RUTGERS

School of Communication
and Information

Towards a Model for Evaluating Online Tutorials

plus ça change, plus c'est la même chose

Jana Varlejs

varlejs@rutgers.edu

Feng-Chia University

May 1, 20112

Objectives

By the end of this hour, we will have:

- Reviewed the evolution of online tutorials

- Identified several types

- Listed and categorized evaluation criteria

- Proposed a model for evaluation

****

Make yourself a note about the main question you have now – at the end, I will want to know if I have answered it!

Not too long ago…..

http://searchpath.libraries.rutgers.edu

Closer to Today

http://www.libraries.rutgers.edu/rul/lib_instruct/riot/

More like today…

http://www.coastal.edu/library/videos
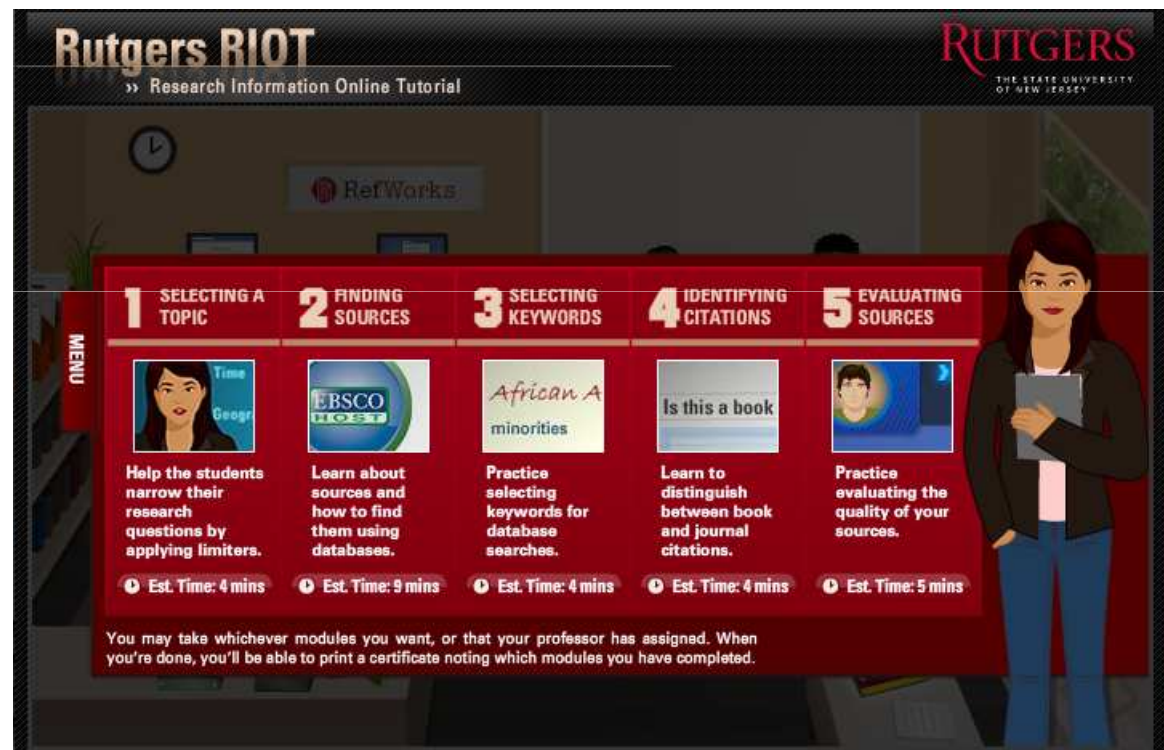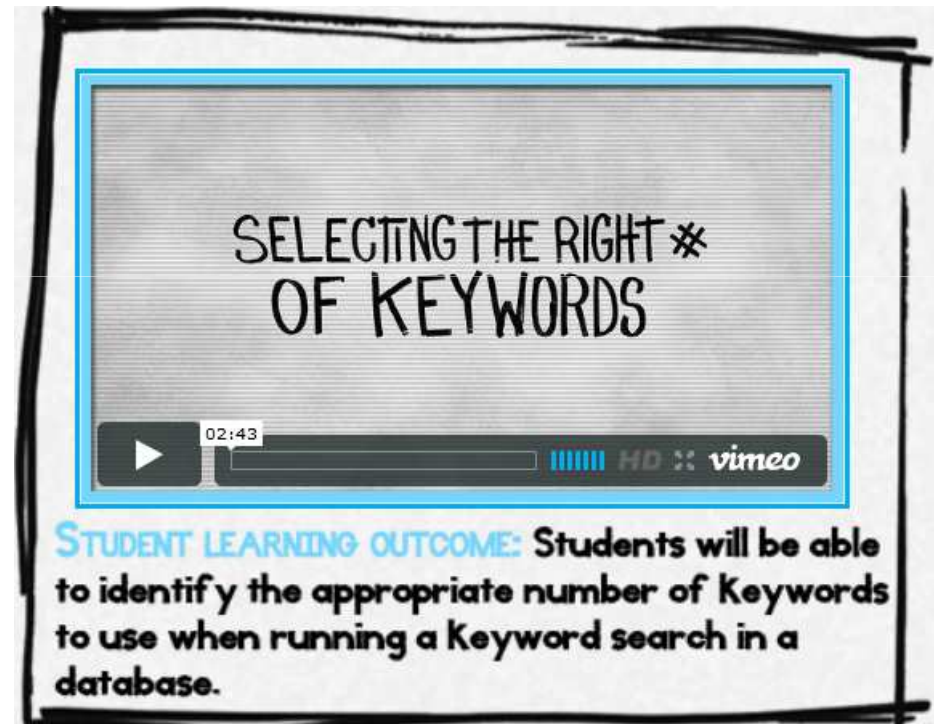
What year did your library create its first tutorial?

