



Introduction

- This project focuses on the effectiveness of a written and in-app tutorial for teaching individuals with cognitive impairment to use the Digital Memory Notebook app, or DMN (Figure 1).
- The DMN is an iPad app designed to support the memory functioning of individuals with cognitive impairment and aid them in maintaining independence with day-to-day activities.
- The DMN includes sections to record events, set reminders, and write down notes for the day. The written tutorial, as well as the in-app help section (Figure 2), is meant to clearly explain how to use each section of the app.

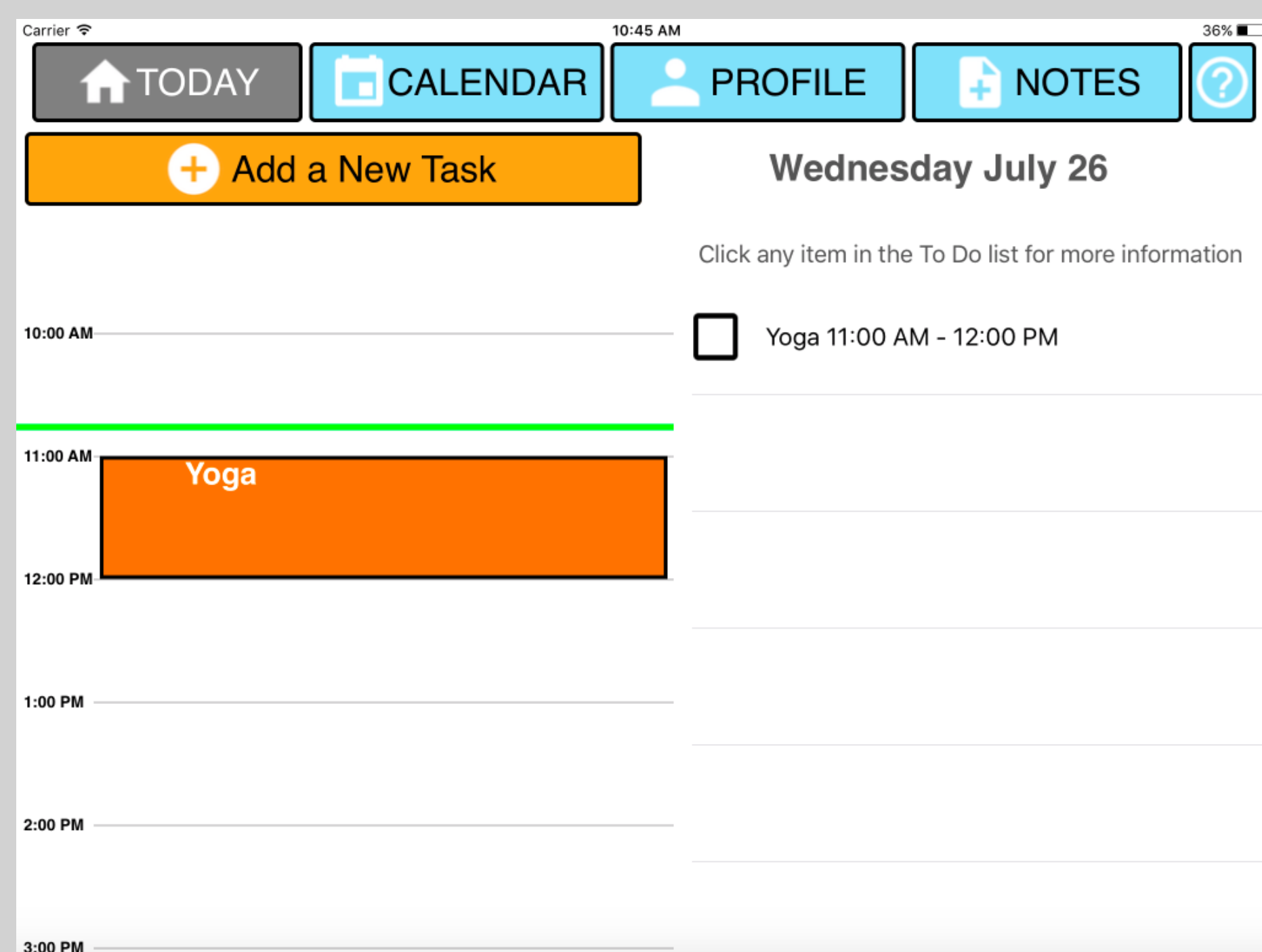


Figure 1: The main screen of the Digital Memory Notebook App

Implementation

- The in-app tutorial includes video walkthroughs for some of the difficult DMN tasks (Figure 3).
- The goal of this project was to obtain user-feedback on the written and in-app tutorials.

