Participant ID: _____

Pre-experiment questionnaire
Project title: *When is the world its own best interface?*

UMASS LOWELL
Learning with Purpose

Demographic Questions

Age _____

Gender Identity
☐ Male ☐ Female ☐ Non-binary ☐ Prefer not to say
☐ Prefer to self-describe: _____

Handedness ☐ Right-handed ☐ Left-handed

Education
If currently enrolled, select highest completed
☐ Some high school ☐ High school or equivalent (i.e. GED)
☐ 2-year degree ☐ 4-year degree ☐ Master's degree
☐ Professional degree ☐ Doctorate
☐ Prefer to self-describe: _____

Do you use a mobility scooter in your daily life?
☐ No ☐ Yes

Do you regularly wear glasses in your daily life?
☐ No ☐ Yes

If yes to above, are you near-sighted, far-sighted, or both?
☐ Near-sighted ☐ Far-sighted
☐ Other: _____

If so, will you be wearing glasses during the experiment today?
☐ No ☐ Yes

Experience

Please rate whether you agree or disagree with each of the following statements, where:

1: Strongly disagree   **2**: Disagree   **3**: Neutral   **4**: Agree   **5**: Strongly agree

	Strongly Disagree				Strongly Agree
1. I have experience with robots.	1	2	3	4	5
2. I regularly use computers.	1	2	3	4	5
3. I regularly use a smartphone or tablet.	1	2	3	4	5
4. I regularly play video games.	1	2	3	4	5

You are now ready to begin the first trial.

Trial 1 questionnaire

Please rate whether you agree or disagree with each of the following statements, where:

1: Strongly disagree   **2**: Disagree   **3**: Neutral   **4**: Agree   **5**: Strongly agree

Please note that the term *system* refers to the *user interface* that you used in the last trial.

	Strongly Disagree				**Strongly Agree**
1. I think that I would like to use this system frequently.	1	2	3	4	5
2. I found the system unnecessarily complex.	1	2	3	4	5
3. I thought the system was easy to use.	1	2	3	4	5
4. I think that I would need the support of a technical person to be able to use this system.	1	2	3	4	5
5. I found the various functions in this system were well integrated.	1	2	3	4	5
6. I thought there was too much inconsistency in this system.	1	2	3	4	5
7. I would imagine that most people would learn to use this system very quickly.	1	2	3	4	5
8. I found the system very cumbersome to use.	1	2	3	4	5
9. I felt very confident using the system.	1	2	3	4	5
10. I needed to learn a lot of things before I could get going with this system.	1	2	3	4	5
11. I thought it was confusing to select objects.	1	2	3	4	5
12. I didn't always know what I had to do to use the system.	1	2	3	4	5
13. I could clearly see which object I was selecting.	1	2	3	4	5
14. I was usually able to select the correct object.	1	2	3	4	5

Is there anything else you would like to tell us about the system?

You are now ready to begin the second trial.

Trial 2 questionnaire

Please rate whether you agree or disagree with each of the following statements, where:

1: Strongly disagree   **2**: Disagree   **3**: Neutral   **4**: Agree   **5**: Strongly agree

Please note that the term *system* refers to the *user interface* that you used in the last trial.

	Strongly Disagree				**Strongly Agree**
1. I think that I would like to use this system frequently.	1	2	3	4	5
2. I found the system unnecessarily complex.	1	2	3	4	5
3. I thought the system was easy to use.	1	2	3	4	5
4. I think that I would need the support of a technical person to be able to use this system.	1	2	3	4	5
5. I found the various functions in this system were well integrated.	1	2	3	4	5
6. I thought there was too much inconsistency in this system.	1	2	3	4	5
7. I would imagine that most people would learn to use this system very quickly.	1	2	3	4	5
8. I found the system very cumbersome to use.	1	2	3	4	5
9. I felt very confident using the system.	1	2	3	4	5
10. I needed to learn a lot of things before I could get going with this system.	1	2	3	4	5
11. I thought it was confusing to select objects.	1	2	3	4	5
12. I didn't always know what I had to do to use the system.	1	2	3	4	5
13. I could clearly see which object I was selecting.	1	2	3	4	5
14. I was usually able to select the correct object.	1	2	3	4	5

Is there anything else you would like to tell us about the system?

