Letting Go & Starting Over: The Transformation of an Information Literacy Tutorial

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Background

In 1996, a two-course General Education communication requirement was implemented at the University of Wisconsin – Madison. Both courses have campus-mandated information literacy modules. The tutorial CLUE was developed for the first of these two courses in which 75% of our freshman class (ca. 3,500-4,000 students) are annually enrolled. All students in this course are required to complete CLUE before attending a library session taught by a librarian in which the basic resources, research strategies and skills are put into the context of the research process.

Original CLUE Tutorial

The original CLUE tutorial, which debuted in 1995, was designed using AuthorWare and was delivered via a stand-alone CD. In 2000, it was updated using Flash and delivered online. Structurally CLUE was divided into three modules: "Info Power Tools", "MadCat" (our local OPAC), and "Indexes." Each module began with the voice of a student discussing research problems they were having. This was followed by a demonstration of how these problems were resolved. Each module ended with a 'your turn' component that got students into an online resource such as our OPAC or an index. Finally, students had to demonstrate their new-found knowledge by successfully completing three quizzes.

By 2004 it was clear that CLUE needed to be revised. The Weblog statistics suggested that students were going directly to the quizzes and bypassing the modules. They were taking the quizzes multiple times until they achieved the required score. A UW-Madison study that assessed freshman research behavior indicated that students were impatient with college-level research skills – opting to quickly abandon the use of library tools, such as

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catalogs and journal databases, for their tool of choice, Google. In addition to updating the look and feel of CLUE, we realized that the tutorial needed to provide students with reasons to learn new search skills and use new research tools. Google had worked for them throughout high school; they needed to be convinced that there was still more for them to learn.

Resources Needed to Revise CLUE

The project took exactly one year. Staff involved included three librarians who brought diverse skills and learning styles to the project. This diversity resulted in longer discussions but a more well-balanced tutorial. Two instructional design consultants assisted in several phases of the project. A graphic artist came in toward the end of the project to fine tune the look of the tutorial container. All told, the project involved 500+ hours of library staff time. Funding for staff and equipment (e.g., a high quality microphone for recording sound) was provided by the library. A small instructional design grant helped cover costs for usability testing.

Revision Process

The original revision plan for CLUE had three objectives: to address the "buy-in" issue mentioned earlier and to update the look and feel of the tutorial and the examples used in it. For the most part, as we reviewed each module, we focused on revising the strategies and updating the tone of each module; we did not think the tutorial's learning objectives would need to be revised since we had been adding to or revising the original objectives as library resources changed. Late in the fall we brought in an instructional design consultant who suggested our revision process was backwards. Instead of looking at strategies, we needed to focus on our learning objectives. Once we started to deconstruct the objectives of the old CLUE, the problems became clear: our affective objective was vague and unpersuasive (i.e., "you need to do this to succeed") which explained the lack of buy-in; we had far too many objectives for each module and steps for each process;

and our decision to weave strategies and resources together in each module resulted in confusion—for us as well as for our students! Two months into the process, we realized we could not simply revise the old CLUE. Instead, we would need to start over and recreate the tutorial from start to finish — a stunning realization since this meant we were now facing a much bigger project than originally anticipated.

So our process of revision became one of transformation. We started by writing new objectives, then identifying critical content for those objectives, and then *and only then* did we turn our attention to learning strategies.

New Features of CLUE (http://clue.library.wisc.edu/)

In designing the new CLUE we paid a great deal of attention to changing the look and feel of the tutorial. As students told us in usability testing, the new look is less busy, lighter, more engaging to Net Gen learners. The structure of the tutorial also changed. There are now five rather than three modules with a new module that tackles the buy-in issue head on and a separate, new module that orients students to the campus library system. We also created a module that addresses transferable search strategies instead of trying to cover both strategies and resources in the same module. The content is tighter and, as a result, it takes students about 45 minutes to an hour to complete, half the time of the older version.

Module 1: "Buy-in"

One of the more significant changes in the new CLUE is the creation of a separate buy-in module that introduces students to the tutorial. Unlike in the old CLUE, here our "carrot/stick" approach is clearly defined: students are congratulated on being admitted to our premiere research university but then cautioned that, because they are here, they will have to meet new and higher expectations. The message is also clearly defined: high school and college research are different and students will need to learn new skills to do research successfully. Finally, we took a different approach to the perennial question of who should be the voice of authority: faculty deliver the message about new expectations and then pass the baton of authority over to a librarian who is introduced as someone who can help students learn how to meet those expectations. Students responded positively to the fact that we used real faculty and real librarians in the module. The faculty who participated in the module were sincerely enthusiastic about the module's message and indicated they would use CLUE in their own classes.

Module 2: Orientation

Another major new feature of CLUE is a dual-purpose orientation module that we call, "Your UW Madison Libraries." In this module we wanted to provide students with a general overview of the campus library system and its superb resources and services. We also wanted them to feel somewhat anxious about the vast number and variety of resources available to them. Once again, we employ the carrot/stick approach to motivate students, continuing the affective goals of Module One.

For many of the images used, we turned to our campus digital photograph collection and then supplemented these with our own images. Because pictures with a voice-over did not pack the emotional punch we wanted, we decided to add music in order to transform the module into an "experience" rather than simply a narrative. Initially our instructional design consultant was skeptical about our decision to use music, since from a design perspective, music can create dissonance for online learners. However, even he was won over when he heard the relaxing, lyric-free music, and said that, in this case, our choice actually enhanced learning.

