

EVALUATION REPORT

Instructional Assessment Resources Web Site Usability Testing

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Executive Summary

The usability of the Instructional Assessment Resources (IAR) Web site was examined, addressing two research questions (p. 5):

- Research Question 1: How easy is it for users to find information from IAR?
- Research Question 2: What design features should be improved and how should they be improved?

Three faculty members, three staff members, and two graduate students tested the IAR site (p. 5). Questionnaire responses and the observation of participants about their interactions with the site (pp. 5-6) yielded the following findings and recommendations.

Key Findings

- ◆ In general, users were highly satisfied, in particular, with the quality and quantity of information and the clean design (pp. 7, 9 and 10).
- ◆ Users typically looked for quick references. The organization of information in IAR did not accommodate such user behaviors (p. 9).
- ◆ Users often had difficulties in finding information from the site due to unclear organization of information, labels, and text density (pp. 9-10).
- ◆ Users needed to scroll up and down constantly (p. 10).
- ◆ Some users strongly disliked PDF files (p. 10).
- ◆ Users did not notice breadcrumbs (p.10).
- ◆ Users found Glossary easy to use but some did not like the white space (p.11).
- ◆ For some users, the search box was the first place to use in the site (p.11).

Key Recommendations

- ◆ No modification is indicated for the site's content, clean look, and well-designed glossary (p.12).
- ◆ Reorganize information in a way that make the organization of information clear and visible to users, guide users through the assessment/research processes, and accommodate different user groups' needs (p.12-13).
- ◆ Reexamine labels to assure that they directly map to their referent information (p.13).
- ◆ Reduce the amount of information per page (p.13).
- ◆ Make the breadcrumbs stand out (p.14).
- ◆ Make important information stand out (p.14).
- ◆ Reduce the white space in glossary pages (p.14).
- ◆ Make both PDF and HTML pages available (p.14)

Running Head: IAR Usability

Instructional Assessment Resources Web Site

Usability Testing:

Full Report

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Evaluation Description

Purpose of Evaluation

The purpose of the usability study was to assess the degree of ease or difficulty with which users found information in the Instructional Assessment Resources (IAR) Web site, to identify ways to improve users' experience with it.

Research Questions

The IAR usability study addressed two research questions:

- Research Question 1: How easy is it for users to find information from IAR?
- Research Question 2: What design features should be improved and how should they be improved?

Data Collection and Analysis Methods

Because the principal targeted users of the website are faculty members, staff members, and graduate students, the evaluation team contacted potential participants from these three user groups by e-mail, most of whom agreed to participate in the study. Three faculty members, three staff members, and two graduate students attended testing sessions—typically one hour long—in early October, 2006, at a computer lab or in the participants' offices. The participants were asked to complete three tasks:

- 1) Fill out a background information questionnaire (Appendix B).
- 2) Perform assigned tasks to find certain information from the IAR site, while thinking aloud.

Faculty and staff members performed different sets of tasks (see Appendix C for the faculty version and Appendix D for the staff version). One student performed faculty tasks and the other

performed staff tasks. During the testing, evaluation staff also observed and made notes about the participants' operations and comments.

- 3) Fill out a questionnaire about their overall experiences in using the site (Appendix E).

While the participants performed their tasks, all of their operations on the computer and their think-aloud utterances were recorded using Camtasia software. Full details about the usability testing procedure may be found in Appendix A.

The responses to the two questionnaires were summarized as descriptive statistics. Contents from observation notes and Camtasia files were examined for information addressing the research questions. First, noteworthy participants' operations and comments from the Camtasia files were documented in text files, which were subsequently merged with the observation notes from the testing sessions. Then, the contents of the resulting files were summarized in terms of information, interface, and interaction themes (see Appendix F). The results of a total of 6.5 test sessions were analyzed, because one and one-half Camtasia files from sessions with faculty members were lost when an evaluation staff member resigned.

Participants

The pre-test session questionnaires yielded information about the characteristics of the eight participants:

- Participants ages ranged from the 20s to the 50s.
- Four PC users, two Mac users, one user of both platforms, and one user of neither platform participated.
- All participants reported that they felt comfortable using the Internet.

- All participants reported that they used the Internet to obtain information for research methods or assessment methods. Three reported that they used it *every time*, three *often*, and two *sometimes*.
- Five reported that they were familiar with instructional assessment (two *familiar*, three *somewhat familiar*).

For full details of the distributions of participant characteristics, see Appendix G.

Findings and Conclusions

Post-test questionnaire: Overall impression of site

Participants' responses to the post-test session questionnaire indicate that they generally viewed the site favorably. In particular, they rated highly the quality of information, its comprehensibility, and the site's practical usefulness. They did see room for improvement in navigation (moving around the site without getting lost) and text density.

