

CSC 310: Human Computer Interaction

Usability Evaluation Report

Dated
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Prepared By

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SIGNATURES:



Brief Description of User

The user is a 21-year-old, white, college female. She is familiar with Windows, but primarily uses a Mac for school and work. She adjusts settings on her computers on an infrequent basis. She was chosen because she is experienced with computers and changing some settings but does not know the features and settings in detail.

Transcript

<< Provide a summary of what the user did and said, and what you did and said. If at some points you have to help the users, because they cannot figure out what to do, that must be included in your transcript in the order they occurred. It is not necessary to write down every word that the user says, just what is interesting and useful. Be sure to write down all actions on the system/device, whether correct or wrong. Include any notes of what happened along the way. Note: **Do not** turn in your videotape or audiotape, just the transcript. This section has line numbers, which you can use as the references in the next section, or add time codes if you want. >>

- 1 **Marco:** Hello [User], my name is Marco. Thank you for participating in our study. I am a Computer Science student at the University of Michigan
- 2 Flint. I am a member of a group working on a project for our Human Computer Interaction course. We are studying the Windows power and sleep
- 3 settings and hope to improve the user experience. To do this, I'm going to ask you to perform some tasks that will help us determine any issues
- 4 with the system. Before we begin, I'd like to ask you some questions about your experience with Windows power and sleep settings. Have you
- 5 touched the power & sleep settings in Windows 10?
- 6 **User:** Yes.
- 7 **Marco:** Have you touched the power & sleep settings in a different version of Windows?
- 8 **User:** No.
- 9 **Marco:** Have you touched the power & sleep settings in a different operating system? (macOS, Linux, iOS, etc.)
- 10 **User:** Yes.
- 11 [User answered the following questions talking about their experience with power & sleep settings in macOS]
- 12 **Marco:** How often do you use the power & sleep settings?
- 13 **User:** When I didn't want it to go to sleep or when I want to change that, but not frequently.
- 14 **Marco:** When was the last time you used the power & sleep settings?
- 15 **User:** When I got my new computer.
- 16 **Marco:** What was your experience last time?
- 17 **User:** It was easy.
- 18 **Marco:** What prompts you to change the power & sleep settings?
- 19 **User:** The length that it takes to turn off the screen and go to sleep. I did change my old computer to low power mode a couple times.
- 20 **Marco:** What settings do you change the most?
- 21 **User:** The length of time before the screen turns off and sleep.
- 22 **Marco:** What settings do you search for the most?
- 23 **User:** I haven't had to search for any settings.

24 **Marco:** What problems did you encounter when changing the power & sleep settings?
25 **User:** It's annoying that on some settings you have to click the lock button to make changes.
26 **Marco:** Thank you for your answers. We are going to move on to the tasks now. I'm going to ask you to perform some tasks. I will only tell you
27 what to do and not how to do it. We will not be judging your performance. Our goal is to find issues with the system so any difficulty you have
28 performing the tasks is actually what we are looking for. This means we can work on improving that component of the system. Please feel free to
29 talk through your thought process to give us as much insight as possible. This will help us to be more effective in improving the system. We have
30 pulled up the Windows 10 Power & sleep settings for you. First, change the screen to turn off after 1 minute.
31 [User found the setting to change the screen turn off time and changed it to 1 minute without difficulty]
32 **Marco:** Now change the computer to go to sleep after 1 hour.
33 [User also found the setting to change the sleep time and changed it to 1 hour without difficulty]
34 **Marco:** Can you set the power button to put the computer to sleep?
35 [User opened the Power and sleep button settings tab and changed the power button to put the computer to sleep]
36 **Marco:** I'd like you to turn on fast startup.
37 [User tried to find this option in advanced settings, and then looked in shutdown settings, where they found it and turned-on fast startup]
38 **Marco:** Great. Can you allow the Hibernate option to show in the Power menu?
39 [User continued looking in shutdown settings and eventually found the option to show Hibernate in the Power menu]
40 **Marco:** I'd like you to set the hard disk to never turn off.
41 [User returned to advanced power settings and set the hard disk to never turn off]
42 **Marco:** Then, can you change playing video to optimize video quality?
43 [User continued looking in advanced settings and found the video playback quality bias setting, but had to continue looking for when playing
44 video setting, and then they set it to optimize video quality]
45 **Marco:** Now set the settings to the high performance default settings.
46 [User opened the default settings tab, and selected the high performance settings, but voiced a concern about not knowing what settings it would
47 change]
48 **Marco:** Thank you for going through those tasks. Now I have some final questions to ask you about your experience. Which of these settings have
49 you changed before?
50 **User:** The screen turn off and sleep time settings.
51 **Marco:** Of the settings you haven't changed before, are there any settings you would now change on your own computer?
52 **User:** The video quality options are interesting, and fast startup sounds like a setting to investigate too.
53 **Marco:** What settings were you satisfied with the process of changing?
54 **User:** All the settings were easy to change, the biggest challenge if anything was finding them on my first try.
55 **Marco:** Which settings were the hardest for you to change?
56 **User:** The biggest difficulty was knowing what tab each setting was going to be in, like fast startup was in shutdown settings which doesn't make
57 sense to me.
58 **Marco:** What improvements would you suggest to the power & sleep settings?
59 **User:** I feel like the default settings could be more explicit with what settings they are going to change before you commit to changing them.
60 **Marco:** Thank you for participating in this study. This is very helpful feedback for how we can improve these settings for our project.

