

Proposal for Enhancing Travel Enjoyment Using Photo Spot Quizzes

Introduction

Thank you very much for participating in this experiment.

This study aims to enhance enjoyment and positive emotions during travel.

Specifically, when using the system, groups of three participants will collaboratively search for designated “photo spots” within tourist sites.

We will investigate whether this cooperative exploration increases group communication and how it affects the travel experience.

The quiz consists of cropped photos of a specific location within a tourist site.

Participants are asked to take a similar photo when they find the spot.

For comparison, participants will also experience one day of sightseeing **without** using the system.

Experiment Overview

- **Duration:** 2 Days
 - **Conditions:**
 1. A day without using the photo spot quiz system
 2. A day using the photo spot quiz system
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Day 1 Schedule (No System Used)

1. Gather in Kyoto
 - Assign roles A, B, and C to the group of three
 - Conduct a personality test* (can be done while traveling)
 - Enter email address

2. From 18 prepared spots, select one by group discussion and move there
(Use your own method to search for routes)
3. Repeat the following at each spot:

Step	Content
1	Answer Arrival Survey & Start heart-rate monitoring
2	Freely explore, then answer Mid Survey after ~7 minutes
3	Continue exploring the spot
4	Answer Exit Survey & Stop heart-rate recording
5	Choose the next spot and travel

⚠ Total of 3 spots will be visited in one day.

Day 2 Schedule (System Used)

Same structure as Day 1, but with the quiz system.

Step	Content
1	Answer Arrival Survey & Start heart-rate monitoring
2	Check the photo spot quiz and begin exploration
3	After discovery, answer Mid Survey
4	Continue exploring the spot
5	Answer Exit Survey
6	Choose the next spot and move

⚠ Visit 3 spots total in one day.

App Instructions



Figure 1: App Icon

1. Launch the app shown in Figure 1.

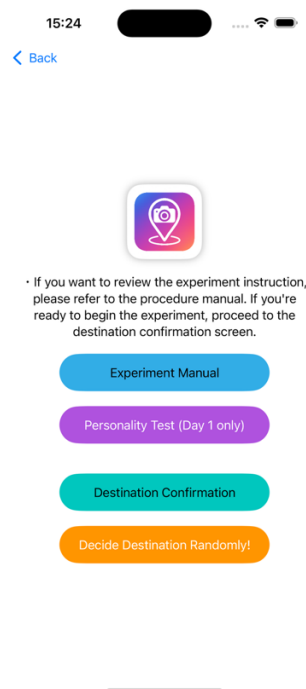


Figure 2: Main Menu Screen

Functions:

1. **Experiment Instructions** — View full procedure
2. **Personality Test** — Answer before Day 1
3. **Spot Selection** — Map-based screen to pick destination

4. **Random Decision** — Use roulette if the group can't decide



Figure 3: Map Screen

On this screen, choose your destination. Once decided, tap the pin of the spot.

Figure 4: Spot Detail Screen

- **Day 1:** Use this screen only for the three types of surveys (Arrival, Mid, Exit).
- **Day 2:** In addition to surveys, use the **photo spot quiz** feature.
 - The image shown is the quiz prompt.
 - Use **Hint 1** if stuck. If still unsure, proceed to Hint 2 and 3.
 - A = Hint 1
 - B = Hint 2
 - C = Hint 3
 - Once the photo spot is found, press **“Verify with Photo”** (green button) and take a photo in landscape orientation.

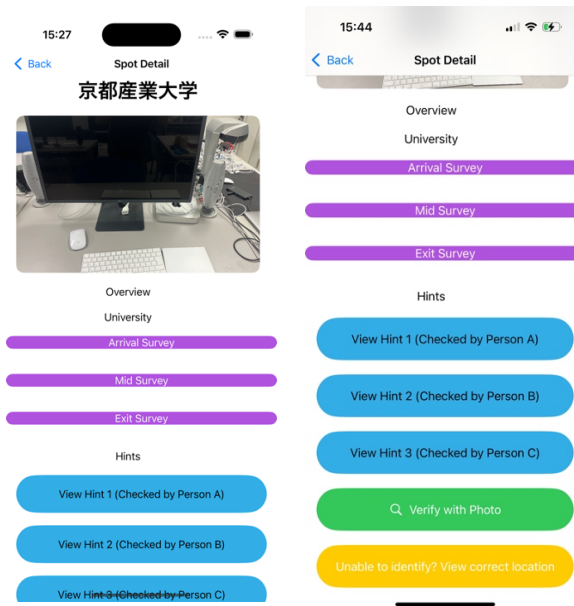


Figure 5: Photo Verification Screen

After taking a photo:

- Press **“Check with Current Location”** and **“Verify with Spot Name”**
- If correct → Green label appears
- If it still fails after 3 attempts (despite correct location), proceed as if verified

If the spot cannot be identified at all, press **“Unable to Identify → Use Location Info”** to reveal coordinates. Head there and take the photo.

After completing this process, proceed to the next spot.

Apple Watch Instructions

Watch App Icon

- **Provided Device:** Apple Watch will be lent on the day
- **Usage:**
 - Open the app
 - Enter your name as username
 - At arrival → Press **START**

- At exit → Press **STOP**
 - Confirm elapsed time is increasing
 - You may use the iPhone keyboard for input
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Google Forms: Survey Notes

- Respond where connection is stable
 - If connection is poor, save your answers and send them later
 - **No re-submissions allowed**
 - **Missed responses or heart-rate failure = invalid data**
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Hints & Rules

- A → Hint 1
 - B → Hint 2
 - C → Hint 3
 - Use hints sequentially if needed
 - Notify on Teams: “Used Hint 1” etc.
 - **✗** No internet searching allowed
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Pre-Experiment Checklist

- Install Microsoft Teams & Enable Notifications
 - Wear comfortable clothes
 - Contact the team beforehand if unsure
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Important Reminders

- Use Teams for all communication
- Close survey tabs after submission
- The experiment must finish **by 4:00 PM daily**


Collected Data

- Heart rate (via Apple Watch)
 - Personality test
 - Survey responses (emotions, impressions)
 - All data will be anonymized and used only for research.
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