



User-centered Instructional Design

Robin Naughton, PhD

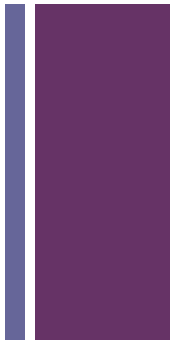
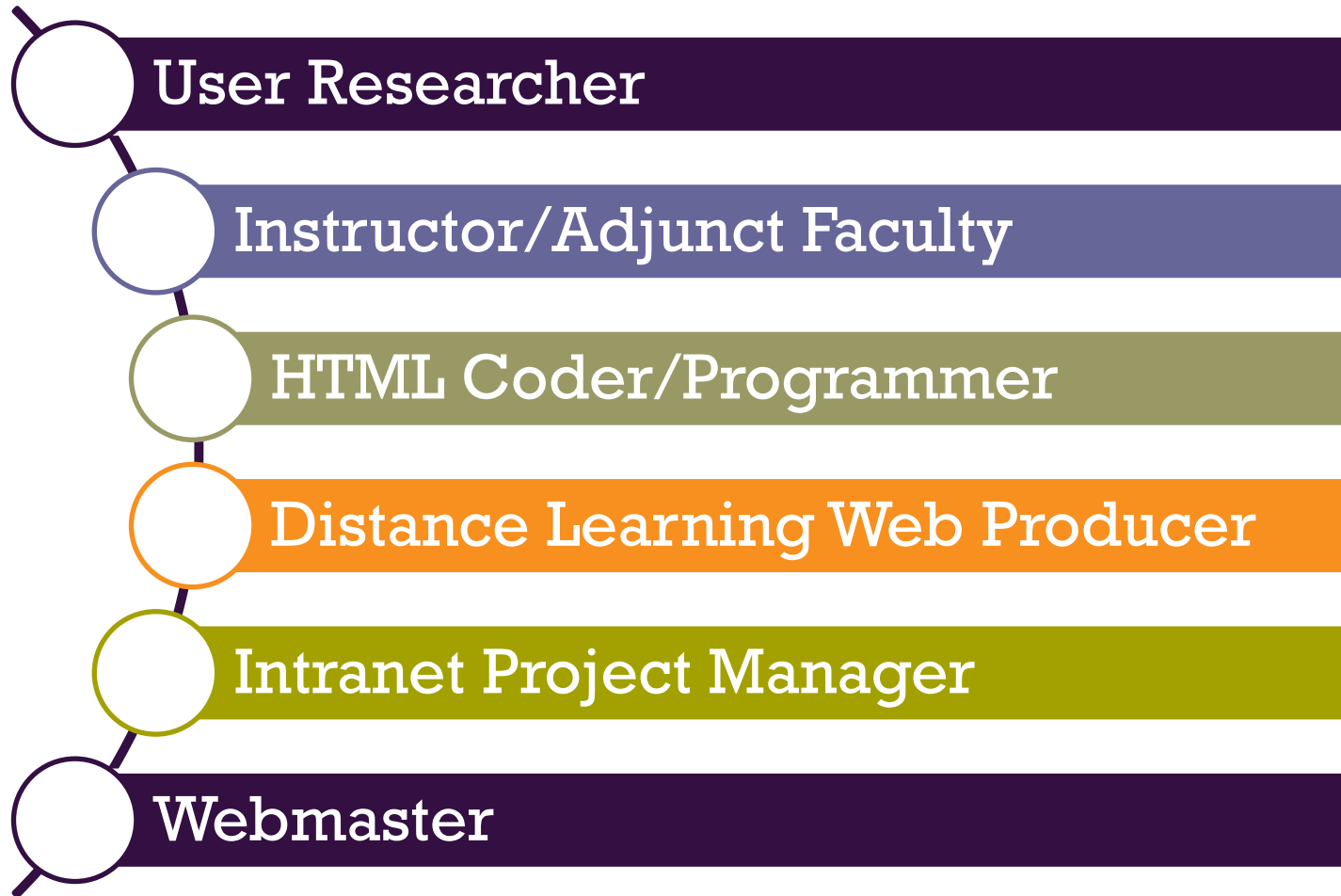
**ACRL/NY Distance Learning Discussion Group “meet-and-greet”
(June 7, 2013)**

+ Agenda

- My Background
- User-centered Instructional Design
 - Research
 - Design
 - Develop, Implement, Evaluate
- Resources
- Questions



+ My Background: Overview





My Background: Recent Research

Designing Public Library Websites for Teens: A Conceptual Model

■ Part I: Teens

- 30 Teens 13 – 15 years old
- 3 Public libraries
- Written Questionnaire, Drawing Task, Semi-structured Interview