- **High overall satisfaction:** Most participants (88%) reported they *agreed* with the statement that they were satisfied with their overall experience with the IAR website, though none of them *strongly agreed* with it.
- **High success rate in information searching:** Most participants (75%) *agreed* that they could find the information that they were looking for; one (13%) *disagreed*. However, observation of the testing sessions suggests that participants very often failed to find the information they were looking for.
- **Mixed opinion about surfing without getting lost:** Half of the participants (50%) *agreed* or *strongly agreed* that they could move around the site without getting lost. Three (38%) were *neutral* and one (13%) *disagreed*.

- **High satisfaction with the quality of information:** All participants *agreed* (50%) or *strongly agreed* (50%) that they were satisfied with the quality of information on the site.
- **Mixed view about the text density:** While 38% of the participants *agreed* (25%) or *strongly agreed* (13%) that the density of the text was appropriate, 25% *disagreed* (13%) or *strongly disagreed* (13%).
- **High comprehensibility of the content:** Seven participants *agreed* (57%) or *strongly agreed* (27%) that they could understand the content on the site, while one (14%) *disagreed*.
- **High satisfaction with the appearance:** Six participants *agreed* (63%) or *strongly agreed* (13%) that they were satisfied with the appearance of site, including layout, colors, and graphics.
- **High perceived usefulness:** Seven participants *agreed* (50%) or *strongly agreed* (38%) that they were likely to return to the site in the future.
- **High perceived general usefulness:** Seven participants *agreed* (50%) or *strongly agreed* (38%) that they would like to recommend the site to others who are interested in instructional assessment.

For full details of the distributions of responses, see Appendix H.

Observation notes from the testing sessions

Analysis of observation notes generated from the Camtasia files and in-session observations (see Appendix F) indicated the following general, major usability features of the IAR site in the areas of information, interface and interaction. Specific features related to small sections of the IAR site are discussed in the recommendations.

Information

- **Users were highly satisfied with the quality and quantity of information.** Some users immediately saw practical value in the information they found in the site.
- **Users typically looked for quick references,** such as Examples and Quick Tips, and jumped to them, rather than reading linearly through the site from the Home page. Also, no user read through Assessment Process, where users can obtain a holistic picture of overall assessment process. Therefore, although the information is presented in an orderly fashion in the site, the way users hopped around the information made it difficult for them to decipher the underlying organization and to unearth information.
- **Users often had difficulties in finding information from the site,** which contrasts with their self-reported high success rate in information searching. Users' responses to the question about the site's navigation were also mixed. The problem in finding information can be attributed to the following three factors:
 - **The organization of information (what comes under what heading) was not made clear to them.** In particular, it was difficult for those with little research background to discern the organization.

- **Labels did not map directly to the referent information.** Therefore, it was very common for users to click many links before they found the right page. The labels with which users had the most difficulty were *Best Practices*, *Interpreting Data*, and *Module 1-3*.
- **Pages are packed with information, so important information does not stand out.** Therefore, users sometimes did not notice that the information they needed was on the page they were looking at. Users' responses to questioning about text density were mixed.
- **Users needed to scroll up and down constantly.** One user described the site as “text heavy.”
- **It was not clear how the information in the site was related to the interests of different user groups.** For example, when the site discusses instructional assessment, it is not clear that the material is also relevant to research practices.

Interface

- **Users liked the clean design.**
- **Some users strongly disliked PDF files**, mainly because of the longer loading time.
- **Users did not notice breadcrumbs**, often using the *Back* button and the DIIA site ID for navigation, as well as the left menu bar. Because IAR site is embedded in the DIIA site, using the DIIA site ID brought them to the DIIA Home page rather than to the IAR Home page, confusing some users.

- **Users found the Glossary easy to use.** They liked the alphabetical letter links and/or *Top of Page* buttons. Some users did not like the white space in the glossary pages, because the extra space meant they were required to scroll down.

Interaction

- **For some users, the search box was the first place they used in the Web site.** But the search results did not always help users find the information they were looking for, often because the scope of search included the entire DIIA site, and so they received too many search results. Currently, *search IAR pages* is the default search scope for the IAR pages, so this may no longer be a problem. One user suggested adding a search box to the glossary.

Overall, users found the site very useful, but they suggested a variety of ways of improving the ease of information searching, as addressed in the recommendations for improvement.

Recommendations

The IAR Web site project team may consider ten general recommendations, listed by priority, concerning the major design features of the site and six specific recommendations concerning specific features. The first general recommendation identifies three successful features that may be left as is, because they received good reviews from the participants.