You are now ready to begin the third trial.

3

Trial 3 questionnaire

Please rate whether you agree or disagree with each of the following statements, where:

1: Strongly disagree   **2**: Disagree   **3**: Neutral   **4**: Agree   **5**: Strongly agree

Please note that the term *system* refers to the *user interface* that you used in the last trial.

	Strongly Disagree				**Strongly Agree**
1. I think that I would like to use this system frequently.	1	2	3	4	5
2. I found the system unnecessarily complex.	1	2	3	4	5
3. I thought the system was easy to use.	1	2	3	4	5
4. I think that I would need the support of a technical person to be able to use this system.	1	2	3	4	5
5. I found the various functions in this system were well integrated.	1	2	3	4	5
6. I thought there was too much inconsistency in this system.	1	2	3	4	5
7. I would imagine that most people would learn to use this system very quickly.	1	2	3	4	5
8. I found the system very cumbersome to use.	1	2	3	4	5
9. I felt very confident using the system.	1	2	3	4	5
10. I needed to learn a lot of things before I could get going with this system.	1	2	3	4	5
11. I thought it was confusing to select objects.	1	2	3	4	5
12. I didn't always know what I had to do to use the system.	1	2	3	4	5
13. I could clearly see which object I was selecting.	1	2	3	4	5
14. I was usually able to select the correct object.	1	2	3	4	5

Is there anything else you would like to tell us about the system?

You are now ready to begin the fourth trial.

Trial 4 questionnaire

Please rate whether you agree or disagree with each of the following statements, where:

1: Strongly disagree   **2**: Disagree   **3**: Neutral   **4**: Agree   **5**: Strongly agree

Please note that the term *system* refers to the *user interface* that you used in the last trial.

	Strongly Disagree				Strongly Agree
1. I think that I would like to use this system frequently.	1	2	3	4	5
2. I found the system unnecessarily complex.	1	2	3	4	5
3. I thought the system was easy to use.	1	2	3	4	5
4. I think that I would need the support of a technical person to be able to use this system.	1	2	3	4	5
5. I found the various functions in this system were well integrated.	1	2	3	4	5
6. I thought there was too much inconsistency in this system.	1	2	3	4	5
7. I would imagine that most people would learn to use this system very quickly.	1	2	3	4	5
8. I found the system very cumbersome to use.	1	2	3	4	5
9. I felt very confident using the system.	1	2	3	4	5
10. I needed to learn a lot of things before I could get going with this system.	1	2	3	4	5
11. I thought it was confusing to select objects.	1	2	3	4	5
12. I didn't always know what I had to do to use the system.	1	2	3	4	5
13. I could clearly see which object I was selecting.	1	2	3	4	5
14. I was usually able to select the correct object.	1	2	3	4	5

Is there anything else you would like to tell us about the system?

You are now ready for the post-experiment questionnaire.

Post-experiment questionnaire

In this questionnaire you will be asked what your preference is for each system in terms of a variety of factors. The *graphical* system is the one with the touchscreen, while the *tangible* system is the one with the box with buttons and a joystick.

1: Strong preference for *graphical*   **2**: Moderate preference for *graphical*   **3**: Neutral
4: Moderate preference for *tangible*   **5**: Strong preference for *tangible*

	Graphical				**Tangible**

1. I would rather use this system frequently.

1	2	3	4	5

2. I thought this system was less complex.

1	2	3	4	5

3. I thought this system was easier to use.

1	2	3	4	5

4. I could see which object I was selecting more clearly with this system.

1	2	3	4	5

5. It would take me longer to learn how to use this system.

1	2	3	4	5

6. I was more confident using this system.

1	2	3	4	5

7. I had to learn more in order to use this system.

1	2	3	4	5

8. I think a new user would prefer this system.

1	2	3	4	5

9. I think an experienced user would prefer this system.

1	2	3	4	5

10. Overall, I preferred to use this system.

1	2	3	4	5

Where do you think this system would be useful?

Is there anything else you would like to tell us?

You are now done with the study. Thank you!