choice or job search.
Fun	What should I do about Valentine's Day?

Themes of the Big6

3. Technology skills take on meaning within the Big6 process.

Technology - Out of Context

- Word processing
- Electronic spreadsheets
- E-Mail
- Hyperstudio
- Web browsing
- Spell/grammar check
- Web page design
- Instant Messaging
- Upload/download
- Web searching
- Statistical analysis presentation
- Online catalogs
- Multimedia production (PowerPoint)
- Database management systems
- Video production
- Inspiration
- Chat
- Group discussion
- Electronic indexes
- CAD/CAM
- Use of operating systems
- Graphics
- Copy/paste
- Telnet
- Brainstorming software
- PDAs
- ftp
- Algorithms
- Programming
- HTML

Exercise

Word processing	
Search engines, electronic indexes, online library catalogs	
Spell/grammar check	
Brainstorming software	
Blogs	
Presentation software (PowerPoint)	
Email	

Technology in Context

Task Definition	Brainstorming software; Email
Info Seeking Strategies	Search engines, electronic indexes, online library catalogs; Blogs
Location & Access	Search engines, electronic indexes, online library catalogs
Use of Information	Presentation Software; Blogs
Synthesis	Presentation Software
Evaluation	Spell/grammar check; Email

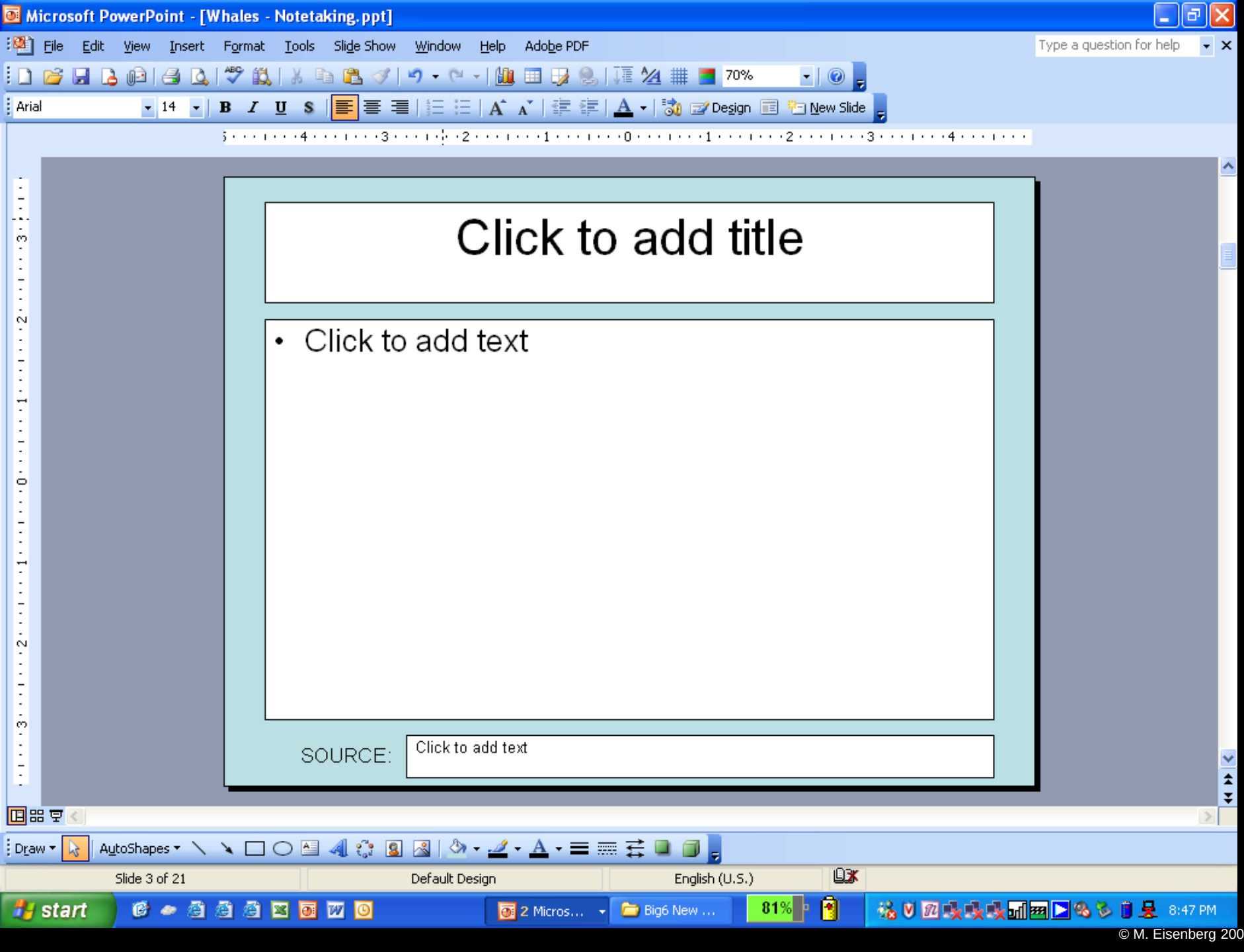
Technology *in* Context

Big6 4.2 and 5.1

Use of Information

Synthesis

Note-taking Using PowerPoint

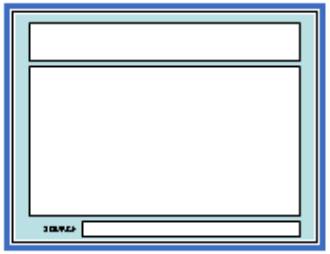


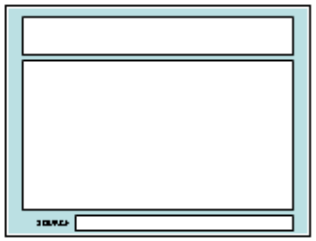
Microsoft PowerPoint - [Blank Notetaking Template.ppt]

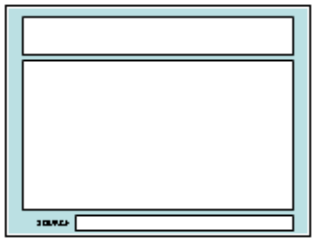
File Edit View Insert Format Tools Slide Show Window Help Adobe PDF

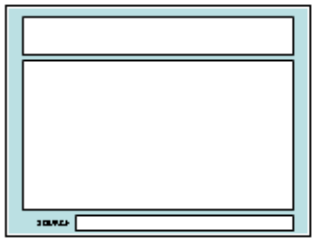
Type a question for help

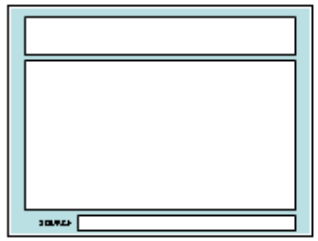
66% Notes... Transition Design New Slide