General Recommendations

1. **No modification is indicated for the site's content, clean look, and well-designed glossary.** Users expressed satisfaction with the quality and quantity of information, and they reported that information in the IAR site was useful and easy to understand. They also reported they liked the cleanness of the design and appreciated the glossary's alphabetical index and *Top of Page* button.
2. **Reorganize information.** The current information structure does not match the ways in which users search for information in a Web site. Reorganization should emphasize four goals:
 - a. **Make the organization of information clear and visible.** Do not assume users possess background knowledge in research or instructional assessment, and present the information in a structure easily understandable by those with no prior knowledge. Additionally, adding rollover submenus to the left menu bar items would help users see at a glance what information is buried deep down in the information structure.
 - b. **Organize the information to guide users through the assessment/research processes.** Because users may not be familiar with the appropriate steps to take in instructional assessment, they are likely to neither understand nor follow the process. Information in the IAR site about the recommended nine-step process would give useful framework for instructional assessment and research, but it is not utilized well because of the users' tendency to look for quick references first. Therefore, it is desirable to organize the site to guide users explicitly in the nine-

step process. Indeed, a few users suggested that they would like such step-by-step instruction. One way to guide users to the nine-step process without restricting them to an inflexible linear process is to introduce the steps at the Home page and then show where they are at in the process in all other pages.

- c. **Organize the information according to the different user groups.** Content and terminology relevant to use may be different (e.g., instructional assessment and research) among different user groups. Therefore by presenting information differently according to user groups, users would find more direct relevance of the information to their needs.
 - d. **Place Using Technology content in a lower level of the information structure,** to avoid the confusion reported by users in having that topic at the same level as content about Assessment Methods and Assessment Process.
3. **Reexamine all labels** to assure they directly map to the information they index. Users had difficulties in telling what labels referred to, particularly the labels *Best Practices*, *Interpreting Data*, and *Module 1-3*.
 4. **Reduce the amount of information per page and minimize the need for scrolling.** Information-packed, long pages have at least three disadvantages for users: (a) they usually dislike scrolling; (b) they are more likely to miss information they must scroll to; and (c) they may not notice information they need, even when they are looking at it. Therefore, it is recommended to chunk content, even at the cost of producing more pages, to reduce the amount of information per page.

5. **Make the breadcrumbs stand out.** Using the different color may help. In particular, make the > character stand out more clearly.
6. **Make important information stand out.** Important information should jump out at users; the present design requires them to hunt in down.
7. **Reduce the white space in glossary pages.** Some participants did not like the white space in the glossary pages, because it required more scrolling up and down. Eliminating the white space would facilitate quicker entry searching.
8. **Make both PDF and HTML pages available.** Some participants did not like PDF links, because such documents loaded slowly. Adding HTML versions of the same pages will provide a quicker-loading for users who don't wish to print pages.
9. **Use more graphics and other media.** The pages in the site are text heavy. Adding graphics and other media would facilitate user-friendly look of the site, and help users understand important concepts. For example, the nine-step assessment process could be presented graphically.
10. **Present examples modeling the nine-step process framework or highlight their strength.** Some users preferred to look first at examples, yet the examples on the site are studies conducted at other institutions, so it is not easy to see their relevance to the methods, processes, or designs discussed in the IAR site. Adding introductory comments to the links, highlighting specific aspects of assessment/research for users, would help make the examples more useful.

Specific Recommendations

1. Locate the description *What is instructional assessment and why you should do it* on the Home page.
2. Add an independent section about the time and work required for different kinds of surveys in the *Survey How To* section and *FAQ*, because users are often interested in finding out which kind of survey can be administered most quickly.
3. Treat *sample size* as an independent section.
4. Weave information about data interpretation into discussions of research methods, rather than addressing the topic in an independent section, so that users can see data interpretation as part of the research or assessment process.
5. Eliminate the hard-to-find link to the response scale file at the bottom of the page, and make the other link at the top of the page more visible.
6. Place the legend for Worksheet E in the worksheet, rather than outside it.

Appendix A

IAR Usability Study Protocol

1. Thank the participant for participation in the study
2. Briefly explain what they are asked to do.
 - a. They are going to look at the DIIA IAR (Instructional Assessment Resources) site. IAR is intended to provide information for instructional assessment and program evaluation.
 - b. Instructional assessment is conducted when instructors (or somebody else) want to assess their teaching effectiveness. Program evaluation is conducted when one wants to evaluate how effectively and efficiently a program is operating.
 - c. Testers will look at the IAR site to find certain information, and write short responses. What we are interested in is how well the IAR site is made, and not how skillful testers are in finding information. Therefore, if testers cannot find certain information easily, that gives us important information about the usability of the site. Also, there is no right or wrong method for finding information. Choose the path that makes the most sense.
 - d. Before and after performing tasks, we will ask the tester to fill out questionnaires. The first questionnaire they fill out before the tasks is background information about the testers. The second questionnaire they fill out after the tasks is about how testers in general felt about the site.
 - e. We will observe them while using it, and have them tell us anything they notice or feel about the site, while they use the site. Those comments will be our important data as well. Also what they do on the computer is recorded, but they do not have to worry about it. We just want them to use the site in the way they would usually do.
3. Ask them to fill out the pre-usability test survey. (Set up the computer while the tester is doing this).
4. Present the task form and ask them to begin the tasks. Ask them to think aloud as much as possible, especially when they encounter some difficulties. While testers performing the tasks, take observation notes (and write down their comments).
5. After the tester is done with the tasks, ask the tester to fill out the post-usability test survey.
6. Thank them for participation.

