Memo

Date:	11/3/2005
To:	instructor name taken out
From:	students' names taken out
RE:	OSDDP Proposal

<u>Description:</u> The Wikipedia encyclopedia was introduced in 2001. It is a free encyclopedia that anyone can edit. A wiki is a collection of text and photos, nearly all of which can be visited and edited by anyone at any time (collaborative software). Wikipedia is an ongoing project aimed at producing a new kind of encyclopedia that is comprehensive and free for anyone to consult. Wikipedia's goal is to create a free, democratic, reliable encyclopedia and in fact it has become the largest encyclopedia in history, in terms of both breadth and depth. This encyclopedia currently has 802, 760 articles and topics such as culture, geography, history, mathematics, people, science, society and technology. It is available in almost every language. Wikipedia is an open source website created by the open source software called Linux.

<u>Reason for Choice/Benefits:</u> Wikipedia is an easy website to navigate through. It should not be difficult to find a group of people to perform a usability test with this website. College students write a lot papers and are always looking for online sources while researching. Students our age have used online encyclopedias in the past, and they will easily be able to compare the usability of this to others. We also chose this because most of our group members and new to open source software and this is not too complicated. Wikipedia is a good basis and start because this concept is new to many of us.

Two of our group members have experience using Wikipedia and think it is a valuable tool for any college student. Many projects require the use of the internet. Since Wikipedia is an online source it is practical to test because it is user friendly. Most of our peers have access and knowledge regarding the internet. We believe that conducting a usability test on an open source software would be much more confusing than simply having a user, test a website.

Many students also find it hard to start researching papers and projects. An advantage of Wikipedia is the variety of information it presents in one location. Students are also able to add definitions and discuss their thoughts about Wikipedia. This is a great open source website that is applicable to most college students.

Usability Project: Group Plan Sheet

> **Note**: The group plan is meant to be used as a project management tool. Having a plan at the early stages of the project helps to set an agenda for the group and keep each individual member of the group on task. It also enables the group to anticipate possible problems that the group may encounter in the process and think of ways to address these problems if and when they occur.
> **The finished group plan (one from each group) is due as an email attachment by the end of class on Tuesday, Nov. 8.**

For this project, you will make a group plan that consists of 2 parts: the Q-A Group Plan Sheet (see questions below) and the Gantt chart (which is a great visual tool for analyzing and planning complex projects).
Completed group plans (both the Q-A sheet and the Gantt chart) should be emailed to me by the end of class on Tuesday, Nov. 8. The questions for the first part are listed below. Try to address them as thoroughly as you can.

1. What is to be tested?

Our group is testing the usability of Wikipedia. This is an online encyclopedia that is free for anyone to use.

2. Who is the typical user of the product that you are going to test? What are some of the characteristics of your "typical" or "average" user?

The type of user we intend on testing is a college student that conducts research or uses any type of encyclopedia within his/her research. A typical user will conduct research two or more times within a semester, however it is not required of our user in order to be tested. Also, a typical user is a student that uses an encyclopedia, whether it be an online source or a hard copy.

3. What does the typical user use the product for? In other words, what typical tasks does the typical user perform by using the product and in what setting? (e.g., The typical user of MS PowerPoint uses the software to create professional-looking presentational materials to use as visual aids when they are presenting their work to their colleagues or clients in an office environment or in other professional settings such as when they are conducting instructional/educational workshops or giving conference presentations.)

The typical user of Wikipedia uses this product to find various definitions of terms when conducting research in any field of study.

4. What methods will you use to recruit and select users? (For the class project, we'll use a pre-test background survey to help us select our users. List other methods that you will use here in addition to the pre-test background survey.)

In addition to the pre-test background survey, other methods we intend on using to recruit and select users include finding students in computer labs and libraries on campus since they will be more likely to conduct research than students that never use the computer labs or libraries.

5. Do you anticipate any possible problems that might occur before, during, and/or after the usability test? (e.g., People you contact refuse to participate; people agree to participate, but leave in the middle of the test; people finish the test but tell you not to use their data later) How will you deal with these problems if, unfortunately, they do occur?

We anticipate that some of the students we approach will not want to participate, or may leave in the middle of the test due to a class. In addition, the internet may not be working properly during the test.

If these problems occur, we will allow students to leave if they need to, and just not use the data we collected from that user. If the internet is not working during our testing, we will be sure to set up a back-up date to conduct our testing.