Formats have evolved from all-text with some graphics, like Searchpath and its ancestor TILT

Text + some audio + some interaction

More visuals + audio

Animation

Video

Apps for handhelds

Games
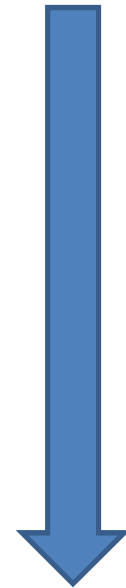
Other changes over time:

From

- Multiple-unit, sequential guide to IL
- 45 minutes or more in length
- Limited navigation

To

- Self-contained modules
- Very short
- For use in any order

Why have tutorial formats changed?

- Basics of information literacy have changed?
- Extra money in the budget?
- Librarians love to show off how clever they are with technology?

- Hmmm – maybe the latter is true

BUT more likely….

The ugly truth

Librarians studied student behavior:

- Students hated the older tutorials
- Students did not learn much from them
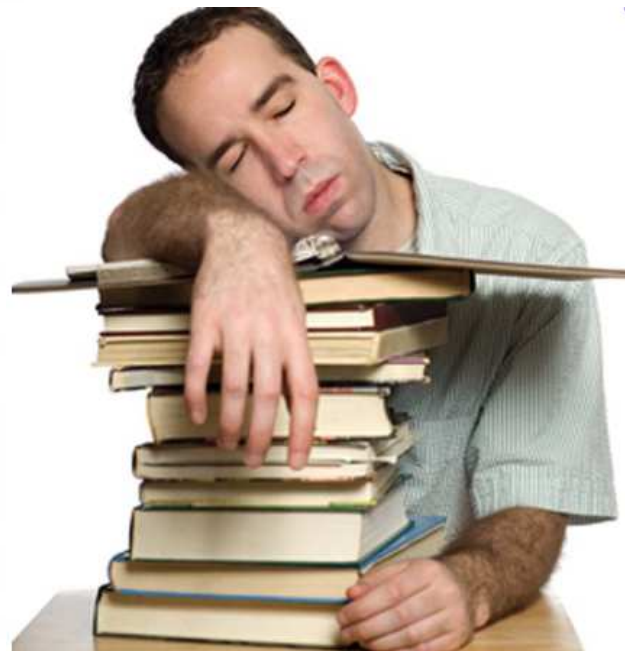
USA students today

- Are media savvy
- Have short attention spans
- Are tethered to their electronic gadgets
- Are multi-taskers
- Lack patience
- Want to save time
- Are these characteristics true of Taiwan's young people too?

