

Evaluation of “Exploring the Internet” Handbook:

Final Report

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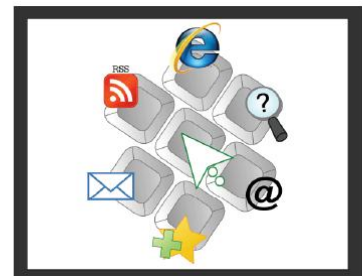
Iowa State University

Section 1: Description of the Product

The product evaluated for this project is Unit 1 in a course entitled "Exploring the Internet" offered by the Osher Lifelong Learning Institute (OLLI) at Iowa State University. It is offered to 50- year-old and older members of OLLI. Osher Lifelong Learning Institute was established in July 2008 after ISU obtained a grant from the Bernard Osher Foundation. Before attainment of the grant, the program was known as Iowa State University's College for Seniors. There are 121 similar Osher programs in existence at various universities throughout the country. Those who meet age and membership requirements and want to expand their knowledge in a variety of areas are encouraged to sign up for courses. The courses are simply provided for enjoyment with no grades or tests.

This course, "Exploring the Internet," was designed by students in a graduate level instructional design course in May 2008. Their idea was accepted by OLLI as a 4-unit, 4-week course and will be taught from April 19-May 10, 2010. There is a 76-page document (title page shown at right) that serves as the course handbook. The handbook is also on a CD, and each student receives a copy. They can then follow along easily as the class progresses.

Iowa State University Alumni Association College for Seniors
Exploring the Internet



The purpose of the course is for senior citizens to learn how to explore the Internet using various Internet browsers, manage a search using Google, and paste information from the Internet into a word processing program. One can understand the need for such a course when looking at Census information about Internet usage. In 2007, "the percentage of 18- to 34-year-olds who accessed the Internet was more than double (73 percent) that of people 65 and older (35

percent)” (U.S. Bureau of Census). Providing a course aimed at teaching senior citizens *how* to use the Internet will close the gap between age groups.

Unit 1 entitled "Using a Web Browser" is designed to teach students how to browse the Internet using Internet Explorer and other browsers as well as to establish a working knowledge of terms associated with the Internet. Each unit takes an hour and a half to complete. The unit begins with a short summary of what the student will learn, followed by three paragraphs explaining the concept of Internet browsers. Within the paragraphs are several words in bold which indicate that these are important terms associated with browsing the Internet. In addition, there are several subsections in the unit which include web browsing definitions, website addresses, elements of an Internet browser, learning to navigate the web, several examples of viewing websites, and homework. Students continue through the course manual completing nine exercises beginning with simple tasks like opening Internet Explorer and navigating a webpage. They end the unit with copying a web address into a Word document for future reference.

In order to access the description of the course, go to http://www.isualum.org/en/olli_at_isu/spring_2010_course_list/. The link to "Exploring the Internet" is the fifth option in the list of courses. Clicking on the link will take those interested to a short summary of the course objectives and a biography of the instructor.

Section 2: Target Audience

This course is designed to introduce the basic knowledge related to a computer-based worldwide website and teach the skills needed for effective and efficient Internet exploration.

The intended “end users” for this course are senior citizens whose ages are fifty and above. They are from the community of Ames as well as any community within 40 miles of Ames. All of the participants are currently retired and have enough time to take the course.

Before retirement, some of the audience members worked in government organizations, such as, city library, city transportation and city post-office, while the remaining audience members used to work in small local companies. Most of the audience has received college educations.

However, all of them have very limited or no knowledge about the Internet since they attended school in the early 1960's when the computer was not widely used.

The group of senior citizens who have the above characteristics are eager to learn knowledge about the computer and master the skills for Internet exploration. Before retirement, their jobs let them contribute to society, communicate with different people and they felt great with their work every day. However, all the interactive things they used to do were lost after they retired. It is assumed that participants strongly feel that they have been marginalized by society and technology after their retirement. Therefore, they have great enthusiasm to participate in this course which will help them to become familiar with the Internet and use the Internet to connect themselves to the outside world.

With the many development of the computer industry in recent years, the personal computer is affordable for audience members and thus their accesses to computer and Internet are virtually guaranteed. To complete this course successfully, the audience is required to have very simple entry competencies which include being able to deal with basic texts, operate a computer keyboard and mouse, and have experience with a word processing program.

Additionally, this particular audience has unique needs which present a challenge to the course design. According to Gregor & Newell (2008), many seniors perceive the Internet as hard to use. As people age, they begin to experience problems with their vision, their hearing, cognitive functions, and their mobility. These features require the course should possess the properties of perceived usefulness and perceived ease of use.

