



Cogo Attention Training Program User Manual

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Table of Contents

1. OVERVIEW	4
1.1. PRODUCT SUMMARY	4
1.2. HOW THE SOLUTION WORKS	4
2. PROGRAM SUPPORT MATERIALS	4
2.1. EQUIPMENT	4
3. PROGRAMME STRUCTURE	5
3.1. PARTICIPANT LOGINS TO COGO APP	5
3.2. PARTICIPANT WEARS SENZEBAND AND CONNECTS TO COGO APP	5
3.2.1. BASIC HANDLING OF SENZEBAND DEVICE	5
3.2.2. INITIATE SENZEBAND CONNECTION PROCESS IN COGO APP	7
3.2.3. VERIFY CONNECTED SENZEBAND DEVICE STATUS	8
3.3. PARTICIPANT UNDERGOES CALIBRATION SESSIONS	9
3.3.1. ADJUST AND CHECK SENZEBAND SIGNAL STRENGTH	9
3.3.2. CALIBRATION ACTIVITY SESSION 1 AND 2	9
3.3.3. POST-CALIBRATION ACTIVITY RESULTS	10
3.4. SERVER GENERATES PERSONALISED ATTENTION MODEL	10
3.5. CALIBRATION PHASE COMPLETED	11
4. TRAINING PHASE	11
4.1. PARTICIPANT LOGINS TO COGO APP	11
4.1.1. ACCESS ACCOUNT SUCCESSFULLY	11
4.2. PARTICIPANT WEARS SENZEBAND AND CONNECTS TO COGO APP	11
4.3. PARTICIPANT ACCESS CURRENT OPEN SESSION	11
4.3.1. SELECT AN OPEN SESSION FROM SESSIONS LIST	12
4.4. PARTICIPANT UNDERGOES TRAINING SESSION (1 ST GAME ACTIVITY)	13
4.4.1. PLAYING THE GAME ACTIVITY	13
4.4.2. PAUSING THE GAME ACTIVITY	13
4.4.3. VIEWING THE IN-GAME ATTENTION GRAPH	14
4.4.4. VIEWING GAME ACTIVITY RESULTS (POST-SESSION)	14
4.4.5. GAME RESULTS – UNDERSTANDING MENTAL STATE	15
4.5. PARTICIPANT UNDERGOES TRAINING SESSION (MCQ QUIZ)	16
4.6. COGO UPLOADS COMPLETED ACTIVITY RESULTS TO SERVER	16
4.7. COGO APP PROVIDES UPDATES ON UPCOMING SCHEDULED TRAINING SESSION	18
5. GAME LEVEL MECHANICS	19
5.1. BASIC LEVEL GAMEPLAY	19
5.2. INTERMEDIATE LEVEL GAMEPLAY	20
5.3. ADVANCED LEVEL GAMEPLAY	22

1. Overview

1.1. Product Summary

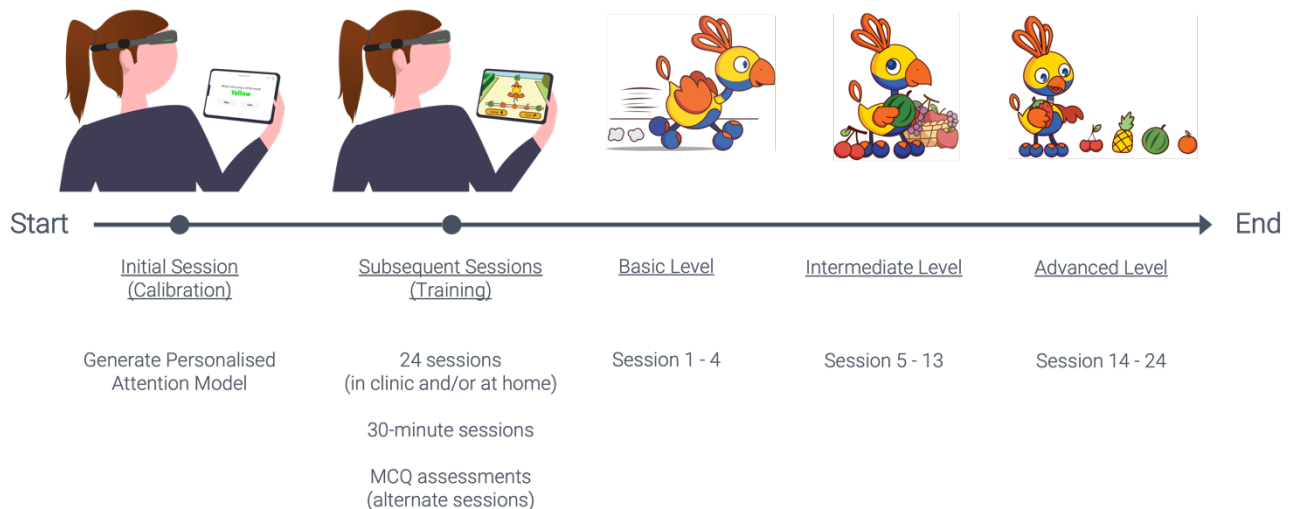
Cogo is a patented, scientifically validated digital therapeutic and attention training programme based on Brain-Computer Interface (BCI) technology. It complements mainstay ADHD treatments for children aged 6 to 12. Backed by clinical trials, it has proven efficacy and demonstrated positive post-training effects on attention-related brain areas, as observed through fMRI scans.