Is there a match?

- When designing tutorials, do librarians put themselves in the shoes of their target audience?

- Looking at the excerpts from Searchpath, RIOT, and Coastal's module, which one seems more attuned to today's young people?

- Let's look at an interview about another tutorial that was selected by PRIMO

PRIMO: Peer-Reviewed Instructional Materials Online Site of the Month

http://www.ala.org/acrl/aboutacrl/directoryofleadership/sections/is/iswebsite/projpubs/primo/site

The "Site of the Month" interviews offer insights and ideas from the creators and developers of projects accepted into the PRIMO database. You can explore both interviews and the actual tutorials through the URL above

- **December 2011:** Information Literacy Tutorial
- **November 2011:** The Search for the Skunk Ape
- **October 2011:** Kimbel Library Instructional Videos

Skunk Ape tutorial combines old and new formats

http://library.fgcu.edu/RSD/Instruction/skunkape/Module_1_Getting_Started/index.html

The Florida Gulf Coast U's Skunk Ape tutorial is quite traditional, yet incorporates a lot of video

[we will look at it later if there is time]

For the time being, let us look at what the tutorial's creator said about it

Skunk Ape tutorial – interview excerpt

We wanted to create a tutorial that would address the information literacy competencies that were considered... basic. ... target audience for this tutorial is lower-division undergraduates or anyone who may be new to college level library research.

Skunk Ape, cont.

Looking at the feedback we have received through our survey, there is a bit of a split opinion about the videos versus text. Some commented that they would prefer to get all of the information for the videos and were tempted to skip the written material. But other responses indicated that they thought the videos took too long, and one person said they would rather just read something and answer the questions.

We have numbers for the year 2010 that show page visits. From the first page of each module to the last page of each module, there is a loss of between 9% and 17% of viewers. So, yes there are a number of people who are starting but not finishing the modules. And there is also a significant drop off of visits between the first module and the second module.

Skunk Ape, cont.

Q: I noticed that you used both immediate concept check questions and end of module quizzes. How do the results of the two sets compare? Has this been an effective strategy for teaching and assessment?

To assess learning as a result of the tutorials, I created a supplemental pretest and posttest in our learning management system. … two-pronged strategy allows the modules themselves to facilitate learning and the pre and posttests to more accurately assess learning. The score collection, assessment, and integration into the learning management system are all still a work in progress, but we have had some positive results so far. In the spring of 2011, we had over 100 students take the assessment and scores improved by 20 percentage points on the posttest over the pretest.

The value of PRIMO

Skim the interviews in PRIMO with the librarians who oversaw tutorial design and development when you have a chance.

You will see the various ways the librarians have tried to find out what the students learned from a tutorial, how much time they spent, and so on.

It will get you started on thinking about how you want to evaluate

Evaluation/Assessment

These terms are often used interchangeably

In the IL context, I like to differentiate between making judgments of value or worth (evaluation) and measurement of skills, knowledge, or outcomes (assessment)

Evaluation is usually expressed in words

Assessment is often expressed in numbers

Evaluating tutorials = assessing students?

- One way of evaluating tutorials is to assess student learning outcomes, e.g., ask what percentage of them achieved a passing grade on a test measuring their information literacy skills

- So one has to consider: Can a tutorial be judged as "very good" on a set of evaluation criteria, yet fail to produce adequate student learning outcomes?

Towards a model of evaluation

As long ago as 1999, an article was published with the title

"Transporting good library instruction practices into the web environment: An analysis of online tutorials"

It concluded that "traditional criteria can guide librarians in developing good online instruction"

Dewald, N. (1999). *Journal of Academic Librarianship 25*(1), 26-32

Dewald's traditional criteria

Good library instruction should:

- Be course-related/assignment related
- Use active learning
- Use collaborative learning
- Incorporate more than one medium
- Have clear educational objectives
- Teach concepts, not just mechanics
- Offer librarian's follow-up help (give contact information)

Ten+ years later

Bowles-Terry, M., Hensley, M.K., & Hinchliffe, L.J. (2010). Best practices for online video tutorials in academic libraries: A study of student preferences and understanding. *Communications in Information Literacy 4*(1), 17-28.