Feedback & Critical Incidence

<< Record your observations in the table on the following page, based on your observations and notes taken during the usability evaluation

Description of columns in the table are as follows:

Prototype Screen/Page:

Which screen of the user interface the user was evaluating at the point of feedback/critical incidence/problem.

Reference:

This column should be used to relate an item back to a specific point in the session. The reference can be to a specific line number in the transcript above or a time code.

User feedback / critical incidence / problem:

This column may contain :

- Feedback (positive or negative) given by the users, **or**
- Critical incidences (breakdowns or problems encountered by users) and/or mistakes committed by users.

Reason for negative feedback / breakdown:

Briefly explain the reason for a breakdown or any negative feedback.

Scope:

Describe the scope of the feedback or the problem; include whether the scope of the issue is throughout the system/device or within a specific screen or screens. If the problems are specific to a page, include the appropriate page reference.

Severity (H/M/L) :

Your assessment as to whether the implication of the feedback is *low*, *medium*, or *high* severity, and the **justification** for that rating.

Way(s) to rectify:

Suggestion for the modifications that might be made to the user interface to address the issue or issues in this row. You **MUST** include trade-offs to be credible. If you can't think of some bad trade-off, say so.

Usability Evaluation Feedback Analysis

| # | Prototype Screen Provide link to images and circle relevant part with optional annotations | Reference include line number(s) in specific transcript for the identified issue | User's feedback/ critical incidence/ problem | Reason for negative feedback / breakdown | Scope which interface /function is impacted | Severity (High/ Medium/ Low) and Justification for giving that rating | Way(s) to rectify and any Tradeoffs (i.e., why the fix might not work) |
|---|---|---|--|---|--|---|---|
| 1 | See Picture 1 | Line 37, 56-57 | User had trouble locating the fast startup setting | The user didn't expect for a setting named fast startup to be placed in the shutdown settings tab of the power and sleep settings. | Shutdown settings tab | Medium: the user was able to find the setting after looking in another tab, but the goal is to avoid the user having to hunt or search for the settings they want to change | Either renaming the shutdown settings tab to better reflect the settings it contains, or placing the fast startup outside of a tab if there is nothing related to it to group it with |
| 2 | See Picture 2 | Line 43-44 | User was confused by two similar looking video settings | The user found the video playback quality bias setting and thought it was the setting they were supposed to change but had to be directed to the other when playing video setting. | Advanced settings tab | Low: the user was able to find both settings, but they didn't understand what each setting did or the difference between them | Naming settings to be more descriptive may help with this problem, there could also be a description of the setting and what it does when a setting is hovered over |
| 3 | See Picture 3 | Line 46-47, 59 | User wanted to know what the default settings would change | The user easily found and used the default settings options, but they wanted to know what settings they would change and wanted to know them before they had to change and lose their current settings. | Default settings tab | Low: the user was able to find and use this setting, but they just wanted to have a clearer understanding of what the setting does and how it does it | A preview or some sort of description could be added to each of the default settings to explain what settings the default includes, there could be a description of the overall goal of the default and the specific changes it makes to each setting |

Picture 1:

Power & sleep - □ X

| | When plugged in | On battery |
|-----------------------|-----------------|------------|
| Turn off screen after | 2 min ✓ | 1 min ✓ |
| Sleep after | 1 hour ✓ | 10 min ✓ |

Power and sleep button settings - □

① When I press the power button

| When plugged in | On battery |
|-----------------|-------------|
| Sleep ✓ | Shut Down ✓ |

② When I press the sleep button

| When plugged in | On battery |
|-----------------|-------------|
| Sleep ✓ | Hibernate ✓ |

Shutdown settings - □

- ☒ Turn on Fast startup (recommended)
- ☒ Show Sleep in Power menu
- ☒ Show Hibernate in Power menu
- ☒ Show Lock in Power menu