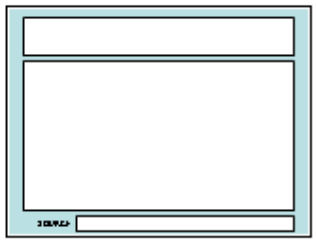

1

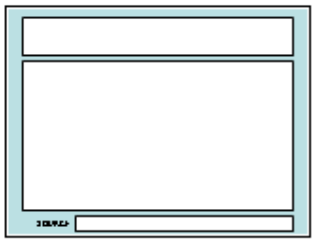

2

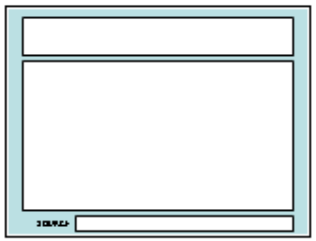

3

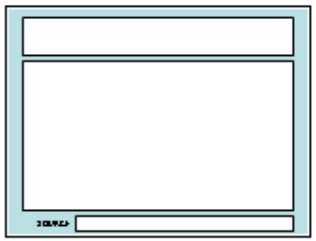

4

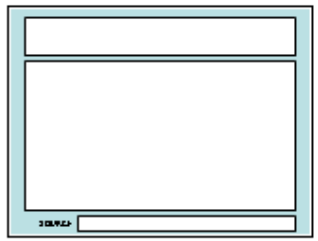

5

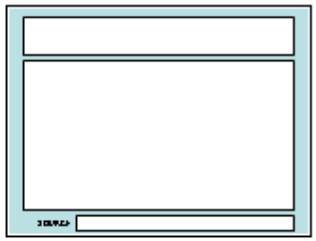

6

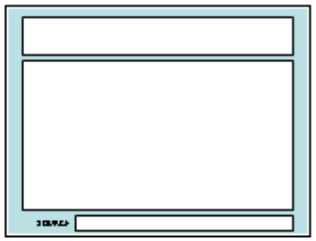

7

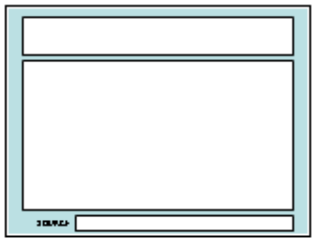

8

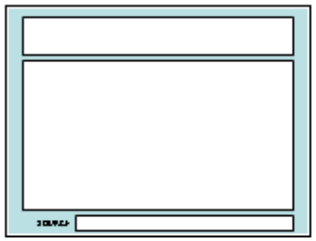

9

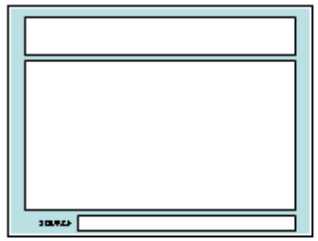

10


11


12


13

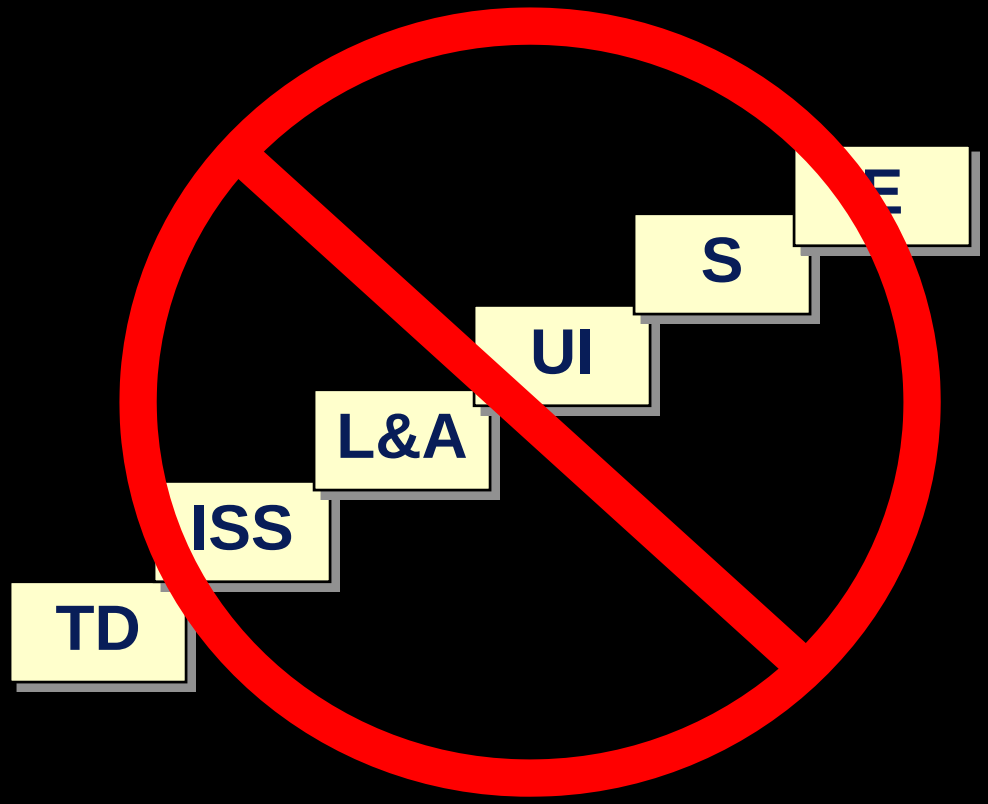

14


15

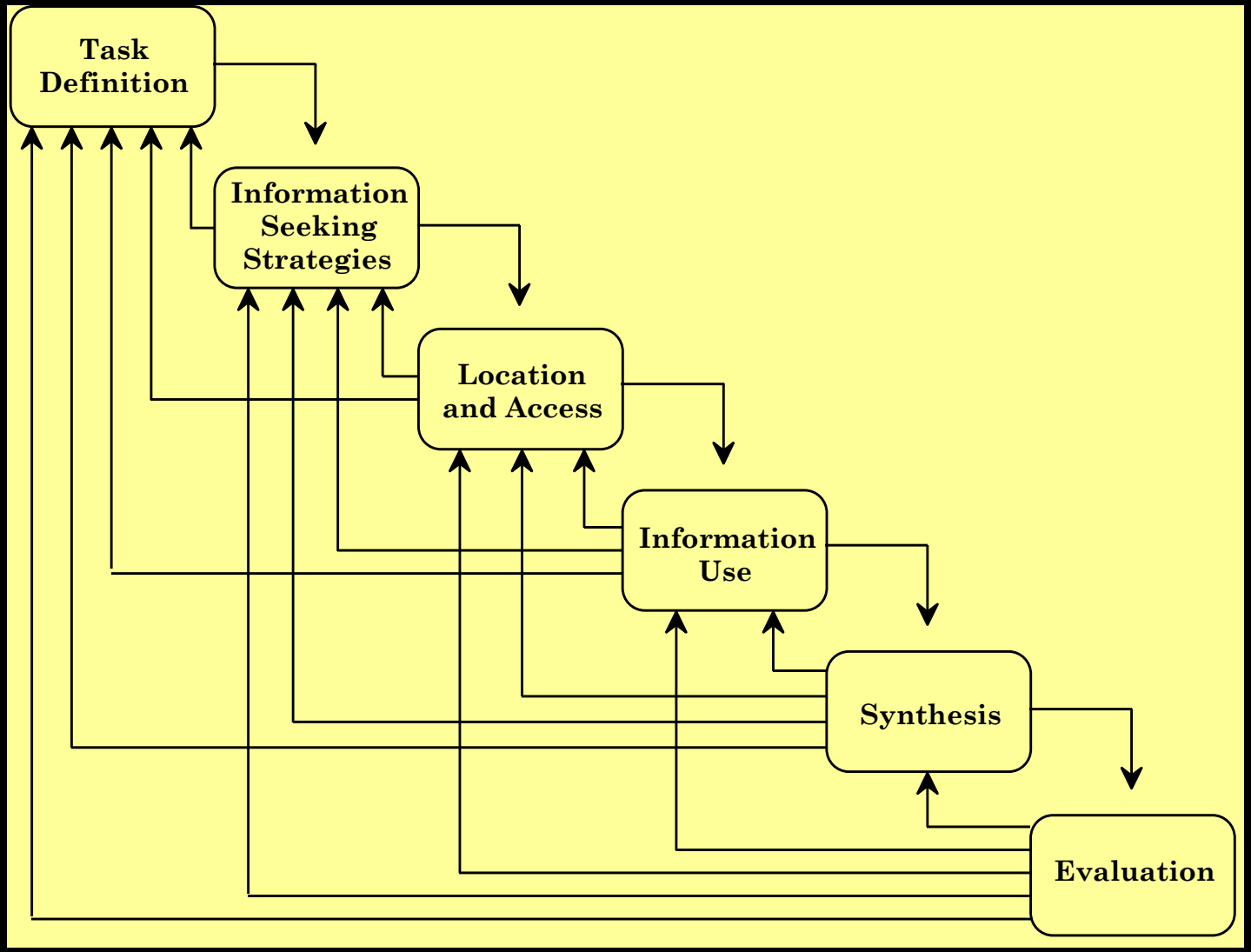
Slide Sorter | Default Design

start | 3 Micros... | Big6 New ... | 80% | 8:49 PM

4. Using the Big6 is not always a linear, step-by-step process.



The Big6: Not Linear



The Big6: Non-Linear

TD

E

ISS

S

L&A

UI

The Big6: Not Linear

TD

S

ISS

L&A

UI

S

UI

S

E

ISS

L&A

UI

S

E

Themes of the Big6