1.2. How the Solution Works

The Cogo program includes 24 sessions lasting up to 3 months. Before training, participants complete a Calibration phase, involving the Stroop test, to establish their Personalised Attention Model. Subsequently, participants undergo 24 training sessions, ideally 2-3 times per week, lasting up to 30 minutes each.

On alternate sessions, there is an additional 30-minute multiple-choice quiz* with 20 questions (10 English, 10 Mathematics). Participants wear the Neeuro SenzeBand throughout the training.

*Quiz questions will differ based on language versions



2. Program Support Materials

2.1. Equipment

Neeuro SenzeBand

The Neeuro SenzeBand* is a safe, non-invasive EEG wearable that measures participant attention levels. It requires Bluetooth 5.0 compatibility for optimal efficiency.

Wet Wipes

The wet wipe cleans dust or grime that may affect SenzeBand's sensor connectivity. Moist sensors enhance sensitivity for optimal performance.

Cogo Mobile Application

This application can be [downloaded](#) onto participant's mobile or tablet and requires a compatibility of iOS 13.0 or above or Android 8.0 or above.

Internet connection

Participants need an internet connection (mobile data or broadband) to transmit and upload device data to Neeuro's Cogo server.

3. Programme Structure

3.1. Participant Logins to Cogo App

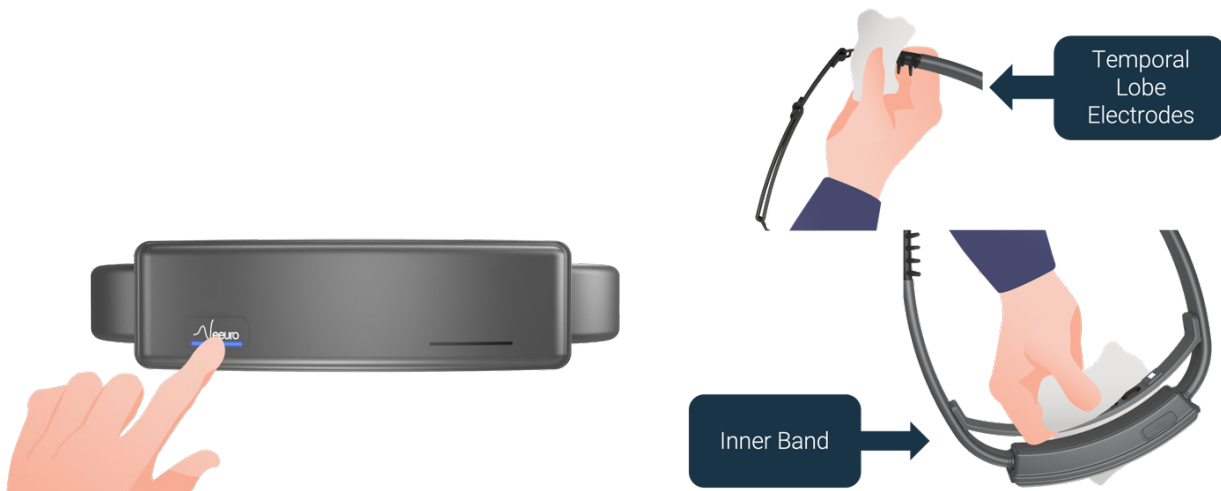
Participants receive their login credentials from an administrator during onboarding. Ensure the tablet has the Cogo app downloaded and is connected to the Internet for account login.



