

## Applying information architecture to university web sites

CASE V Conference

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Blog item for this presentation: <http://instone.org/casev>

Hi, I am Keith

- IBM > ibm.com > User experience > Information Architect
- Computer science > Human-computer interaction > Hypertext > Web usability > Information architecture
- Argus associates
- Telecommute to work from Toledo, Ohio
- BGSU Computer science researcher, ca. 1988-1998 (including working on bgsu.edu in the very early days of the web)



## Overview

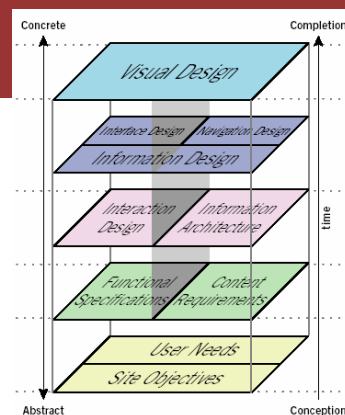
- About information architecture
  - Examples from ibm.com
  - Applied to university web sites
- Theme: Site organization → User experience → Perception of the university
- Practical: Navigation
- Warning: a lot of geeky IA stuff

## Familiar voices at CASE V

- Chaos to Harmony – Enterprise content management (Mon 9:15)
  - ...Coordinated its brand presence on the web...
- Designing an effective fundraising web presence (Mon 11:00)
  - ...Site strategy, audience definition, content inventory...
- From recruitment to orientation: Leveraging the web to offer services and build community (Mon 2:00)
  - Disparate sites... into... a... rewarding... experience...
  - Web site + process/people + information = good experience
- Measuring site success (Mon 3:45)
  - ... Complete user experience involves ... what users really think of your site ... usability studies...
  - 78% of prospective students use the web to evaluate colleges
- Usability factor (Tue 9:15)
  - ...Methods and processes for developing a site's information architecture.

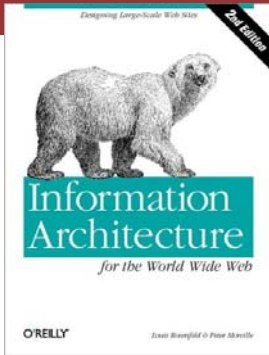
## What is information architecture? (from IA Institute)

- The structural design of shared information environments.
- The art and science of organizing and labeling web sites, intranets, online communities and software to support usability and findability.
- An emerging community of practice focused on bringing principles of design and architecture to the digital landscape.



Elements of User Experience – [jg.net/elements](http://jg.net/elements)

## The best starting point re: IA

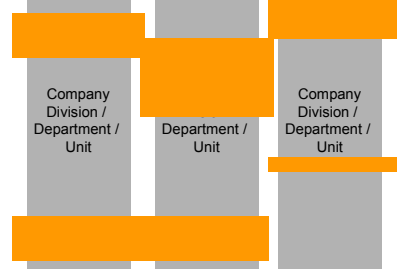


- Intro: Defining IA, Practicing IA, User needs and behaviors
- Principles: Organization, Labeling, Navigation, Search, Thesauri/CV/Metadata
- Methodology: Research, Strategy, Design
- Practice: Education, Ethics, IA Team, Tools/Software
- Organizational IA: ROI, Business strategy, Enterprise IA
- Case Studies: MSWeb, evolt

## Why practicing information architecture for (any large organization) is hard

How customers need to do business with the company

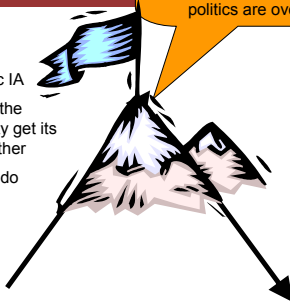
How students/parents/people need to interact with the university



## Strate

Magic moment:  
The issues are well-thought out, fully funded, the right teams are in place, the politics are over, ...

