Carnegie Mellon University

Online Teacher Acknowledgement Form

Introduction

This project is part of a collaborative research study conducted by Carnegie Mellon University's Robotics Academy (CMRA) and the University of Pittsburgh's Learning Research and Development Center (LRDC) that is funded by the National Science Foundation. CMRA provides the technical support, the curriculum, the Computer Science STEM Network (CS2N), and the Robot Virtual World software used in the experiment, LRDC is the research partner and evaluator for the project. *The purpose of this research project is to develop ways to engage students in "computational thinking practices" in formal and informal robotics education activities.*

What is this Document?

This document is designed to inform teachers that the Computer Science Summer of Learning is a Carnegie Mellon Robotics Academy National Science Foundation funded research project that studies the effectiveness of new curriculum and Robot Virtual Worlds software. Carnegie Mellon's research plan has been approved by Carnegie Mellon's Institutional Review Board (IRB) which is a committee established to review and approve research involving human subjects. The purpose of the IRB is to ensure that all human subject research be conducted in accordance with all federal, institutional, and ethical guidelines. By pressing the "I am aware that this is a research project" button after you have read this document, you are acknowledging that you know this is a research project and that you are participating in this project by your own choice and understand that you can choose to leave the project at any time.

Teacher/Student Participant Requirements

No teacher or student has an obligation to participate in this study or to share their information. Teachers and students that elect not to partipate in the study will have the same free access to the online resources and software as teachers and students that agree to participate in the study. If a teacher or student begins the study and then changes their mind about sharing their progress they will be able to log into their settings and change their settings to "do not share my data".

Computer Science Summer of Learning Online Computer Science Expectations

- Participants are interested in learning how to program robots.
- Participants understand that it will take approximately 20 hours to complete the course materials.
- Participants will log into CS2N at the beginning of each session to store their progress.
- Participants will complete the pre and posttests and surveys that are part of the project. This data will be used to: measure how much a student learned, if their perceptions changed about programming and robotics, and if their perceptions about their ability to program changed.
- Participants will complete the Introduction to Programming Certification Test at the end of the course.

Robotics Course Login Procedure for Data Collection

Teachers are required to create an account on the Computer Science STEM Network (CS2N), a Carnegie Mellon secure server. The teacher will follow the directions found at:

http://www.cs2n.org/teachers/groups to setup their online class roster. If they need help setting up the class roster, then they can contact CMRA using the help tab on the side of the screen.

Risks

The risks and discomfort associated with participation in this study are no greater than those ordinarily encountered in a typical classroom or other online activities. No student names will be collected by the the University of Pittsburgh research team---all student data is automatically associated with a study-specific

Carnegie Mellon University

ID number. CS2N automatically creates long arbitrary strings (e.g., 61852c56e6e2faba00c76a0790c71) that are coupled with student data. This allows researchers to track learning from pre to post without having access to student's actual names. CS2N's system enables completed assessments to be handed over to the researchers without further modification. The LRDC research team collects the ID-indexed information data via a CS2N secure adminstrator only log in. Access to this data requires a log in that is only available to researchers. When researchers publish papers from this study they will not be using actual school, student, or teacher names.

Benefits
There may be no personal benefit to you from participation in this study but you may learn programming skills and computational thinking practices from being part of this study and this may benefit you in the future.

Compensation & Costs
There is no cost to participate in this study. There is no financial compensation for participants in this study. Students that complete all parts of the study, including taking the certification test, will have their names entered into a randomly selected drawing for a free robotics kit.

Confidentiality
Teachers are required to create a CS2N account to setup their online classroom. When a teacher creates a classroom account they upload an excel spreadsheet that includes:
- the classroom login password,
- a personal ID number for each student (this ID number is often the same ID number that the school uses to identify individual students), the number is created by the teacher,
- Last Name of each student,
- First Name of each student,

this file enables the teacher to setup an online class list and follow individual student's progress during the course. When students log into the system for the first time they are prompted to change the teacher assigned password and to create an individual student password. They are also requested to create a unique pseudoname (a fake name) that they will use for the class. The research data the team collects does not include any personally identifiable information about participants and the project does not capture a user's IP address. All data is stored on a secure CMRA server that only trained research staff have access to.

By participating in this research, you understand and agree that Carnegie Mellon may be required to disclose your consent form, data and other personally identifiable information as required by law, regulation, subpoena or court order. Otherwise, the data collected from the study will be kept on a secure server at Carnegie Mellon University and will only be accessible to the researchers conducting the study.

Right to Ask Questions & Contact Information
If you have any questions about this study, you should feel free to ask them by contacting the Principal Investigator. Robin Shoop, 10 40th Street, Pittsburgh, Pa. 15238
Phone 412-681-7160 email rshoop@cmu.edu

If you have questions pertaining to your rights as a research participant; or to report objections to this study, you should contact the Office of Research integrity and Compliance at Carnegie Mellon University. Email: irb-review@andrew.cmu.edu . Phone: 412-268-1901 or 412-268-5460.

Voluntary Participation Your participation in this research is voluntary. You may discontinue participation at any time during the research activity.