



Design and Development of a Social Robot for Teens – School Parent Letter

Elin Björling, MA, Ph.D.
Investigator
Human-Centered Design and Engineering
University of Washington
428 Sieg Hall
Seattle, WA
206.351.7559

Emma Rose, Ph.D.
Investigator
University of Washington Tacoma
1900 Commerce St.
Box 358421
Tacoma WA 98402
206.280.5873

Maya Cakmak, Ph.D.
Co-Investigator
Computer Science and Engineering
CSE 542
Seattle, WA
mcakmak@cs.washington.edu
206.685-5643

24-Hour Study Contact Phone: 206 351 7559

Research Staff: Rachel Ren, (206) 616.2662

PROJECT EMAR

DEAR SEATTLE SCHOOL PARENT

We are inviting your teen to be part of a research project exploring the development of a social robot to help teens with stress. Project EMAR is a participatory design study. As researchers, we would like teens to inform us about their ideas, likes and dislikes about robot prototypes. This will help us to make evidence-based design decisions. Participation in this research project is voluntary and any student can choose at any time not to participate. However, we anticipate that this project be educational, enjoyable and engaging for your students. From this research we hope to design a robot that teens find engaging and helps them to reduce their stress.

ACTIVITIES

This educational research project involves several school-based activities that will take place either during an elective class, before, or after school. Students of all ages, grades, ethnicities, and abilities are invited to participate. Activities range from 30-90 minutes and are led by a team of UW students and faculty. Teens may volunteer for a wide range of activities described below.

Teen-Robot Interaction

In our effort to successfully build a social robot that teens find engaging, many activities will involve inviting students to interact with robot prototypes while our team directly observes their reactions/interactions. We are interested in student’s feedback about what they like/dislike about our prototypes. The students may respond be asked to respond verbally or select responses on a touch screen in response to the robot’s questions.

Virtual Reality Robot Design

Also as part of this project, students will be invited to play and give feedback on a virtual-reality (VR) game, Build-a-Bot, that was designed by our team. In this game, students will wear a VR headset and explore a factory of robot parts. They will choose from a large assortment of parts in order to build a robot that they like. We will video record the activity in the game and ask students to talk aloud about their process. Completed robots will be screen captured as data to inform our future design of our school robot.

Group Interviews

As part of our project, we also plan to conduct 2-4 student group interviews and 1-2 staff group interviews. In these interviews a Researcher will interview 2-4 groups of 8-10 students as well as 1-2 groups of 6-8 teachers or staff about their feelings about a robot living in their school. Group interviews will also take place at your school at a time that is convenient to the school and staff. Group interviews will be audio recorded. Audio recordings will only be available to research study staff.

In-School Robot Pilot

The final activity in our 3-year project involves the completed social robot visiting your school for 1-2 months. During this time, the robot will interact with students in a common, non-classroom area and gather anonymous stress level and mood data from teens who decide to interact. The specific data being gathered will be determined during the participatory research process as will the location of the robot. All of the information that the robot has will be anonymous.

Student Data Being Collected

During all of our activities, we will not collect any written student identifying information (names or contact information). We will collect student demographic data (such as age, grade, gender and ethnicity). We do plan to take photos and videos of the students' interactions with our prototypes and during the virtual-reality design game. Video recordings will be essential for our research team to understand teen-robot interactions and help us to make design decisions. In addition, video and photos may be useful in research presentations or social media as part of our mission is to share our learning with the public. However, any student or parent can opt out of participation in photos, video or audio recordings as it is not required for participation.

Teens will not be allowed to participate without parental permission. If you have any questions, please contact the project lead, Elin Björling, directly at 206.351.7559 or bjorling@uw.edu.

Project EMAR Parent Permission

I agree my child can **participate** in the following these educational research activities:

- Teen-robot interaction activities
- Virtual-reality robot design game
- Group Interviews

I agree the following data can be captured about my child:

- I agree photographs and videos of my child can be used for **only research purposes**.
- I agree photographs and videos of my child can be used for **social media and research presentation purposes**.

OR

_____ (initials) no photographs or video recordings of my child may be used for any purposes.

Parent

Student Name

Date