Conducting usability studies with budget-friendly web-based tools

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LITA National Forum
St. Louis, Missouri
Sept. 29-Oct. 2, 2011
Abstract

A look at the multiple web-based tools available for online usability studies and their suitability for conducting assessments of academic library websites. The initial project focused on the evaluation of an updated version of the University of Louisville's Digital Collections website. The purpose of the assessment was to gather information on how users navigated the collections and retrieved information.
What is ARPT?

Assessment & Resource Planning Team: A volunteer group of 6 librarians within university libraries who are available to coordinate assessment studies and usability tests across departments.

The primary focus of the Assessment & Resource Planning Team is collecting information from users about the Libraries' performance... [We are] here to help your team, unit, or library determine information needs, use feedback to make decisions, and assess the effectiveness of your programs, activities, and services.
ARPT wanted to increase its presence within the libraries and be available to provide help on or coordinate more assessments and studies, but the group had limited personnel availability, time, and funding.

Previous in-person usability studies were time consuming and difficult to plan. Tests were often delayed because of issues recruiting staff volunteers to conduct the tests and student volunteers to participate.
The Scenario

- Digital Initiatives wanted an assessment done to determine what, if any, changes needed to be made to the layout of the website to improve user searching.

- Five task-based questions were developed based on the needs and issues recommended by Digital Initiatives staff, but a test site had not been set up, and volunteers had not been recruited.

- ARPT decided to test web-based options and use one of the products for the Digital Collections website study.
Is there a web-based tool that is
1) Easy to use by the team and end-users?
2) Budget-friendly (free or low-cost)?
3) And applicable for a variety of assessments and studies that could be done in the libraries?
Testing Criteria

- Relevant to academic websites – not just commercial sites
- Tracks user behavior
- Allows for detailed tasks: “find ‘x’ and show how you did it” vs. “where do you click to find ‘x’”
- Free!
- Data can exported in multiple formats
- Accessible to any ARPT member
- Software is easy to install or coding is easy to add
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* = Products that were tested
Features:
- Flash video of users recording thoughts
- “Crowdsourcing” usability – recruit panel of target users
- Can identify own panel of users

Cost (Per User/Per Test):
- $39 (introductory offer is $29) – up to 3 users (their site recommends at least 5)
- Up to $750 for 20 users
- Pricing is not easily located on the site

Usertesting provides a 15-minute video and written user comments. It’s flexible with the cost/user, but 39/user, up to 3 users, was too small a panel. 5 users = $195. Paying for a panel & responses saved time (don’t have to put together own usability panel) but perhaps not worth the cost to ARPT. No free trial.
We wanted to test the site with more than 3 users. The issues were similar to usertesting’s – not enough users for free test, and the subscription model of a monthly cost was not practical for ARPT’s (or the University Libraries’) needs. However, a plan based on storage size rather than number of tests may be useful at some point when funding is available.

Features:
- Records user clicks & comments
- Web-based, no software to install
- Storage-limit based subscription
- Record users remotely or locally

Cost:
- Free: One-time, up to 3 users
- Starter: $19/month, 50 MB
- Basic: $49/month, 1 GB
- Plus: $99/month, 3 GB
- Premium: $199/month, 9 GB
The free version was a possible option for other projects, but at the time it included 1 page (less than 1 test if the site has multiple pages) and 50 users. Now it is 1 test and 10 users. More pages were more important than more users because we’d be evaluating more than just a home page.

Features:
- Measures task performance
- Use screenshot or URL
- One-Click Tasks (can click, not search)
- Scatterplots, heatmaps

Cost
- Free: 1 page / 50 users
- Small: $49/month, 1 test / 50 users
- Standard: $89/month, 3 tests/100 users
- Large: $139/month, 5 tests/200 users
Loop\textsuperscript{11} was a frontrunner with its free test, but the cost, particularly per project, was not sustainable. Pursuing an academic usage license as an option. The free project is a possibility for a future assessment, but for this project, we could not solve the compatibility issues. Invalid HTML code in the CONTENTdm software resulted in display issues within Loop\textsuperscript{11}.

**Features:**
- No software to download, no code to install
- Creates task- and question-based tests
- Can recruit users from panel or provide link/pop-up to test

**Cost:**
- Free – first project (5 tasks and 2 questions)
- $350/project, up to 1000 participants
- Academic usage - free for academic professionals currently teaching usability or user experience courses or anything else related
Trials for the Digital Collections website were created within the free versions of usabilla and Loop$^{11}$. These were distributed to 6 ARPT members, one of whom, the web services librarian was also part of Digital Initiatives and 2 Digital Initiative participants not with ARPT—the Digital Initiatives Librarian and the Acting Head of the University Archives and Records Center (UARC).

Comments were received from 3 respondents, all of whom were part of Digital Initiatives.
Research Summary: Comments

**Usabilla**
- Does not allow you to complete task, just marks where you clicked.”
- Not clear how to start test.
- Nice layout but did not allow for detailed tasks and so the questions could not be answered as presented.
- Could be great tool for other tasks.

**Loop**
- “Marginally” more useful.
- Test questions embedded above Digital Collection’s website. Can choose to “abandon” a task.
- Could do searches but PHP code from CONTENTdm was exposed and website customizations didn’t appear; issues with compound objects and dropdown boxes. This was not limited to a single browser. Customer service resolved some issues, but a few could not be solved without hacking/tweaking CONTENTdm code.
Commercial products were not easy to adapt to the needs and restrictions of an academic library. The 2 main issues were cost and functionality. There was not an option with a useful, free test and a testing format compatible with detailed usability tasks.
ARPT ultimately selected SurveyMonkey, which is technically a survey tool and not a usability testing tool. However, ARPT had a subscription, and with some modifications (for example, the website being evaluated had to be open in a separate window from the questions, which required users to toggle back-and-forth) it was able to collect self-reported responses from users on their search behavior.
Results & Implications 3

- Unless an institution can justify a subscription and conducts multiple usability tests on a regular basis, academic libraries and other non-commercial organizations appear to have few choices. There is a need for web-based usability tools that can be more easily adopted by libraries/non-profits for remote testing.