Evaluation focused on usability, findability, instructional effectiveness. Some criteria are different, but so is the format. The most significant difference is the purpose.

What is the purpose?
Is it achieved?

http://www.library.illinois.edu

The University of Illinois librarians wanted to

- … "meet students at their point of need when facing a specific library – related research task"

- They did not intend to teach concepts or critical thinking, just how to get the student on with his or her work

Stand-alone vs point-of-need criteria

http://www.library.illinois.edu

Dewald's "**Transporting…**"

- Course related
- Active learning
- Collaborative learning
- Visuals, audio
- Contents, navigation
- (objectives clear)
- Includes concepts
- Librarian contact info

Illinois' "**Best practices…**"

- Irrelevant
- Some
- No
- Yes, and text
- Obvious
- Obvious
- No
- yes

Illinois' results

- In order to evaluate whether the videos taught students library tasks they needed to perform, the librarians first watched students attempt a task without any instruction, then showed the video demonstrating the task
- All but one student succeeded after watching an instructional video
- Usability and findability aspects were less successful

UW-Milwaukee – a multipurpose how-to-research tutorial (Searchpath redux)

http://www.ala.org/acrl/aboutacrl/directoryofleadership/sections/is/iswebsite/projpubs/primo/site/2010dec

Another PRIMO pick, an example of a tutorial that was meant to be both course-related and stand-alone:

"Each module has… videos that demonstrate search strategy and evaluation, a graphic explanation of the skill that goes with the type of search, glossary terms, and a website or article on the theory behind that concept. The tutorial …was designed primarily to meet the needs of English 102 …., but the modular design and higher order content was built into the tutorial so that it could be a learning utility for all undergraduates and graduate students"

UW-Milwaukee, cont. -- Structure
http://guides.library.uwm.edu/infolit

"The six modules' topics were based upon the modules of the SearchPath tutorial that we were replacing …essential for our information literacy goals. Within each module you will find four "layers" of content: skill, exploration, theory, and glossary. We wanted the tutorial to be adaptable so that it met the needs of our principal user group, but could also be integrated into other courses. This desire for adaptability led to our layered approach."

UWM cont. -- Evaluating the tutorial

"To assess the new Information Literacy Tutorial, data was gathered through three modes: the Feedback Survey in the Tutorial, student discussion posts from English 102 D2L courses, and an instructor focus group [and] a handful of unsolicited responses. ... We collected and coded the posts to analyze the findings."

UWM cont. – Did they learn?

"In reviewing student discussion posts, our guiding question was "Do English 102 students articulate learning and value in their discussion of the tutorial modules?" The comments from all five of the participating sections were reviewed and then coded to indicate evidence of learning and track user experience comments. The tutorial was evaluated on the criteria listed in the Figure below. Student comments were independently coded and then compared for consistency."

UWM cont. -- Analysis

Criteria	Code	Frequency
Real Learning Knowledge	RLK	42
Helpful	H	39
Connections to Assignments	C	29
Real Learning Task	RLT	28
Aha Moment	A	17
Missed the Learning Goal	X	16
User Experience	UEX	7
Ease of Use	EU	3
Technical Problems	TP	2

**Total Number of Comments=63 from 5 online sections**

UWM criteria

- Rather than listing criteria before doing the analysis, the UWM librarians drew themes from the feedback they got, and we can see how evaluation criteria emerge.

- The main point to note is that the criteria are not very different from most of the Dewald traditional criteria and that usability plays a role, as in the Illinois study.

UWM, More criteria, more to evaluate

- "We have plans to do periodic usability testing. We have … closed captioning on all videos. One of the benefits of using the LibGuide … is its accessibility on multiple devices.

- … thinking of what content to include, we continually asked ourselves, "Is this the most useful information? Will this meet their research need?" … Weeding out the nice but not necessary …. We also wanted … information would be clearly identified as useful from a student's perspective. An example might better explain this. The Finding Articles Module includes a video on how to locate and use our databases. We titled the video: Where do I find articles? Not, Article Databases. So we strove to present the content in language commonly used by students."

