

## Guide on the Side (GOTS) Usability Study – Summer 2014

### Summary of the Study and Results

The library plans to launch its first Guide on the Side web-based tutorial in fall 2014. The first tutorial, an introduction to PubMed searching, has been designed for health science students. The plan is for subject librarians to create additional tutorials for students across all subject disciplines, as well as tutorials designed specifically for Freshmen Learning Communities. The purpose of the usability study was to gauge users' perceptions of overall ease-of-use of the Guide on the Side format. Users also were asked about navigation, content, and stumbling blocks particular to the PubMed tutorial.

Five Georgia State students were recruited for this study, and each subject participated in an individual interview with the Assessment & User Experience Librarian July 22-24, 2014. None of the subjects had used PubMed prior to the usability study. The subjects were of the following class levels and majors:

- Graduate (PhD), Communication
- Junior, English
- Senior, Managerial Science and Computer Information Systems
- Senior, Social Work
- Sophomore, Computer Science

Subjects were asked to complete the tutorial a few sections at a time. After completing each defined block of sections, they were asked a series of questions. The questions were scripted (see Appendix 2: Interview Instrument) but were adapted in some cases depending on how much information each subject provided independently while working through the tutorial sections. Appendix 1 gives subjects' responses and reactions to each section of the tutorial.

### Suggestions Based on Feedback

1. Guide Overview, page 1: Consider making the very first tutorial page more of a title page, rather than a content page, to draw the user's focus to that panel. All but one of the subjects hesitated and asked how to begin the tutorial.
2. About MeSH, page 1: Consider revising the wording "retrieves subjects, not words." This did not make sense to several subjects.
3. Building a Keyword Search, page 2: Consider moving the instructions about turning off automatic suggestions. The current order of the content has the user execute a search ("Type, or copy and paste, the phrase above into the search box and click the Search button"), and then suggests the user turn off the automatic suggestions ("Click **Turn off** at the bottom right of the suggestion box to temporarily disable the auto suggest feature, or just ignore them.") Once the user executes a search, the automatic suggestion box disappears.
4. Building a MeSH Search, page 4: Consider adding instructions to clear the search box. Two subjects did not clear the search box ("salt") before adding new search terms ("high blood pressure"), and their searches were unsuccessful.

5. Subjects did not rely on the arrow icon in the blue box as an indicator that they should search the database. Consider removing it in favor of another indicator, such as making search instructions a different color and/or bold. This suggestion is based on observing subjects, not on their specific feedback.

6. Provide the user's quiz score before the email screen, or provide an explanation that the score will be given after submitting an email address; for example: "Please enter your name and email address to see your quiz score and a copy of your completed quiz." A few subjects expected to see their scores immediately after completing the quiz. One subject was reluctant to provide her email address.

7. On pages with step-by-step instructions, break up the steps using bulleted or numbered lists. This suggestion is based on observing subjects attempt to read instructions, execute the instructions in the PubMed window, and return to the instructions; it is not based on their specific feedback. An example is the page "Using the Clipboard to Collect Citations." The text is in paragraph form.

Consider:

Use the Clipboard to store selected citations from searches *temporarily* (for eight hours.)

- Click the check box next to a citation to select it
- From the **Send to** pull-down menu to the right of the **Display Settings**, select **Clipboard**
- Click the **Add to Clipboard** button
- Click on the **Clipboard** link to the upper right to view and edit your citations

Another example is Building a MeSH Search, page 3.

## Appendix 1: Subjects' Responses and Reactions by Section and Page

### Getting Started

In general, subjects unfamiliar with PubMed didn't know they were looking at PubMed on the right with the tutorial interface on the left.

Subject 1: Am I looking for a link that says "Guide Overview?" What do I do? Make "Guide Overview" [title/heading] a different color or something to stand out.

Subject 2: Clicked to page 2 without reviewing page 1. Instructed subject to go back.

Subject 3: I wasn't sure how to start at the beginning.

Subject 4: What is PubMed?

### Guide Overview

#### Page 1

Subject 1: Like arrows/content status bar at the bottom of the tutorial window.

Subject 2: I wasn't sure how to advance to the next page at first.