Big IA  
Strategic IA  
Helping the university get its act together  
What to do



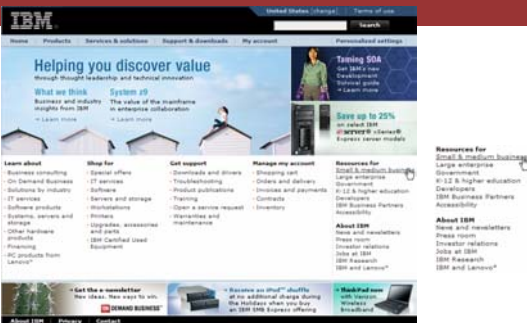
Little IA  
Tactical/Design IA  
Helping the university execute on its plan  
How to do it

## IBM stories → University examples

(examples to explain concepts & foster discussion, not be critiques)

- Audience views
  - IBM story, university samples, discussion/Q&A
- Org chart-it is
  - IBM story, university samples, discussion/Q&A
- Faceted finding
  - IBM story, university samples, discussion/Q&A
- Navigation concepts
  - IBM story, university samples, discussion/Q&A

## #1 Audience views





## Housing: A common destination for several audiences (audience sub-sections)

The screenshot shows the UHOUSING website with a navigation diagram overlaid. The diagram shows a flow from 'Faculty & staff' and 'Current students' to 'Resources', which then leads to 'Housing'. From 'Housing', the flow goes to 'Housing top page', which then branches into 'Faculty & staff Housing' and 'Undergrad Housing'. A red arrow points to the 'Faculty & staff' link in the top navigation bar, labeled 'Faculty & staff entry point'.

The screenshot shows the Ball State University main website. A navigation diagram is overlaid, showing a flow from 'Information for Prospective Students' to 'Faculty and Staff', 'Alumni and Friends', and 'Parents'. From 'Faculty and Staff', the flow goes to 'Resources', then 'Housing', then 'Housing top page', which branches into 'Faculty & staff Housing' and 'Undergrad Housing'. A red arrow points to the 'Faculty and Staff' link in the top navigation bar, labeled 'Faculty & staff entry point'.

## (Ball State) Specific-to and Relevant-for links

The screenshot shows the Ball State University website with arrows indicating specific-to and relevant-for links. Arrows point from 'My Courses' to 'Faculty and Staff', 'More News & Calendars' to 'Ball State vs. Butler', and 'Campus Life' to 'Services for Current Students'.

The screenshot shows the University of Cincinnati website with a list of relevant links. The list includes: 'Future Students', 'Current Students', 'Alumni', 'Faculty & Staff', 'Community', 'About UC', 'UC21 Vision', 'Academics', 'Admission', 'Calendars & Events', 'Colleges', 'Majors & Programs', 'Medical Center', and 'Sports'. A table on the right lists these links with a 'Relevant for' column.

Link	Relevant for
1. Relevant for	
2. Relevant for	
3. Relevant for	
4. Relevant for	
5. Relevant for	
6. Relevant for	
7. Relevant for	
8. Relevant for	
9. Relevant for	

