Project: smallest_steps

Usability Test Report: Findings and Revision Plans, Harvard: Designing Education Media

by Kai Kleinbard on November 18, 2021

“smallest_steps” is an educational chatbot designed to grab the attention of 14 to 37 year olds who might struggle with planning out their tasks and achieving their goals. The aim of the chatbot is to offer people an understanding of how to break goals into their smallest, actionable and feasible steps.

To test my product, I conducted one on one interviews with 3 females and 4 males. The demographics for each participant are as follows:

- 15 year old male, 9th grader in high school, resides in Brooklyn NY, White
- 16 year old male, 11th grader in high school, resides in Brooklyn NY, White
- 17 year old male, 11th grader in high school, resides in Brooklyn NY, White
- 33 year old female, working full time in journalism, resides in Brooklyn NY, Asian
- 42 year old female, recent grad school graduate, resides in Brooklyn NY, White
- 42 year old male, working full time as in real estate, resides in Queens NY, White
- 60 year old female, working full time as design professor, resides in Brooklyn NY, White

All interviews took place on Zoom. I briefly introduced the topic smallest_steps but said nothing about the audience or objectives. Besides a previous email with a server link, my only instruction was to message the smallest_steps bot. I watched each person interact with the bot and took notes on their facial reactions, verbal thoughts (if they spoke aloud) and any glitches that happened via a chat log on the server. After the bot’s lesson was completed, I asked them a series of questions. A few days later, I sent a followup to thank the participants and ask them if there's anything more they’d like to share.

Key reception (attention, appeal, arousal) findings

1. Most people (6/7) liked the video at the beginning of the lesson (interview, observations)
2. All people (7/7) knew by the end of the lesson that the aim was to teach tasks planning (interview)
3. All people (7/7) felt that it was clearly targeted toward the teenage to young adult age-group (interview)
4. All people (7/7) considered the bot ”attention grabbing” (interview, observation).
5. Some people (2/7) found the open ended questions more engaging (interview)
6. Some people (3/7) preferred the clarity of a multiple choice over open ended questions: Observation: under 20 year olds enjoyed multiple choice more than ages > 20 (interview).
7. Few people (2/7) struggled to stay focused during the course of the lesson (interview).

Key outcome effectiveness (comprehension, recall, transfer) findings

8. Some people (4/7) identified that they would be interested to think more systematically (interview)
9. Some people (2/7) identified how important it is to break big meta ideas into steps (interview).
10. All people (6/7) described how planning is also creating a system (interview).
11. No people (0/7) mentioned what the smallest step is (interview).
12. All people (7/7) felt connected to the topic (interview).
13. Most people (6/7) stated the way a system is a series of small connected parts (interview).

14. Some people (2/7) felt that adding more open ended questions would help comprehension (interview).
15. Some people (4/7) felt that adding more media would create more engagement (interview)

Key formal feature (characters, pace, humor or drama, visual style) findings

16. All people (7/7) liked the chatbot as a teaching tool (interview).
17. All people (7/7) preferred breaking long paragraphs into smaller ones (1-2 sentences) (interview).
18. All people (4/7) liked the opening video (interview).
19. All people (7/7) felt the navigation was intuitive (interview).
20. Some people (3/7) felt smallest_steps will benefit from more images (interview).
21. Most people (5/7) found the pace to be right but the text to be too long (observation/interview).
22. Some people (2/7) would prefer that I make the progress bar more exciting aka gamify (interview).
23. Some people (3/7) felt I might consider adding other types of media/links for deeper research (interview).

Key usability (accessibility, responsiveness, flexibility, choice of medium, ease of access to product) findings

24. All people (7/7) said the navigation was intuitive. (interview)
25. All people (7/7) said the bot should allow for a flexibility of user responses (caps, etc.) (interview).
26. Many people (5/7) felt that the passages were too long and hard to read on screen
27. One person (1/7) suggested using more emojis (interview)
28. Some people (2/7) would appreciate more open ended for subjective questions (interview)
29. One person (1/7) suggested making the menu choices more appealing (interview)
30. One person (1/7) suggested focusing on 'what is a smallest_step?', fewer menu choices (maybe 3). (interview)
31. One person (1/7) suggested adding additional info into the progress bar aka ratio (1/20 (interview)
32. One person (1/7) suggested adding status of completion within menu (interview)

Revision plans

1. Fix some of the issues with flexibility in answers (allow capitalizations, fix naming issue, fix what happens when user enters an int or symbol accidentally)
2. Break up large paragraphs. Only 2 sentences max per bot interaction.
3. Add appealing titles to lessons and reduce to 2 or 3 main lessons.
4. Menu needs to be simplified (remove menu item 0). Show 'progress' of each lesson in menu
5. Add media for some items (such as the metaphor of the tire) - use .gifs format, too
6. Add emojis for the 'got it correct!' vs. 'not correct'
7. Rethink the mission of the bot -- hone it to focus on 'smallest_steps'. What is the smallest step?
    a. measurable, beginning, middle and end, feasible
8. Add accessibility options (perhaps to an audio recording for the user to play
9. Editing the descriptions -- random spaces need to be cleaned
10. Simplify wording: using Hemingway Editor (hemingwayapp.com)
11. Add option to print out or download the lesson

SOURCES USED: Report template adapted from Kerry Foley and Mike Wojtaszewski. Link to resource: https://canvas.harvard.edu/courses/94601/files/12907072/download?wrap=1