#### Page 2

Subject 2: Does the arrow [blue "click" graphic] mean this will pop up when it's time to search? Not sure what this means.

Subject 5: What does this mean about using the back button? [Subject later explained that instructions like this—that are basic to using web-based applications—should be left out of the tutorial.]

### Accessing PubMed

Subject 1: Have a "page of page" (e.g., 1 of 3) indicator for all sections--even the one-page sections--for consistency.

### About PubMed

Subject 1: Should this section be first? Explain what PubMed is at the beginning.

#### Page 2

Subject 2: I like that it gives some background information.

#### Page 3

Subject 2: Quiz is cool. A refresher.

Subject 5: Went back to look up what PubMed stands for.

#### Page 4

Subject 1: Icons aren't in the same order as the vendor names in the text.

Subject 2: Good to know other tools to use if PubMed isn't working that day.

#### Page 5

Subject 1: What's the difference between search bar and search box? Oh, it's talking about everything in the gray bar.

### Page 6

Subject 2: Provide more information about the column items on the PubMed home page.

Subject 5: Provide more information about the column items, and less information about basic navigation

### Overall Comments about the Sections Guide Overview, Accessing PubMed, and About PubMed

Subject 1: I'm not a medical expert. It was ok. Dry, but how can it be exciting?

Subject 2: I'm not saying I understood everything, but it was pretty clear. Nothing was too complicated.

Subject 3: These first sections may be bordering on too much information. I want to dive right in.

Subject 4: A lot of big, scientific words. Everything was understandable, but I'm not familiar with the science words. Wasn't too long. I thought I wasn't finished with these sections.

Subject 5: A lot of acronyms and abbreviations (PubMed, NLM, MEDLINE, EBSCO, etc.) Some of this information doesn't seem necessary if this is for typical internet users, like using the back button and the search box. Too much information about how to use the tutorial. Could add more information about the columns on the home page—the "new stuff."

### About Medical Subject Headings (MeSH)

#### Page 1

Subject 1: "Retrieves subjects, not words"—how can this be" Subject as a field of practice? What would words be then?

Subject 2: What does it mean "retrieves subjects, not words"? Don't understand. I'll have to try it out to see how it works.

#### Page 2

Subject 1: Previous page is about searching. This page starts with cancer. This page needs some kind of introduction: "Here's an example" or something.

Subject 2: I still don't understand. Will have to try it, *see it* to understand it.

#### Page 3

Subject 1: Does anyone use the word "serial"? Maybe leave that out—not a great example.

Subject 2: How accurate is this? Is every word really matched to a subject?

Subject 1, overall: I haven't gotten any more quiz questions. These are helpful as long as they reflect the content.

### Example of a Citation

#### Page 1

Subject 1: Subject mis-entered the UID for the article and so retrieved a different article than the one intended. This was fine until she got to page 3, and the tutorial specified what she should see. At this point, she got confused. Perhaps prior to page 3, indicate something descriptive about the article, so that the user can check before continuing.

Subject 2: Is it telling me to copy and paste this? Should I actually do this? [Told subject yes, to copy and paste the number.] Searching using the PMID is a nice feature.

Subject 3: [The subject didn't enter the PMID search. She continued a few pages, and I asked her to go back and run the search.] I saw where to key in the string [PMID] but didn't know I really should do it.

Subject 5: Should I do this search?

### *Page 3*

Subject 1: What if I want the article in English? Add this information to the page—how I would get the article in English.

Subject 2: I think this means you can get the article translated. Oh, the abstract is in English, but the article is in French. Maybe the next page will tell me how to get it in English.

### *Page 4*

Subject 1: "Older" and "very recent"? What's left? Isn't this everything? Maybe include some date ranges to add context.

Subject 5: The tutorial says "click the arrow" and has a picture of a blue arrow. I was looking for the blue arrow on the PubMed page. Maybe change "arrow" to something else or don't use the blue arrow icon.

### *Page 5*

Subject 4: While on page 4, the subject closed the Publication Types, MeSH Terms, Substances list. When she advanced to page 5, she was confused because the instructions are to "Left click on any of the MeSH terms listed." She struggled to think of where to access the MeSH list.

## Building a Keyword Search

### *Page 1*

Subject 1: Second sentence is awkward. Consider something like: "Searching keywords is fast, easy, and effective."

