



A Program of the Minnesota Office of Higher  
Education and the University of Minnesota

# MESSENGER

## **EXTRA**

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### **The New ELM Portal: (<http://www.elm4you.org/>) Features, Tips, & the Usability Testing Process**

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The Electronic Library for Minnesota (ELM) provides Minnesota residents with online access to magazine, journal, and newspaper articles as well as eBooks (electronic books) and information from other reference sources in virtually all subject areas. ELM resources, primarily periodical aggregator databases, were selected based on their broad subject and title coverage, freeing libraries to spend local funds on unique resources appropriate for their patrons' needs. ELM has something for everyone!

The new ELM portal offers Minnesotans:

- A single point of access to all the ELM databases
- Easy authentication via public library barcode number
- A special section for kids' and teens' resources
- A new "Publication Title List" that lists each title in ELM both alphabetically and by subject — users can quickly locate and link to publications of interest
- Links to MnLINK, the Minnesota Digital Library, Minnesota North Star, and public libraries throughout the state
- Help tips and tutorials for each database
- FAQs and help for more information about ELM

ELM has something for everyone:

- ELM includes thousands of magazines, journals, newspapers, and eBooks appropriate for users of all ages and interests.
- Public library patrons will find titles like *Consumer Reports*, *People*, *USA Today*, *Time*, *Fortune*, *Magazine Antiques*, *Popular Mechanics*, *Sports Illustrated*, *Harvard Business Review*, and thousands of others perfect for the general public.
- Kids and teens can use ELM for homework projects. They can find literary criticisms, timelines, images, biographies, dictionary excerpts, and more in every subject area.
- College and university students, researchers, and faculty can use ELM to find thousands of scholarly journals in virtually every subject area.

## Informal Usability Testing

As part of the process for developing the ELM Portal, we engaged in two usability studies to help determine that our Web design and layout were on the right track. Two usability studies you say? Yes! And, what a revealing and rewarding endeavor it was to submit the ELM portal to the rigors of two separate studies.

The first study was introduced to us by Jerilyn Veldof and Shane Nackerud, both from the University of Minnesota Twin Cities Libraries, at the MLA Fall Conference 2005 session titled, “Usability from Start to Finish: A 30 Minute Demo.” The session inspired a great deal of interest among attendees in learning how to conduct quick, inexpensive, informal, and effective usability studies. Jerilyn sat down with us in November to outline an approach for using an informal study with the ELM Portal. In less than one hour, we outlined the critical areas that we wanted to test on the site, the likely scenarios that Minnesota residents might use when interacting with the portal, and the target audience that we expected would use it. By 3 p.m. the following day, we asked three people who met the criteria of our target audience (and who were unfamiliar with ELM) whether they would be evaluators. Each said yes, and the study was underway.

We asked each evaluator to answer the same eight questions, allowing around 15 minutes per testing session. In 45 minutes, we had completed all three evaluations and had received invaluable, insightful, and design-changing information. We learned what worked on our site, and more importantly, what did not. It was fascinating to watch as the same “trouble spots” were identified consistently the evaluators — a clear indicator that design changes were necessary.

Using the feedback we received in this informal study, we made make enough structural changes to the ELM Portal that, when we went to our second, formal usability testing situation, we were optimistic that we had uncovered and addressed the unworkable aspects of the site. We hoped that the second round of testing would identify only minor flaws that could be remedied by easy cosmetic changes. Fortunately, this is exactly what happened!

## Formal Usability Testing

Our formal usability testing was conducted by Usability Services, a team within the Enterprise Application & Web Development Department at the University of Minnesota Twin Cities. We had four usability goals for the ELM Portal:

- Users can easily and confidently find an appropriate database for the information they are seeking,
- Users understand the purpose of the site and what it can be used for,
- To validate the navigation of the new design, and
- To validate the authentication process

For the formal usability testing process, we had to identify the traits of our target audience (a challenge when we hope that everybody in Minnesota will use it!), such as age, gender, education level, kids/no kids, English as a first or second language, etc. One of the neat aspects of the Usability Services lab process is that once we selected the traits that we wanted our evaluators to have, the lab staff took care to find and schedule the testers based on our criteria. Then, we set to work writing scenarios of situations for which typical users might want to use ELM. For example, your book club is reading *Friends, Lovers, Chocolate* by Alexander McCall Smith. How would you find information about the author to share with book club members? In advance of the actual testing, MINITEX staff and lab staff did a thorough run through of each scenario with preferred path and alternate paths to a desired outcome. We wanted to make sure that our scenarios made sense, were “do-able,” and were close to real world examples.

