Co-Designing a Data Collection App with Potential Respondents

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2021 FCSM Research and Policy Conference

Acknowledgments

- This research was supported by the National Center for Science and Engineering Statistics (NCSES) through a Broad Agency Announcement (BAA).

The views expressed in this document are those of the authors and do not necessarily reflect the views of the National Center for Science and Engineering Statistics within the National Science Foundation.

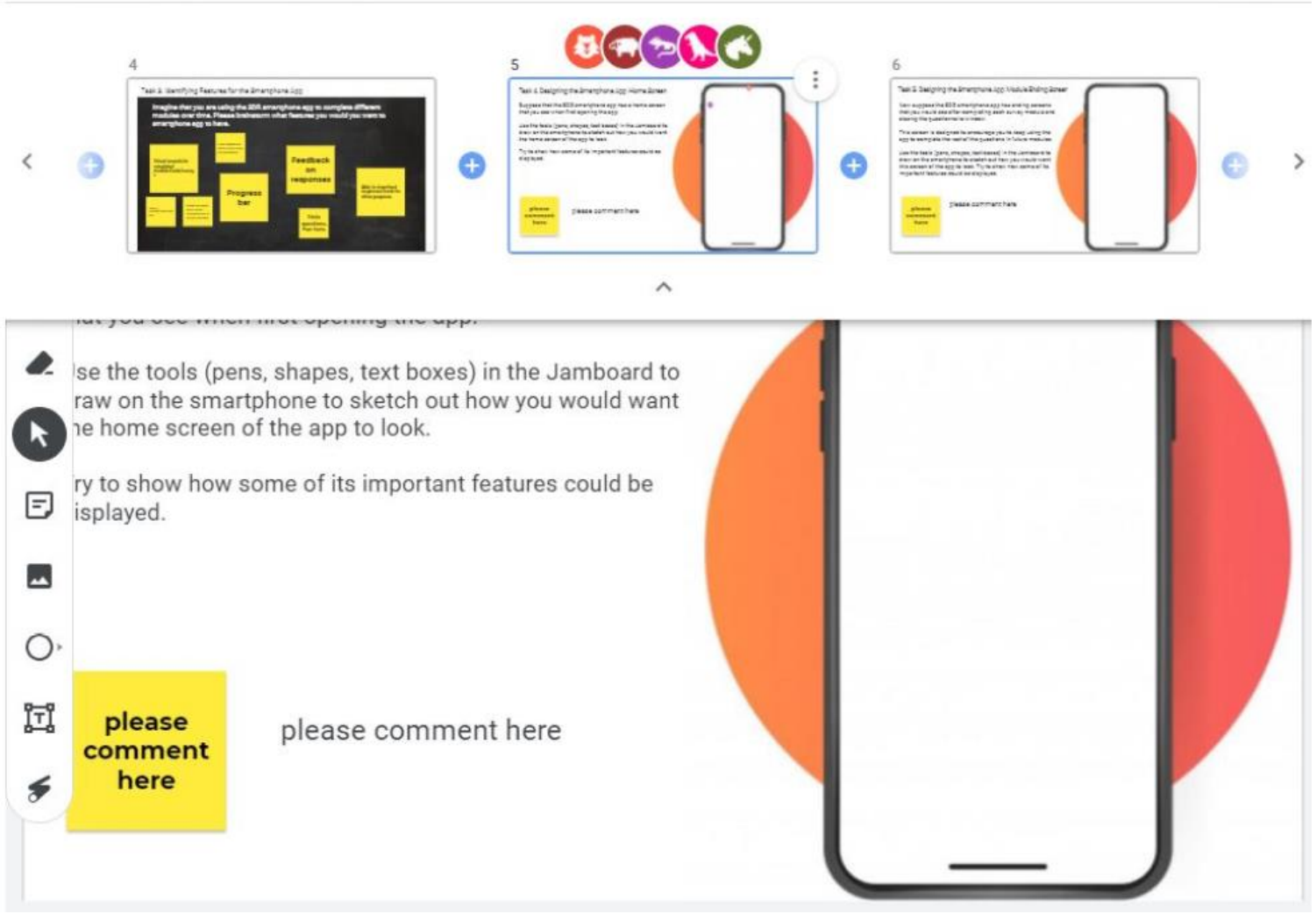
Motivation

- Smartphone apps are increasingly used to collect survey data
  - Smartphone usage has become widespread
  - Apps provide a way to deliver frequent, short surveys over time (i.e., modular design)
- Some sample members may prefer using an app to respond
  - But this requires designing an app that respondents are motivated to download and find easy to use
  - What features should it have? If modules are used, what is their optimal length and timing?