Cogo Mobile App – Login Screen UI Controls

3.2. Participant wears SenzeBand and Connects to Cogo App

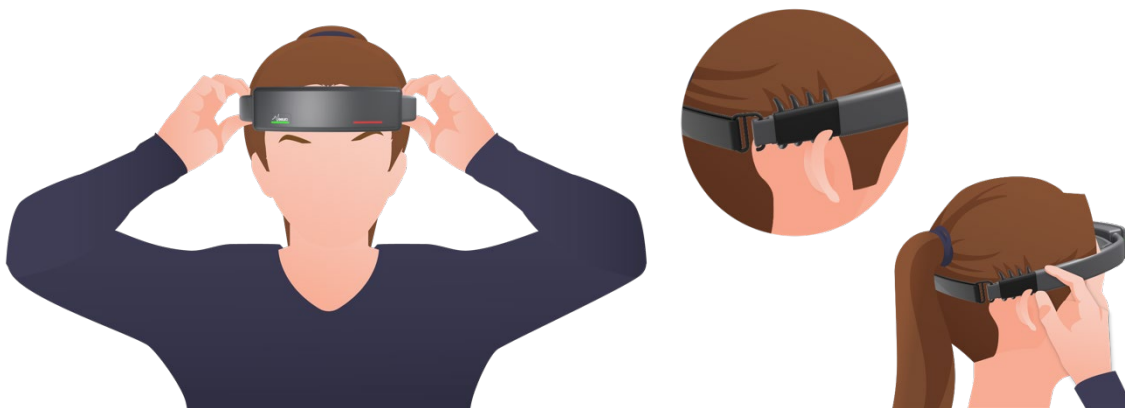
3.2.1. Basic Handling of SenzeBand Device



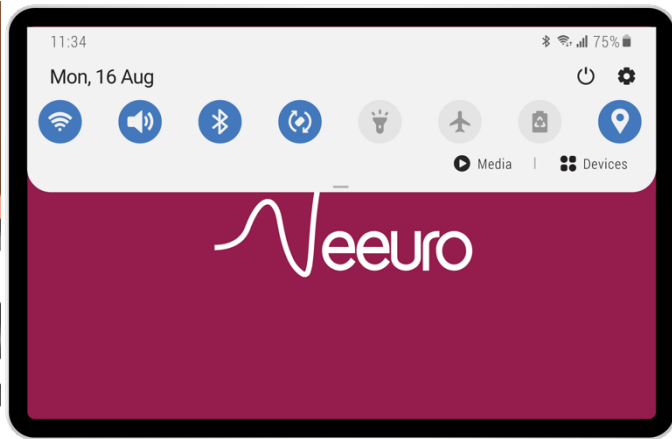
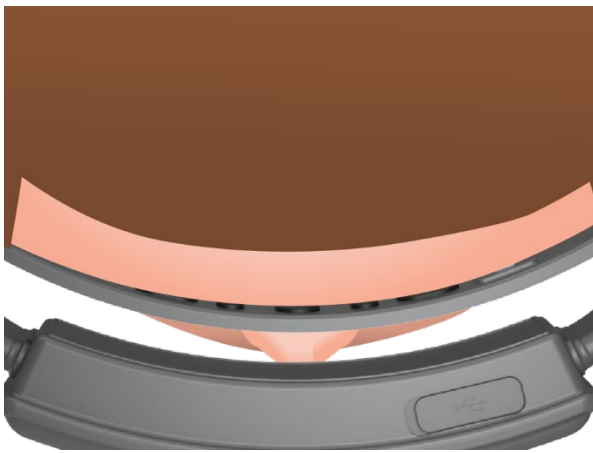
Press and hold the power button on the SenzeBand until a blue light appears. Use a wet wipe to remove any dust and grime that may affect the sensors to improve connectivity and maintain accuracy.



Wipe your forehead and the area above the ear. Non-alcoholic wipes are recommended.