## Audience views: Discussion points

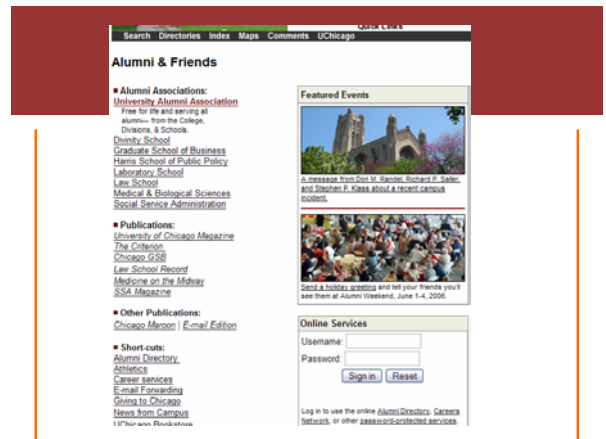
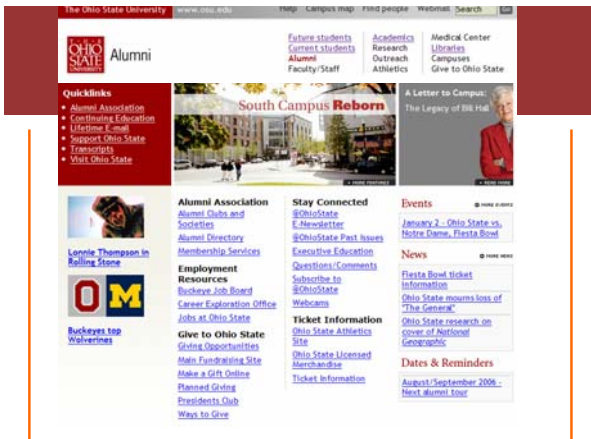
- Specific-to vs. Relevant-for
  - What proportion do you have?
- Audience as page of links vs. pervasive view of the university
  - Do you have an Alumni gateway page?
  - How much does your Alumni ass'n site represent "all things for alumni" (vs. org chart)
- Impact on the user experience
  - And thus on the perception of the university
- ...

## #2 Does anybody care about your org chart? (Or, how does it feel to air your dirty laundry in public on the web?)

The screenshot shows the IBM Global Services website. The page features a header with 'IBM' and 'Global Services', a main content area with 'THE CAPABILITY WITHIN: GLOBAL HUMAN CAPITAL STUDY 2005', and a sidebar with 'Why IBM' and 'Our capabilities include'.





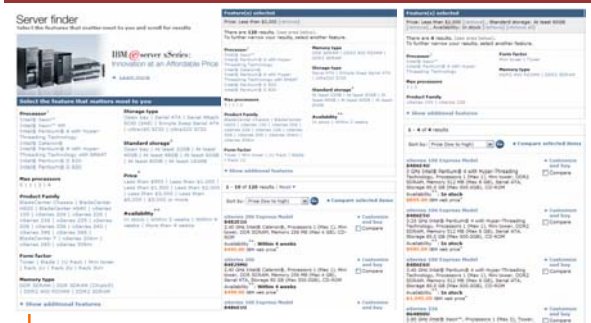


### Org chart: Discussion points

- What techniques do you use to fight org-chart-itis within universities?
  - What is the impact on the user experience / perception of the university? Maybe "herding cats" is the "brand" you want to convey? (^)
- Any examples where the org chart was overcome for a quality user experience?
- Any tips for at least getting each group to *appear* to be part of the same university?
- ...

#3 When does it pay to centralize and provide many access points? (Faceted finding)

Faceted browsing



- Interaction style where users filter a set of items by progressively selecting from only valid values of a faceted classification system
- Facet values selected in any order the user wishes
- Null results are never achieved
- Leverages faceted classification schemes
- "Slow and steady wins the race" interaction (click-page-click-page)
- Model: drill-down choices "naturally" reflect depth so far
- Faceted finding = faceted search + faceted browse + faceted query

**Workstation finder**

Maximize your IT investment with technical training from IBM

Choose from thousands of courses available on demand, e-learning, or in-classroom learning formats

**Professional** selected

Operating system: Microsoft® Windows® XP Professional 3 (selected) | Home Edition (also available) (selected) (2)

There are 7 results. (See area below). To further narrow your results, select another feature.