6. If you think examples would be helpful when you are writing up your test results in the form of a usability report, where are you planning to look for examples?

We may be able to find examples of a usability report for an online source by doing a search online.

7. What role(s) will each team member play in the process?

Each member will play an equal role during the process of this project. We have all been at the meetings, and contributed equally so we all have an equal understanding of what a usability report is.

Additional notes, comments, reminders, warnings etc. for the group:

Wikipedia Usability Report

By (student names taken out)
as part of an Open Source Development and Documentation Project at Purdue
test conducted: November, 2005, report issued: December 12, 2005

Contact: (student name taken out)
English Department
Purdue University
West Lafayette, IN 47906
name@purdue.edu

Executive Summary

The product that we decided to run our usability project on was an open source internet encyclopedia called Wikipedia. It is written collaboratively by volunteers with wiki software, which allows articles to be added or changed by almost anyone. The project began on January 15, 2001 as a complement to the expert-written Nupedia, and is now operated by the non-profit Wikimedia Foundation. The English-language version of Wikipedia currently has more than 820,000 articles.

The basis for our usability test was to find out about the user friendliness and credibility of Wikipedia. Due to the fact that anyone can edit an article, there has been much debate as to whether it is a credible encyclopedia. Through the usability tests we also wanted to see how easy it was for users to navigate through the webpage and to find information.

We created three forms that our users had to fill out while taking the usability test. The first was a consent form that informed the user about the test and was signed by each person. The second form was a pre-test survey which asked for information about the user. Such questions included what year in college they were, what sex they were, have they ever used Wikipedia, how often they do research, and what other encyclopedia's they are familiar with. The last form they filled out was the observational survey. This listed the instructions for the test along with the tasks that they had to complete. Once the participants were done with the tasks they were asked to rate the credibility of Wikipedia, if they would recommend it to a friend, and how likely they were to use it on a research report.

There were a lot of similarities between the results of the individual tests. Most of the users were unfamiliar with the open source Wikipedia encyclopedia and that anyone could edit an article. We also found that many users had problems finding the topics that we asked them to search for in the search engines. This was due to the fact that you couldn't search a topic from any other page within Wikipedia except the main page. The users also had a hard time finding topics in the search engine unless they were typed in exactly as we had them typed in the directions. After the tasks were completed we found that the majority of the users didn't find Wikipedia credible because they could change the information on an article. Due to this, they said they wouldn't recommend it to anyone nor would they use it to conduct their own research.

From the results of these tests, we would recommend that Wikipedia develop a way to make their website more user-friendly. Everything on the main page should be uncluttered so that things are easier to read. They should also anticipate that people are going to type a subject in different ways into the search engine and they should be able to accept all of the variations. Another recommendation would be to change the search engine capabilities so that the user can search from any page within the website. The last thing Wikipedia should do is make the website more credible, but given that anyone can edit an article, it might be hard to accomplish this goal.

Project Description

Wikipedia is an ongoing project aimed at producing a new kind of encyclopedia that is comprehensive and free for anyone to use. It is an open source website created by the open source software called Linux. Wikipedia is hosted by the non-profit Wikimedia Foundation, which operates several other multilingual and free-content projects. Wikipedia was introduced in 2001. Wikipedia's goal is to create a free, democratic, reliable encyclopedia. It has already become the largest encyclopedia in history in terms of both size and depth. There are over 13,000 contributors working on over 1,800,000 articles. Articles are added each day and as of November 20, 2005 Wikipedia is currently working on 829,539 articles in the English version. Each day hundred of thousands of visitors from all over the world make edits and create thousands of new articles to enhance the amount of knowledge held by this encyclopedia. Contributors do not need any specific qualifications to edit and people of all ages submit articles. Articles submitted start as stubs but after many contributions, they can become featured articles. Obvious non-sense is easily deleted as soon as it appears on the "Recent Changes" page. Wikipedia has categorized their information under the topics of culture, geography, history, mathematics, people, science, society and technology. Wikipedia is available in ten different languages.

Test Objectives

- **Navigate:**
  Our test was first designed to observe the ability to move about this site. We had set instructions to go to different areas of the website. We judged how well it is to navigate this site by how able our users could follow the directions without getting lost or confused.
- **Edit:**
  Another test objective was to see how easy it was for users to edit articles. We wanted to see whether editing information was too complicated or very easy for users to do and understand.
- **Credibility:**
  The third test objective was finding out whether or not users found Wikipedia to be a credible source. We wanted to know whether or not users were accepting the information on Wikipedia as true.
- **Research Tool:**
  Our last objective was to find out whether or not our users would use Wikipedia as a research tool. In college, students conduct a lot of research and we wanted to see whether Wikipedia is thought of as a tool to research specific topics.

