**Team Formation and Project Proposal**

**Team Name:**

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**Team Members:**

Jen Tennison (SLU) & Bryan MacGavin (SLU)

**Preferred Hardware Platform:**

Robotic hand with arm bending and twisting capabilities

**Social Building Blocks:**

We will be incorporating kinesics through spatial and gesturing movements of the arm in order to test different games

We will be incorporating haptics to signal the approval for successful completion of an exercise by the robotic hand

**Project Proposal Idea:**

Goal:

* Have participants attempt to teach different games or exercises to the robotic arm and have the robotic arm recreate the game/exercise
* The robotic arm will be testing realism of the interaction by either being typically robotic/“distant” and human-like/“expressive” during the interactions

Plan to accomplish:

* Activities:
  + Rock, paper, scissors
  + Odds/Evens
* Experimental Design
  + 2 X 2 Factorial

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Perceived Competency | |
|  |  | Correct Sign Replication | Incorrect Sign Replication |
| Expressiveness | Distant | 2 | 2 |
| Expressive | 2 | 2 |

* + Participants evaluate experience with the Godspeed Index
* Distant Case:
  + Participant chooses an activity to teach the robot from placards sitting in front of the hand
    - Robot hand remains stationary during the choosing process
  + Participant is asked to “teach” the robot hand by explaining and recreating the gestures
    - Robot hand remains stationary during the participant’s explanation
  + Robot hand either correctly or incorrectly simulates the activity
    - Robot returns to neutral position
* Expressive Case
  + Participant chooses an activity to teach the robot hand from placards sitting in front of the hand
    - Robot hand points to the chosen activity and thumbs up for acknowledgement
  + Participant “teaches” the process
    - Robot hand gives a sign of understanding
  + Robot hand either correctly or incorrectly simulates the activity
    - Correct response = fist bump or high-five
    - Incorrect = fist shake
  + Robot hand waves goodbye once finished