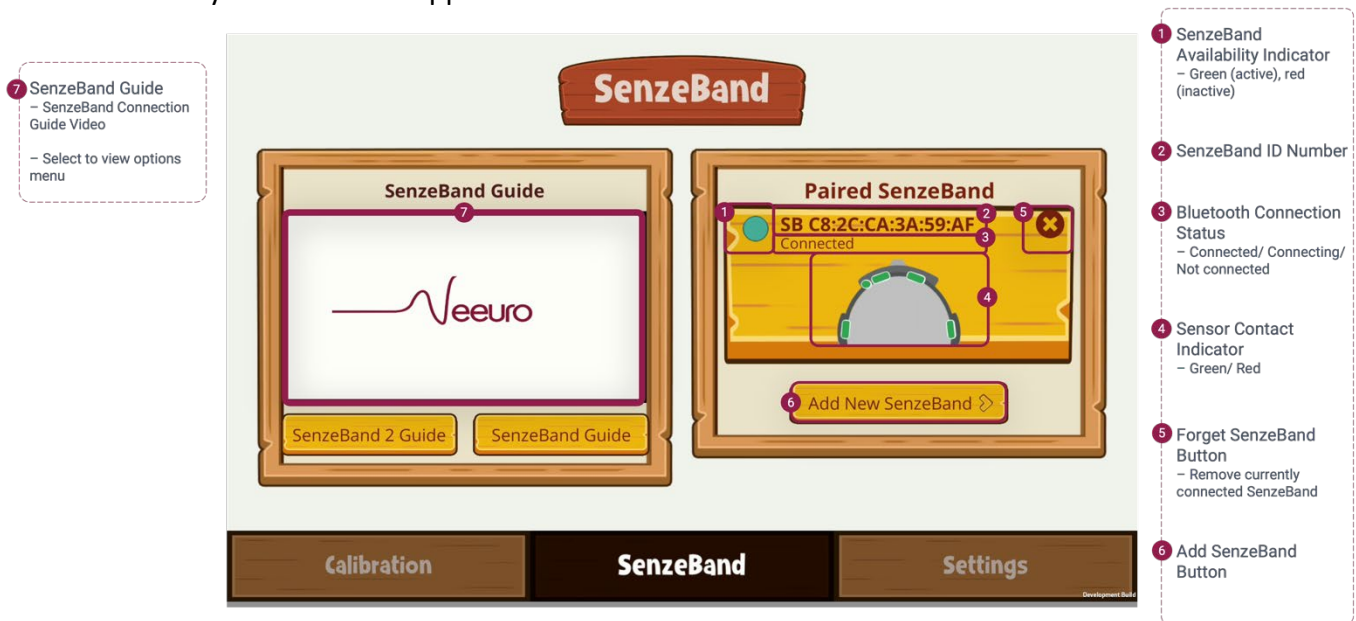
Position the SenzeBand above the eyebrows, adjust the elastic strap for comfort, and ensure the spider electrodes are in contact with the scalp for improved connectivity.



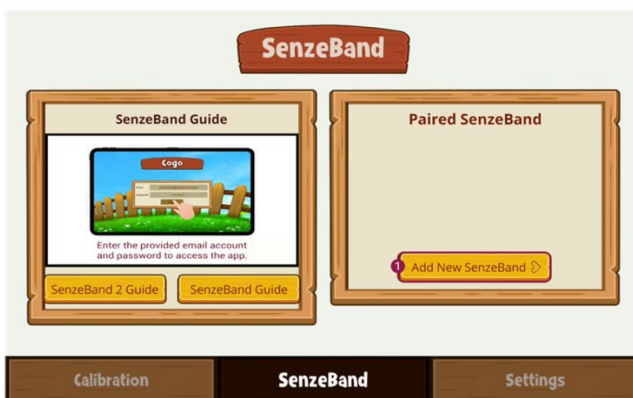
Ensure all inner band sensors are in contact with the forehead. Ensure the Bluetooth function is enabled on your mobile device. For iOS and Android devices, go to Settings > Bluetooth.

3.2.2. Initiate SenzeBand Connection Process in Cogo App

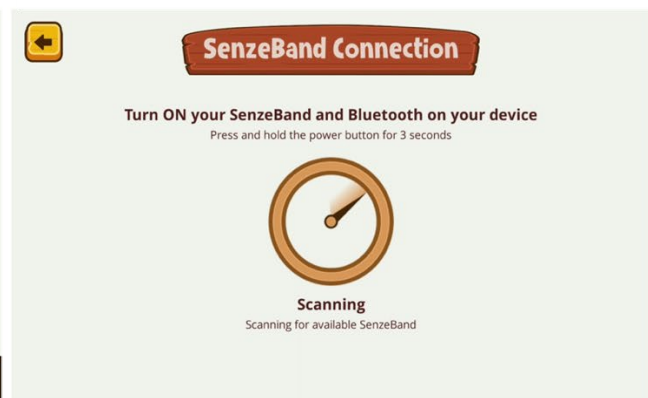
Once the SenzeBand is worn correctly, proceed with the connection process. In the Cogo app, select the SenzeBand menu to connect with the device. Ensure it is not connected to any other Neeuro apps.