A mash-up model for tutorial evaluation -- pick and choose from the following criteria!
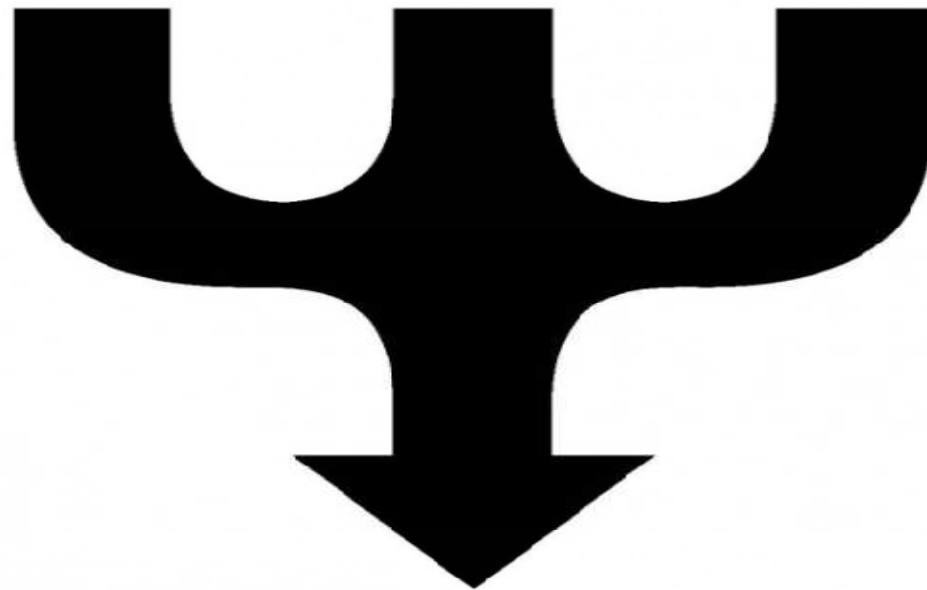
Learning-related criteria

1. Purpose and objective/s are clear and appropriate
2. Motivation is built in – related to coursework
3. Active learning is integrated
4. Feedback and reinforcement are included
5. Completion time is commensurate with value
6. Format recognizes different learning styles
7. Presentation holds attention and interest
8. Contact information for more help from librarians is included

Content-related criteria

1. All content is useful and helpful, but parsimonious – no padding
2. Content is selected in line with objectives
3. It is up to date, accurate
4. No broken links
5. Presentation is logical, well organized
6. Material is presented in manageable chunks
7. Vocabulary is free of jargon, concepts are explained, examples are relevant
8. There are links to glossary, subject research guides, other useful aids

Technology-related criteria

1. Tutorial is easy to find on library's website
2. Works with multiple file types, handheld devices , major course management systems
3. Easy to navigate – you can see where you are and how to move elsewhere
4. Screens are readable, uncluttered, require minimal scrolling
5. Print can be enlarged; other assistive technology can be applied; color is not distracting, no problem for color-blind users

Many criteria, many models?

One size does not fit all

The entire set of criteria should be considered for designing comprehensive tutorials, such as UW-Milwaukee's

But only some criteria apply to short, point-of-need tutorials, such as Illinois' videos

Which criteria **always** apply? Please mark you handouts

What is always applicable?

Let's see if we agree on the basic criteria!

Check choices on the handout and compare

Finally, can we identify the underlying principle that the tutorial designer should follow?

Questions to answer

I posed the question, "Can a tutorial be judged as 'very good' on a set of evaluation criteria, yet fail to produce adequate student learning outcomes?"

We can now turn this around and ask, Can a tutorial produce adequate student learning outcomes but fail to meet a number of other criteria?

Finally,

Have we answered YOUR question?

Thank you for your attention! 　　　　　varlejs@rutgers.edu

If time, or on your own, evaluate a tutorial that combines formats

http://library.fgcu.edu/RSD/Instruction/skunkape/Module_1_Getting_Started/index.html

The Skunk Ape tutorial is quite traditional, yet incorporates a lot of video

What evaluation criteria do you want to apply?

Overall, do you think the University's students will be happy using this tutorial?

If you were the designer, what would you keep, what would you change?