Materials to prepare for the testing:

- A laptop with Camtasia installed-make sure wireless is available.
- Two questionnaire forms (pre and post)
- Task forms (faculty or staff)
- This form
- Something to take observation notes with (another laptop or notepad)

Appendix C

IAR Usability Tasks for Faculty Members

IAR Usability Tasks

First, open any Internet browser and go to <http://www.utexas.edu/academic/diia/>.

1. You would like to improve your teaching. It's been suggested that one of the most important things you should do to improve your teaching is instructional assessment. Use the site to gather information about the following:

- a. Find the IAR (Instructional Assessment Resource) site.
- b. What is instructional assessment and why should I do it?

c. What is the best way to teach? (List two good practices)

d. What do I need to do to assess my teaching? What is the first step?

2. You are planning to conduct a survey to gather information about your teaching or program effectiveness. Use the IAR site to answer the following questions:

a. What is the quickest kind of survey I can give? How long will it take to complete?

Quickest kind of survey: _____

Required time for the entire survey process for you: _____

b. How do I write survey questions? (One tip to remember)

c. Name one response scale that you like the most

d. How large does my sample need to be? (Using a class/program of 200 students)

e. What do I do with the results once I've completed the survey?

f. Look up "confidentiality" in the glossary. What do you think of the look of the glossary page?

Appendix D

IAR Usability Tasks for Staff Members

IAR Usability Tasks

First, open any Internet browser and go to <http://www.utexas.edu/academic/diia/>.

3. You have a program you are managing. In order to improve the program, you decide to evaluate it. Use the site to gather information about the following.

a. Find the IAR (Instructional Assessment Resource) site.

b. How do I design a program evaluation?

c. How should I report the findings from my focus group.

d. What are stakeholders and why are they important to my evaluation?

4. You are planning to conduct a survey to gather information about your teaching or program effectiveness. Use the IAR site to answer the following questions:

a. What is the quickest kind of survey I can give? How long will it take to complete?

Quickest kind of survey: _____

Required time for the entire survey process for me: _____

b. How do I write survey questions? (One tip to remember)

c. Name one response scale that you like the most.

- d. How large does my sample need to be? (Using a class/program of 200 students)

- e. What do I do with the results once I've completed the survey?

- f. Look up “confidentiality” in the glossary. What do you think of the look of the glossary page?

Appendix E
IAR Post-Questionnaire

User ID:	Date:
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Please circle one number for each question and offer any comments you wish.

1. I was satisfied with my overall experience with the IAR Web site.

Strongly agree Agree Neutral Disagree Strongly disagree

Comment:

2. I was able to find the information I was looking for.

Strongly agree Agree Neutral Disagree Strongly disagree

Comment:

3. I could move around the site without getting lost.

Strongly agree Agree Neutral Disagree Strongly disagree

Comment:

4. I was satisfied with the quality of information that I viewed on the site.

Strongly agree Agree Neutral Disagree Strongly disagree

Comment:

5. The amount and the density of the text on per page were appropriate.

Strongly agree Agree Neutral Disagree Strongly disagree

Comment:

6. I could understand the content on this site.

Strongly agree Agree Neutral Disagree Strongly disagree

Comment:

7. I was satisfied with the appearance of site, including layout, colors, and graphics.

Strongly agree Agree Neutral Disagree Strongly disagree

Comment:

8. I am likely to return to this site on my own in the future.

Strongly agree Agree Neutral Disagree Strongly disagree

Comment:

9. I would like to recommend this site to others who are interested in instructional assessment.

Strongly agree Agree Neutral Disagree Strongly disagree

Comment:

10. What do you like the best about this site?

11. What do you like the least about this site?

12. What could have made it better?

13. Is the IAR Web site a tool that could help you perform your job duties better?

14. Are there any other assessment tools you currently use?

Thank you very much for your help!