Subject 2: I need to see how this is used to understand it better.

### *Page 2*

Subject 1: This doesn't align with the earlier section that says "subject, not words." Now we're searching keywords but earlier you told me to search subjects. This is confusing, but maybe because I'm not a science person. Maybe add a transition: Subjects compared to keywords and that we're moving from one to the other.

Subject 1: Why would I want to turn off the suggestion box? Subject got stuck on where to turn off suggestion box because she already had run her search. [Pointed out the suggestion box to subject.]

Subject 2: Subject got stuck on where to turn off suggestion box because he already had run his search. Skipped this part because he could not find it.

Subject 5: Subject got stuck on where to turn off suggestion box because he already had run his search. [Pointed out the suggestion box to subject.]

### *Page 3*

Subject 1: Verify the search—do most people do this?

Subject 2: I don't really understand what this is trying to tell me. Maybe a science major would.

#### *Page 4*

Subject 5: “Automatic term mapping”—this doesn’t seem necessary. I just want to know how to do it. I don’t need to know these terms.

### Building a MeSH Search

#### *Page 1*

Subject 1: This has 9 pages? That seems like a lot compared to the other sections that have 3 or 4 pages.

Subject 5: Instructions like “Use the grey X at the end of the search box to clear your search”—people know this already. Cut out the things that people already know.

#### *Page 2*

Subject 1: This quiz question is better than the PubMed definition question.

Subject 2: I like the “refreshers” [quiz questions]. So far, it’s easier than building a keyword search.

#### *Page 3*

Subject 1: Says I can only add one MeSH at a time—subject checked and added 2 other items from the list. Confused about the instructions stating only one MeSH term can be added at a time. What does this mean? What were the items I checked in the search results?

Subject 2: PubMed Search Builder—kind of cool but is it necessary? Doesn’t seem like it. I’m not convinced this is useful.

#### *Page 4*

Subject 3: Subject kept “salt” in the search box and added “high blood pressure.” Search did not return any results. Eventually removed “salt” and ran the search again.

Subject 4: Subject kept “salt” in the search box and added “high blood pressure.” Search did not return any results. Eventually removed “salt” and ran the search again.

#### *Page 5*

Subject 2: I don’t see year. [Subject missed that the information listed is “generally” provided.]

Subject 4: There is too much information on this page. Delete the page or cut it back to the highlights.

#### *Pages 6-7*

Subject 1: “Automatic explosion” is weird. Is this a science thing?

Subject 2: Not sure what this is talking about. I don’t see “eye”—oh, it’s not on this page. I thought it was talking about this page.

Subject 3: This is a bit too much. It gives precise results, but it’s kind of confusing. I preferred keywords.

Subject 5: “Automatic explosion”—this doesn’t seem necessary. I just want to know how to do it. I don’t need to know these terms.

#### *Pages 8-9*

Subject 2: Still not sure about search builder. I guess it’s there to help you narrow but still not sure it’s necessary.

## Overall Comments on Building a MeSH Search

Subject 3: Kind of long. Students probably won't read it all.

Subject 4: Too many words. Very long. This section got confusing towards the end.

## Narrowing Your Search Results

### *Page 1*

Subject 2: "Show Additional Filters"—why is this here twice? Kind of confusing.

### *Page 2*

Subject 1: Link to ILL from this page.

Subject 2: Not sure what "check off" means. I see the boxes to check, but what is "check off"? Don't understand "Find it @ GSU." Don't understand "free full text" or "full text." The whole page is confusing.

### *Page 4*

Subject 1: Last quiz response option mentions "filters activated" and where to find this. Subject struggled with this piece of the response option.

Subject 2: Why is there a quiz question here? "Review" is bold and checked, so it doesn't need a question. Is this supposed to be funny? The rest of the tutorial isn't funny, so it doesn't go.

### *Page 5*

Subject 2: Should I narrow on the search bar? This one looks different. Not sure how I would narrow by demographic information like the instructions say.

Subject 4: Easy to understand. I like that it was brief.

Subject 5: Too much description on how to narrow your search. Filters are common. Maybe just say, "you can narrow your search using options on the left." Information like "Find It @ GSU" is good to include because "it's new" [meaning not common knowledge].