Cogo Mobile App – SenzeBand Menu UI Controls



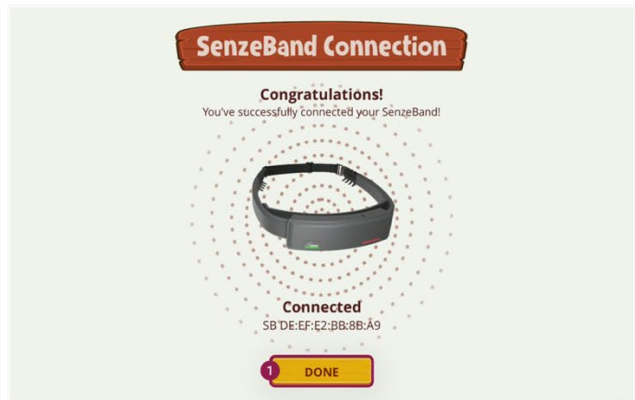
To initiate SenzeBand Connection Process, select 'Add Device' button.



Wait for a few seconds while the app scans for an available SenzeBand.

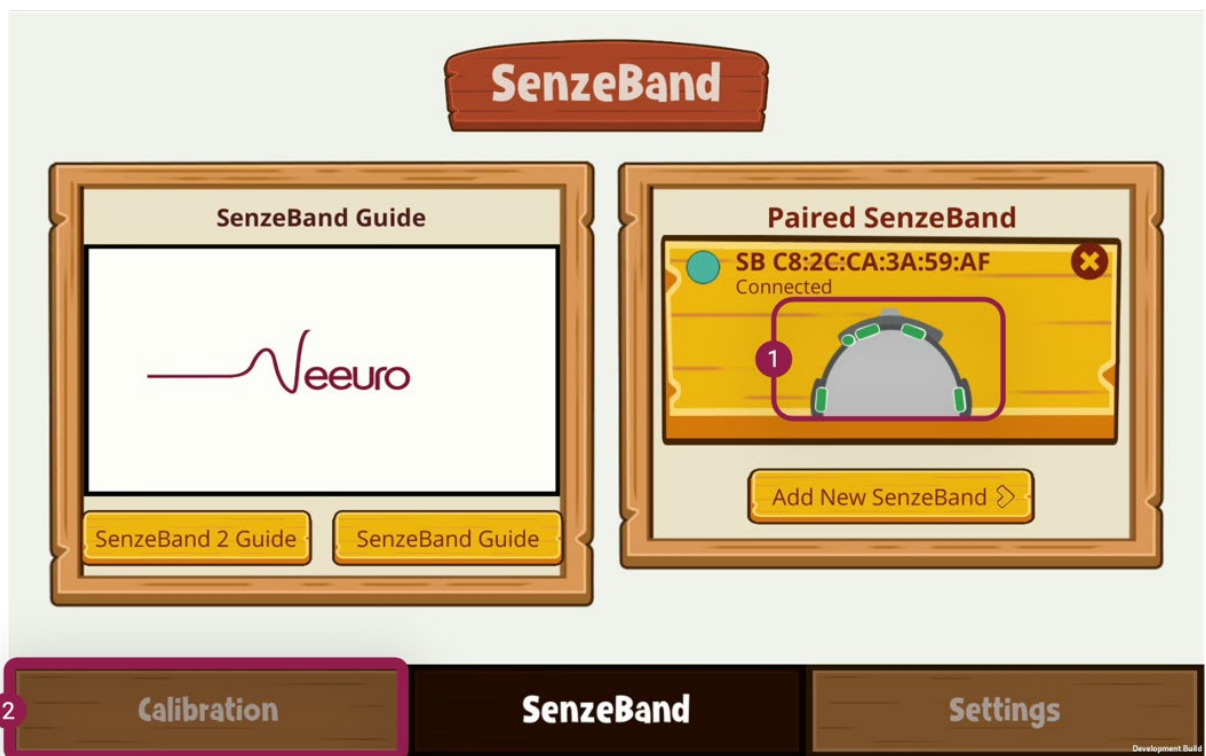


A 'Neeuro SenzeBand' button option will appear. Select the available SenzeBand option.



When SenzeBand successfully connects to the app, Select 'Done' button.

3.2.3. Verify Connected SenzeBand Device Status



In the SenzeBand menu, the connected device is displayed in the Device list. Check for green indicators indicating signal strength. Proceed by selecting the Calibration menu.

