

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 an 18-year-old, white, male. He is experienced with Windows computers but does not have much experience changing advanced settings. He was chosen because while he has been using a Windows computer for a long time, he does not have the experience of changing every possible setting or feature.

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:** Yes
- 9 **Marco:** Have you touched the power & sleep settings in a different operating system? (macOS, Linux, iOS, etc.)
- 10 **User:** Yes.
- 11 **Marco:** How often do you use the power & sleep settings?
- 12 **User:** Hardly ever.
- 13 **Marco:** When was the last time you used the power & sleep settings?
- 14 **User:** I don't remember when.
- 15 **Marco:** What was your experience last time?
- 16 **User:** I didn't have any issues
- 17 **Marco:** What prompts you to change the power & sleep settings?
- 18 **User:** Making it so my computer won't stay on all the time.
- 19 **Marco:** What settings do you change the most?
- 20 **User:** The length that it takes to go to sleep.
- 21 **Marco:** What settings do you search for the most?
- 22 **User:** None.
- 23 **Marco:** What problems did you encounter when changing the power & sleep settings?

24 **User:** I haven't had any problems.

25 **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
26 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
27 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
28 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
29 pulled up the Windows 10 Power & sleep settings for you. First, change the screen to turn off after 1 minute.
30 [User found the setting to change the screen turn off time and changed it to 1 minute without difficulty, but had some confusion on the meaning
31 between when plugged in and when on battery]

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 went to open Power and sleep button settings tab, but asked if the plus button had to be clicked to open the tab or if the name could just be
36 clicked, they then changed the power button to put the computer to sleep]

37 **Marco:** I'd like you to turn on fast startup.
38 [User confidently went to advanced settings to find the setting and was surprised it wasn't there, and then looked in shutdown settings, where they
39 found it and turned-on fast startup]

40 **Marco:** Great. Can you allow the Hibernate option to show in the Power menu?
41 [User continued looking in shutdown settings and eventually found the option to show Hibernate in the Power menu]

42 **Marco:** I'd like you to set the hard disk to never turn off.
43 [User returned to advanced power settings and set the hard disk to never turn off]

44 **Marco:** Then, can you change playing video to optimize video quality?
45 [User continued looking in advanced settings and found the when playing video setting and set it to optimize video quality]

46 **Marco:** Now set the settings to the high performance default settings.
47 [User opened the default settings tab and selected the high performance settings]

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:** When to turn off the screen and put it to sleep, and what the power buttons do.

51 **Marco:** Of the settings you haven't changed before, are there any settings you would now change on your own computer?

52 **User:** Maybe turning on fast startup, but I'm not sure how the other settings could help me.

53 **Marco:** What settings were you satisfied with the process of changing?

54 **User:** Changing the settings was fine for all of them, the dropdowns or checkboxes all made sense with each setting.

55 **Marco:** Which settings were the hardest for you to change?

56 **User:** The hardest part was just finding the right setting and not having to look in each tab for the right setting.

57 **Marco:** What improvements would you suggest to the power & sleep settings?

58 **User:** Just more clarity on how everything works in case someone needs the help, like with the plugged in and on battery modes or opening the
59 tabs.

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 30-31, 58-59	User had trouble understanding the different power modes	The user didn't have any trouble changing the screen turn off time, but was initially confused on why there were two options to change and if they impacted each other.	Screen and sleep settings	Low: the user was able to find and change the settings, and just didn't understand the difference between the two dropdowns	Having some sort of explanation that settings can be set depending on power mode, or explaining what the power modes mean may help with this issue
2	See Picture 2	Line 35-36, 58-59	User didn't know how to open the settings tabs	The user noticed that the plus sign would likely expand the tab to show settings, but they weren't sure whether just clicking the name would work too.	All settings tabs	High: most of the settings are contained within the settings tabs, if a user can't figure out how to open them then they can't change a lot of settings	This problem seems to boil down to implementation, which obviously wasn't done for a prototype, when we do create an actual model of this we should ensure that the tab opens when the expand button is pressed and when any other part of the tab is clicked
3	See Picture 3	Line 38-39	User had trouble locating the fast startup setting	The user expected the fast startup setting to be in advanced settings and immediately went there, but was confused to see in the tab shutdown settings tab.	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

Picture 1:

Power & sleep □ X

Turn off screen after When plugged in On battery
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 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 -

Turn off hard disk after When plugged in On battery
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) Change

Set to high performance settings Change

Set to power saver settings Change

Picture 2:

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 - □

④ When I press the power button When plugged in On battery
Sleep ✓ Shut Down ✓

④ 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 - □

	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) Change

Set to high performance settings Change

Set to power saver settings Change

Picture 3:

Power & sleep - □ X

	When plugged in	On battery
Turn off screen after	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 <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 - □

	When plugged in	On battery
Turn off hard disk after	Never <input checked="" type="checkbox"/>	20 minutes <input checked="" type="checkbox"/>
When sharing media	Prevent sleep <input checked="" type="checkbox"/>	Allow 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) ☒

Set to high performance settings

Set to power saver settings