Appendix F

IAR Usability Testing: Analysis Summary

Information (content and organization) Area

Theme	User voice/what happened	Analysis/Description/Suggestion
Information Quality and Quantity	<p>Users were generally satisfied with information quality and quantity.</p> <ul style="list-style-type: none"> • “A lot of useful information.” (user 3) • “It seems useful. It seems you guys got a lot of information for people to start doing all those [sic] stuff.” (user 4) • “There is ton’s [sic] of excellent information here.” (user 5) • “Terrific information, wow, I would like to have access to this. Paige and I are trying to find a site like this. Having it here at UT is fantastic. There is a contact person, there is a real person at UT.” (user 7) 	<p>Good quality and quantity of information</p>
Organization of information	<p>No user started by reading Assessment Process.</p> <ul style="list-style-type: none"> • Users typically started their information searches with Assessment Examples (user 2:2-a; user 4: 1-b), Quick Tips (user 1: 1-b, 1-c, 2-a, 2-b; User 4: 1-d), Using Technology (user 2), Glossary (user 6: 1-b), and Best Practices. • Users employed the menu items on the left menu bar for navigation. For example, user 7 first examined each of these menu items. (user 7: 1-b). When the labels did not represent the contents, they could not find the information easily. • User 4 was an exception. She reported that she would start reading from module 1, which includes a link to the process: “It seems like it’s talking about all the basic information you would need in order to design something.” She said she would read through all the links in module 1 until she gather enough background knowledge, because she presumed all the relevant information on design would be in module 1. 	<p>Users typically look for a quick reference, such as Examples and Quick Tips, rather than reading through the text. If it is important for users to understand the overall picture of the assessment process first, the structure of the presentation should be modified so that users will find such information first. For example, Module 1 is a good place to start reading, yet it is listed as Assessment Design on the left menu bar. If the label, Module 1, appeared on the left menu bar, users perhaps will look at it before module 2 or 3. But because it appears as Assessment Design, clicking it first is less likely.</p> <p>When users go to Examples first, it is difficult for them to understand the process/design/method of instructional assessment. It is perhaps desirable to present these examples within the assessment process framework presented in the IAR site (e.g., nine steps, etc.).</p>
	<p>Users often had difficulty finding information in various tasks.</p> <ul style="list-style-type: none"> • User 1 said that, because she was not already familiar with the procedure for a survey-based study, she could not figure out what to 	<p>Users are not likely to read websites in an orderly manner, and they try to go to the section where they are likely to find the information QUICKLY, such as Quick Tips and Examples. While information is</p>

	<p>look for there. She agreed that having a list that showed all the steps would have made the task easier (user 1: 2-d). Similarly, user 7 said, “You know certain things come under certain heading. But for me, I didn’t know that.”</p> <ul style="list-style-type: none"> • User 1 could not find relevant information in 2-b (user 1: 2-b). • User 2 wound up in a different information section. She went to the Using the Technology section when looking for designing a program evaluation (1-b). • User 2 could find no answer in 1-c and 2-b (1-c, 2-b, 2-c). • User 3 had hard time finding information about the response scale (2-c). • User 3 could not find information about sample size and steps after survey administration (2-d, 2-e). • User 6 could not find the information for 1-c after 7 minutes looking around in the site. He actually opened a correct page (Best Practice) for the topic (best way to teach), but he looked only at information about integrating technology. Because Instructional Best Practices are with other information, it was hard for him to notice. From the user’s point of view, these categories of best practices were very different topics. 	<p>organized in the website, the way users hop around makes it hard for them to find it. Users may lack the necessary research or assessment background to anticipate how information is organized.</p> <p>To make the information structure clearer to users, the following approach may make more sense to them who are looking for STEP by STEP instruction:</p> <ol style="list-style-type: none"> 1) Somewhere on the page, users should always see an assessment process bar to indicate where they are in the process. 2) Steps 1-5 should be common to all the methods. 3) Steps 7-9 should be peculiar to each research method. <p>Additionally, adding rollover submenu items to the left menu bar would reveal what information is buried deep down in the structure.</p> <p>Furthermore, reducing the amount of information per page would help, because users may not notice information they are looking for when there is too much text.</p>
	<p>Users had to scroll up and down the pages very often due to the volume of information per page.</p> <ul style="list-style-type: none"> • User 5 scrolled down more than half of the pages she opened. She said, “You know what—it would be nice if there is a way to navigate back without scrolling back up to the top; this is a lot of text, on a page. When you want to go back to review something, you have to go back all the way to the top; yeah, something along the way. See, there is all that space on the left; the other option is to break it down to chunks so that each of these things [orange links on the top] would go to a page. This is good info, but hard to get around” (2-e). • User 7 recommended to “break down, less 	<p>The information should be chunked to amounts that fit one screen-sized page.</p>

