When Would You Do The Tasks?

Effects of Activity Breakpoints on Mobile Crowdsourcing Task Performance

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Abstract

Mobile phones have become a new and more accessible medium for executing crowdsourcing tasks in a variety of situations. Yet, while some may assume that people are likely to perform these tasks during activity breakpoints, it remains unclear whether different types of such breakpoints affect the likelihood that crowdsourcing tasks will be performed. To explore this question, we classified the breakpoints into five types, according to a user' s preceding, current, and upcoming activities, and conducted a six-week experience sampling method study of 30 users' breakpoint-type-specific crowdsourcing-task performance behavior.

5 types of breakpoints

- **DURING** the same activity
- **BETWEEN** two different activities
- **PRECEDED** by but not succeeded by an activity
- Not preceded by but **SUCCEEDED** by an activity
- **NEITHER** preceded by nor succeeded by an activity

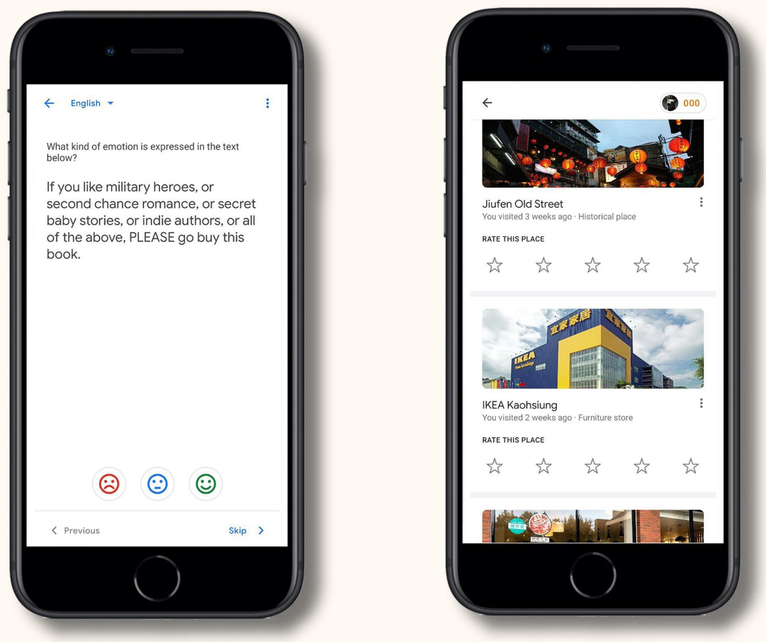


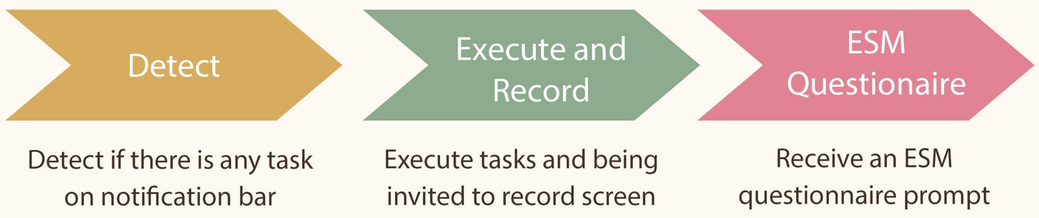
Figure 1. Two types of mobile-crowdsourcing tasks that we used: Google Crowdsource (Left) and Local Guides (Right)

Motivation & Goal

To collect larger amounts of crowd data from people' s day-to-day activities, crowdsourcing tasks have begun to be issued and processed on smartphones, allowing users to perform these tasks almost anywhere and at any time. Some services even actively seek to expand the amount of time their users spend contributing data to them: e.g., navigation apps that prompt their users with real-time traffic-notification questions. However, whether people will actually contribute data under such conditions largely depends on their availability in the moment. Through the experiment, we want to find out how people perform mobile crowdsourcing tasks in different types of breakpoints, and further benefit the development of service systems.

Experiment Process

We developed an android research app that captures the moment when users open two crowdsourcing apps, Local Guides and Google Crowdsource (Figure 1), screen-records their task execution, and delivers ESM questionnaires after a task is completed. The participants were encouraged to complete all ESM questionnaires within 15 minutes of receiving the prompts. In addition, users were also prompted by ESM questionnaires after the research app had detected tasks on notification bar, which are initiated from Google Crowdsource, Local Guides, or reminders from the research app. Every two weeks, all participants were invited to partake in short,non-mandatory interviews, aimed at augmenting the researchers' contextual information about their mobile crowdsourcing tasks.



Current Progress

Currently, We found that these participants tended to engage in crowdsourcing tasks when they were at breakpoints between two different activities, rather than within an activity, and also when breakpoints were long. Additionally, the higher the complexity of their previous activity, the lower the crowdsourcing-task execution rate. However, the high complexity of the post-crowdsourcing task activity had no obvious impact on execution rate.

Future Plans

Our future work includes further analysis of the crowdsourcing tasks people chose to perform at different types of breakpoints, as well as how the choice of the tasks relates to the properties of the preceding and the upcoming activity.