Advanced power settings - □

| | When plugged in | On battery |
|-----------------------------|--------------------|------------------|
| Turn off hard disk after | Never ✓ | 20 minutes ✓ |
| When sharing media | Prevent sleep ✓ | Allow sleep ✓ |
| Video playback quality bias | Performance ✓ | Power saving ✓ |
| When playing video | Optimize quality ✓ | Optimize power ✓ |

Default settings - □

Set to default settings (balanced)

Set to high performance settings

Set to power saver settings

Picture 2:

Power & sleep - □ X

| | | |
|-----------------------|--|--|
| Turn off screen after | When plugged in | On battery |
| | 2 min <input checked="" type="checkbox"/> | 1 min <input checked="" type="checkbox"/> |
| Sleep after | 1 hour <input checked="" type="checkbox"/> | 10 min <input checked="" type="checkbox"/> |

Power and sleep button settings -

① When I press the power button When plugged in On battery

Sleep ☒ Shut Down ☒

② When I press the sleep button Sleep ☒ Hibernates ☒

Shutdown settings -

☒ Turn on Fast startup (recommended)

☒ Show Sleep in Power menu

☒ Show Hibernates in Power menu

☒ Show Lock in Power menu

Advanced power settings -

| | | |
|-----------------------------|--|--|
| Turn off hard disk after | When plugged in | On battery |
| | Never <input checked="" type="checkbox"/> | 20 minutes <input checked="" type="checkbox"/> |
| When sharing media | Prevent sleep <input checked="" type="checkbox"/> | Prevent sleep <input checked="" type="checkbox"/> |
| Video playback quality bias | Performance <input checked="" type="checkbox"/> | Power saving <input checked="" type="checkbox"/> |
| When playing video | Optimize quality <input checked="" type="checkbox"/> | Optimize power <input checked="" type="checkbox"/> |

Default settings -

Set to default settings (balanced) Change

Set to high performance settings Change

Set to power saver settings Change

Picture 3:

Power & sleep - □ X

Turn off screen after When plugged in On battery

| | | | |
|-------|-------------------------------------|-------|-------------------------------------|
| 2 min | <input checked="" type="checkbox"/> | 1 min | <input checked="" type="checkbox"/> |
|-------|-------------------------------------|-------|-------------------------------------|

Sleep after When plugged in On battery

| | | | |
|--------|-------------------------------------|--------|-------------------------------------|
| 1 hour | <input checked="" type="checkbox"/> | 10 min | <input checked="" type="checkbox"/> |
|--------|-------------------------------------|--------|-------------------------------------|

Power and sleep button settings -

① When I press the power button When plugged in On battery

| | | | |
|-------|-------------------------------------|-----------|-------------------------------------|
| Sleep | <input checked="" type="checkbox"/> | Shut Down | <input checked="" type="checkbox"/> |
|-------|-------------------------------------|-----------|-------------------------------------|

② When I press the sleep button When plugged in On battery

| | | | |
|-------|-------------------------------------|-----------|-------------------------------------|
| Sleep | <input checked="" type="checkbox"/> | Hibernate | <input checked="" type="checkbox"/> |
|-------|-------------------------------------|-----------|-------------------------------------|

Shutdown settings -

- ☒ Turn on Fast startup (recommended)
- ☒ Show Sleep in Power menu
- ☒ Show Hibernate in Power menu
- ☒ Show Lock in Power menu

Advanced power settings -

Turn off hard disk after When plugged in On battery

| | | | |
|-------|-------------------------------------|------------|-------------------------------------|
| Never | <input checked="" type="checkbox"/> | 20 minutes | <input checked="" type="checkbox"/> |
|-------|-------------------------------------|------------|-------------------------------------|

When sharing media When plugged in On battery

| | | | |
|---------------|-------------------------------------|-------------|-------------------------------------|
| Prevent sleep | <input checked="" type="checkbox"/> | Allow sleep | <input checked="" type="checkbox"/> |
|---------------|-------------------------------------|-------------|-------------------------------------|

Video playback quality bias When plugged in On battery

| | | | |
|-------------|-------------------------------------|--------------|-------------------------------------|
| Performance | <input checked="" type="checkbox"/> | Power saving | <input checked="" type="checkbox"/> |
|-------------|-------------------------------------|--------------|-------------------------------------|

When playing video When plugged in On battery

| | | | |
|------------------|-------------------------------------|----------------|-------------------------------------|
| Optimize quality | <input checked="" type="checkbox"/> | Optimize power | <input checked="" type="checkbox"/> |
|------------------|-------------------------------------|----------------|-------------------------------------|

Default settings -

Set to default settings (balanced) Change

Set to high performance settings Change

Set to power saver settings Change