We had two full days of testing with eight evaluators and spent one and a half hours with each evaluator. Research has found that eight is the optimal number of evaluators for formal usability testing, as eight evaluators typically reveal 95% of usability issues that would appear regardless of how many additional evaluators you added. The Usability Lab staff used eye-tracking software and hardware that tracked the eye movements of the evaluator as he/she looked around the page – a pretty cool way to figure out what part of the page is receiving the most attention and what’s not being looked at.

As observers of the testing, we sat behind a one-way mirror/window, listening to the evaluators narrate why they were going to certain links, and listening to their opinions about the site. This “thinking aloud” proved most enlightening. At the same time we were listening, we were able to track both eye and mouse movements on a computer screen in front of us – a fairly complete way to view and understand an evaluator’s experience without actually sitting right next to the tester. In many ways, the anonymous experience of the evaluators likely made their comments and reactions far more candid than if we were to work with them in person.

## Usability Results

What did the formal testing teach us? As with the informal study, it revealed areas that needed attention – both those that we suspected might be problematic (lengthy descriptions of the databases) and other areas of which we would otherwise have been unaware (language choices for some of the links in the “Quick Links” navigations box). It was fascinating to watch the same problems identified again and again by evaluators.

As a result of our two-part usability testing, we feel confident that we are offering a highly usable product to the residents of Minnesota!

Is this something that you can do in your library? Absolutely! And you should. Most libraries will not have access to the sophisticated lab facility and staff that the University of Minnesota provided to MINITEX, but *all* libraries can engage in an informal study for every Web site that you offer to your public. It’s easy, it’s fast, and it’s free. And most importantly, it’s effective. It only takes an understanding of the type of user that you anticipate will be using your site and writing scenarios for how he/she will interact with it. Ask the same questions of each evaluator, and you will uncover the areas of your site that need a little extra attention. You *will* be pleased with what you learn – even if it means extra time with Dreamweaver! You’ll be confident that your site is effective for your users.

Effective sites make for satisfied users. And satisfied users will come back to your site again and again.

*ELM is brought to you by your local library or school media center, the MINITEX Library Information Network, and State Library Services and School Technology (the Minnesota state library agency) with state appropriations to the Minnesota Office of Higher Education and the Minnesota Department of Education and federal LSTA funds under the support of the Institute of Museum and Library Services.*

*For help with ELM set-up and access, please contact Christine Kline at MINITEX at [kline119@umn.edu](mailto:kline119@umn.edu) or 800-462-5348.*

*For help with ELM training, please contact Beth Staats at MINITEX at [fried004@umn.edu](mailto:fried004@umn.edu) or 800-462-5348.*

## ACCESSING ELM

There are three ways to access ELM:

### 1. With direct account links on your library's Web site

Point your users directly into the native ELM vendor interfaces via your library's or school's account links (links & set-up details can be found at <http://www.minitex.umn.edu/cpers/elm/access.asp>).

We recommend this option for ELM access within your library. Direct links allow your users to be IP authenticated in your school or library, removing the need for users to enter any authentication information.

### 2. Through the ELM Portal

Point your users to [www.elm4you.org](http://www.elm4you.org) for easy access to all ELM databases! Your users will be prompted to enter their Minnesota public library barcode to gain access to the ELM Portal regardless of where they are searching.

### 3. Through the MnLINK Gateway

Point your users to the MnLINK Gateway at [www.mnlinkgateway.org](http://www.mnlinkgateway.org) to cross-search catalogs and many of the ELM databases. Users will be IP authenticated in your library (no login required!) and will be prompted to enter their library barcode when searching from home.

**ELM—online all the time from school, home, work, or @ your library!**

## The ELM Portal: To Link or Not to Link

Staff at your library may be wondering if you should use the ELM Portal rather than direct links to ELM on your library web site. Here are some things to think about when you're making that decision.

### Considerations in linking directly to the ELM Portal:

1. No need to maintain multiple database links on your web site — you will only link to <http://www.elm4you.org>.
2. ELM Portal will include a subject and alphabetical listing of ELM databases, plus links to other Minnesota resources like MnLINK, Minnesota Digital Library, Minnesota public libraries, and Minnesota North Star.
3. Access is by public library barcode number (no need to maintain multiple ids/passwords).
4. You will not be able to use any institution-specific branding.
5. You will not be able to collect an institution-specific usage statistics.
6. The URL is easy to remember.

### Considerations in direct linking to ELM databases from your web site:

1. You can control the look and feel of your web site (how the databases are listed, displayed, described, etc.).
2. You can have your institution's branding on the database interface screens.
3. You can track your institution's usage statistics.
4. You have to maintain the links (time and technical effort for you or IT staff).
5. Schools will use ids/passwords for remote access and these vary from vendor to vendor which means you'll have several to track.
6. You will be able to integrate the ELM databases in with other databases to which your institution subscribes.