

Cognitive Walkthrough

Nov. 23

Remember Assignment 3

(your filled in CW sheets are due tonight Nov. 23rd by
11:00pm on Brightspace)

Quick review of a CW and what to do as an evaluator....

Cognitive Walkthrough

- A usability inspection method
- Focuses on an aspect of usability, called "exploratory learning" (most users prefer to do things to learn rather than to read a manual or follow a set of instructions).
 - Focuses on how easy the system is to learn.
 - Is it confusing?
 - Is anything missing?
 - What must the user know to make the next correct step?
- The session is usually facilitated by a moderator. A recorder may also be designated.
- Can be performed on an interface at any time during the development process, from the original mock-ups through the final release

The Three Questions

1. Will the user know what to do?

Know what to do

- Will the correct action be sufficiently evident to the user?
- Will the user know what to do to achieve the task?

2. Will the user see how to do it?

See how to do it

- Will the user notice that the correct action is available (can users see the button or menu item that they should use for the next action?)
- Is it apparent when needed?
- E.g., Will users see the button or menu item, for example, that is how the next action is actually achieved by the system? An example of when this question gets a negative response might be if a VCR remote control has a hidden panel of buttons that are not obvious to a new user.

Understand correct action/not correct

3. Will the user understand the correct action?

- Will the user associate and interpret the response from the action correctly (will users know from the feedback that they have made a correct or incorrect choice of action?)

Review

- Let's quickly go through the example from class and the last lab

After the facilitator has described the application and gone through the first task with you, then fill in the sheets on your own.

First read the task scenario and task.

Then look at the prototype screen and step (e.g, Step 1) and go through each question. For example:

If Abby needs to **select the option to set up the feeding schedule**, will she be able to **know** what to do? Fill in your answer and why you think yes, no, or maybe.

Then ask: will Abby **see** how to **select the option to set up the feeding schedule**?

Then ask: will Abby see know that she **selected the option to set up the feeding schedule successfully**?

Cognitive Walkthrough Sheet – TASK 1 – Page 1

INSTRUCTIONS

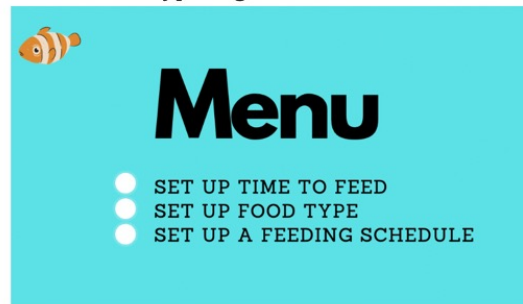
Add a heading at the top of each page that identifies the task #, and which page/step of the task so that the evaluator can follow along easier. You can colour code each task by highlighting to help the evaluator keep track of which task they are doing (e.g., highlight all steps for Task 1 in yellow, all steps for Task 2 in pink, etc.)

Task Title: *Feed fish for set time on a schedule – feed fish using the scheduler*

Task Scenario (using Abby):

Abby, a PhD student, has a small aquarium with several fish. Abby is going to visit her family for vacation for 2 weeks. She sets up her automated fish feeder to feed the fish twice per day for those 2 weeks, with flake food every morning at 9:00am and pellet food every evening at 6:00pm

Task 1 - Prototype Page 1



INSTRUCTIONS

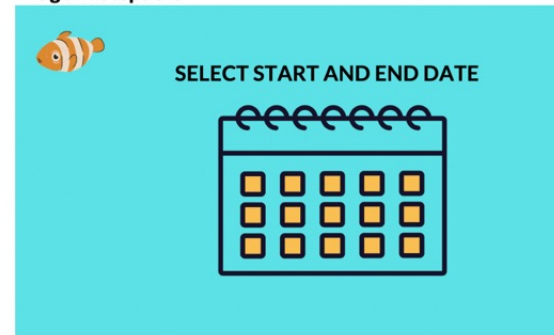
- On the first page of the new task, include the task title, and the scenario for that task
- Each step and table with 3 questions should be on a new page.
- Number the steps with instruction that Abby would do, and also include which use-case steps these match (evaluators can easily refer to the use-case if necessary, to check)
- Include a screen shot of the prototype page for this step either before the Step/Table or after (but both should be on one page).