[Video #1: Cogo App SenzeBand Connection Process](#)

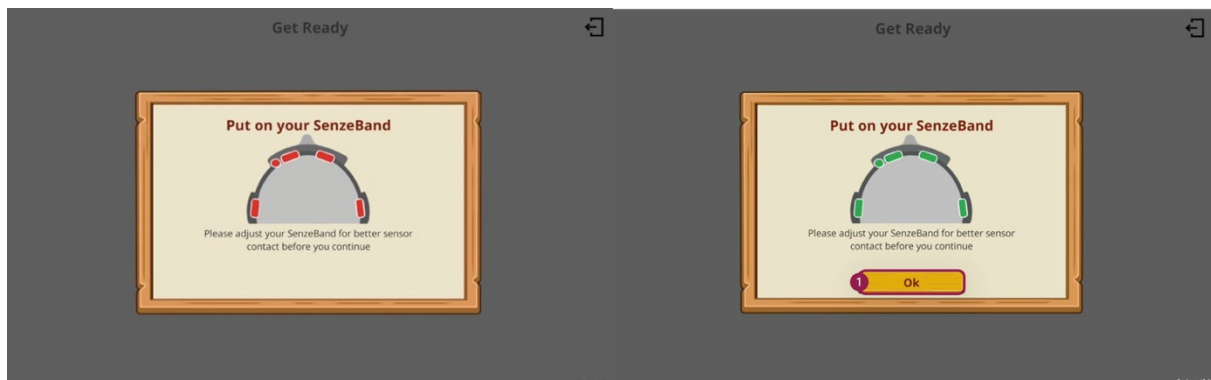
3.3. Participant Undergoes Calibration Sessions

Calibration includes 2 alternating sessions: Stroop test and relax phase. Create a distraction-free environment for participants to complete the 15-minute calibration. Increase tablet volume for audio cues.



Select 'Start' button to begin the Calibration activity.

3.3.1. Adjust and Check SenzeBand Signal Strength



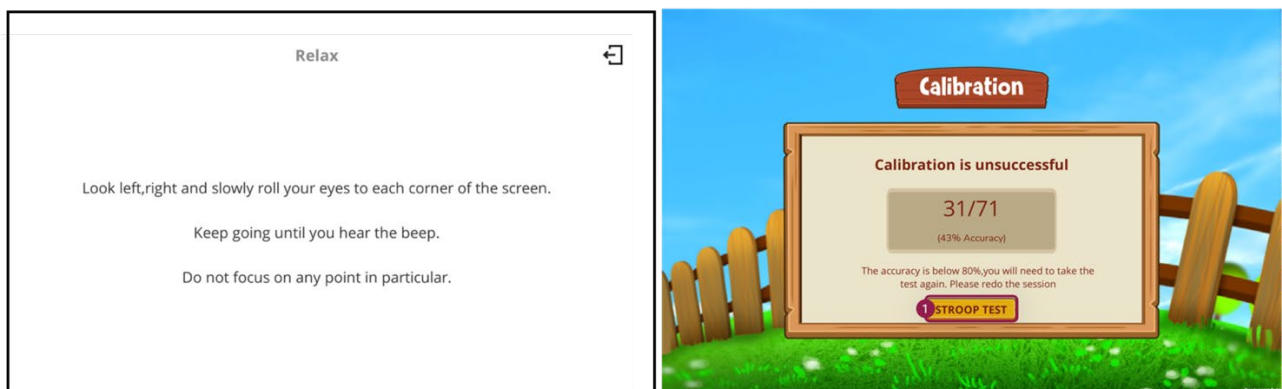
Before proceeding, a reminder to wear the SenzeBand device will appear. Check the indicators for strong signal reception at each sensor, indicated by green. Select 'OK' to proceed.

3.3.2. Calibration Activity Session 1 and 2



Each session begins with a 3-second countdown. Pay attention to the session details displayed. Answer Stroop test questions by selecting the button with the correct answer.

3.3.3. Post-calibration Activity Results



After completing the sessions, view the results. To proceed to the next session, the accuracy must be at least 80%. If calibration is unsuccessful, select the 'Stroop Test' button to retake it.

3.4. Server Generates Personalised Attention Model



The Cogo app uploads calibration EEG data to the server. After uploading, select 'Go to Training' and wait for the server to process the data. The Personalised Attention Model will be ready in approximately 10 minutes. Keep the Cogo app open during this process.

[Video #2: Data upload and logout](#)

3.5. Calibration Phase Completed

Participant may begin the next phase of the program.

4. Training Phase

4.1. Participant Logins to Cogo App

Ensure the calibration activity in the Cogo app has been completed before proceeding to the training session. The device needs to be connected to the Internet for participants to log in and access the Cogo app using the provided account credentials.

4.1.1. Access Account Successfully

After login, select Training button to show the Training menu. Select 'SenzeBand' menu.