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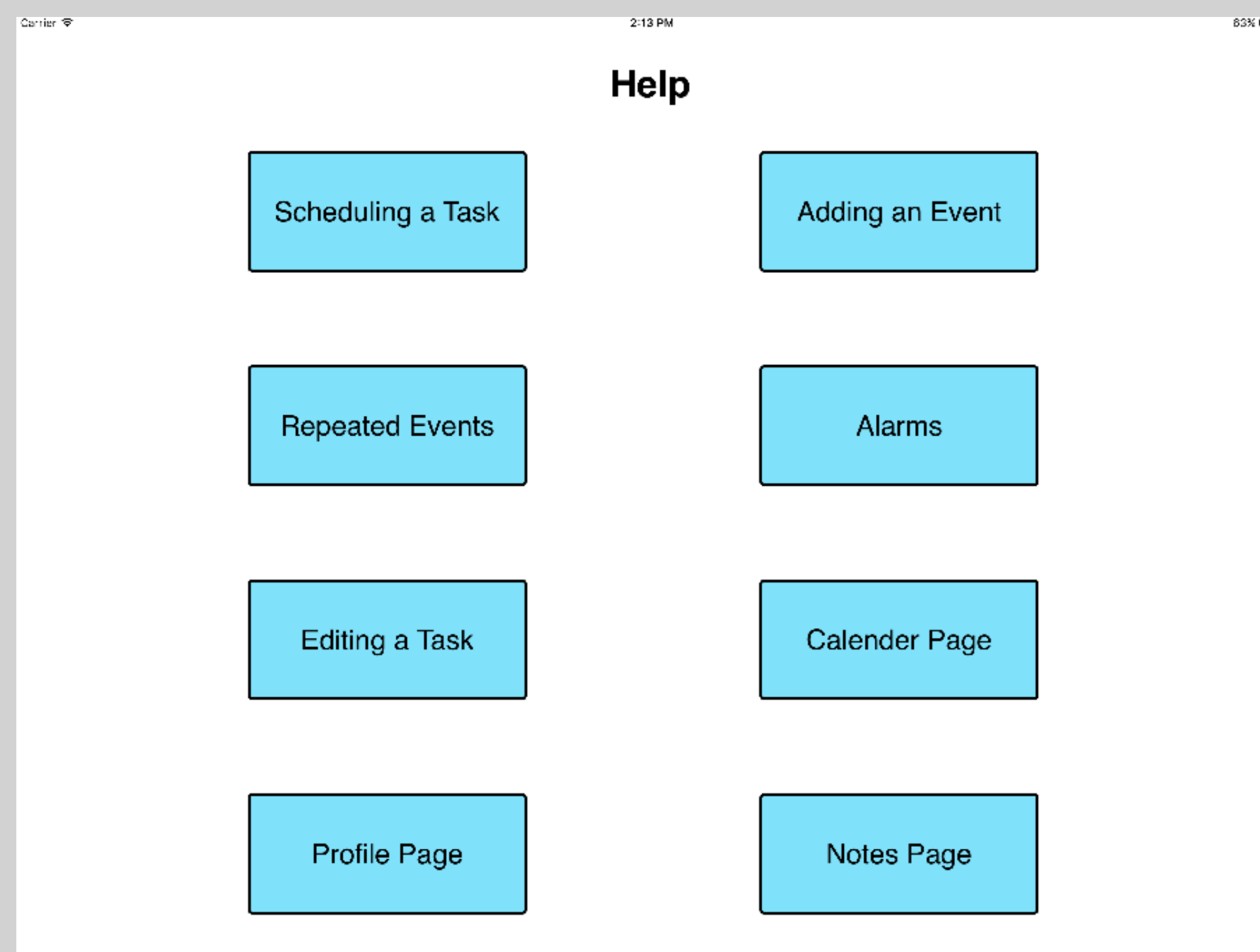


Figure 2: The main screen of the Help Section of the Digital Memory Notebook App

Methods

Participants

- 9 undergraduate students participating in a summer program.

Procedure

- Participants read through the written manual for the app before completing a task on the app related to the section of the manual they read (e.g., How to add a new event).
- After participants completed the task related to the event, they were asked to rate how hard the task was, how much time it took them to complete, and how useful the manual was in helping them with their task.
- Once all of the tasks were completed, the correctness of the tasks was recorded.