Module 3: Separate Strategies

"Module Three: Five Research Strategies" is also a response to some of the problems encountered with the "old" CLUE. While deconstructing the original learning objectives, we realized it was unrealistic to expect students to learn effective search strategies at the same time they were being introduced to unfamiliar tools such as the catalog and journal databases. As a result, we decided to cover five specific search strategies separately from the tools themselves. We chose strategies that can be used alone or in combination and that, most importantly, will work in the majority of the search tools students are likely to encounter.

We had also learned from a previous study that Google defines many of our incoming students' understanding of the world of information in general and of the search process in particular. So, it seemed wise pedagogically to build on what students already knew about searching via Google, rather than ignore or disparage the one tool many of them felt comfortable using. The result is that we use Google as a touchstone or point of comparison for introducing new resources and strategies whenever possible.

When we showed our instructional design consultant the original rapid prototype for this module, he was distracted by all the text, tabs, buttons, and branding that are part and parcel of most database interfaces. In fact, because of all this "noise," he was *unable* to concentrate on the main learning objectives at hand, the strategies themselves. Given this response, we decided to create our own "Generic Database," rather than spend inordinate amounts of time "doctoring" real interface screens to fit our pedagogical needs. The resulting screen is very bare bones, but it avoids any possibility for confusion as to where the eye should focus. It also serves to further enforce the concept that regardless of what a database looks like, the strategies being covered in this module will still apply.

Modules 4 and 5: Library Research Tools

The remaining modules explore how to effectively access and make use of two specific resources: MadCat (our OPAC) and the library's journal databases. No explanation

is given for the search strategies employed in these modules since successful completion of Module Three is assumed. An interesting point regarding Module Four is that we decided to re-contextualize the online catalog by way of describing the "old fashioned" card catalog. This idea was inspired by a presentation at LOEX 2005 by Mary Elizabeth Barbosa-Jerez.[1] And, indeed, students in our usability testing told us that they do find this analogy quite helpful.

RAPID PROTOTYPES AND CAPTIVATE[2]

In the old days of Authorware and Flash programming, the CLUE prototypes were sketched on paper before they became digital creations. With the advent of tools such as Captivate, the need to figure it all out on paper ceased to be an imperative. Instead, we developed Flash prototypes using Captivate software. This software captures what happens on a computer screen and produces a PowerPoint-like editing environment in which images and sound, including narration, can be added to the slides. Each slide can be edited, and every object can be changed, repositioned, or resized with simple mouse clicks, including mouse paths! For each module, we created one Captivate movie or file which was then published as a self-contained Flash (swf) movie. Captivate allowed us to embed quiz questions throughout a module, which prevented students from going right to the quiz without first completing the module. The main disadvantages associated with Captivate include the typical 'beta' bugs and limited features associated with newer applications.

USABILITY TESTING

After developing rapid prototypes, we enlisted the help of 25 undergraduate students to test these prototypes. We gave them book store certificates in exchange for an hour of their time. During these usability tests, we asked students to work through the prototypes of the various modules and to think out loud as to what they were seeing and feeling. This feedback was invaluable in letting us know if we were on the right track and in helping us edit the prototypes. After editing we would do more usability testing and obtain additional feedback. Ultimately, we merged all user feedback comments into a single document and then met to review each comment and decide what should be changed and when. In September of 2005, the new version of CLUE was linked from the Libraries' Web site.

ASSESSMENT

In late fall of 2005, we distributed Web surveys to students and instructors in the Communication A course in which CLUE and a follow-up library session were required. 240 students and 39 instructors completed the survey. The results were generally positive.

- Time to complete CLUE: 58% of the respondents indicated it took between 30 and 60 minutes to complete the entire tutorial.

- 92% indicated that CLUE prepared them for the follow-up library session. For those who did not feel prepared, the problem was largely one of scheduling by instructors who assigned CLUE long before the follow-up class. Ideally, the interval between the two should be no more than a week.

- When asked what they had learned from CLUE, "search strategies" were most frequently mentioned, then the library system, followed (somewhat to our bemusement) by truncation.

- When asked what they liked best about CLUE, the majority of respondents (111) selected "easy to follow/clear (content)."

- When asked what they would change about the tutorial, the most frequent response was that CLUE was "too long." Since most students complete CLUE in under an hour, we suspect that this concern may reflect unrealistic expectations on the part of some of our students in terms of how long it takes to learn a new library system—an expectation we will work with instructors to address more explicitly in the fall. A number of students commented on the fact that CLUE covered a lot of information, too much for them to remember.

- When asked what parts of CLUE helped them most with their research assignments, the most frequent responses were "strategies," followed by our database gateway, and then our online catalog. Comments to this category were particularly gratifying: "I actually learned how to use the Madison system; I love the libraries now, and research is a lot easier." Or "It let me know that there was more out there than just the Internet or books."

- Finally, when asked what helped them most with their research, 11% of the respondents said CLUE, 35% said the library session, 51% said CLUE and the library session in combination, and 4% said neither. The mixed response is similar to the feedback we received for earlier iterations of CLUE and reflects the diverse learning style preferences of our students.

CONCLUSION

The planning process used for transforming CLUE has proven so successful that it is now being applied to other instruction projects such as the redesign of the campus instruction Web site and in developing new lesson plans for existing courses.

ENDNOTES

[1] Barbosa-Jerez, M. E. (2005, May). *What Helps & what Hampers? Real Students Talk about the 50-Minute College Library Session.* Presentation at the 33rd LOEX National Conference, Louisville, KY.

[2] Thiagarajan, S. (1999). *Rapid instructional design.* Retrieved April 1, 2005 from http://www.thiagi.com/article-rid.html