**Desktop** selected

Graphics type: Advanced G2 (selected) | G2 (selected) | G20 (selected) | G21 (selected) | G22 (selected) | G23 (selected) | G24 (selected) | G25 (selected) | G26 (selected) | G27 (selected) | G28 (selected) | G29 (selected) | G30 (selected) | G31 (selected) | G32 (selected) | G33 (selected) | G34 (selected) | G35 (selected) | G36 (selected) | G37 (selected) | G38 (selected) | G39 (selected) | G40 (selected) | G41 (selected) | G42 (selected) | G43 (selected) | G44 (selected) | G45 (selected) | G46 (selected) | G47 (selected) | G48 (selected) | G49 (selected) | G50 (selected) | G51 (selected) | G52 (selected) | G53 (selected) | G54 (selected) | G55 (selected) | G56 (selected) | G57 (selected) | G58 (selected) | G59 (selected) | G60 (selected) | G61 (selected) | G62 (selected) | G63 (selected) | G64 (selected) | G65 (selected) | G66 (selected) | G67 (selected) | G68 (selected) | G69 (selected) | G70 (selected) | G71 (selected) | G72 (selected) | G73 (selected) | G74 (selected) | G75 (selected) | G76 (selected) | G77 (selected) | G78 (selected) | G79 (selected) | G80 (selected) | G81 (selected) | G82 (selected) | G83 (selected) | G84 (selected) | G85 (selected) | G86 (selected) | G87 (selected) | G88 (selected) | G89 (selected) | G90 (selected) | G91 (selected) | G92 (selected) | G93 (selected) | G94 (selected) | G95 (selected) | G96 (selected) | G97 (selected) | G98 (selected) | G99 (selected) | G100 (selected)

**Laptop** selected

Operating system: Microsoft® Windows® XP Professional 3 (selected) | Home Edition (also available) (selected) (2)

There are 7 results. (See area below). To further narrow your results, select another feature.

**Downloads and drivers results**

Product category: Year of issue (2002) selected

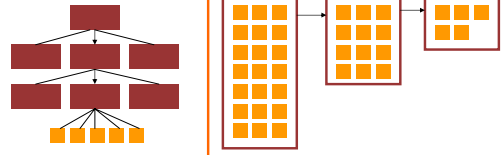
Select an attribute or enter a search term to refine your results.

Search within results: Search

1 - 10 of 10 results | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100

## Part of a trend: Filtering instead of Hierarchies

- Old days: Click-click-click on categories and finally get to the goodies *at the leaf nodes*
- Trend: One click, get a sample of results ("1-10 of 149"), select a category to get fewer results



## The pieces of the faceted browse flow

**Top page**

**Middle pages**

**Destination page**

The screenshot shows the epicurious website interface. The top page displays search filters and a list of recipes. The middle pages show the results of a search, with various facets like 'Course', 'Meal', 'Preparation', 'Season/Occasion', 'Appetizers', 'Breakfast', 'Dessert', 'Main Dish', 'Salad', 'Sandwiches', 'Snacks', 'Soups', 'Side', and 'Vegetables'. The destination page shows a specific recipe, 'Artichoke Bruschetta', with a detailed description and ingredients.

## Pieces of the user interface

**Facet selection**

**Results**

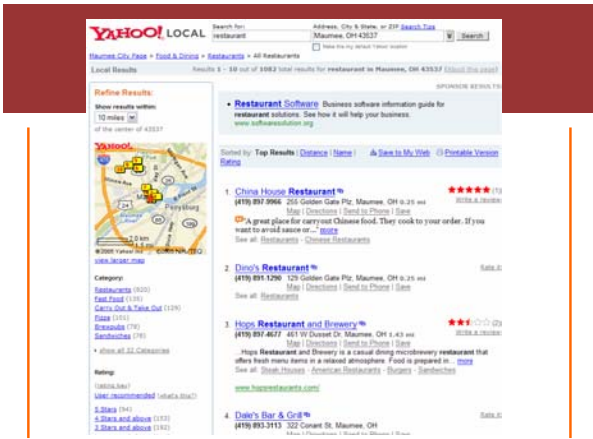
The screenshot shows the epicurious website interface. The top navigation bar includes 'Home', 'Eat', 'Drink', 'Learn', 'Shop', 'Recipes', 'Restaurants', 'Bon Appétit', 'Gourmet', 'TV', 'Forums', and 'Travel'. The main content area displays search filters and a list of recipes. The search bar is located at the top right, and the results are displayed in a grid format.