Section 3: Description of intended outcomes

Even though the course does not provide clearly written statements of intended outcomes, there are several ways to figure out the intended outcomes of the course. First, the summary of Unit 1 provided in the course handbook gives a tip of intended outcomes by stating “in this unit you will learn how to view content on the Internet using a computer program called Internet Explorer. You’ll also learn the Internet itself and some of the terms associated with it.” Second, the Iowa State University Alumni Association website provides another explanation regarding intended outcomes. The last source for intended outcomes is the content itself. A summary of intended outcomes is listed in Table 1.

Table 1: Summary of the intended outcomes

	Main focus	Intended outcomes
1	Increase knowledge of the Internet	Participants will understand the concept of the Internet (World Wide Web).
		Participants will know terminology associated with the Internet and web browsers.
2	Understand how Internet browsers work	Participants will know the components of a website address and the meaning of different parts.
		Participants will know the elements of Internet browsers
3	Increase usability of Internet browsers	Participants will be able to navigate the web autonomously.
		Participants will be able to complete the given tasks using web browsers and other programs.
		Participants will be able to use a number of functions of web browsers autonomously.

A thorough analysis of the handbook, website, and content reveals three main focuses and seven intended outcomes. All the outcomes deal with people knowing, understanding, and

using the Internet. According to Hanson (2001), seniors, people 65 years of age and older are using the Internet more and more for communicating, information searching, and evaluating services (pg. 60). Accordingly, their attitude toward using the Internet is positive. However, the actual usage of the Internet has remained little because they perceive the Internet as difficult to use. Therefore, it is easy to see that the intended outcomes match well with the needs of the participants.

Section 4: Product Critique

The first unit covers entry level knowledge about the Internet for beginners very well. It begins a clearly stated introduction explaining some basic elements, including the overview of Internet browser, the use of navigation tools, and the introduction of website addresses. These elements are all basic concepts of Internet Explorer but also are universal terms the learner needs to know in order to operate all kinds of browsers. It helps learners add to their understanding of the Internet itself and Internet Explorer, which in turn, helps learners prepare well for more advanced knowledge of the Internet. Therefore, Unit 1 is a good start for the end users who are senior citizens with limited knowledge of computer-based technology relevant to the Internet.

However, one drawback of Unit 1 is that as designed, it does not provide a section to examine the learners' prior knowledge, which may jeopardize the instructor's understanding of students' different needs. Finding out what students are already able to do would be a better way to begin this unit. If all participants know how to open Internet Explorer and get to a website, Exercise #1 could be omitted or skipped. The designers could have developed a pretest or survey to determine the learners' prior knowledge. This would allow for further exploration into areas where learners are less familiar.

Another strength is that the product uses pictures to provide visual assistance. Senior citizens may be confused by complicated wording and even intimidated by a large amount of unfamiliar academic vocabulary. Besides explaining with text, this product uses the pictures as aids to make all piecemeal points organized. There are various screenshots of the actual web pages they are asked to explore which greatly reduces confusion between what is on the paper in front of them and what is on their computer screen. The effort of reading which can be cumbersome for senior citizens with poor eyesight is also reduced because of the effective use of graphics; in addition, the key points and terms are highlighted directly in bigger font size and bold formatting. It not only adds interests into an otherwise dull handbook, but also exhibits the topic clearly.

Furthermore, the product uses a sensible organization of exercises to deliver one key segment of Internet exploring at a time. The succession from easy to challenging is simple to follow step-by-step with larger fonts indicating that a new exercise is beginning. Being able to visually follow along in their handbook as well as hear the instructor give directions meets the needs of both auditory and visual learners. At the same time, the novice learners may acquire satisfaction after finishing each segment, which would encourage them to insist on further learning.

Besides the main flow of the content, a number of additional information boxes are present at the bottom of most pages. Five “Fun Facts” help the students expand their background knowledge about Internet surfing by giving definitions of some terminology and providing quick guides. Four “quick quizzes” offer learners a chance to test their knowledge. Answers are also provided for immediate feedback. This additional information can be considered another strength of the unit. There is a number of terminology that learners may not

know in the main content. The new words have to be explained in some way to accelerate the learning. The only concern is that additional information may be distracting. In this unit, however, the boxes *are* separated from the main content and decorated in a distinctive manner so that the students can follow the flow with minimal distractions.

The major weakness of the product design is that it lacks activities which could increase the interactions among students and between instructor and students. The unit mainly asks students to complete the exercises on their own at their computer. The instructor could take liberties to include discussion among students which would help to solve the isolating nature of the exercises. Having little interaction will also reduce the opportunity in which the teacher could follow students' learning process closely. Effective feedback and individual help may not be available because of that.