Participatory design workshops

- Goal: to engage potential respondents to Survey of Doctorate Recipients (SDR) in development of an app, particularly for modular survey delivery
- Selected recent doctoral recipients who participated in a previous NCSES survey
  - Sample equally balanced by sex, race/ethnicity, age, and PhD field
- Participants were asked to participate in a 90-minute workshop via Zoom
- 3 parts:
  - 1: Moderated focus group to solicit reactions about the idea of using a survey app
  - 2: Design session in small groups using *Google Jamboard*
  - 3*:* Debriefing
- Three workshops conducted from Feb-May 2021
  - 19 participants in total

Google Jamboard tasks



Survey app discussion

- Participants generally liked the idea of using a survey app
- But they expressed clear expectations:
  - user-friendly
  - multi-purposed
  - secure

Not for **one-time use…** Example: use to answer “small” and “easy” surveys over time

Needs to **make answering survey questions easier…** Example: voice input

Should be **packaged with other useful features…** Example: link to my NSF dashboard

Modular design discussion

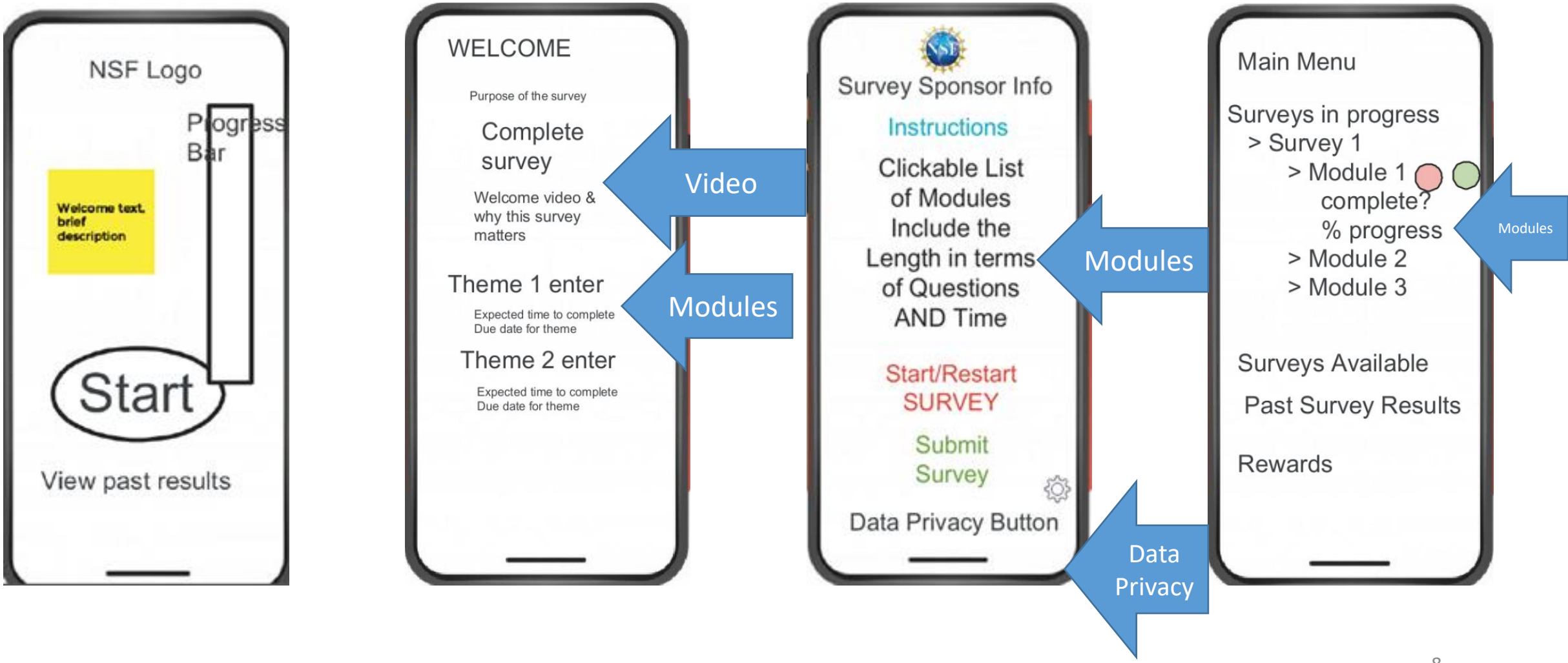
- Most participants liked modular approach
- Expectation: flexibility in schedule (timing and pace) of modules
- No consensus about the optimal length of modules, but participants seemed to lean toward short surveys (“few minutes long”) with related questions