Potential Benefits

- **Layout/Design:**
  Developers of Wikipedia could use the information we gather to better design their site pages. The steps in our test that caused confusion due to navigating

through the site could help developers make the site better and easier to move about**.**

❑ **Credibility:**
Whether or not users find the information on Wikipedia as credible could help the developers as well. If they know that people do not accept the information as credible, they could try to come up with a solution on how to make sure the information is more credible. They could come up with a way the user would feel confident about the trustworthiness of the information.

❑ **Ease of Editing:**
The developers could use our test to find whether people feel editing articles is easy. They need to make the process easy enough in which people are not apprehensive about editing information.

Methodology

Participants
Our group's goal was to test a large variety of people. We when completed our tests we had collected data from a total of ten participants. Two of our participants were used as pilot surveys to see how our data sheet and test was perceived. We tested these two participants but did not include their data in the statistical information.

We each selected one to three participants whom we did not previously know. Most of us asked people who were in our classes, or people who lived in the same area as us. We talked about the types of people we were planning on testing before we actually conducted each tested so our group could become acclimated with our participants. We also looked into testing different types of people such as females, males, and people with language barriers.

Profiles

Participant Number	Gender	Major	Previously heard of Wikipedia	Conducted research in the last semester	Wikipedia Credibility Rating (out of 5)
1	Male	Engineering	No	Yes	1
2	Female	CDFS	No	No	2
3	Female	Communication	No	Yes	1
4	Female	Management	No	Yes	1
5	Female	Management	Yes	Yes	1
6	Female	Communication	Yes	Yes	3
7	Female	Psychology	Yes	Yes	2
8	Female	Horticulture	Yes	No	2.5
9	Female	Law & Society	No	Yes	3
10	Female	Engineering	Yes	Yes	3

Conducting Tests

As a group we discussed the ideal environment that we wanted to create while conducting each test. This way, although every group member would not be present there would be sufficient consistency throughout our research. We decided that we would use a room that had a computer (this was essential) and few people. At least two group members were present for each participant incase there were any discrepancies.

To keep the tests unbiased we decided to let each participant work through their problems if any were presented and that we would later answer questions. Each of us took notes so that we could analysis the tasks that had the most difficulties. We also wanted each person to provide as much feedback as possible so we could understand how they truly felt about the website and the tasks. Although we tried to keep the questions to a minimum while testing we were each qualified to conduct the test because we each had taken it as well.

Materials

We had a packet which included three documents for each participant. Before the survey they were asked to sign a consent form just to make sure they were comfortable using the website while we took notes on their progress. Next they were given a pre-test survey that focused on who they were and their previous experience with Wikipedia. After they had completed the two pre-test documents the test officially began with the observational datasheet that we created with directions and four tasks. We did not have a post-test survey but we used our test results from our pre-test survey and our observational datasheet to create graphs that show how different participants felt about Wikipedia.

Facility

We conducted our tests in a variety of places but as stated above we created certain standards. The test had to be conducted in a private room with a computer and with at least two group members present. This worked well because as we collected our data we were able to see that our results and testing locations were fairly consistent.
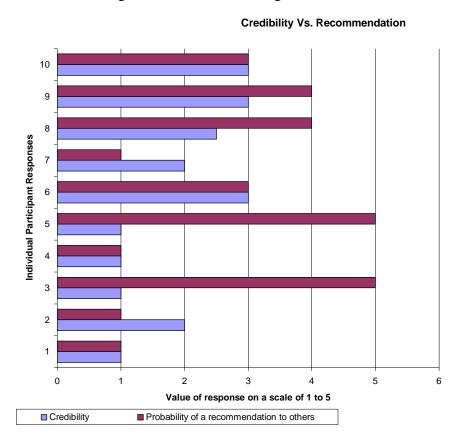
Procedure

We felt that creating a variety of tasks that asked our participants to do various things was the best way to see if Wikipedia was user friendly. Our pre-test survey allowed us to gain so information about the participants and each tasks allowed us to see if they could navigate their way through a new website. Most of the participants did not asked questions during the test. The interaction was minimal but not uncomfortable. They were able to leave comments about the test on the observational datasheet.