	info on one page.”	
Text Heavy	“It might be nice to have pictures. It is kind of text heavy. The whole site is very text heavy.” (user 5).	Using graphics and other media—especially animations—would help users envision the evaluation process, other concepts, and examples of evaluation tools. These should also help users locate information.
<task-specific> What is instructional assessment?	Fundamental information, such as what instructional assessment is and why it’s necessary, does not appear on the front page of the site (user 5).	Reconsider organization so that users can <ul style="list-style-type: none"> • see the most important information first, and • find the information they are looking for easily.
<task-specific> Quickest kind of survey	No user could find the section where the information is listed. For example, user 5 opened 13 pages over 7 minutes.	Because this is likely to be useful information to many users, it should be placed somewhere more easily found.
<task-specific> Sample Size	It took a while to get to the information (user 1: 2-d, 2-e) or the information couldn’t be found (user 3: 2-d).	It was necessary to scroll down a lot to find the information. Shorter pages should help, as would treating sampling as an independent section.
<task-specific> Interpreting data	User 2 looked at Analyzing Data for 2-e; user 3 looked at Disseminate Results on the process page for 2-c (reporting focus group results).	Information on interpreting data should be weaved into the methods, rather than presented as an independent section (e.g., <i>how to analyze/interpret the survey data, how to analyze/interpret the interview data, etc.</i>). Also, reconsider the label (interpreting). (See the label section below.)
<task-specific> Response Scale	User 2 did not notice the link to the response scale page in the Survey How To page (user 2: 2-c).	The list of links at the top of the Survey How To page is long, so users may not read the list carefully. The presentation should highlight important words (e.g., <i>Response Scale</i> should stand out more than <i>Types of Questions</i>). Consider presenting the list in a diagram.
Worksheet E	User 2 said she was not sure what <i>X</i> and <i>Rank</i> meant in the worksheet. She thought that having a legend would help. After returning to the design page, she found the explanations for <i>X</i> and <i>Rank</i> . She thought this information should be on the worksheet (user 2 1-d).	The legend should be on the worksheet.
IAR within DIIA	Users tended to click on the DIIA site ID, which sent them back to the DIIA Home page instead of to the IAR homepage (user 4: 1-c, 2-a. and other occasions).	There should be a way to get back to the IAR homepage more easily. Make the breadcrumbs more noticeable.

Interface Area

Theme	User Voice/What Happened	Analysis/Description
Layout	“I like the layout. It is very easy to see. I like to look at the scheme of bunch of information so that I can pay more attention to different areas. Yeah, so I like that it is clearly laid out” (user 4: 1-b).	Clean, nice design
Labels	<Best Practice> It took a while for user 1 to find “the best way to teach” (user1: 1-c). User 2 thought she could find the information about survey question writing in Best Practice (user 2: 2-b).	The label Best Practice does give enough information, because this section includes best practices for every function: assessment, using technology, and teaching. But from the user’s point of view, it would be better to treat each function’s best practices separately, because no one is looking for the topic <i>best practice</i> : users look for information on <i>instruction</i> , on <i>instructional technology</i> , or on <i>assessment</i> .
	<Process> The user detoured to get to the <i>process</i> (user 1: 1-d).	Maybe <i>nine steps in the assessment process</i> would be more descriptive.
	<Data analysis and Interpreting data> User 5 said that having the label <i>Interpreting Data</i> include data analysis is confusing, because <i>data interpretation</i> and <i>data analysis</i> are different, depending on whether research is qualitative or quantitative. The typical quantitative approach of analyzing and then interpreting would make sense to more people (user 5: 2-e).	Change the label <i>Interpreting Data</i>
	<In general> <ul style="list-style-type: none"> - “Definitely, the labels did not jump out to tell me I can find it [the answer].” It was not clear what information they are leading to (user 2 :1-c). - In order to find the information for the quickest kind of survey, user 5 looked at Assessment Process, Assessment Method, Best Practice, Instructional Best Practice Summary, then Survey How To. This kind of lengthy trial-and-error process to find certain information was typical—users had to open pages to see what was there. “There is ton’s [sic] of excellent information here, but I just feel like some of the terminology on the left menu ... Using Technology, it (Using Technology) does not seem parallel to 	Reexamine the labels to make them clearer to users.