Step 1: Abby selects the option to set up a feeding schedule on the main menu. [use-case steps 1-2]

Question	Yes (reason/s)	No (reason/s)	Maybe (reason/s)	Severity Rating (1-5)
Will the correct action be sufficiently evident to Abby? ("Know what to do?" - Will the Abby know what to do to achieve the task?)	Abby will see the option in the menu			
Will the Abby notice that the correct action is available? ("See how to do it" - Can users see the button or menu item that they should use for the next action? Is it apparent when needed?)	Abby will see the radio button on the menu			
Will the Abby associate and interpret the response from the action correctly ("Understand correct action/not correction" - will users know from the feedback that they have made a correct or incorrect choice of action?)	The next screen brings up the calendar to add schedule			

Severity Rating
where 1 is lowest
and 5 is highest

Prototype Page 2



Go to next step and do the process: Look at the prototype screen and step (e.g, Step 2) and go through each question. For example:

If Abby needs to **fill in the dates**, will she be able to **know** what to do? Fill in your answer and why you think yes, no, or maybe. If it's no or maybe add a severity rating.

Then ask: will Abby **see** how to **fill in the dates**? In this case maybe... add reasons.

Then ask: will Abby see know that she **filled in the dates correctly**?

Step 2: Abby fills in the start and end date to set up the dates for the feeding schedule. [UC steps 3-5]

Question	Yes (reason/s)	No (reason/s)	Maybe (reason/s)	Severity Rating (1-5)
Will the correct action be sufficiently evident to Abby? ("Know what to do?" - Will the Abby know what to do to achieve the task?)			Abby might not know that the calendar is to add days to feed fish. Could add a title beyond the simple instructions.	1
Will the Abby notice that the correct action is available? ("See how to do it" - Can users see the button or menu item that they should use for the next action? Is it apparent when needed?)			Abby might not know how to add dates. Could add better instructions under calendar or have a ? icon for help.	3
Will the Abby associate and interpret the response from the action correctly ("Understand correct action/not correction" - will users know from the feedback that they have made a correct or incorrect choice of action?)		The next screen is very basic. The user may not know if they properly selected the correct dates. Perhaps join the 2 screens into one, ask frequency while keeping range of dates highlighted on calendar		4

A low severity rating may be for a button label for example, where as, a high one might be that the option isn't clear or is hard to find (ie it has a major impact on doing the task or this step of the task). You may need to ask the facilitator for help or look at the use-case. Note this as well in your sheets and indicate why (usually means there is a problem).

Evaluators will go through each step and ask themselves 3 questions. If "Abby" doesn't have problems you can note this in "Yes" cell or if you think Abby may or will have problems at any point, note it in the appropriate cell:

- what would cause problems (involves explaining why users would face difficulties)
- notes about issues and design changes can be proposed as well as any other potential solutions
- severity of problem(1 to 5 – 5 being most critical)

CHECKLIST (what to have ready)

Before lab each group should have ready:

- You need to have the following documents ready:
 - Your CW worksheets (one file) as a word document called "CW_Group[yourColour].doc".
 - Make sure for each task scenario you include the use-cases and the persona of Abby
 - All these items should be in one file that can be shared with your evaluators
 - Each evaluator will download and save this file to their own computer in the lab. For example, you can email this to each of your evaluators (for evaluators - make sure to save your work as you fill this in and make sure to bring your laptop).
- Your prototype should be ready to demonstrate (can be paper, or online either is okay).

Session Process for Facilitators

Each team will have 2-3 members be the facilitators for CW evaluation sessions (other team member will be evaluators). Choose one member per session to be the main facilitator.

Process:

- Introduce yourselves and direct the evaluators to the files to download the CW sheets/or email them. Once the evaluators have the CW sheets on their computer, you can start.
- Give an overview of your application - what is it, what types of tasks can you do with it
- Give an overview of your persona (Abby)
- **For each task:**
 - **Read the first task, and scenario then evaluators on their own do CW for Task1.**
 - **Give them a 2-3 minute warning before you start going through the next task (read task and scenario).**
 - **If an evaluator has a question, you can answer but note, you don't ask them questions.**
 - **Note: you have 45-50 minutes to go through all tasks. EACH task should be ~15 minutes.**
- After the final task is done, let the evaluators discuss their evaluations together where they will come up with 2-3 must fix changes for each task. They will all change their severity ratings on their sheets from a number to MF. You can listen in during this process, but you can't ask questions.