## Viewing Search Results

Subject 1: Not clear that instructions are to change both format and sort options under "Display Settings."

Subject 2: It should tell me where to look for Display Settings.

Subject 4: Nice and short.

## Getting Full Text Articles

Subject 1: If possible, link to these services.

Subject 2: This is the first time [within search results] that I've seen "Find it @ GSU."

Subject 3: The tutorial says "click the Find it @ GSU icon" but the icon on the page isn't a button. Maybe include a search that uses the Find It @ GSU button.

Subject 4: Subject had a "Find it @ GSU" button in her search results. Clicked it and navigated away from the tutorial but easily returned.

**Subject 2, general comment brought up at this point in the tutorial**: Just noticed the button to browse sections [top-right corner of tutorial window]. Maybe point this out at the beginning if someone needs to return to a section.

## Using the Clipboard to Collect Citations

Subject 2: Confusing. A lot of words. Maybe say that “Send to” is above the citations.

Subject 4: I didn’t see the Clipboard next to Send to.” Maybe use a screen shot that shows where to look for Clipboard next to Send to.

Subject 5: The tutorial says “click the Send to Clipboard button,” but the button says “Add to Clipboard.”

## My NCBI

Subject 2: Is collections the same as NCBI? What is collections compared to the clipboard? Not sure about this.

Subject 4: Do I have to create an account? [Told the subject that she didn’t have to in the context of the tutorial, just that it’s an option.]

## Printing, Emailing, and Downloading Results

Subject 1: Struggled to find “Send to” pull down menu. Maybe mention where to look. Can the tutorial point to this somehow?

Subject 2: Don’t use the Find it @ GSU button as text. Just use plain text and put the button image at the bottom.

## Quiz

### *Subject 1*

- Can I get my score? Kind of weird I can’t see my results before I give my email address. Maybe provide instructions that say once you email the results, you’ll see your score.
- Change at least one of the “all of the above” questions, since the answer to both of these is “all of the above.”
- Does it matter that you can re-take the quiz?

### *Subject 2*

- Stuck on email page. Is it supposed to look like this? I expected to see my score, not an email option. I thought I was in the wrong place.
- Content of the quiz was ok. Just terminology, not searching. I’m surprised it asked about the clipboard, since that’s universal to many applications.

### *Subject 4*

- On the page with the name and email fields subject asked, “do I...?” Then stopped and eventually entered her name and email address.

### *Subject 5*

- Should I enter my email address?
- It didn’t really reflect how well you knew the content. Maybe add a question like, “How would you combine terms using the box on the right?”

## Subjects’ Reports of How Much of the Tutorial They Read

At the end of each group of sections, subjects were asked whether they read all of the text, some of the text, or just browsed the text. All of them claimed they read all of the text of each section, with the following exceptions:

- For the sections Guide Overview, Accessing PubMed, and About PubMed, one subject said she read about 90% of the text.
- One subject said he read just some of the section Getting Full Text Articles.



- Two subjects reported that they started skimming towards the end of Building a MeSH Search due to the length of the section. One subject said he went back and re-read part of this section to make sure he understood it.
- One subject said he skimmed the sections Narrowing Your Search Results, Viewing Search Results, and Getting Full Text Articles because most of it was “basic computer stuff.”

It should be noted that when asked, all of the subjects said they were reading more thoroughly than they typically would because it was a testing situation. Two subjects commented that they wanted to provide “good feedback.” One subject commented that he was reading carefully because he knew there would be a quiz.

### Additional Suggestions and Comments

- Highlight items we’re supposed to use within the PubMed frame with an arrow, spyglass, or animations (2x). An alternative suggestion (that is much more likely to be possible) is to consider adding more screen capture graphics within the tutorial, so that users know what to look for.
- Add links to relevant sites and information within the tutorial (e.g., interlibrary loan. This was mentioned previously.)
- Avoid using PubMed jargon like “automatic term mapping” and “automatic explosion” unless these terms are necessary for successful use of PubMed. (This was mentioned previously.)
- The nine-page Building a MeSH Search section is kind of long compared to the others. (This was mentioned previously.)
- Emphasize the information that is specific to PubMed and leave out the information that is common to most web-based applications. (This was mentioned previously.)
- Step-by-step (2x)
- Straightforward
- Simple
- Understandable
- Easy to follow

### Using the Live PubMed Website

Subjects unanimously said that using PubMed in conjunction with the tutorial was a good feature; however, they didn’t find it particularly compelling.