■ Part II: Websites

- 60 Public library websites
- Web Content Analysis





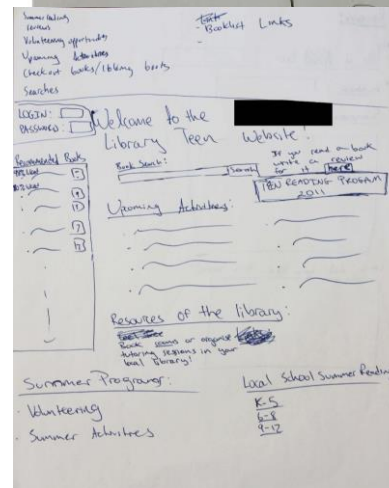
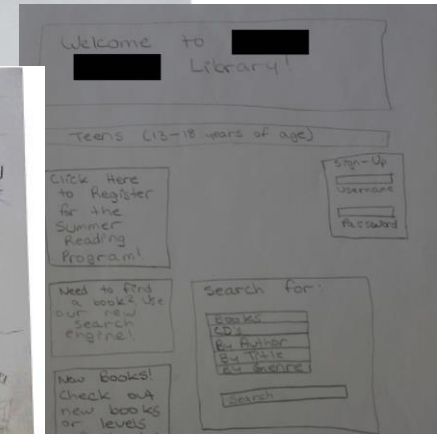
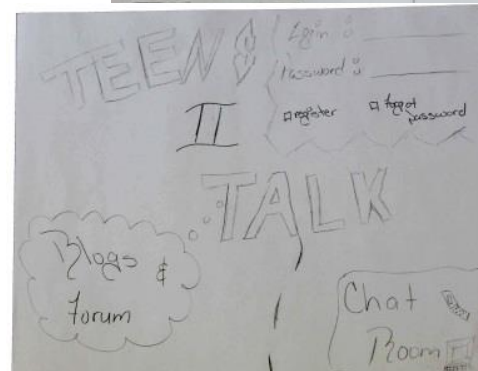
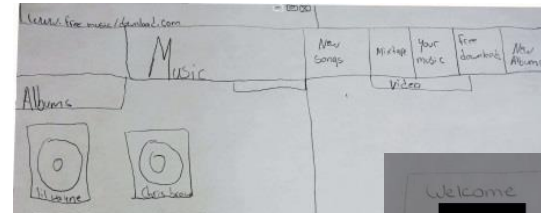
My Background: Recent Research

Designing Public Library Websites for Teens: A Conceptual Model

Findings:

- **5 Teens' Mental Models:**
 - Single Functional - *task-oriented and goal specific*
 - Process - *Search-focused*
 - Social Connection - *communication-focused*
 - Portal - *category-based*
 - Information Discovery - *click-free instant updates*

- **4 Website Models:**
 - Portal
 - Information Discovery
 - Reading
 - Media-oriented





User-centered Instructional Design

Creating effective, efficient and easy to use instruction that responds to the information and learning needs of users



■ User Experience

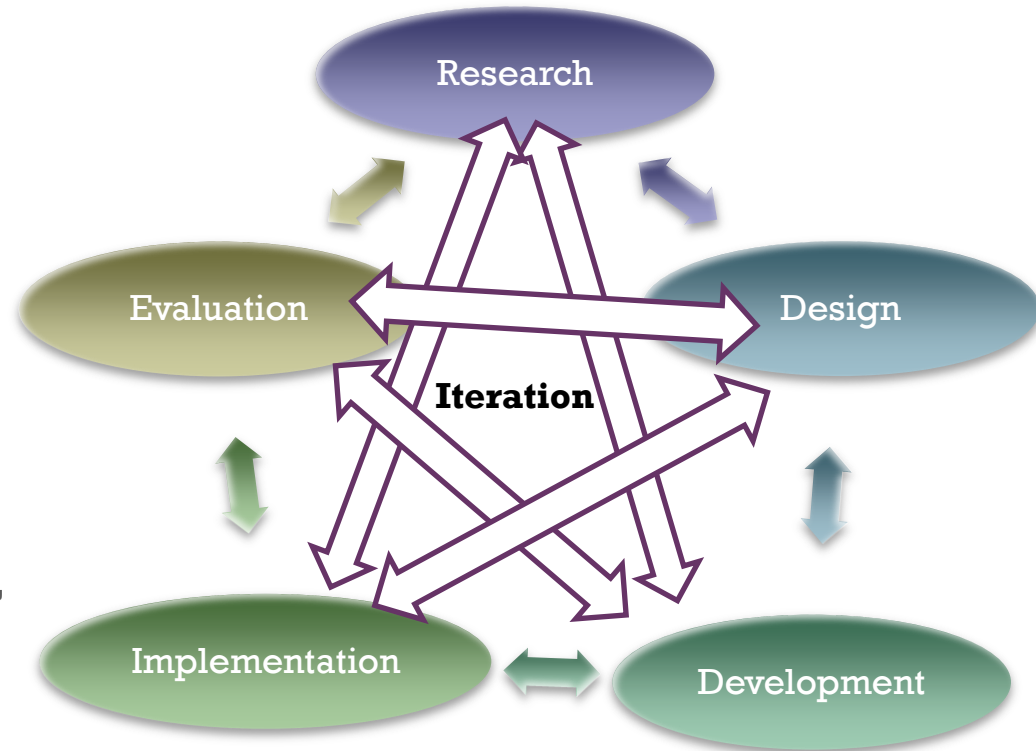
- “It is important to point out that one cannot design a user experience, only design for a user experience,” (Sharp, et al, 2007).
- 5 Planes: Strategy, Scope, Structure, Skelton, Surface (Garrett, 2002)