Overall, the product design is effective for the age group to learn much information about browsing the Internet. Strengths include a thorough coverage of basic knowledge needed for autonomous Internet browsing, visual assistance using images and formatting of text, clear organization of material presented, and supplementary information for further knowledge construction. Weaknesses are few including no testing of prior knowledge which may be beneficial to planning further activities and a lack of providing activities for interaction between class members and instructor. Even with the weaknesses, the course is still a high quality product since it meets senior citizens' needs of knowing the Internet and browsing the Internet. This product prepares the learners well for advanced Internet exploring. In the long run, it is a good start for senior citizens to keep themselves engaged by actively pursuing knowledge and experience.

Section 5: Matrix of objectives and instruments

Table 2 outlines the evaluation objectives, the data-gathering instrument and specific questions that will be asked to answer the objective.

Table 2 Matrix of Objectives and Instruments

Evaluation Objectives	Method	Questions	Materials
Assess participants' operative skills obtained after receiving the course.	Performance-based Assessment	1. Open Internet Explorer 2. Go to the website, www.amespubliclibrary.org 3. Click on any hyperlink you find on the home page. 4. Click to go back to www.amespubliclibrary.org 5. Copy and paste the website address into a Word document.	Observation Log (will be done via voice recorder and facilitator notes. A computer will be provided for participants, and a handout will be given to guide the assessment)
Evaluate participants' satisfaction of the content of the handbook	Focus group	1. Are you satisfied with the content provided in Unit 1? - Does it meet your needs of learning how to browse the Internet?	Focus group guide (The question will be exhibited via PowerPoint. The process will be recorded via voice recorder and facilitator notes)
Evaluate participants' satisfaction of the facilitation provided by the handbook	Focus group	2. Do you think the handbook is easy to follow? Why or why not? - Which exercises are difficult to learn?	Focus group guide (The question will be exhibited via PowerPoint. The process will be recorded via voice recorder and facilitator notes)
Evaluate the utility of the instructional design/layout	Focus group	3. Do you think the design/layout of the instruction is effective? - Think about the arrangement of elements like quiz placement, fun fact placement, images, etc.	Focus group guide (The question will be exhibited via PowerPoint. The process will be recorded via voice recorder and facilitator notes)
Investigate participants'/ additional recommendation/ expectation for the course	Focus group	4. What suggestions for improvement do you have, if any?	Focus group guide (The question will be exhibited via PowerPoint. The process will be recorded via voice recorder and facilitator notes)

This project was developed to evaluate the applicability of the handbook used by senior citizens in the course, “Exploring the Internet,” which is offered by Osher Lifelong Learning Institute at Iowa State University. Six senior citizens whose ages range from 60-70 with minor knowledge about the Internet will be selected randomly to participate in the evaluation. Six senior citizens who registered for the course and are willing to be volunteers participated in the evaluation after instruction of Unit 1. The evaluation included two sections which were a Performance-based Assessment/Observation and Focus Group. After getting the training of Unit 1, participants were given the performance-based assessment to assess their acquired operative skills. Following this, the focus group was conducted to collect participants’ thoughts about their learning experience. These two sections were used to gather the data and were intended to provide “a trade-off between breadth and depth, and between generalization and targeting to specific populations” (Westat, 2002, p. 43).

An observation was employed to evaluate the participants’ comprehension and transfer of the skills and knowledge after receiving the training from the course. More than one observer was involved in looking at the same events. Reliability of observation came from observer consistency. Observers followed the guide of the observation check list and used the same code to record what was going on. These strategies were used to ensure that the observers make similar decisions about similar events on different occasions and to “ensure that they made the same decisions about the same events if they saw or heard them again, either on video or audio recorder” (Robson, 2002, p. 340). The evaluators were strictly advised not to give any answers or facilitation to participants, which was to avoid any affects or leading of participants. That ensured the validity of the observation.

A focus group method was selected to learn more about the needs and circumstances of participants, and how individuals reacted to the course. To ensure the validity of the test, the focus group consisted of senior citizens whose age range are from 60-70 who have minor knowledge about Internet browsing and are unknown to each other. These homogeneities are desired to “facilitate group interaction; noticeable differences in education, income, prestige, authority, or other characteristics can result in hostility or withdrawal by those who are lower on those dimensions”(Fitzpatrick, Sanders, & Worthen, 2004, p. 351).

During both the observation and focus group, evaluators kept on-the-spot notes so that any additional or unusual events could be noted. Robson (2002) suggests that you should "never embark on a second observation session until you are sure you have sorted out your notes for the first one" (p. 324).

Section 6: Pilot Test

The pilot test for our evaluation took place on Tuesday, March 9, 2010, at 10:00 AM at Ames Public Library. Three volunteers participated in the pilot test. They were convenient participants who are evaluators' friends and colleagues. Sharon, 72 years old, is a native speaker and retired. Aaron, 26 years old, is also a native speaker and has full-time work and Minsun Lee, 30 years old, is an international graduate student who speaks English as her second language. The three participants experienced our original matrix of evaluation instruments, which included pre-survey, post-test, and interview for the data collection instruments. During the test, we were able to determine the strengths and weaknesses of our evaluation process. We planned to change several parts.