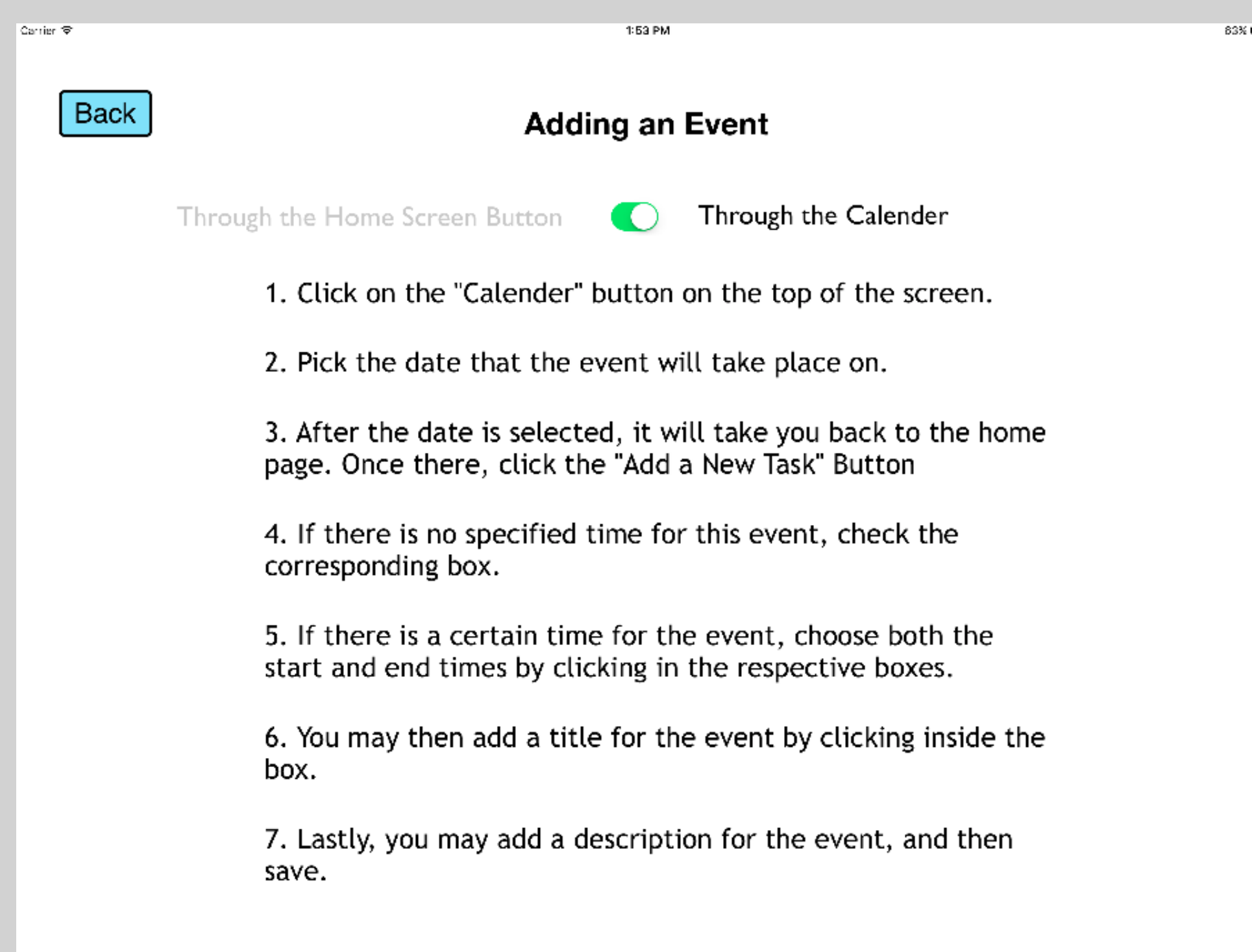


Figure 3: A section of the Help Page that instructs users on how to add an event.

Results

Task Series 1:

Looking for and analyzing an event.

Accuracy (Average): 3.0 / 3.0
 Ease of Use (Average): 6.6 / 7.0
 How much time it took (Average): 7.0 / 7.0
 How helpful the manual was (Average): 6.0 / 7.0

Task Series 2:

Creating an event.

Accuracy (Average): 3.0 / 3.0
 Ease of Use (Average): 5.2 / 7.0
 How much time it took (Average): 6.0 / 7.0
 How helpful the manual was (Average): 6.4 / 7.0

Task Series 3:

Editing an event.

Accuracy (Average): 2.9 / 3.0
 Ease of Use (Average): 6.6 / 7.0
 How much time it took (Average): 6.4 / 7.0
 How helpful the manual was (Average): 6.6 / 7.0

Conclusion

- This data indicate that the manual was effective in communicating how to use the app. (accuracy) but ease of use could be improved.
- Based on feedback, the video tutorials will be improved by including a voiceover to aid in clarity.
- Open-ended feedback from participants also helped better the app by detection of bugs and other unpleasant features.
- In the future, adding a section to the help page specific to partnering the DMN with smart home data and a mobile robot will be needed.