### What search engine do you typically use?

All subjects responded that the search engine they typically use is Google. One subject added that for academic searching she also uses EBSCO, Fastcase, and Westlaw.

## Appendix 2: Interview Instrument

**Introduction:** The library has designed a new online tutorial and wants to get feedback from students before we advertise it at the beginning of fall semester. I want you to work through the tutorial a few sections at a time. I'm going to ask you questions about your experience as you go. As you work through each section, feel free to ask me any questions you have. Please talk out loud about what you're doing, what you like, and what doesn't make sense to you.

Do you have any questions before we start?

**Part 1: First I want you to complete the sections Guide Overview, Accessing PubMed, and About PubMed. Let me know when you're finished with those sections. [Give subject a card with section names on it for reference.]**

1. What do you think about the words and terminology used in this section?
2. What do you think about how the content was organized?
3. What do you think about the length of this section—too short for the concepts presented, too long for the concepts presented, or just right?
4. Would you say you read all of the text on each page, some of the text, or just browsed the text?
5. At any point in this section did you get stuck and not know how to proceed?

**Part 2: Next I want you to complete the sections About Medical Subject Headings (MeSH) and Example of a Citation. Let me know when you're finished with those sections. [Give subject a card with section names on it for reference.]**

1. What do you think about the words and terminology used in this section?
2. What do you think about how the content was organized?
3. What do you think about the length of this section—too short for the concepts presented, too long for the concepts presented, or just right?
4. Would you say you read all of the text on each page, some of the text, or just browsed the text?
5. At any point in this section did you get stuck and not know how to proceed?
6. Did you have any problems doing the search in this section?

**Part 3: Next I want you to complete the sections Building a Keyword Search and Building a MeSH Search. Let me know when you're finished with those sections. [Give subject a card with section names on it for reference.]**

1. What do you think about the words and terminology used in this section?
2. What do you think about how the content was organized?
3. What do you think about the length of this section—too short for the concepts presented, too long for the concepts presented, or just right?
4. Would you say you read all of the text on each page, some of the text, or just browsed the text?
5. At any point in this section did you get stuck and not know how to proceed?
6. Did you have any problems doing the searches in these sections?

**Part 4: Now I want you to complete the sections Narrowing Your Search Results, Viewing Search Results, and Getting Full Text Articles. Let me know when you're finished with these sections. [Give subject a card with section names on it for reference.]**

1. What do you think about the words and terminology used in this section?
2. What do you think about how the content was organized?
3. What do you think about the length of this section—too short for the concepts presented, too long for the concepts presented, or just right?
4. Would you say you read all of the text on each page, some of the text, or just browsed the text?
5. At any point in this section did you get stuck and not know how to proceed?
6. Did you have any problems doing the tasks (like narrowing your search results) in these sections?

**Part 5: Next I want you to complete the sections Using the Clipboard to Collect Citations, My NCBI, and Printing, Emailing, and Downloading Results. Let me know when you're finished with these sections. [Give subject a card with section names on it for reference.]**

1. What do you think about the words and terminology used in this section?
2. What do you think about how the content was organized?
3. What do you think about the length of this section—too short for the concepts presented, too long for the concepts presented, or just right?
4. Would you say you read all of the text on each page, some of the text, or just browsed the text?

5. At any point in this section did you get stuck and not know how to proceed?

**Part 6: The last part is the quiz. Let me know when you're finished taking the quiz.**

1. What did you think about the content of the quiz? How well do you think the content of the quiz reflected what was presented in the tutorial?

**Follow up questions to ask at the end:**

1. What suggestions do you have to make this tutorial more understandable or clear?

2. You were using the live PubMed website throughout the tutorial. What did you think about this feature of the tutorial?

3. Do you have any other comments about the tutorial that you think would be helpful to us?

4. What search engine do you usually use?

5. What is your class level and major?