**Amazon.com Diamond Search Results**

The screenshot shows the Amazon.com website interface. The search bar is at the top, and the results are displayed in a grid format. The filters on the left include 'Shape', 'Price', 'Carat', 'Cut', 'Color', and 'Clarity'. The results table shows columns for 'Shape', 'Carat', 'Price', 'Color', 'Clarity', and 'Action'.

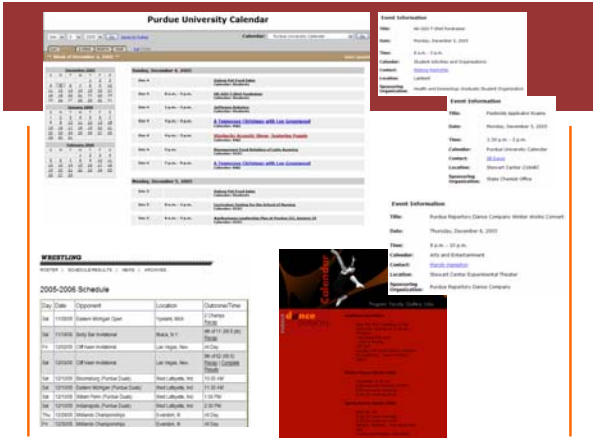
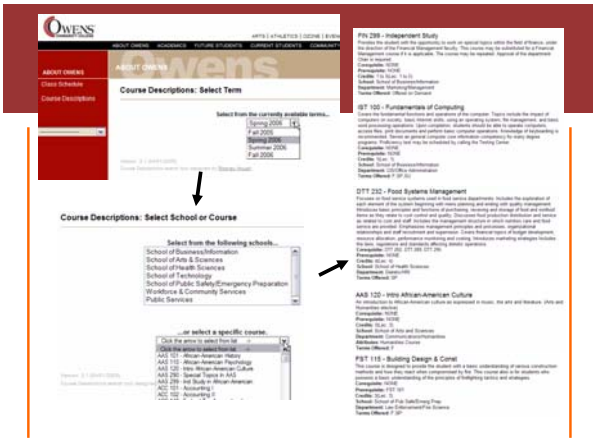
**msnet Shopping**

The screenshot shows the msnet Shopping website interface. The search bar is at the top, and the results are displayed in a grid format. The filters on the left include 'Brand', 'Price', 'Color', and 'Clarity'. The results table shows columns for 'Brand', 'Price', 'Color', 'Clarity', and 'Action'.



## Faceted browsing possibilities for university web sites

- Course description database
- Calendar of events



## Faceted finding: Discussion points

- Any examples of existing university applications?
- What user goals does this appear to be promising for universities?
- Any other favorite examples (non-university)?
- ...

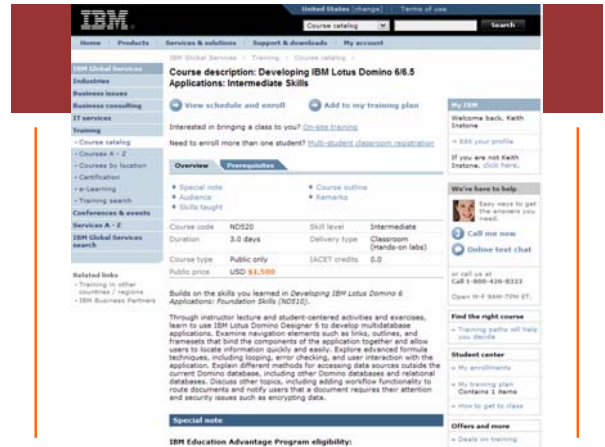


#4 Kinda interesting so far, Keith, but we really need help with our *navigation!*