Evaluator Session Process

- Go to the team that you are assigned. Download and save the CW from that group.
- The facilitator will read each task and scenario before you do the CW for THAT task/prototype. (one at a time)
- For each task:
 - Fill in the CW for that task (ask yourself the 3 questions for each step as if it were Abby that were doing the task)
 - EACH EVALUATOR DOES THROUGH OWN CW INDEPENDENT OF THE OTHER EVALUATOR/s – NO DISCUSSION DURING THIS PROCESS BETWEEN THE EVALUATORS.
 - Make notes of problems in the tables, provide solutions if you have ideas. Give each problem a severity rating (1-5 where 5 is most severe - e.g., you would give a 5 if you couldn't do the task/step because it is unclear). **Even if you give a 5 at some point, keep going through each step. Make sure your feedback is critical, constructive and helpful.**
 - You can ask for clarification from the facilitators, and you can also lookup the use-case if needed. If you need to ask a question or look at the use-case make a note on that in your CW sheets -- this usually means that there is an issue.
- After all the evaluators have gone through all the tasks (and fill in the CW sheets), come together as a group (2 or 3)
 - Discuss each task/prototype and the problems you found with the other evaluator.
 - Together decide on 2-3 Must Fix problems for each task/prototype (these should be items that you think have a major impact on the usability of the task/prototype). Replace whatever severity rating you have given and replace it with a MF.
- You have ~10-15 minutes to do this part – so about 5 minutes per task (keep on time).
- After the session is finished, you should go back and rejoin your group and we'll start round 2 right away
- After the lab is finished, everyone needs to submit their CW evaluations on Brightspace.
- I will email each group, their CW evaluations by the end of the week. You'll need these for next week's lab.

Schedule and Process

- If you're not being an evaluator, you need to facilitate your Cognitive Walkthrough of your prototype. (there are at least 2 facilitators for each round)

At the end of class (Assignment 3)

- Make sure you have added your name to your CW sheets and that the group you evaluated is clear. This is due on Brightspace by 11:00pm on Wednesday (Nov 23).
- This counts as your Assignment 3 (see the assignment for the rubrics).
- I will send a copy of each evaluator's worksheets to the appropriate groups by the end of the week - you will use the feedback to create a cost-importance table to analyze the feedback (in the next lab). You'll need this to finish your project.

Schedule Cognitive Walkthrough

6:00 - Session 1a (~45-50 minutes)

Free member/s of each team will facilitate their walkthrough [read through the tasks and answer questions]

Evaluators 1, 2 [3] do the CW and fill in the tables and give problems a rating 1-5 (5 is highest) (evaluators do the CW at same time but fill their own sheets in **without talking**)

~6:50 Session 1b (~10-15 minutes)

Evaluators discuss their results for each prototype/task and come up with 2-3 "Must Fix" problems for each scenario/prototype. They will all change the severity levels to M on their sheets.

7:10 - Session 2a (~45-50 minutes)

Free member/s of each team will facilitate their walkthrough [read through the tasks and answer questions]

Evaluator 1, 2 [3] do the CW and fill in the tables and give problems a rating 1-5 (5 is highest) (evaluators do the CW at same time but fill their own sheets in **without talking**)

~8:00 Session 2b (~10-15 minutes)

Evaluators discuss their results for each prototype/task and come up with 2-3 "Must Fix" problems for each prototype. They will all change the severity levels to M on their sheets.

Evaluators – Round 1

(evaluators go to the group their name is under)

Yellow

Dharminsinh Pankajsinh Rathod
Farin Daminia
Qiwei Sun

Blue

Sagarkumar Pankajbhai Vaghasia
Sanika Tamhankar

Red

Radhey Rupapara
Jayasree Barla

Maroon

Sai Chinthirla
Aneri Vishalkumar Shah

Green

Dharmik Soni
Naveed Hussan Khowaia

Orange

Nilesh Gupta
Manasvi

Teal

Ferin Rakeshkumar Patel
Vanshika Gohel
Harsh Kamleshbhai Shah

Purple

Sarthak Patel
Arshdeep Singh

Navy

Smriti Mishra
Janvi Nayanbhai Patel

Gold

Sharad Kumar
Saifali Prasla

Evaluators – Round 2

(evaluators go to the group their name is under)

Yellow

Sukaran Golani
Dhairya Doctor

Blue

Sujeet Kc
Aditya Satendra Dixit
Karan Singh Rathore

Red

Shivam Dinesh Rank
Aravind Jayanthi
Meghna Rupchandani

Maroon

Meghna Kumar
Sri Venkata Sai Tejaswini Rallapalli
Shreya Jayachandran

Green

Shamsheer Singh
Bhavesh Lalwani
Dharmay Dineshchandra Sureja

Orange

Prachi Yadav
Heli Bhavsar
Purvisha Patel

Teal

Sangramsinh More
Hrishi Patel

Purple

Arti Bhalodia
Faiza Aziz Umatiya
Dhrupa Patel

Navy

Jayashree Ramasubramanian
Bhavna Jindal
R2: Vinay Vilas Patil

Gold

Vatsal Yadav
Kishan Mahendrabhai Savaliya
Hemanth Kumar Nadipineni