The major issue we came across is the overall time that our evaluation would take. We had planned a pre-survey, post-test, and interview for the data collection instruments, but failed

to realize it would take over 2 hours to complete all of these. We felt like that was way too long. Therefore, we decided to omit the pre-survey completely and change the interview to a focus group.

The reason we omitted the pre-survey is because the questions we were asking really had nothing to do with the purpose of the evaluation. We were asking questions that gauged previous computer experience and prior knowledge of computers. After giving the survey to our participant and going through the rest of the evaluation, we realized that the data collected by the pre-survey was not related to what we really wanted to find out, which is whether the participants can perform web browsing on their own *after* instruction. The pre-survey was not a valid choice as a data collection instrument.

After taking out the pre-survey, we decided that we needed to change the name of the post-test to “quiz” or “task completion” because the word “test” is intimidating to some. The “task completion” will be very short, asking participants to perform five tasks related to the instruction they received in Unit 1. Observation method was applied during the “task completion”, and an observation checklist was added as part of the “task completion.” The checklist will simply list the skills they are expected to perform following with a “yes” and “no” column. We will observe the participants during the task completion and very easily use the checklist to determine if they are successful with each task. Also, as our reading this week discussed, checklists are a very reliable data collection instrument.

The last part we changed was to conduct a focus group instead of interviews. This was decided because of the number of participants we will have in the try-out. In addition, the focus group could increase the interaction among participants and more needs and circumstances of

participants will be revealed during the interaction. Therefore, a focus group will be more efficient to find out participants' opinions and experiences with Unit 1.

Overall, the pilot test revealed several issues that we can now resolve before the actual try-out. We feel like the pilot test was very helpful. Because of the changes, our evaluation is estimated to take one hour and 30 minutes. We also feel like we have selected stronger instruments for data collection.

Section 7: Data Collection Process

Date: March 25, 2010

Location: Lagomarcino Hall Room N055

Product: "Exploring the Internet" Unit 1

Participants: Ana-Paula Correia, Rachel Graham, Dillan Laughlin, Eva Tao, and Shayne Narjes (senior citizens, 50 years of age and older, with minimal experience with computers)

Evaluators: Laurel Newell, Katie Dou, Chris Lee (also acting as instructors of Unit 1)

Evaluation Instruments: Performance-based assessment, observation checklist, and focus group guide

Tools Needed: Computer with Internet Explorer, video camera, voice recorder, copies of handbook, performance-based assessment handout, and observation checklist

The evaluators (Laurel, Katie, and Chris) conducted an evaluation of Unit 1 of the course entitled "Exploring the Internet" at 5:10 PM on Thursday, March 25, 2010 in Lagomarcino Hall Room N055. The purpose of the evaluation was to determine the effectiveness of instruction by testing individuals' ability to perform a given task using a web browser after instruction had been given. The evaluation was also used to find out participant's opinions about how the unit could be improved for even greater effectiveness. Because of this, the evaluators conducted an evaluation with five senior citizens whose ages range from 60-70. The total time for conducting the evaluation was one hour and 30 minutes (Appendix B).

The evaluation took place in a room with PC computers, a projector, and video equipment. PC computers had the Windows XP operating system, Internet Explorer, and Microsoft Word

2007. We chose to use PC's because they are most likely the kind of computer participants have in their home. Participants worked on PC computer individually. We ensured that each computer being used was logged on to make it easier to begin the evaluation. A video camera and voice recorder was also set up for observation of the participants and the environment.

Evaluators began at 5:10 with introducing themselves and their role in the evaluation. Laurel briefly explained the course and the purpose of the evaluation using a script prepared beforehand (Appendix C). Finally, she described the activities that would take place during the evaluation.

The evaluation began by giving the participants a copy of the Unit 1 handbook (Appendix A). Laurel started the unit with page 1 and 2 of the handbook. This involved demonstrating how to visit a website. Participants viewed this demonstration on the projection screen.

At 5:25 Katie began instruction of Exercise #1 which asked participants to view Iowa State University's website. At 5:35 Chris continued instruction with Exercise #2 which involved participants exploring various aspects of a webpage (hyperlinks, mouse movements, etc.). Because this course is intended to be taught by an instructor, we taught three sections of Unit 1. This provided participants with a good idea of the intended delivery of the course. At 5:45 we asked that participants work through Exercises 3-9 independently. They were given about 15 minutes to complete the exercises.

At 6:00 participants were given a ten minute break to stretch and have a beverage and snack. When students returned from their break, Laurel handed out the performance-based assessment to each participant (Appendix D). This was a very short task completion that helped us to determine if they could perform Internet browsing independently. All evaluators also had an observation checklist (Appendix E) that was used to determine if the participants were able to perform the tasks on their own. They were given 5 minutes to complete the quiz.

At about 6:20, the evaluators interviewed participants through a focus group discussion facilitated by Laurel (Appendix F). The focus group guide contained six questions asking for participants' opinions and experience of Unit 1. We were most interested in the ease of use and suggestions for improvement. The focus group was 20 minutes long.

At 6:45 evaluators asked for any additional feedback and questions. There were no questions. Chris wrapped up the session with a brief closing (Appendix G).

Section 8. Data analysis plan

The evaluation is expected to obtain a set of quantitative data and a set of qualitative data from multiple sources. The results of a quiz and an observation checklist will be the source of the quantitative data. A focus group interview and recordings from video camera and voice recorder will be the source of the qualitative data.

8. 1. Quantitative data analysis

Numerical data obtained from the results of the quiz and an observation checklist will be analyzed in searching the distribution, central tendencies, and outliers using descriptive analysis methods. It will be serving as criteria to determine the effectiveness of the instruction and the satisfactory level of the instruction in terms of whether the intended outcomes have been achieved. The reason the present evaluation employs descriptive data analysis plan with obtained qualitative data is first the limited participants and second that descriptive data analysis is enough to accomplish the purpose of the present evaluation. In general, getting statistically significant numerical proofs is influenced by sample size (Fitzpatrick, Sanders, & Worthen, 2004, p. 360). In the present evaluation, however, only 6 senior citizens will be participating which will not generate enough data volume for any inferential data analysis.

8. 2. Qualitative data analysis

Qualitative data obtained from the focus group interview and recordings will be analyzed by searching for any possible themes at the first stage. The themes formulated from the analysis will be categorized into several sub-groups to establish coding schemes. The coding schemes will be serving as a platform for further analysis. The evaluators will pull apart all the participants' narrative components and place into an appropriate theme for a content analysis until issue-relevant meanings emerge. In general, content analysis for qualitative information is an appropriate method for textual form of information Fitzpatrick, Sanders, & Worthen, 2004, p. 362). Since the recorded information can be converted into a textual form easily, this method can be useful for recorded narrative components too. This analysis method will ensure that the evaluation reaches objective conclusions.

Section 9: Results and Findings

The evaluation produced two set of important data. One is quantitative data from the observation checklist and the other one is qualitative data from focus group interview. For the quantitative data, this evaluation employed descriptive statistics. A series of analysis revealed follows.

Five senior citizens with an age over 50 participated in the evaluation. Three female and 2 male participants were asked to complete a set of tasks (refer to Appendix D: Participant Task Completion) after the learning session. While the participants were completing the tasks, the three evaluators checked whether the participants properly conducted the tasks or not using an observation checklist (refer Appendix E: Observation Checklist). The results are summarized in Table A.

Table A: Results- Observation checklist

Participants	N of properly conducted task	%
1	5	100
2	5	100

3	5	100
4	5	100
5	5	100
Average	5	100

The results show that all of the participants completed all of the tasks correctly. Thus, it is possible to say the product is effective to teach senior citizens how to browse the Internet. More specifically, the intended outcomes 1) increase knowledge of the internet; 2) understand how internet browsers work; 3) increase usability of Internet browsers can be achieved by utilizing the product.

For the qualitative data, the evaluation employed content analysis. Five senior citizens who experienced the product participated in the focus group interview. While videotaping the interview, the participants revealed their opinion about the questions (refer to Appendix F: Focus Group Interview Guide) provided by the interview facilitator. The videotaped interview was turned into a text form to make a transcription which was used for content analysis. In order to figure out all the issues related to the product, the evaluators conducted an open coding; then, most frequently mentioned issues were counted. The results are summarized in Table B.

Table B. Results- Content analysis

Issues	N of participants mentioned the issue	%
Language (inappropriateness)	5	100
Language (new terms)	3	60
Vision	3	60
Arrangement	2	40
Unclear direction or content hole	2	40

All participants pointed out that some language was inappropriate for senior citizens. “Your future are gone!” (p 11) and “get out your wallet” (p 12) are the examples of inappropriateness of language. The results suggest that inappropriate language can distract the

participant, making the product less effective. The following statements illustrate participants' feelings about the language in the handbook.

"All the little things, not all age friendly comments like 'your future are gone' on page 11. I had no idea what it was saying. And on page 12, says all the sudden, "it is a commercial website, get out your wallet". My grandma would have been like 'I'm gonna get out of here, man.'" (participant 1)

"'Your future are gone'. It could be really insulting for the age group." (participant 5)

The second-most frequently mentioned issues were 'new terms', and 'vision.' Sixty percent of the participants reported that new terms were hard to understand and font size was too small to read. These issues can hinder the learning as described by participants.

"Little things like 'hyperlink' and 'link,' things like that. There were different versions of the same word but it is hard to tell it's the same thing." (participant 1)

"There's no discussion about 'http' stuff." (participant 4)

"One of the issues I have with pictures is that things are printed so tiny. Someone who has vision problems, they are going to have hard time seeing things." (participant 4)

"And on page 3, it's really hard to read and see the picture. I can't read that." (participant 2)

Lastly, 'arrangement,' and 'unclear direction or content holes' were pointed out by 40% of the participants as the issues that could be obstructive for effective learning.

"There are so many things on a page; it's like my eyes are going to a million places." (participant 4)

Section 10: Recommendations

The recommendations for revision are based on the analysis of the data as previously described in Table C.

Table C: Recommendations

Description of Problem	Recommendation	Reason
Language: Inappropriate word choice for target audience	Exercise #7: <ul style="list-style-type: none"> • Omit “your history are gone” Fun Fact Box (Ex. #7): <ul style="list-style-type: none"> • Omit “get out your wallet” • Add brief definition of commercial website. 	Eliminates any possibly offensive comments.
Language: Excess of new terms introduced	<ul style="list-style-type: none"> • Add “Glossary of Terms” to end of document 	If students need to look up a term, they can easily search the glossary.
Vision: Small font	<ul style="list-style-type: none"> • Increase font size from 12 pt. to 16 pt. 	Helps those with vision problems see the words on the page.
Vision: Confusing visuals (too many textboxes and arrows)	<ul style="list-style-type: none"> • Move textboxes to the border of picture. • Increase font and line of arrows 	Reduce cognitive demand on students to figure out visuals.
Content: Information holes	<ul style="list-style-type: none"> • Add introductions of how to open an Internet browser • Add brief and clear explanation of HTTP 	Facilitate the learning (Students may not have this prior knowledge)
Content: Update	<ul style="list-style-type: none"> • Update year of revision 	Improve the quality of handbook annually and maintain professional appearance.

Language

There are some areas of improvement the handbook needs regarding word choice and amount of new information presented.

First, Exercise #7 should be changed to omit the comment, “your future are gone.” This was a problem with the age group of the target audience. It offended some, so a simple removal will solve the problem. Second, the Fun Fact box in Exercise #7 should omit the phrase, “so get out your wallet.” Many senior citizens would be offended by this because they have a different view of handling money than younger generations. This phrase can be replaced with a brief definition of “commercial websites.”

Finally, there is an excess of new terms introduced in the handbook. There are 10 new terms introduced on just pages 1 and 2 with a total of 22 terms introduced in Unit 1. Because it is important that students are exposed to vocabulary associated with Internet use, the recommended change is to add a Glossary of Terms at the end of the document. This would eliminate the need to search the entire document to review a term. Students could simply locate the Glossary of Terms and look up a term in alphabetical order.

Content

The handbook covers most of the necessary information for students; however, there are still some holes of detailed information which result in participants' confusion.

For example, the audience in this course is senior citizens who have limited prior knowledge about Internet browsers and the Internet. Some of them may not have any idea about Internet browsers. As a primer, the handbook should have considered all kinds of possible challenges for learners.

Therefore, we suggest that the handbook should include an introduction of how to open an Internet Explorer. The introduction should include both text and images, which would ensure that beginning learners understand it easily.

Meanwhile, because of different settings on different computers, it is necessary to introduce different approaches of opening an Internet Explorer, including click the icon on the desktop, the icon in quick Launch taskbar, and the icon in the menu bar.

Another issue is that although the handbook gives a good explanation about website address, including prefix and domain, there is no explanation about *http*, which normally appears together with the website address. Many participants commented that they were curious about that. We suggest adding relevant information to the introduction of website address. The

explanation should not be a specific one, because it will bring more academic and complex concepts. Instead, it should be a brief and clear explanation. Such as:

HTTP (Hypertext Transfer Protocol) is an Application Layer protocol for distributed, collaborative, hypermedia information systems.

HTTP is a request-response standard typical of client-server computing. In HTTP, web browsers or spiders typically act as clients, while an application running on the computer hosting the web site acts as a server. The client, which submits HTTP requests, is also referred to as the user agent. The responding server, which stores or creates resources and images, may be called the origin server. In between the user agent and origin server may be several intermediaries, such as proxies, gateways, and tunnels.

Additionally, the handbook states it was created on May 1, 2008. It has not been revised since then. Changing the date would show continuing improvement of the quality of the handbook. Also, it is showing professional performance and appearance.

Vision

Since the main audience of this product is senior citizens who might have poor sight, it could be hard for them to read small font and tiny printed pictures. It is unnecessary to challenge the audience with issues not relevant to the content. Therefore, we suggest that the handbook should increase the font size and the pictures to be easily viewable to the senior citizens.

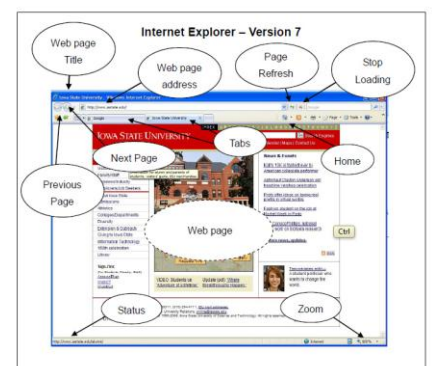
Section 11: Product critique vs. try-out

The critique we constructed as evaluators at the beginning of this project shows that we had both accurate and inaccurate insights about Unit 1's strengths and weaknesses. First, the critique begins by stating a strength of Unit 1 as providing entry level information to beginners very well. This differs from what we found in our try-out. Participants in the try-out found that

there were too many new terms introduced in the unit. Senior citizens with very little knowledge about the Internet would never be able to remember all the terms associated with Internet browsing. It was intimidating that there were so many terms in bold font which was intended to catch their attention. Although participants found the way terms were introduced ineffective, they did comment that they all learned something new even if it was something simple like discovering a different way to get back to a previous page.

Something that we discovered in the try-out but did not realize when writing the critique is that there was no need to assess the students' prior knowledge. Participants in the try-out also made the suggestion that there could have been varying levels of students' knowledge. However, we believe that is inconsequential because students sign up for the class voluntarily knowing their level of ability. The course description clearly states the prior knowledge needed (use a mouse, keyboard, and word processing program), so it is unnecessary to take class time to assess that.

The use of visuals is another topic we critiqued. It turns out that we were mistaken about how students would perceive these visuals. One statement we made in the critique is, "There are various screenshots of the actual web pages they are asked to explore which greatly reduces confusion between what is on the paper in front of them and what is on their computer screen." During the try-out, participants discussed how the screenshots may actually be misleading because web pages change so much. Also, there were so many additional textboxes and arrows which were trying to help point out important pieces that it was difficult to tell which arrow pointed where (shown at right). We initially thought the visuals would be extremely helpful.



There were also some unexpected issues on details that emerged in our try-out. There were some information holes which we did not notice in the primary stage of evaluation. Even though these information holes are subtle, making the appropriate changes will be very helpful in facilitating the learning. Also, there was some inappropriate word choice problems highlighted in the try-out. We neglected this kind of issue because of our limited experience of senior citizens' perspective of the world. The recommendations for these details enhance the strength of our evaluation work.

Team Members Main Responsibilities

Evaluation /Usability Project Steps	Team Member Responsible
Section 1: Description of the Product	Laurel
Section 2: Target Audience	Katie
Section 3: Description of intended outcomes	Chris
Section 4: Product Critique	Laurel, Chris, Katie
Section 5: Matrix of objectives and instruments	Katie
Section 6: Pilot Test	Laurel, Chris, Katie (written by Laurel)
Section 7: Data Collection Process	Laurel, Chris, Katie (written by Laurel)
Section 8: Data analysis plan	Chris
Section 9: Data analysis	Chris
Section 10: Recommendations	Laurel, Chris, Katie
Section 11: Product critique vs. try-out	Laurel, Chris, Katie
Appendices	Laurel, Chris, Katie (written by Laurel)
Presentation	Laurel, Chris, Katie
Revision of Paper Work	Laurel and Katie

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**APPENDIX B:
EVALUATION SCHEDULE**

Time	Process	Team member in charge	Materials
4:30-5:00	Set-up video camera and voice recorder; make sure computers are logged on, projector connected to instructor's computer	Laurel Newell, Katie Dou, Chris Lee	Video camera, voice recorder, computers, projector
5:10-5:15	Introductions Hand out notes about intended user roles	Laurel Newell	Intro script, Consent forms, copies of user role notes
5:15-5:25	Hand out Unit 1 course handbook to participants. Begin instruction with introduction of page 1 and 2	Laurel Newell	Copies of course handbook, projector connected to instructor's computer
5:26-5:35	Instruction of exercise #1	Katie Dou	Course handbook, computers
5:36-5:45	Instruction of exercise #2	Chris Lee	Course handbook, computers
5:46-6:01	Participants complete Unit 1 on their own	All	Course handbook
6:02-6:10	BREAK		
6:11-6:20	Hand out quiz, participants perform task, evaluators observe	All	Copies of quiz, observation checklist
6:20-6:40	Focus group	All (Laurel – facilitator)	Focus group guide, questions projected through PowerPoint on screen
6:40 – 6:45	Wrap up, end of tryout	Chris Lee	Closing script
6:45-	Clean up	All	

APPENDIX C: INTRODUCTION SCRIPT

Hi, thank you very much for coming and welcome to the evaluation. We are the evaluators. I am Laurel and this is Katie and Chris. Today we are here to determine the value of the course “Exploring the Internet” which is offered through at the Osher Lifelong Learning Institute at Iowa State University. Our goal is to find out if *after* instruction, you are able to perform a simple task completion on your own.

Today we will be focusing on Unit 1 entitled “Using a Web Browser.” Each of us will be providing instruction for one section of the unit. This will ensure that you understand the intended delivery of the course. However, because of time constraints, we will be asking you to complete part of the unit on your own. Do not be overwhelmed by this. You will be provided with a detailed handbook that takes you step-by-step through the exercises. Do your best and perform as you normally would.

This evaluation will be divided into two parts. During the first part, you will be given instruction as well as complete exercises on your own. However, evaluators will be available for questions and help if needed. This part should take about 45 minutes.

After that, we will take a 10-minute break before starting the second part of the activity – a “practice” and a focus group discussion. The practice is not something you are being graded on. It is simply being used to determine if *after* instruction, students are able to perform tasks related to web browsing on their own. During the focus group, we will ask you questions related to your experience with Unit 1 as well as solicit your views and opinions regarding the design, organization, and ease of use of content in the handbook. The focus group should take about 20 minutes.

During the instruction part of the evaluation, the team will be around to facilitate and operate the video equipment.

We are not affiliated with Osher Lifelong Learning Institute, where the course is taught, and this activity is conducted only for evaluation purposes. We will not be collecting background information from you; your participation is voluntary and you may opt out from the evaluation at any time.

Do you have any questions? If not, we are now passing out the handbook for Unit 1. Please take a minute to skim through it before instruction begins. Thank you for your willingness to participate!

APPENDIX D: PERFORMANCE-BASED ASSESSMENT (Handout)

Task Completion

You have just received instruction of Unit 1 “Using a Web Browser.” Now we would like to see if you are able to perform some simple tasks on your own. Please follow the five steps below to complete this part of the evaluation. You may use your handbook for reference.

1. Open Internet Explorer
2. Go to the website, www.amespubliclibrary.org
3. Click on any hyperlink you find on the home page.
4. Click to go back to www.amespubliclibrary.org
5. Copy and paste the website address into a Word document.

APPENDIX E: OBSERVATION CHECKLIST

Participant # _____

Observation Checklist	Yes	No
Can open Internet Explorer	_____	_____
Can go to website www.amespubliclibrary.org	_____	_____
Can click on any hyperlink to open new webpage	_____	_____
Can click back to original webpage	_____	_____
Can copy and paste website address www.amespubliclibrary.org into a Word document	_____	_____

Additional Observations

APPENDIX F: FOCUS GROUP GUIDE

Total participant time required: 1 hour 35 min

Total focus group time: 20 min

Break: 0 min

OVERALL QUESTION TO ANSWER IN FOCUS GROUP DISCUSSIONS:

The purpose of the evaluation includes the followings

- Assess participants' operative skills obtained after receiving the course
 - Evaluate participants' satisfaction of the content of the handbook
 - Evaluate participants' satisfaction of the facilitation provided by the handbook
 - Evaluate the utility of the instructional design/layout
 - Investigate participants/ additional recommendation/ expectation for the course
-

1. Introduction (1 min)

- Welcome participants and introduce yourself and observers.
- Explain the general purpose of the discussion.
- Explain the presence and purpose of recording equipment and inform that participants' names will not be used in any analysis.
- Outline general ground rules.

Discussion Guidelines:

This discussion will be informal which means we encourage you to respond directly to the questions from me or comments from other participants. If you do not understand any question or comment, feel free to ask a clarification. As discussed, we will use a voice recorder to capture every part of the discussion. No one besides us will have access to the recording and it will be destroyed after our report is written. Katie and Chris are here to assist me if I need any help.

2. Focus group (18 min)

The focus group facilitator will explain:

You learned internet browsing with a given instructional material in the previous session. We would like to learn about your experience, feedback and whether or not you think the instructional material was useful to improve your skills of using the Internet. Let's get started!

Question 1:

- **Are you satisfied with the content provided in Unit 1?**
 - Does it meet your needs of learning how to browse the Internet?

Let each participant answer the head question. All participants freely discuss the follow up question. Take notes and ensure the voice recorder properly work.

Question 2:

- **Do you think the handbook is easy to follow? Why or why not?**
 - **Which exercises are difficult to learn?**

Let each participant answer the head question. All participants freely discuss the follow up question. Take notes.

Question 3:

- **Do you think the design/layout of the instruction is effective?**
 - Think about the arrangement of elements like quiz placement, fun fact placement, images, etc.

Let each participant answer the head question. All participants freely discuss the follow up question. Take notes.

Question 4:

- **What suggestions for improvement do you have, if any?**

Let each participant answer the head question. Take notes.

3. Closing (1 min)

- Closing remarks
- Thank the participants