"Stress test" questions  
(ca. 1997, more popular now with SEO)

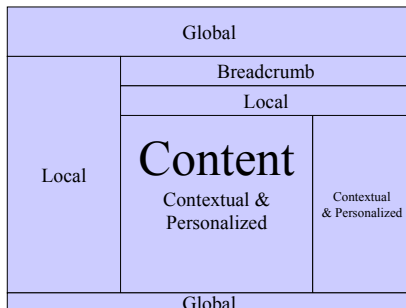
- Designing all pages as an entry point
- Navigation framework: global, local, contextual, personalized

- What is this page about?
  - What site is this?
  - What are the major sections of this site? Which one is this page under?
  - What is "up" 1 level from here?
  - How do I get to the home page of this site?
  - How might you get to this page from the site home page?
- What does each group of links represent?
- More details, sub-pages of this one
  - Nearby pages, within same section as this page
  - Pages on same site, but not as near (in other sections)
  - Off-site pages

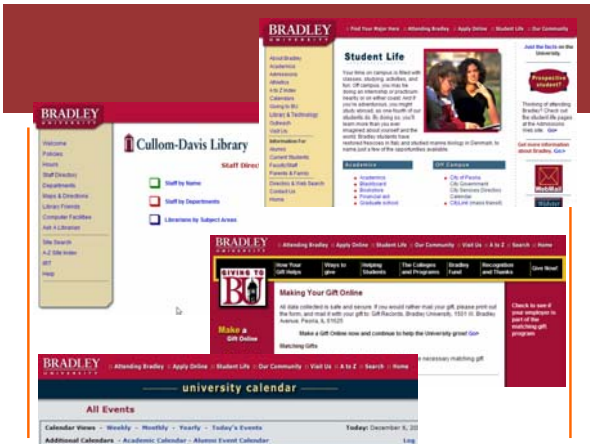


### Navigation Framework

### Global & Local Navigation

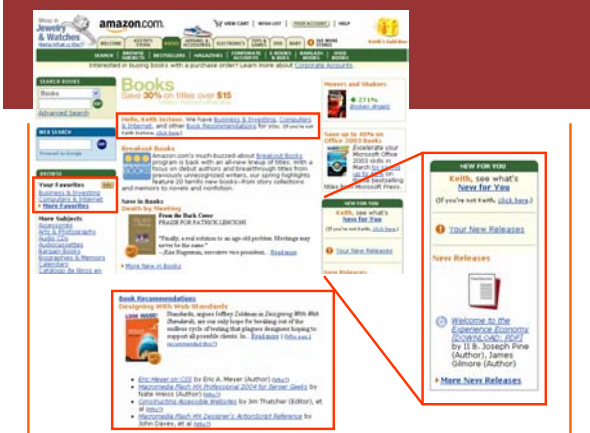


- Site identification, branding
- Major sections
- Utilities
- Almost every page
- Can (should?) change for sub-sites
- Where-am-I indicators
- Specific to this section of the site
- Varies from section to section, but consistent (hopefully)
- Parental, sibling, child relationships
- Where-am-I indicators



## Contextual & Personalized Navigation

- Specific to this page
- Cuts across hierarchy (local navigation covers the stuff in the same bucket)
- Hand-crafted and/or automated
- Embedded in the content and/or given its own space on the screen
- Like contextual but based on WHO you are
- "Recommendations"
- Who do you think I am?
- Why is this here?
- What am I missing?

