

User Study Design

Part 1: Welcome and consent form (10 min)

1. Welcome the participants.
2. Let the participant sign the consent form.
3. Tell them there is a cash award of \$20 at the end.
4. Ask them if it's ok that we are filming them and taking pictures.
5. Assign participant to one of the two conditions first and then the other (let them draw a number, either 1 or 2).
6. Give them the pre-test questionnaire.

Part 2: Calibrating distance (2 min, 4-16 attempts)

1. Set the prototype in the medium condition at XX cm height and XX cm hoop dia
2. Make the participant stand at the 12ft mark and attempt 4 throws.
3. If they get 2 or more successful throws (ball goes into the hoop), then select 12 ft as the distance.
4. If they get less than 2 balls into the hoop, make them move closer to the ring by 1ft and repeat the process.

Part 3: Assessing Current Skill Level (5 min, 20 attempts)

1. Give participants the final test setup (hardest condition).
 - a. Hoop = XXcm, Height = XXcm, distance at which participant is standing = XXcm
2. Let them throw the ball the same number as in the final test and at the same time intervals (20 attempts).
3. Note down the score, i.e., how often people hit the board, hit inside, fail to hit.
 - a. Hit the board: 5/20
 - b. Hit inside: 3/20
 - c. Failed to hit: 12/20

Part 4: Training Time (20 min, 80 attempts)

Self-adaptive condition first (06 participants):

1. Participants start with the setup they desire and adapt the setup as and when needed. The maximum adaptive setup is the hard setup.
 - a. Throw the ball in any set of attempts.
 - b. Adjust the setup: Hoop = XXcm, Height = XXcm
 - c. Number of throws: 80 attempts, time interval between throws = ~2s
 - d. note down the score: how often people hit the board, hit inside, fail to hit.
 - i. Hit the board: 25/30, Hit inside: 23/20, Failed to hit: 32/30

Adaptive condition first (06 participants):

2. Participants start with the medium (not easiest) setup and then gradually go through different adaptive setups. The maximum adaptive setup is the hard setup.

- a. Throw the ball in sets of 04 attempts.
- b. Wait for the setup to calibrate/adjust Hard setup: Hoop = XXcm, Height = XXcm
- c. Number of throws: 80 attempts, time interval between throws = ~2s
- d. note down the score: how often people hit the board, hit inside, fail to hit.
 - i. Hit the board: 25/30, Hit inside: 23/20, Failed to hit: 32/30

Part 5: Accessing New Skill Level (5 min, 20 attempts)

1. Give participants the final test setup (hardest condition).
 - a. Hoop = XXcm, Height = XXcm, distance at which participant is standing = XXcm
2. Let them throw the ball the same number as in the original test and at the same time intervals.
 - a. First block: number of throws XXcm, time interval between throws = XXs
3. Note down the score, i.e., how often people hit the board, hit inside, fail to hit.
 - a. Hit the board: 5/20
 - b. Hit inside: 3/20
 - c. Failed to hit: 22/20

Part 6: Training Time (20 min, 80 attempts)

1. Switch the training mode. Those participants who did adaptive mode first, will now train on non-adaptive mode and vice versa.

Part 6: Accessing New Skill Level (5 min, 20 attempts)

2. Give participants the final test setup (hardest condition).
 - a. Hoop = XXcm, Height = XXcm, distance at which participant is standing = XXcm
3. Let them throw the ball the same number as in the original test and at the same time intervals.
 - a. First block: number of throws XXcm, time interval between throws = XXs
 - b. Break: XX minutes
 - c. Second block: number of throws XXcm, time interval between throws = XXs
4. Note down the score, i.e., how often people hit the board, hit inside, fail to hit.
 - a. Hit the board: 5/30
 - b. Hit inside: 3/30
 - c. Failed to hit: 22/30

Part 7: Post-study Questionnaire (10 min)

1. Give participants the final questionnaire.
2. Record what they have to say or write it down.