Results

To analyze the data, Microsoft Excel was the only program used. Excel was used first to sort and then organize the raw data. This consisted of totaling each participants answer for every question; assigning a number in relation to the value of the response, and entering the assigned number for each answer among all surveys. After all of the raw data was entered, each question was then analyzed individually. While individually
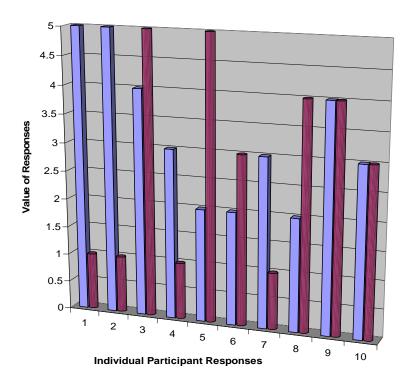
analyzing each question, a record was kept of how often each response was made by the participants. With this new data, the responses for each question could then be compared to the responses of other questions. Being able to compare the results among various questions produced more information, thus giving the researchers a better understanding of each participant's ideas and opinions of Wikipedia.

Through this information, it was noted that 4 participants would recommend Wikipedia as a research tool, even though none of the participants rated the credibility above a 3 on a scale of 1 to 5, 1 being the least credible. As shown in the graph below, 4 of the 10 participants are more likely to recommend using Wikipedia as a research tool despite the fact that he/she does not find it to be a credible resource. However, the probability of recommending Wikipedia as a research tool for 4 other participants are shown to be consistent with the sites credibility rating. In addition, the final 2 participants rated credibility over the probability of recommending Wikipedia as a research tool, meaning that even though he/she believe it to be somewhat credible, they still would not recommend using the site as a researching tool.

Credibility Vs. Recommendation

Another key finding that was noticed through the data was that only three of the participants had reported Wikipedia being moderately easy to very easy to use and of those three, only one is very likely to recommend using Wikipedia as a research tool. In addition, four participants rate Wikipedia as not being easy at all to use, therefore rating themselves as being less likely to recommend using Wikipedia as a researching tool.

Researching Ease Vs. Probability of a Recommendation

☐ Researching Ease (1 being very easy to use)   ■ Probability of recommendation (1 being less likely to recommend)

        Overall, the data illustrates that the participants in this study were more concerned with how easy the site is to use, rather than how credible the actual information on the site is. You can refer to the profile chart in the methodology section to further learn about the participant's thoughts on the credibility of Wikipedia.

Recommendations

After completion of the tests, we decided that improvements can be made to Wikipedia.

Credibility
Since anyone can edit articles on Wikipedia, credibility is at risk assuming that everyone is not an expert. A suggestion to Wikipedia would be forcing the editor to provide a source for the newly added information. Another suggestion would be hiring experts to examine the edited articles and verify that the information is correct. These suggestions would allow Wikipedia to become more credible and a better research tool.

Search Engine
More than half of our participants had difficulty when using the Wikipedia search engine to find an article. This is unbelievable, and Wikipedia needs to redesign their search engine in order to make their website accessible. The redesigning would involve better

programming and coding of the search engine. An improved search engine would allow more complete access to the entire database of Wikipedia.

Layout/Design
Wikipedia was easy to use for half of our participants, and Wikipedia was difficult to use for the other half of our participants. This discrepancy needs to be taken care of by Wikipedia, and the developers should probably redesign the website and give it a different feel since right now only half of the people have ease in navigating with Wikipedia. This improvement would give ease of use to every user.

Familiarity
Even though Wikipedia is available in ten different languages, Wikipedia was not a familiar website to some of our test participants. Wikipedia could start advertising its website in order to gain a larger audience and become a familiar website to all. Wikipedia does not possess the funds in order to advertise their website, so, in order to receive these necessary funds, Wikipedia should start having advertisements on its website. Currently Wikipedia does not have any banner ads or pop-ups, but Wikipedia should start having ads like these in order to raise funds in order to advertise themselves in order to build familiarity.

Works Cited

Wikipedia Encyclopedia. November 2005. 15 November 2005. www.wikipedia,org

Appendix

USABILITY RESEARCH PARTICIPANT CONSENT FORM
(student researcher names taken out)
English Department
Purdue University

Purpose of Research: The researchers aim to examine the usability of Wikipedia and make suggestions for improvement based on observations of user reactions to and interactions with Wikipedia in a simulated office environment.