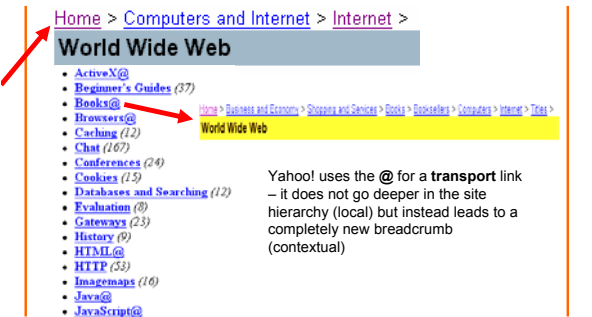


## About the 3 Types of Breadcrumbs

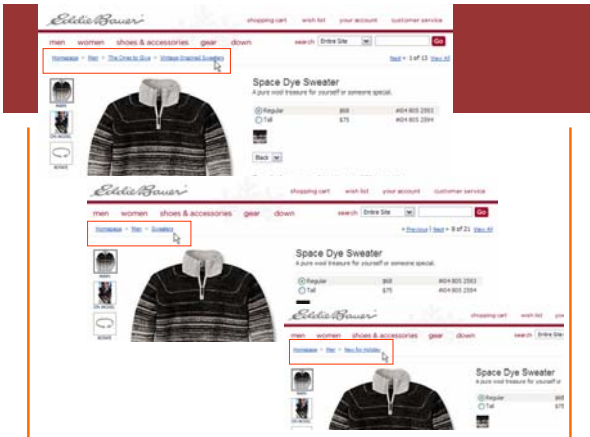
- The term "breadcrumb" is used for several different concepts – causing confusion during design discussions
- Location Breadcrumb – "You are here", static
  - Path Breadcrumb – how you got here, dynamic
  - Attribute Breadcrumb – meta-information

## Yahoo Directory: Everyone's first exposure to breadcrumbs?

## Yahoo Directory: @ means Transport



Yahoo! uses the @ for a transport link – it does not go deeper in the site hierarchy (local) but instead leads to a completely new breadcrumb (contextual)



**Look for similar items by category**

**Browse similar items in Music:**

- Styles > Children's Music > General
- Styles > Jazz > Cool Jazz
- Styles > Jazz > General
- Styles > Miscellaneous > General
- Styles > Miscellaneous > Holiday > General Christmas
- Styles > Miscellaneous > Holiday > Pop Vocal
- Styles > Pop > General
- Styles > Soundtracks > By Decade > 1960s
- Styles > Soundtracks > General

**A Charlie Brown Christmas: The Original Sound Track Recording of The CBS Television Special [SOUNDTRACK]**

View Details Status Related Recordings

**List Price:** \$14.98  
**Price:** \$13.49 & eligible for **FREE Super Saver Shipping** on orders over \$25. [See details](#)

**You Save:** \$1.49 (10%)

**Availability:** Usually ships within 24 hours. Ships from and sold by Amazon.com. [See more on holiday shipping.](#)

**Want it delivered Wednesday, December 27?**  
 Order it in the next 3 hours and 13 minutes, and choose **One-Day Shipping** at checkout. [See details](#)

**14 used & new available from \$9.99**  
**Club price:** \$9.99

See 2 customer images. Click above to see customer images.

## Navigation concepts: Discussion points

## Final thoughts?

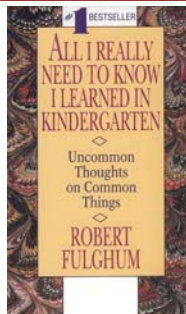
- What template do you use to encourage people to design each page as an entry point?
- How have you balanced global and local navigation?
- Do you have any personalized navigation?
- Are breadcrumbs effective for your sites?
- ...

- Which IBM stories were most relevant to you?
- What are the *other* important IA issues at your university? (I may have an IBM story that is similar)
- What are your take-aways from this talk? (if any!)
- ...

## All I really need to know I learned in IA class...

## Thanks for your attention!

- Share
- Put things back where you found them
- Flush
- Take a nap
- Hold hands, watch out for traffic, stick together



Other stuff about navigation, breadcrumbs, faceted browsing:  
<http://user-experience.org/>

This presentation:  
<http://instone.org/casev>