Want to move at my own pace – no preset schedule for modules

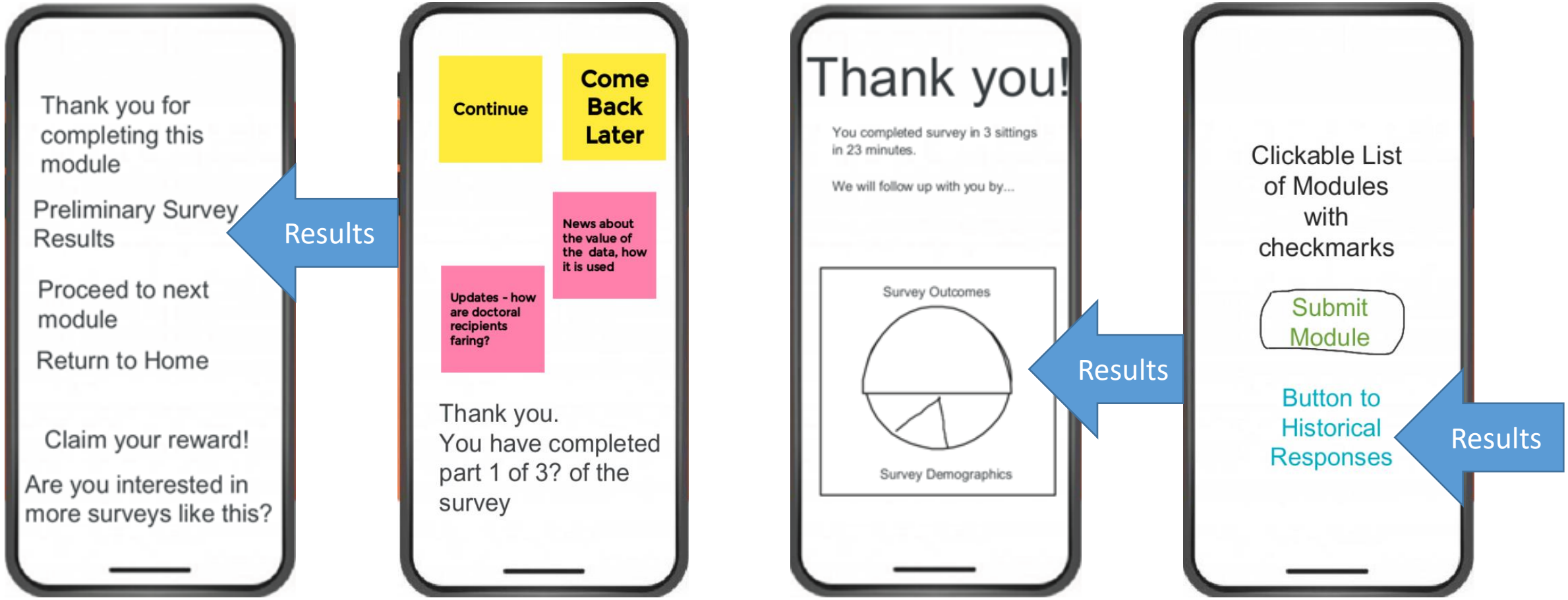
Helpful, not-too-frequent notifications when there are modules to complete

- Some preferred a single survey format with option to save progress

Sketches of app landing page



Sketches of app ending page



Other suggested features

Theme	Examples
Accessibility	Ability to change font size
User experience	Well-designed **user guide/tutorial**
Information on modules	An **estimated time range** for each module; clearly describe the **number of questions** contained in each module
Results	**Personalized results** – e.g., how your responses have changed over time; how you compare to other respondents
Extra features	**Customizable reminders**; Ability to give **feedback or comments** on the app if there are concerns or questions

Discussion

- Vibrant discussion in workshop
  - Participatory design can engage potential respondents in design process
  - Easy to use “sticky notes” in Google Jamboard
- Respondents appeared motivated to use survey app if it saves effort over time
  - App worth pursuing given its potential benefits (rapid data collection, reduced survey burden)
- Different ways of implementing modular design, needs experimentation
- Next steps
  - Design and build an app protype
  - Conduct field test of the app with debriefing interviews

Thank you!
Questions?
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