Specific Procedures to be Used: I will participate in a survey regarding the usability of a website called Wikipedia. I will be prompted by the researchers to perform certain tasks using Wikipedia. I will fill-out a pre-test survey. With my permission, the researchers may also interview me after the test.

Duration of Participation: My participation in this study will take no more than 15 minutes total. The pre-test survey will take about 5 minutes to fill out. The post-survey interview will take about 20-30 minutes.

Benefits to the Individual: This research can benefit me by making Wikipedia easier to use.

Risks to the Individual Risks are no more than I would encounter in everyday life.

Confidentiality: All data from the pre-test survey, the test itself, and the post-test interview will be stored in a secured area with access restricted to the researcher.
When the information from this study is presented or published, I will be identified only by number (e.g., user number 1). The researchers will remove from any specific quotations or references used any and all information of a personal nature or information that might identify me personally as the subject.

Voluntary Nature of Participation
I do not have to participate in this usability research project. If I agree to participate, I can withdraw my participation at any time without penalty.

Human Subject Statement:
If I have any questions about this research project, I can contact (student name taken out) at
name@purdue.edu

I HAVE HAD THE OPPORTUNITY TO READ THIS CONSENT FORM, ASK QUESTIONS ABOUT THE RESEARCH PROJECT AND AM PREPARED TO PARTICIPATE IN THIS PROJECT.

_____
_____
           Participant's Signature   Date

_____
           Participant's Name

_____
_____
           Researcher's Signature   Date

Mock Usability Test for Wikipedia
Pre-test Background Survey

Instruction: Please answer the following questions as honestly and thoroughly as you can. The entire questionnaire takes approximately **5 minutes** to complete.

1. I am _____male _____female.

2. I am_____Fresheman _____Sophomore
_____Junior_____Senior

3. My major is_____.

4. Choose **ALL** that apply from the following categories:

    _____I have never heard of Wikipedia.
    _____I have heard of Wikipedia before, BUT I don't know what it does exactly.
    _____I have heard of Wikipedia before, AND I know what it does exactly.
    _____I have used Wikipedia at least once as a resource.
    _____I use Wikipedia frequently during research and projects.

5. I have used Wikipedia:
    _____ 0 times in the past year
    _____1-5 times in the past year
    _____more than 5 times in the past year

6. What types of encyclopedias do you use while researching?
    _____ I do not use encyclopedias
    _____ Encarta
    _____ Hard Copy Encyclopedia (ie: Britannica)
    _____ Wikipedia
    _____ Other (please explain):_____

7. Choose **ALL** that apply from the following categories:

    _____I have never done research.
    _____I have conducted research within the last week.
    _____I have conducted research within the last semester.
    _____I have conducted research within the last school year.
    _____I have conducted research within my college career.

Please provide any additional comments you may want to make on your experience with Wikipedia in the space below.

Observational Data Sheet

Instructions: Go to www.wikipedia.org. Click on the language version that you want. Once you are on the main page read the tasks below and complete them.

Please specify the language you chose_____.

Task #1

Find the search dialog box and search for the word "open source".

Please provide a brief definition of "open source" (the first sentence of the definition is fine):
_____
_____
_____

Please check here if you had any difficulties with this task._____

Please explain:
_____
_____
_____

Task #2

Start a new search for the word "Purdue". Once the article about Purdue loads, click on the "edit this page" button at the top of the page. Edit in the words "Boiler Up" at the end of the first paragraph. When you are done click the save page button.

Please check here if you had any difficulties with this task._____

Please explain:
_____
_____
_____

Task#3

Begin a new search for "Ross Ade Stadium" and then click on the "discussion" tab at the top of the page. Then click on the "edit this page" tab and type in the words "I love boiler football". When you are done typing click the save page button.

Please check here if you had any difficulties with this task._____

Please explain:

_____
_____
_____

Task#4

Click on the "donations" tab on the left side of the main page. Find the section titled "Postal Mail". What is the address where donations should be sent?

_____
_____
_____

Please check here if you had any difficulties with this task._____

Please explain:

_____
_____
_____

Since Wikipedia is an open source encyclopedia and anyone can edit it, how credible do you find Wikipedia? Rate the credibility of Wikipedia on a scale from 1-5 (one being the least credible).
_____

Overall, **based on your experience**, how would you rate Wikipedia as a tool for researching on a scale of 1 (very easy to use) to 5 (not easy to use at all)?
_____

Would you recommend Wikipedia to your friends? Please explain.

_____
_____

Additional Comments: