Lester's Deli
Usability Evaluation Report Example

COS70004 User-Centred Design

The aim of this document is to provide you with an example of how to write up the results of a usability evaluation. This document only shows the results for 1 of 3 tasks.

Executive Summary

The aim of this usability test was to determine whether the Lester's Deli website (circa 2007) meets specified usability requirements. Six University students completed three sandwich ordering tasks in a controlled usability study on a fully functioning website. At the conclusion of the task participants completed a SUS questionnaire. Several usability problems were found.

The most serious issues were: delivery prices not being displayed in shopping cart, difficulty adding and removing sandwiches using the quantity function, and visibility of order status. The average SUS score was 55.6. One limitation in the method was that none of the participants were residents of Montreal or had any knowledge or experience of Lester's Deli before the study was conducted.

Context of Use

Lester's Deli is a delicatessen based in Montreal that sells various goods online for home delivery and pick-up. This usability evaluation evaluated the ordering function of Lester's Deli website. The user group consists of males and females between the ages of 18 and 80 who have some familiarity with computers and the internet. They are comfortable with ordering online and live in the vicinity of Montreal or in the USA. Users are expected to be on a broadband internet connection using Chrome, Firefox or Safari web browsers. Help pages are available on the website. Note: Accessing help page does not count as an assist.

Usability Evaluation Tasks

Three ordering tasks were tested as follows:

Task 1: Order sandwich

Reason for choosing task: Ordering a sandwich is a core user task. Many of local customers choose to order sandwiches to be delivered to their home or workplace.

Task 2: Change sandwich order

Reason for choosing task: Change of mind or ordering mistake are common issues, so this process must be easy to do.

Task 3: Order Heat and Eat pack

Reason for choosing task: A large volume of online sales are for heat and eat packs for delivery to USA. This is an important revenue stream and must be easy to do.

Usability Requirements

These targets were determined by a benchmarking against competitor sandwich order sites. A summary of the targets for each task is provided in Table 1, 2 and 3.

The target for the SUS score was 80.

Table 1: Target Criteria Values for Task 1 (Order sandwich)

User Group	Usability Goal	Measuring Instrument	Metric	Target Value
Montreal resident	Effectiveness	Task: Order a smoked meat sandwich with Swiss cheese, fatty meat and mustard.	Proportion of participants who complete task without assistance	80%
Montreal resident	Effectiveness	Task: Order a smoked meat sandwich with Swiss cheese, fatty meat and mustard.	Proportion of participants who received assistance.	Less than 20%
Montreal resident	Efficiency	Task: Order a smoked meat sandwich with Swiss cheese, fatty meat and mustard.	Average unassisted task completion time	1.5 min
Montreal resident	Satisfaction	Task: Order a smoked meat sandwich with Swiss cheese, fatty meat and mustard.	Average task difficulty rating (1= very easy, 5 = very hard)	2 or less

[Requirements for all tasks not provided in example…]

Participant Characteristics

Six male students from Swinburne University of Technology Melbourne, Australia participated in the Lester's Deli usability test as part of a class activity. See Table 2 for a summary of their characteristics. There were one female and five males between the ages of 18 and 39 years old. All had bought something over the internet within the last year. None of the participants were from Montreal. While they may not be familiar with the post code

system, we believed that in regard to the process of ordering a sandwich the difference in country of origin would not be problematic.

Table 2: *Participant characteristics for Lester's Deli usability test*

	Age	**No. Items bought over the internet**	**Last time bought on internet**
P1	18-24	1 to 2	less than 1 week ago
P2	18-24	10 to 19	1-4 weeks ago
P3	18-24	3 to 9	more than 4 weeks ago
P4	35-49	1 to 2	more than 4 weeks ago
P5	18-24	3 to 9	1-4 weeks ago
P6	18-24	1 to 2	1-4 weeks ago

Method

The participants were tested in a usability laboratory equipped with logging software which recorded the participant's screen and a head shot from a webcam. Testing was conducted on a live website using a high-speed broad band connection.

After completing the informed consent procedure, they were administered with a demographic questionnaire to determine their gender, age range and use of the internet for shopping. The were instructed to make every effort to complete the tasks wit out help, and that any problems they might have had were due to the interface and not them. At the end of each task they were asked to rate the difficulty of the task.

Participants were asked to think aloud during the evaluation.

At the conclusion of the evaluation they were asked to complete the SUS questionnaire and respond to some general open ended questions about what they liked and disliked about the interface. The test tasks can be seen in the preceding section.

Performance Data

Task 1 was to order a smoked meat sandwich with Swiss cheese, fatty meat and mustard. The results can be seen in Table 3. Two of the participants failed to complete the task giving a task completion rate of 66.7%. P1 did not include the delivery price and P3 required help entering the quantity number. The most number errors were 3 and the least number was 0. The total number of errors made was 7. One participant's data did not meet the less than 3 errors specified in the usability requirements. The shortest successful task completion time was 1.53 minutes, the longest was 2.32. The average Task Completion Time was 1.96 minutes (Note: Task completion time is calculated for successfully completed tasks only). This task completion time was within the specifications of the usability requirements target (i.e., 1-2 minutes).

Table 3: Performance measures and difficulty ratings for Task 1 (order a sandwich)

	Unassisted Task Completion Rate	**Assist**	**Errors**	**Task Completion Time (min)**	**Difficulty Rating**
P1	0	0	1	1.48	4
P2	100	0	0	1.53	2
P3	0	1	2	4.72	5
P4	100	0	3	2.32	3
P5	100	0	1	2.03	4
P6	100	0	0	1.94	3

The following is a summary of the errors made by participants:

- P1 did not complete the task because they did not add the delivery price to the in the price (i.e., they only reported the sandwich price).
- P3 had difficulty working out how to access the sandwich menu. They tried clicking on menu items before adding the post code. P4 and 5 also had this problem.
- P3 required help to specify sandwich quantity.

- P3 and P4 attempted to access the sandwich menu without first selecting the post code. Once they had entered the post code, all participants were able to find the smoked meat sandwich under ‘cold sandwiches’. However, P4 was unable to find the meat sandwich with Swiss cheese. He/she first attempted to add Swiss cheese by using the dropdown box (for selecting meat type and mustard). When that failed, P4 attempted to add cheese by clicking on the ‘add’ button (which is for added items to the shopping cart).

When the participants had identified the sandwich with the Swiss cheese, all participants were able to add the fatty meat with mustard. However, P3 had difficulty adding the sandwich to the cart. It took them several attempts and help from the investigator before realising that they had to change the number in the quantity box to 1 before they could add a sandwich. P1 did not notice the running total on the left-hand side of the page. P1 did not include postage when reporting the price of their sandwich.

Only one participant gave a task difficulty rating under the target (i.e., 2 or less).

[Data for all tasks not provided in example…]

System Usability Scale Results

SUS scores were calculated for all 4 participants. The SUS score for P1 was 63, for P2 it was 60, for P3 it was 47 for P4 it was 52.5, for P5 it was 59 and for P6 it was 62. These seem to reflect the performance data. Overall, participants who took longer and made more errors rated tended to rate their satisfaction as less than those that were quicker and made less errors. The average SUS score was 55.6, well below that specified in the usability requirement targets (i.e., 80).

Table 3: SUS Scores

	SUS
P1	63
P2	60
P3	47
P4	53.5
P5	59
P6	62

Recommendations

The results of the study revealed the following usability problems.

Problem 1: Activation of menus

Figure 1: Menu selection screen

Problem 1 Summary: Some users did not realise that they had to select a post code to view menu.

Severity Assessment: Caused some confusion and unnecessary clicking, but all users managed to overcome the problem without help. However, if user can not overcome this problem they will not see the menu at all. Some may want to see it to determine if they want to visit Lester's in person

Severity Rating: Medium

Recommendation: Allow users to browse menus without requiring a postal code.

Problem 2: Categorisation of menu items

Figure 2: Menu selection screen

Problem 2 Summary: Some users where unsure where to find the required sandwich.

Severity Assessment: Caused some confusion and unnecessary clicking, but all users managed to overcome the problem without help.

Severity Rating: Low

Recommendation: Conduct a card sort activity to determine the best way to organise the menus if time permits.

Problem 3: Finding Swiss cheese item Problem 4: Using text box to select quantity

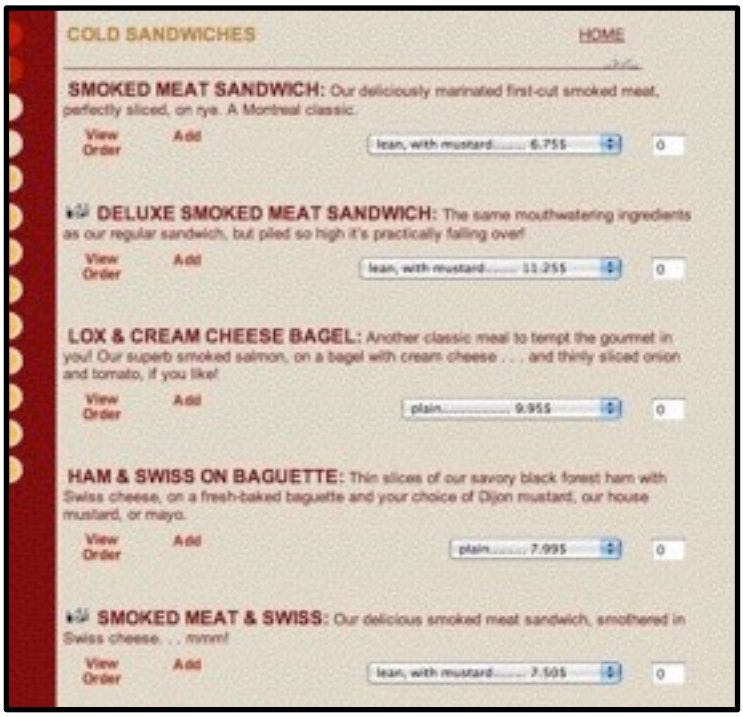

Figure 3: Sandwich selection screen

Problem 3 Summary: Some users did not notice or could not find the swiss cheese sandwich.

Severity Assessment: Variable, some users added the wrong sand- wich (medium severity) others just took some time to find it (low).

Severity Rating: Low-Medium
Recommendation: Improve the scanablity of the sandwich list by separating the list of sandwiches from the descriptions and add/view order buttons.

Problem 4 Summary: Some users had trouble realising that to add a sandwich they had to edit the value in the text box and click add..

Severity Assessment: Users will not be able to make an order with- out being able to do this. One partic- ipant failed to work it out without help.

Severity Rating: Medium-High
Recommendation: Change the way sandwiches are added. Remove the text box and use an add button, or put the add button and text box closer together so relationship is clearer.

Problem 5: Visibility of order status

Figure 4: Sandwich selection with order price displayed

Problem 5 Summary: When users added the quantity, some users had difficulty seeing the cart summary in the top left hand corner which indicated that the item was added - by an in-crease in the price.

Severity Assessment: May cause user confusion and they may attempt to add the sandwich again if they think they were unsuccessful.

Severity Rating: Medium

Recommendation: Need to decrease the physical distance between the user action and the system response.

Problem 6: Visibility of delivery price

Figure 5: Cart

Problem 6 Summary: One user used the cart price to check the final price. Postage is not included in the cart price, the user did not include the cart price in their quoted price.

Severity Assessment: Delivery price is substantial. Some users may recon- sider the transaction because of the delivery price. If delivery price is not visible they will not be able to make this decision and might get a shock at the final price - user may be angry at unexpected delivery charge.

Severity Rating: Severe

Recommendation: Need to include delivery costs in the cart price..

Limitations

The biggest limitation with this evaluatin was that the participants were not natives to Montreal. This meant they were unable to properly understand the ordering system as it required a post code. However, they may also be true of customers ordering from the USA. In addition all the participants were young males which may not have been properly representative of the user group.

The study was conducted as part of a class activity and it is possible that participants were more nervous than they might have been if tested without a large audience. In addition, participants were not consistently asked to think aloud so some insights into the issues they were having may not have been apparent.

Finally, a video recording was not taken of the sessions so it was not possible to check notes or the accuracy of recording the task times (which were taken with a stop watch) or errors at the conclusion of the evaluation.