5. The Big6 process is necessary and sufficient for solving problems and completing tasks.

The Big6™ Skills Necessary and Sufficient

1. Task Definition
2. Info Seeking Strategies
3. Location & Access
4. Use of Information
5. Synthesis
6. Evaluation

The Big6™ Skills Necessary and Sufficient

1. Task Definition
2. Info Seeking Strategies
3. Location & Access
4. Use of Information
5. Synthesis
6. Evaluation

The Big6™ Skills Necessary and Sufficient

1. Task Definition
2. Info Seeking Strategies
3. Location & Access
4. Use of Information
5. Synthesis
6. Evaluation

The Big6™ Skills Necessary and Sufficient

1. Task Definition
2. Info Seeking Strategies
3. Location & Access
4. Use of Information
5. Synthesis
6. Evaluation

Themes of the Big6

6. The Big6 provides a common vocabulary for “metacognition” – that helps everyone talk about how they learn and solve problems.

6 Kinds of PIM Activitiy

1. Finding
2. Keeping
3. Maintaining and organizing*
4. Managing privacy and the flow of information*
5. Measuring and evaluation*
6. Making sense of things

* Meta-level or “m-level”

6 Kinds of PIM Activitiy

1. Finding
2. Keeping
3. Maintaining and organizing*
4. Managing privacy and the flow of information*
5. Measuring and evaluation*
6. Making sense of things

* Meta-level or “m-level”

Teaching/Learning/Applying PIM as part of Information Problem-Solving

- Within the IPS process
- In context

Information Problem-Solving & PIM

- Questions – Comments? -

Agenda

1. **Review WJ understandings**
2. **Information problem-solving**
   - Developing your own PIM skills
   - Teaching PIM skills to others
3. **Value-Added**
4. **My own “PIM”**
   - Personal taxonomy, tools, devices, approaches
   - Changing PIM

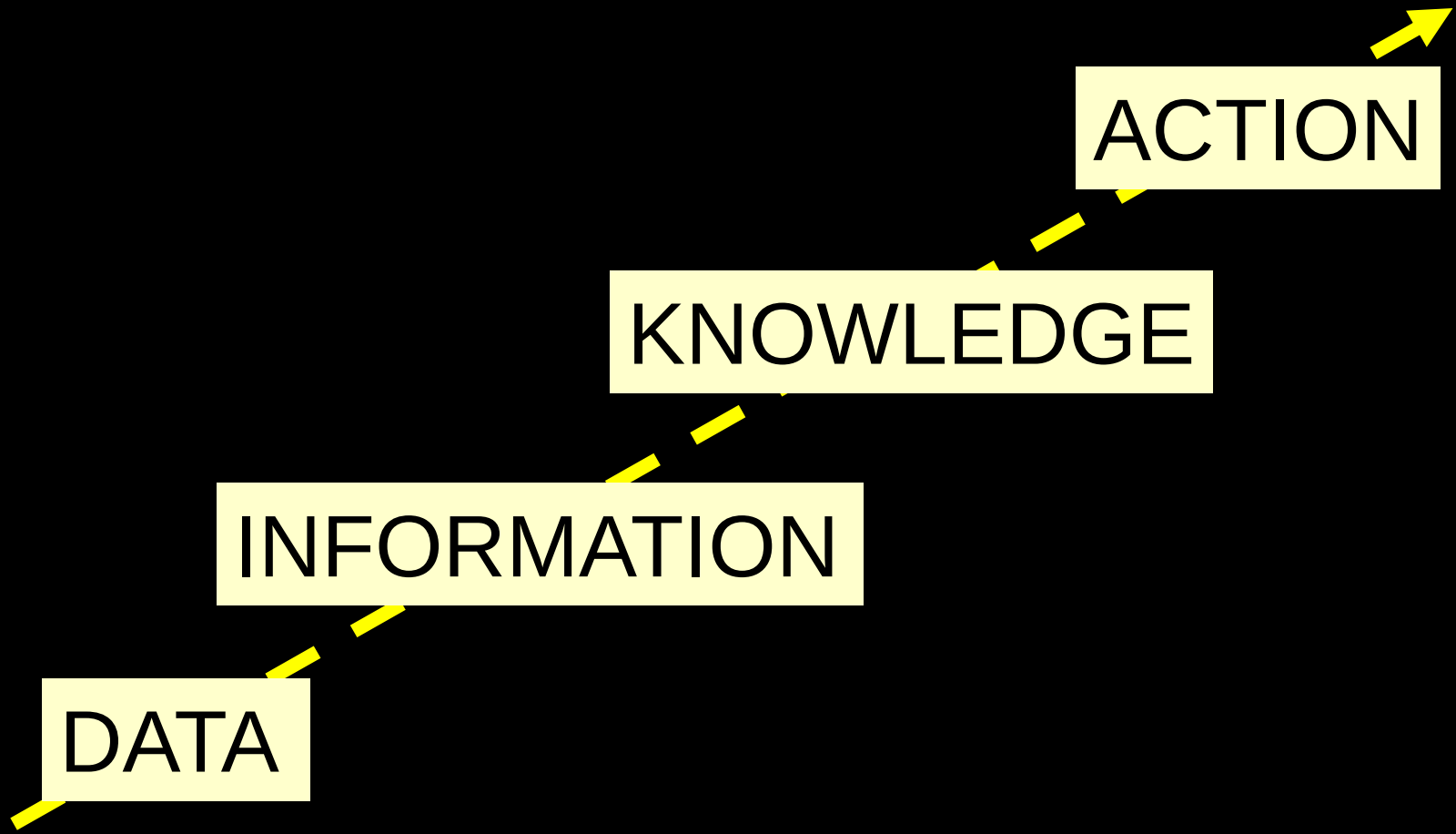
The Value-Added Approach

- R.S. Taylor
- Value-Added Processes in Information Systems
- Ablex, 1986

Underlying the Value-Added Perspective

1. Information is ubiquitous.
2. There is a hierarchy of information - the "information spectrum."
3. The purpose of an information system is to add value to better meet user needs.
4. We are constantly engaged in information problem-solving: encountering, solving, and resolving information problems.

The Information Spectrum



Taylor: Essentially what is being asked:

What do users want from information systems that would enable them to perform better, however "better performance" is defined in their context?

(Taylor p. 55)

The Value-Added User View of Information Systems

- The purpose of an information system is to meet the needs of its users
- The system does so by adding value to information

R.S. Taylor
The Value-Added Model

- User - criteria of choice
- Interface - values-added
- System – value-added processes

The Value-Added Model

- User Criteria
- Values Added
- System Processes

Taylor's Value-Added Model

USER CRITERIA OF CHOICE	INTERFACE (Values Added)	SYSTEM (Value-added processes)
Ease of Use	Browsing	Alphabetizing
	Formatting	Highlighting important terms
	Interfacing I (Mediation)	
	Interfacing II (Orientation)	
	Ordering	
	Physical Accessibility	
Noise Reduction	Access I (Item identification)	Indexing
	Access II (Subject description)	Vocabulary control
	Access III (Subject summary)	Filtering
	Linkage	
	Precision	
	Selectivity	

Taylor's Value-Added Model

USER CRITERIA OF CHOICE	INTERFACE (Values Added)	SYSTEM (Value-added processes)
Quality	Accuracy	Quality control
	Comprehensiveness	Editing
	Currency	Updating
	Reliability	Analyzing and comparing data
	Validity	
Adaptability	Closeness to problem	Provision of data manipulation capabilities
	Flexibility	Ranking output for relevance
	Simplicity	
	Stimulatory	
Time-Saving	Response Speed	Reduction of processing time
Cost-Saving	Cost-saving	Lower connect-time price

