

Study Plan

Purpose: The purpose of the study is to do a comparative analysis of participant annoyance to emergency/amber alert sound notifications. Our hypothesis is that the current amber alert sound will increase participant annoyance and replacing it with another less annoying sound will have a calm response rather than dismissing the alert as it goes off. (edit this please)

Participants: There will be 12 participants for this study and they will be students of the University of Waterloo. There would be no demographic exclusion or inclusion for the participants. Recruitment emails would be sent out to potential participants followed by an information letter for those who signify interest. Participants will sign an informed consent form stating: participation is voluntary, can cease at any time, and that the session will be videotaped but their privacy of identification will be safeguarded.

Experiment Procedure

On the phone, you will be responding to questions from the task being done on the laptop
Time to react to the sound and time to do something
If they should actually react, what is the type of reaction

Just paying attention to the sound, responding to the sound and final action

Participants should be asked to:

1. Please turn off their phone
2. Set up all our phones to do the same sound

Participant

1. Briefing (Include disclaimers: e.g. you can stop at any time during the study if you want, all parts of this experiment are for education purposes only, permission to record the video and ensure that privacy will be maintained (participants name will not be associated with data collected))
2. Ask the participant to play a phone game (e.g. Tetris)
3. Send them 4 "Amber alerts" at randomly selected times and order
4. Debrief (Check ethics guidelines to make sure we cover everything: e.g. real purpose of study, how the video will be used etc..)
5. Follow-up Interview:
 - a. Replay each alarm sound and ask the participant to recall the level of annoyance, perceived urgency, etc...
 - b. Ask the participant to complete a Likert questionnaire
 - c. Semi-structured interview based on their responses with predefined questions about their experience with emergency alerts and how they would feel if this sound was used for emergency alerts

Roles

1. Facilitator
2. Test observer
3. Test recorder
4. Test participants

Metrics

- Response time (to stop the alarm, from when the alert goes off to when it stops) measured in seconds.
- Annoyance (Self-reported scale)
- Perceived Urgency (Self-reported scale): urgency for the noise as compared to the urgency of the msg

Recruitment Email

Hello, our names are Olamide Olatoye, Clara Lau, and Neuel Sam. We are University of Waterloo students enrolled in the Management Sciences course Human-Computer Interaction, MSCI 630, taught by Professor Mark Hancock. We are currently working on a project aimed at studying human interaction with **mobile alert** notifications which can help inform better designs in the future. We are recruiting people to perform a simple usability study. During this study, you will be asked to perform some simple tasks with an interactive computing system and a mobile phone. Some questions would be asked following the tasks about usability and ease of use. This study will last approximately 15 minutes.

We cannot pay you for your time, however you will be able to gain an understanding of research at the University of Waterloo and be able to see how evaluation of interactive systems occurs.

We would like to assure you that this study has been reviewed and received ethics clearance through the Office of Research Ethics at the University of Waterloo. However, the final decision about participation is yours.

If you are interested in participating, contact us by emailing Olamide, Clara or Sam at oolatoye@uwaterloo.ca, cswlau@uwaterloo.ca, and nsam@uwaterloo.ca.

Thank you.

Consent form and Information letter: (in a seperate document)

Course Project for MSCI 630: Human-Computer Interaction

Department of Management Sciences

University of Waterloo

Course Instructor: Professor Mark Hancock

Email: mark.hancock@uwaterloo.ca

Participant Information Letter and Consent Form (Lab Study)

Overview

You are being asked to volunteer in a study as part of a course project at the University of Waterloo. The intent of the course project is to learn how to design usable interactive systems, or services related to those systems, that enhance people's lives, whether at work, home, or play. The course instructor is Professor Mark Hancock.

Designing effective interactive systems is a process that requires interviews, observations, and the evaluation of new prototypes. In this phase of the project, we are performing a study to evaluate the usability of a system.

Study Details

Participation in this study is completely voluntary and you may stop at any time. If you agree to participate in this study, we will briefly describe the interactive system, and the particular design problem we are focused on improving, and then we will ask you to perform a few tasks with the system while we observe what you do. You may also be asked to speak your intentions out loud as you use the system. At the end of the study, we will ask you to fill out an anonymous online questionnaire to provide some feedback about the system. The session will last approximately 15 minutes.

With your permission, we will use recording devices to record the study session. These recordings will allow us to more easily recall facts when we later analyze data. Data may also be collected through computer logs, such as how long it takes you to complete a task and where you were interacting (e.g., clicking or touching on the screen).

You may decline to answer particular questions, if you wish, and may withdraw participation at any time.

Risks

There are no known or anticipated risks to you as a participant in this study other than those associated with the normal use of computing devices.