■ User-centered Design

- “The practice of creating engaging, efficient user experiences” (Garrett, 2002)
- Know the user, Minimize memorization, Optimize operations, Engineer for errors (Hansen, 1971)

■ Instructional Design

- “...stripped to its basics, is simply a process for helping you to create effective training in an efficient manner” (Piskurich, 2006)





Research: Know Your Users



■ Previous Knowledge

- Why are they here?
- What do they know when they arrive?
- What are their goals?
- How do they use their knowledge?

■ Expectations

- What type experience do they expect?
- How do they know when their expectations are met?
- What will they do if their expectations are not met?

■ Environment

- What technologies do they use to interact?
- When and where are they interacting?
- How do they interact?





Research: Know Your Content



■ Content Inventory

- What content do you have and what needs to be developed?
- What are the content types (text, images, video, audio, files, etc.)
- How is the content being used now? Should it change?

■ Learning Goals

- What is the relationship between content and learning goals?
- How does the content reflect user information and learning needs?
- What is the quality of the content?
- How will users be assessed and success identified?

■ Constraints

- How will content be developed, assessed and maintained?
- What resources are available?
- What is the timeline?



Research: Know Your System



■ Current Status

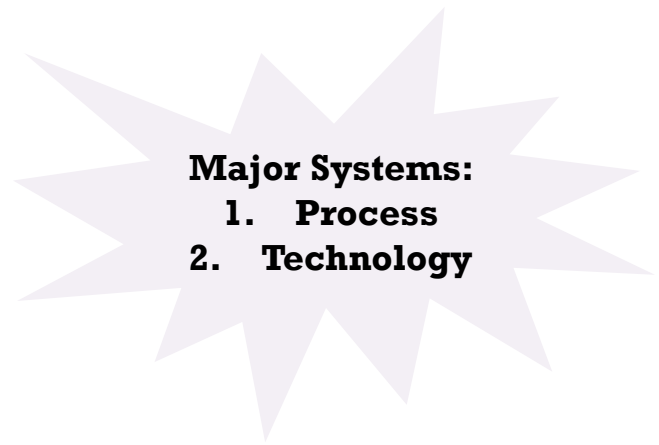
- What can the system do now, with some tweaking, or not at all?
- What is the current process being used?

■ Expectations

- What are the goals?
- How will the goals be met?
- What is the measure of success?

■ Constraints

- What are the technical constraints?
- What resources are available?
- What skills and tools are available for design and development?
- What is the plan for continued maintenance and updates?



+ Research: Methods

- Questionnaire & Survey
- Interview
- Focus Group
- Drawing
- Contextual Inquiry
- Usability
- Card Sorting
- Web Analytics
- Competitive Intelligence
- Web Content Analysis



**5 Participants
Provide Insight**

+ Design

- Goals & User Needs
- Content & Visual Design
- Information Architecture
- Personalization & Customization

The screenshot shows a course management system interface. On the left is a navigation sidebar with a tree view containing sections like 'INFO-684-900', 'Announcements', 'Weekly Events', 'Week 1: Defining YA', 'Week 2: Adolescent Development', 'Week 3: Intro YA Lit', 'Week 4: BookTalking/Teen Spaces' (highlighted), 'Week 5: YA Genres', 'Week 6: Reference Services for Teens', 'Week 7: Multicultural Literature', 'Week 8: 21C YA Literacies', 'Week 9: Teens and Technology', 'Week 10: Resources for Young Adults', 'Resources', and 'Faculty Info'. Below this is a 'COURSE MANAGEMENT' section with a 'Control Panel' and various tools like 'Content Collection', 'Course Tools', 'Evaluation', 'Grade Center', 'Users and Groups', 'Customization', 'Packages and Utilities', and 'Help'.

The main content area is titled 'Week 4: Booktalking / Teen Spaces'. It contains several sections:

- WEEK 4 READINGS**
 - Textbooks:**
 - Gorman/Suellentrop: Chapters 7 and 10
 - Articles:**
 - Cole, Sonja. "Booktalks that Knock 'em Dead." *Teacher Librarian* 35.1 (October 2007): 41-42. Serial online.
 - Gallo, Erminia Mina. "Attractive Displays for Teen Spaces." *Young Adult Library Services* 8.4 (July 15, 2008): 32-34.
 - Jensen, Kelly, and Westin Mary Beth. "Booktalks As Bridges: Building a Partnership Program." *Voice Of Youth Advocates* 33.5 (December 2010): 418-419.
 - Sullivan, Margaret. "Walls Can Talk...but Are They Speaking to Teens?" *Teacher Librarian* 39.2 (December 2011): 13-15.
 - Book Club:**
 - Book Club Reading "Break" Catch up on any discussion forums that you are lagging participation; no new forums this week.
- WEEK 4 LECTURES & NOTES**

Attached Files:

 - Lecture: Booktalking.pptx (871.11 KB)
 - Notes: Powerful Points Example.ppt (3.895 MB)
 - Lecture: TeenSpaces.pptx (2.042 MB)
- VIDEO: Booktalking with Teens with Kristine Mahood**

Duration: (4:38)
- VIDEO: YOUmedia Chicago Teen Space**

Take a look at the video at the bottom of this page of a new 21st Century Teen Space.
Duration: 4:47
- Additional Booktalking Resources**
 - Diamant-Cohen, Betsy, and Selma K. Levi. *Booktalking Bonanza: Ten Ready-To-Use Multimedia Sessions for the Busy Librarian*. Chicago: American Library Association, 2008.
 - Langmack, Chapple. *The Booktalkers' Bible: How to Talk about Books You Love to Any Audience*. Westport, CT: Libraries Unlimited, 2003.
 - Mahood, Kristine. *Booktalking with Teens. Libraries Unlimited Professional Guides for Young Adult Librarians Series*. Westport, CT: Libraries Unlimited, 2010.
 - Silvey, Anita. *500 Great Books for Teens*. NY: Houghton Mifflin, 2006.
 - Welch, Rollie James. *A Core Collection for Young Adults*. 2nd ed. Teens @ the Library Series. NY: Neal-Schuman, 2011.
- DISCUSSION FORUMS**

Click here to access the discussion forums for this week.



Design: Content & Visual Design



Use Words and Graphics rather than Words Alone

Managing Complexity by Breaking a Lesson into Parts

E-learning and the science of instruction : proven guidelines for consumers and designers of multimedia learning (Clark & Mayer, 2008)

Align Words to Corresponding Graphics

Adding Interesting Material Can Hurt Learning

Present Words as Audio Narration, Rather Than On-Screen Text

Explain Visuals with Words in Audio *or* Text: Not Both



Design: Content & Visual Design

Consistency: Develop templates (content, font, colors, images, multimedia, etc.)

Week ## Readings

- **Textbooks:**
 - **Text 1:** Author(s) & Chapter (s) to read
 - **Text 2:** Author(s) & Chapter (s) to read
- **Articles:**
 - **Article 1:** Full Citation of Article
 - **Article 2:** Full Citation that links to Online Article
- **Other Weekly Activity:**
 - **Task 1**
 - **Task 2**

Week ## Lecture & Notes

- **Attachments:**
 - **File 1:** Descriptive title including file extension
 - **File 2:** Descriptive title including file extension
 - If necessary, include additional descriptions or directions for attachments

Week ## Additional Information

- **External Links**
- **Additional reading and/or resources**

Week ## Discussion

- **Link to discussion forum for the week**

Info884: Resources for Young Adults
Week 2

1

UNDERSTANDING ADOLESCENT DEVELOPMENTAL AND INFORMATION NEEDS
An Introduction to Young Adult Literature

2

UNDERSTANDING ADOLESCENT DEVELOPMENT

This lecture is focused on teens developmental and information needs, drawing from Gorman and Sullentrop and additional research. Although teens as a group have developmental milestones, each teen is unique and the pace of development differs among teens. Some teens may hit their physical milestones while their emotional and psychological milestones are still in progress. Thus, it is important that educators try to have a positive impact on teens developmental assets. We need to recognize how our work impacts teens and their contributions.