Cogo Mobile App – Select Training button



Training Menu – Select the 'SenzeBand' Menu.

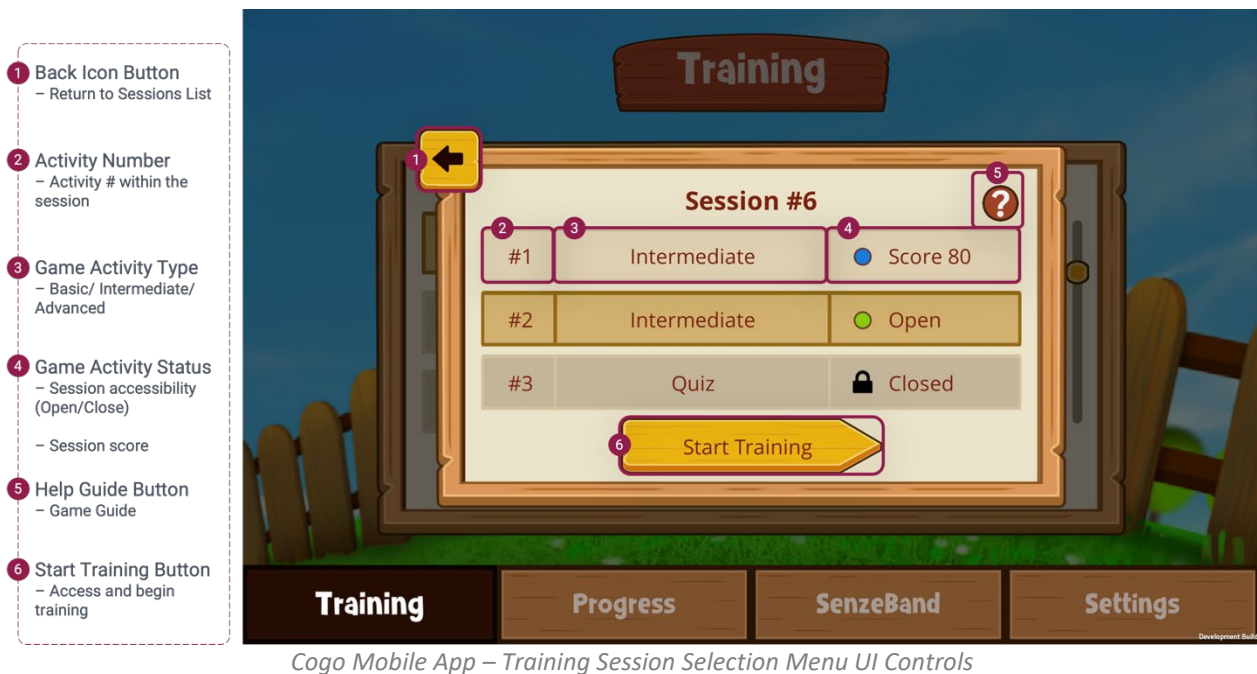
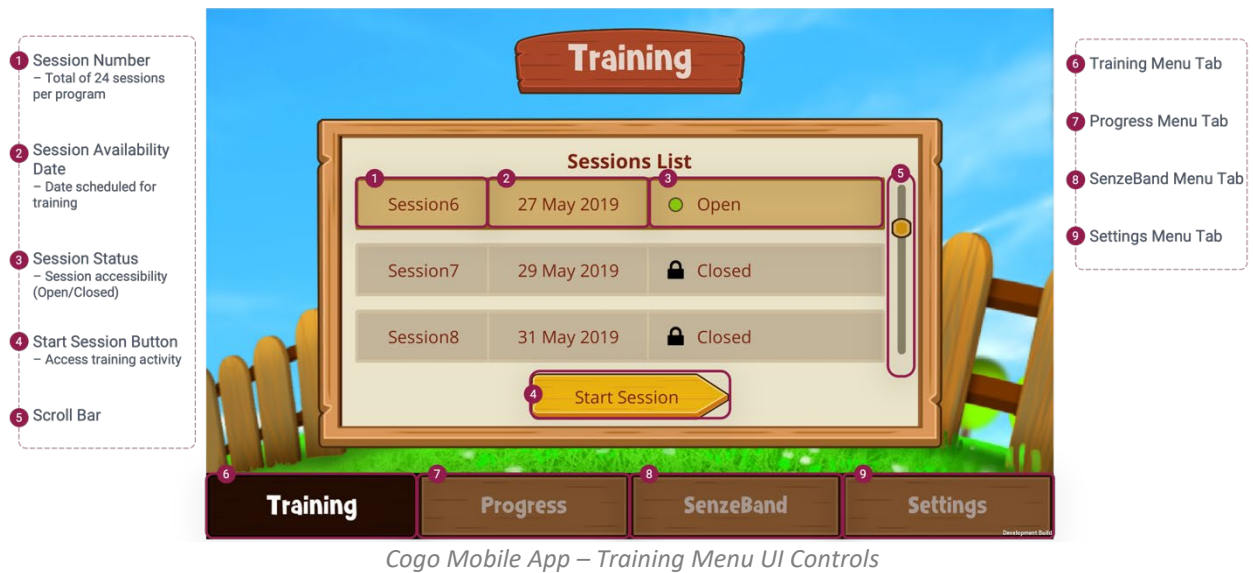
[Video #12: Cogo App Login process](#)