	those (Assessment Process, etc.) other choices” (user 5).	
PDF	<p>Users’ reactions to PDF files were mixed: some were okay with PDF, but some were annoyed because of their loading time.</p> <ul style="list-style-type: none"> - “It is good because it is easy for me to print out, but takes longer when I use it at home.” So she suggested putting information in an HTML file, because she can still print it out and it opens more quickly (user 1). - “It is fine, as long as it loads quickly; it is not a problem” (user 2). - “I have to say, it really annoys me when something downloads, PDF file; I would rather want to go to table in HTML, because I am always in a hurry” (It took about 20 seconds until the file opened; user 5). - When she tried to close a PDF file, the browser, instead of the PDF, closed. She said, “That is a little bit confusing” (user 5). - “It would be nice if they have also HTML format... if I don’t need to use it, I don’t” (user 6: 1-c). -“Oh yuck!” “That’s how I feel about PDFs, especially when I am surfing around for information” (user 7: 2-a). 	Giving the option of PDF and HTML would be a good idea.
Breadcrumbs, Site IDs	<p>Users tended to use the Back button and site IDs to get back to where they were, and they did not use breadcrumbs, which are the most convenient way (user 1: 2-d, 2-e, 2-f; user 2: 1-c; user 4 1-c;). User 5, for example, explicitly asked how to go back to the IAR homepage, but understanding that the DIIA logo took her to the DIIA Home page, rather than IAR Home page, she clicked Assessment Process on the left menu bar rather than using the breadcrumbs. She later noticed the breadcrumbs and explained that it was not immediately obvious. “I interpreted it more as a title or something. So I was navigating all that time but did not know how to get back to the Home page” (user 5: 2-e). User 7 was the only one who used the breadcrumbs actively to navigate in the site easily.</p>	Make Breadcrumbs more noticeable?
Glossary	Most users found the glossary easy to use	In general, users liked the glossary (in

	<p>(user 1: 2-f; user 3:2-f; user 5: 2-f).</p> <p>- The reaction to white space was mixed. Some users did not find the white space distracting (user 1:2-f; user 2: 2-f; user 3: 2-f). But users 4, 5 and 7 did not like it. User 5 said, “It is just way too much white space, and it is—I almost think when I go to c, I, rather than scrolling down—this is super long page; I would because again there is no way to get up there; I would have a page for each chunk of the alphabet. And that would vary depending on how many terms there are. I like the little A, B, C, D, but again when you click on that, all it does is to take you down to the bottom of the page, which does not let you navigate within the page” (user 5: 2-f).</p> <p>User 4 also said that everything in the alphabet should be grouped more closely. User 7: “I don’t like that there is so much space that I have to scroll down. I did like this, the alphabet (user 7: 2-f).</p> <p>- They liked the top-of-page buttons (users 2 and 3).</p> <p>- User 1 said she wanted to have usage examples of those words (user 1: 2-f).</p> <p>User 5 suggested having a search box.</p>	<p>particular, alphabetical organization and top-of-page buttons). It may be useful to eliminate the white space, so that users can view entries that start the same letter at once.</p>
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Interaction Area

Theme	User voice/what happened	Analysis/Description
Search Box	<p>-User 2 typed <i>instructional assessment resource</i> and received 411 results, scrolled down, and found IAR.</p> <p>-User 1 typed <i>instructional assessment resource</i> and <i>resource</i> and received the message <i>sorry we were unable to find a match</i>. Then she typed <i>assessment</i> and received 713 results, but did not see anything about IAR in the first page. “The search box is not helping me. But this is the first thing I usually do. If I want to search for anything, I will just go to the search bar” (user 1: 1-a).</p>	<p>For some users, the search box is the first place they use in a website. For user 2, the search box helped find IAR. (User 1 mistyped.)</p>

Other

Theme	User voice/what happened	Analysis/Description
Different User groups	“If people who are going to be using this site are faculty, they would think of this (instructional assessment) as research.” So they would use research schema to understand this site.	When users look for information useful for their research, the heading <i>research</i> would directly show relevance to their interests rather than <i>instructional assessment</i> . The label <i>instructional assessment</i> is confusing.
Assumed background knowledge	She suggested using terminology consistently and using lay person’s terminology (user 7). “You know certain [topics] come under certain heading. But for me, I didn’t know that” (user 7).	Do not assume that users have knowledge and experiences in instructional assessment and research. Those who would use this site (overview site) are likely not to have it. If they do, they would refer to more technical references.

NOTES

A few users had problems because they did not know the terminology, such as *response scale* (user-1, 2-b: went to various irrelevant places). But if they are constructing a survey, this problem is not likely to occur, because they would be more familiar with the survey construction process.

Appendix G:

IAR Usability Study: Participants Demographic Information

- A total of eight testers
- Age: Varied from 20s to 50s
- Three faculty members, two staff members, two students, and one staff/student
- Four PC users, two Mac users, one both user, one neither user
- All eight testers reported that they feel comfortable using the Internet.
- All eight testers reported that they used the Internet to obtain information for research methods or assessment methods. Three reported that they used it every time, three often and two sometimes.
- Five out of eight reported that they were familiar with instructional assessment (two familiar, three somewhat familiar)

Your age?