While going through the lecture, reflect on the following questions:
-> Drawing from your own experiences during adolescence, what do you find true or not with the research presented?
-> Think about teens you know and teens you've seen in the world. What assumptions have you made?
-> After reading the research, what new understandings do you come away with?

3

Stages of Adolescence Development

Early Adolescence
Ages 11 - 13

4

Stages of Adolescence Development

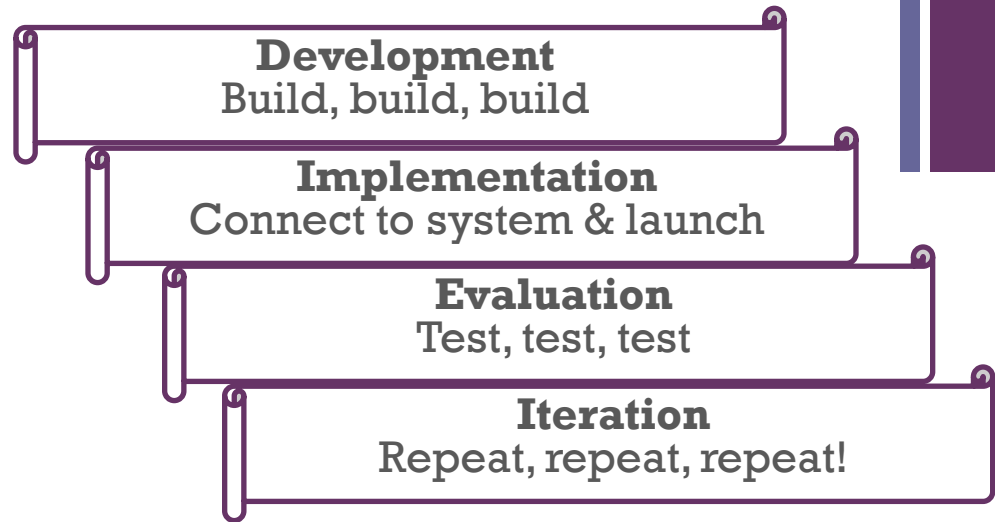
- Three stages of adolescent development
 - Early Adolescence – generally ages 11 - 13
 - Middle Adolescence – generally ages 14 - 16
 - Late Adolescence – generally ages 17 - 18
- Each stage of development is characterized by particular tasks/milestones.
- Each teen has an individual and unique experience while going through the stages of development.



Develop, Implement, Evaluate

Design Results

- User Roles & Personas
- Mockups & Wireframes
- Prototypes
- Templates



Assessment

- **Research** – Ask students about their expectations and goals early, get informal feedback on specific activities, and get formal feedback on course/instruction
- **Design** - Based on student expectations and goals, informal and formal feedback, design the course to respond accordingly
- **Development** – build new resources and adjust others
- **Implementation** – apply new knowledge throughout course and future courses
- **Evaluation** – identify what works, what needs to change and how best to evaluate next time.



Resources

- Beyer, H., & Holtzblatt, K. (1999). Contextual design. *Interactions*, 6, 32–42. (InContext Design Company Website <http://incontextdesign.com>)
- Clark, R. C., & Mayer, R. E. (2008). *E-learning and the science of instruction : proven guidelines for consumers and designers of multimedia learning* (2nd ed.). San Francisco, CA: Pfeiffer.
- Garrett, J. J. (2002). *The elements of user experience : user-centered design for the Web* (1st ed.). Indianapolis, Ind.: New Riders.
- Morville, P., & Rosenfeld, L. (2007). *Information architecture for the World Wide Web* (3rd ed.). Sebastopol, CA: O'Reilly.
- Nielsen Norman Group (<http://www.nngroup.com/>) and Alertbox (Nielsen's Newsletter on Usability): <http://alertbox.com/>
- Norman, D. A. (2002). *The design of everyday things* (1st Basic paperback. ed.). New York: Basic Books.
- Piskurich, G. M. (2006). *Rapid Instructional Design: Learning ID Fast and Right*: Pfeiffer.
- Sharp, H., Rogers, Y, and Preece, J. (2007) *Interaction Design: Beyond Human-Computer Interaction* (2e), John Wiley & Sons, Inc.

+ Discussion



Questions & Comments



Thank You

Robin Naughton, PhD

robin.naughton@gmail.com

<http://www.nebodi.com/rnaughton/>