Figure 1: Taylor's Value-Added Model
(From Taylor 1986, Table 4.2 – p. 50)

USER CRITERIA OF CHOICE	INTERFACE (Values Added)	SYSTEM (Value-added Processes)
Ease of Use	Browsing	Alphabetizing
	Formatting	Highlighting important terms
	Interfacing I (Mediation)	
	Interfacing II (Orientation)	
	Ordering	
	Physical Accessibility	
Noise Reduction	Access I (Item identification)	Indexing
	Access II (Subject description)	Vocabulary control
	Access III (Subject summary)	Filtering
	Linkage	
	Precision	
	Selectivity	
Quality	Accuracy	Quality control
	Comprehensiveness	Editing
	Currency	Updating
	Reliability	Analyzing and comparing data
	Validity	
Adaptability	Closeness to problem	Provision of data manipulation capabilities
	Flexibility	Ranking output for relevance
	Simplicity	
	Stimulatory	
Time-Saving	Response Speed	Reduction of processing time
Cost-Saving	Cost-saving	Lower connect-time price

USER CRITERIA	VALUES ADDED	SYSTEM PROCESSES
Ease of Use	Browsing	Alphabetizing
	Simplicity	Highlighting
	Mediation	Formatting
	Orientation	Simplifying
	Ordering	
	Accessibility	
Noise Reduction	Item identification	Indexing
	Classification	Controlled vocabulary
	Summarization	Filtering
	Order	Selection
	Referral	Hyperlinking
	Precision	Semantic connecting
	Selectivity	Search
	Novelty	
Quality	Accuracy	Quality control
	Comprehensiveness	Editing
	Currency	Updating
	Reliability	Analyzing
	Validity	Selecting
	Authority	
Adaptability	Contextuality	Data manipulation capabilities
	Flexibility	Sorting
	Simplicity	Customizing
	Privacy	User profiling
		Informed consent
		Choice
Performance	Time saving	Bandwidth
	Cost saving	Parallel processing
	Security	Server size
	Safety	Processor speed
		Resource allocation/sharing
		Multi-tasking
		Common protocols; business practices
		Encryption; Password protection
Pleasing	Aesthetics	Design
	Entertaining	Interactive
	Rewarding	Gaming
	Engaging	Reinforcing
	Stimulating	

Value Added Analysis

User Criteria	Values Added	System Processes
Ease of Use		
Noise Reduction		
Quality		
Adaptability		
Performance		
Pleasing		