	Frequency	Percent
Valid 21-30	2	25.0
31-40	3	37.5
41-50	1	12.5
50+	2	25.0
Total	8	100.0

What is your primary role at UT?

	Frequency	Percent
Valid Faculty	3	37.5
Staff	2	25.0
Student	2	25.0
Student/ Staff	1	12.5
Total	8	100.0

Do you prefer using a Mac or PC?

	Frequency	Percent
Valid Either	1	12.5
Mac	2	25.0
Neither	1	12.5
PC	4	50.0
Total	8	100.0

How comfortable are you using the Internet?

	Frequency	Percent
Valid Comfortable	8	100.0

How much have you used the Internet in order to obtain information for research methods or assessment methods?

	Frequency	Percent
Valid Every time	3	37.5
Often	3	37.5
Sometimes	2	25.0
Total	8	100.0

How familiar are you with instructional assessment?

	Frequency	Percent
Valid Familiar	2	25.0
Somewhat familiar	3	37.5
Neutral	3	37.5
Total	8	100.0

Appendix H:

Overall Post-Testing Questionnaire Results

Testers in general rated the site favorably. In particular, they rated highly the quality of information, comprehensibility of the content, and practical usefulness of the site. There appears to be a room for improvement in navigation around the site without getting lost and text density.

- **High overall satisfaction:** Most (88%) *agreed* that they were satisfied with their overall experiences with the IAR website. However, none *strongly agreed*.
- **High success rate in information searching:** Most (75%) *agreed* that they could find the information that they were looking for. One (13%) *disagreed*.
- **Mixed opinion about surfing without getting lost:** Half of the testers (50%) *agreed* or *strongly agreed* that they could move around the site without getting lost. Thirty-eight percent were *neutral* and 13% *disagreed*.
- **High satisfaction with the quality of information:** All testers *agreed* (50%) or *strongly agreed* (50%) that they were satisfied with the quality of information on the site.
- **Mixed view about text density:** While a total of 38% of the testers either *agreed* (25%) or *strongly agreed* (13%) that the amount and density of the text per page was appropriate, 25% either *disagreed* (13%) or *strongly disagreed* (13%).
- **High comprehensibility of the content:** Eighty-six percent *agreed* (57%) or *strongly agreed* (27%) that they could understand the content on the site, while 14% (one tester) *disagreed*.
- **High satisfaction with the appearance:** Seventy-five percent *agreed* (63%) or *strongly agreed* (13%) that they were satisfied with the appearance of the site, including layout, colors, and graphics.
- **High perceived usefulness:** Eighty-eight percent *agreed* (50%) or *strongly agreed* (38%) that they were likely to return to the site in the future.
- **High perceived general usefulness:** Eighty-eight percent *agreed* (50%) or *strongly agreed* (38%) that they would like to recommend the site to others who are interested in instructional assessment.

I was satisfied with my overall experience with the IAR Web site.

	Frequency	Percent
Valid Agree	7	87.5
Disagree	1	12.5
Total	8	100.0

I was able to find the information I was looking for.

	Frequency	Percent
Valid Agree	6	75.0
Neutral	1	12.5
Disagree	1	12.5
Total	8	100.0

I could move around the site without getting lost.

	Frequency	Percent
Valid Strongly agree	1	12.5
Agree	3	37.5
Neutral	3	37.5
Disagree	1	12.5
Total	8	100.0

I was satisfied with the quality of information that I viewed on the site.

	Frequency	Percent
Valid Strongly Agree	4	50.0
Agree	4	50.0
Total	8	100.0

The amount and density of the text on each page were appropriate.

	Frequency	Percent
Valid Strongly agree	1	12.5
Agree	2	25.0
Neutral	3	37.5
Disagree	1	12.5
Strongly disagree	1	12.5
Total	8	100.0

I could understand the content on this site.

		Frequency	Percent
Valid	Strongly agree	2	25.0
	Agree	4	50.0
	Disagree	1	12.5
	Total	7	87.5
Missing	System	1	12.5
Total		8	100.0

I was satisfied with the appearance of the site, including layout, colors, and graphics.

		Frequency	Percent
Valid	Strongly agree	1	12.5
	Agree	5	62.5
	Neutral	1	12.5
	Disagree	1	12.5
	Total	8	100.0

I am likely to return to this site on my own in the future.

		Frequency	Percent
Valid	Strongly agree	3	37.5
	Agree	4	50.0
	Neutral	1	12.5
	Total	8	100.0

I would like to recommend this site to others who are interested in instructional assessment.

		Frequency	Percent
Valid	Strongly Agree	3	37.5
	Agree	4	50.0
	Neutral	1	12.5
	Total	8	100.0