Confidentiality and Data Retention

All data collected is considered confidential. Codes, rather than names or other identifying information, will be used in notes and/or recordings. Even though we may present our findings to the class or publish our results in papers, only the course instructor and our project group will have access to the data collected. Your name or any other personal identifying information will not appear in any publication resulting from this study. However, with your permission, anonymous quotations, pictures and/or video clips may be used. Notes, images, and/or recordings collected during this study will be retained indefinitely in a secure location in Professor Hancock's office.

Remuneration

You will not receive remuneration for participation in the study. However, the information you provide will help us understand how to improve the usability and user experience of the types of interactive systems, and related services, that you may use in the future.

Questions

If you have any questions about participation in this study or would like additional information to assist you in reaching a decision about participation, please contact Professor Mark Hancock at 519-888-4567 ext. 36587 or via email at mark.hancock@uwaterloo.ca.

I would like to assure you that this study has been reviewed by, and received ethics clearance through, the Office of Research Ethics at the University of Waterloo. However, the final decision about participation is yours. In the event you have any comments or concerns resulting from your participation in this study, please contact Andrew Barker, the Director, Institutional Research at 1-519-888-4567, Ext. 36004 or andrew.barker@uwaterloo.ca.

The dates for the study are 12th and 13th of March, 2020. Please reply with your preferred date and we would update you with the time slots available. Thank you for your interest once again.

Student Name(s):

Email

Consent Form

I have read the information presented in the information letter about a study being conducted by Olamide Olatoye, Clara Lau, and Neuél Sam.

for the course MSCI 630 (Human-Computer Interaction) at the University of Waterloo. The course instructor is Professor Mark Hancock. I have had the opportunity to ask any questions related to this study, to receive satisfactory answers to my questions, and any additional details I wanted.

I am aware that I have the option of allowing my study session to be recorded using audio and/or video recording devices to ensure an accurate recording of my activities and responses.

I am aware that excerpts from the interview may be included in any publications to come from this study, with the understanding that the quotations will be anonymous.

I am aware that I have the option to allow video and/or digital images in which I appear to be used in teaching, scientific presentations and/or publications with the understanding that identifying characteristics will be made anonymous, and I will not be identified by name.

I am aware that I may withdraw my consent for any of the above statements or withdraw my study participation at any time without penalty by advising the students or course instructor.

This project has been reviewed by, and received ethics clearance through, the Office of Research Ethics at the University of Waterloo. I was informed that if I have any comments or concerns resulting from my participation in this study, I may contact Dr. Maureen Nummelin, the Director, Office of Research Ethics, at 1-519-888-4567, Ext. 36005 or maureen.nummelin@uwaterloo.ca.

Please	Please Initial
Circle One	Your Choice

With full knowledge of all foregoing, I agree, of my own free will, to participate in this study. **YES** **NO** _____

I agree to have the interview video recorded, photographed, and audio recorded **YES** **NO** _____

I agree to the use of anonymous quotations in any presentation or report that comes of this study. **YES** **NO** _____

I agree to let the video/audio recordings and/or digital images be used for presentation of the research results. **YES** **NO** _____

(Please print)

Participant Signature: _____

Witness Name: _____ (Please print)

Witness Signature: _____

Date: _____

Demographic and Background Questionnaire

DEMOGRAPHIC BACKGROUND QUESTIONNAIRE

Please fill in the blank or check the appropriate boxes for each of the following questions.

1. What is your age? _____ years.
2. What is your gender? ☐ Female ☐ Male ☐ Prefer not to answer
3. How often do you have your phone within arm's reach? _____ hours/day
4. Do you use alarms often? Yes/NO
5. Do you have push notifications activated on your phone? Yes/NO

Feedback/Thank you letter: in a separate document.

Questions for each alarm

On a scale of 1-100

1. How urgent do you
2. How annoying do you find the sound of this alarm ?
3. How likely will this alarm startle you or cause you to panic?
4. How likely are you to ignore this alarm?

Likert Questions (5-point?)

Ease of Detection

1. I can distinguish this alert from other mobile notifications on my phone
2. I would be able to detect this alarm If I was driving
3. I would be able to detect this alarm if I was working with my phone nearby
4. I would be able to detect this alarm if I was in a noisy environment (e.g. crowded area)
5. If I was asleep, this alarm would wake me up

Follow up: open-ended question: In what situation would you fail to hear this alarm?

Suitability for Emergency Alerts

1. I think that this alert is suitable for government-issued alerts
2. I think that this alert is suitable for alerts that require immediate action
3. I think that this alert is suitable for alerts that do not necessarily require immediate action

Influence on Intended Message/Action

1. The sound of this alarm encourages me to read the associated alert message

Repeated Use

1. I would feel irritated if I hear this alarm more than once in a day
2. I would be inclined to ignore this alarm if I hear it often

Hypotheses

1. How annoying
2. Response time
3. Perceived urgency