Cell Phones


MOTOROLA
12:00PM


SAMSUNG


AT&T
9:42 AM


NOKIA


Sony Ericsson
WALKMAN


SAMSUNG

Value Added Analysis

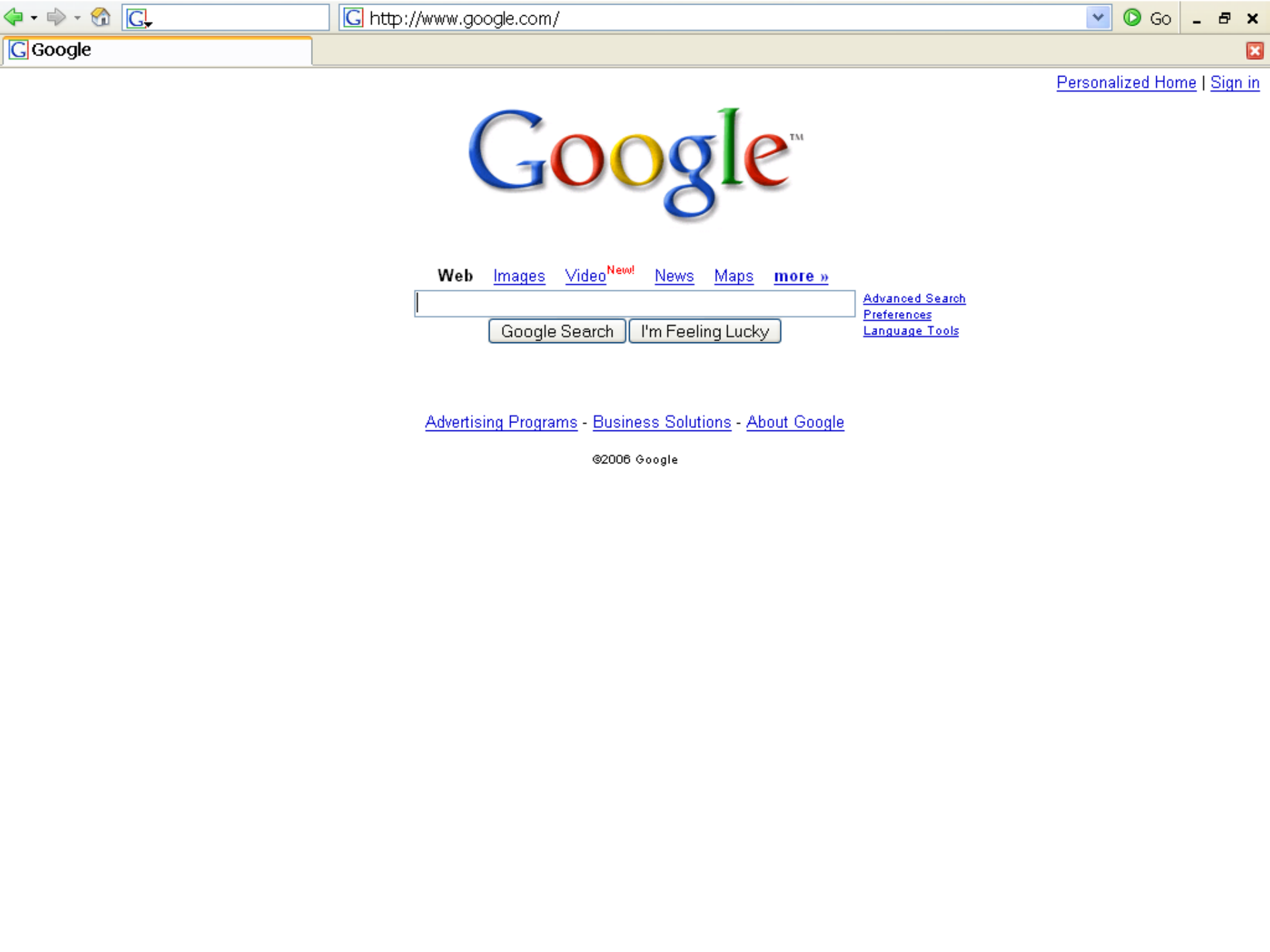
User Criteria	Values Added	System Processes
Ease of Use		
Noise Reduction		
Quality		
Adaptability		
Performance		
Pleasing		

#2 - The Car Dashboard

Value Added Analysis

User Criteria	Values Added	System Processes
Ease of Use		
Noise Reduction		
Quality		
Adaptability		
Performance		
Pleasing		

#3 – Search System


http://www.google.com/
Go
Google
Personalized Home | Sign in
Google
Web Images Video New! News Maps more »
Advanced Search
Preferences
Language Tools
Google Search
I'm Feeling Lucky
Advertising Programs - Business Solutions - About Google
©2006 Google

Value Added Analysis

User Criteria	Values Added	System Processes
Ease of Use		
Noise Reduction		
Quality		
Adaptability		
Performance		
Pleasing		

Summary

The Value Added Model provides a framework for:

- Analyzing user needs
- Determining values and sub-values to add that will meet those needs
- Applying system processes that add the desired values.

Build into your toolkit -

- The user-centered, value-added perspective
- Be able to add value to information in order to better meet the needs of users.

Value-Added & PIM

- Questions – Comments? -

Agenda

1. **Review WJ understandings**
2. **Information problem-solving**
   - Developing your own PIM skills
   - Teaching PIM skills to others
3. **Value-Added**
4. **My own “PIM”**
   - Personal taxonomy, tools, devices, approaches
   - Changing PIM

Eisenberg & PIM

- Questions – Comments? -

- thank you for listening -