4.2. Participant wears SenzeBand and Connects to Cogo App

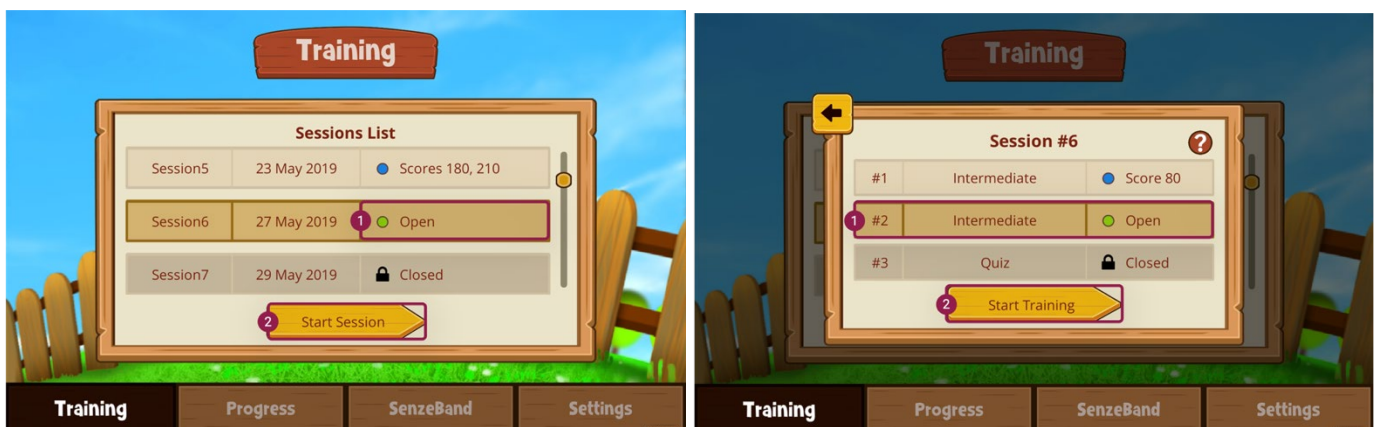
Participant conducts basic handling of the SenzeBand device, such as switching it on, wearing it and adjusting the fit. Ensure SenzeBand is paired to Cogo app.

4.3. Participant Access Current Open Session

Participants can access the appropriate training session based on the schedule. The session status in the list is displayed as either 'Open' or 'Closed'.



4.3.1. Select an Open Session From Sessions List



The Sessions List displays the status of the 24 scheduled training sessions. For open sessions, select the 'Start Session' button to proceed.

Each training session either consist of 2 game activities or 2 games and 1 quiz (alternate sessions). Click 'Start Training' to begin the current activity.

[Video #3: Cogo App Session Activity Selection](#)

4.4. Participant Undergoes Training Session (1st Game activity)

Game levels progress from Basic, Intermediate to Advanced levels. Each game level has different requirements for completion.



Cogo Mobile App – In-game screen UI Controls

4.4.1. Playing the Game Activity



Before the activity starts, ensure that indicators are green. Once 'Start' button appears, select it to proceed. In Basic level, the objective is to get Cogo (the avatar) to run as far as possible, within the duration of 10 minutes.

[Video #4: Cogo In-game activity](#)

4.4.2. Pausing the Game Activity

When necessary, participant may tap on the 'Pause' icon button to temporarily pause the game. This brings up the Pause menu which allows the option to resume the game session.



Cogo Mobile App – In-game Pause screen UI Controls

4.4.3. Viewing the In-game Attention Graph



Cogo Mobile App – In-game Attention Graph UI Controls

[Video #5: Pause menu and In-game Attention graph](#)

4.4.4. Viewing Game Activity Results (Post-session)

- 1 Game Results
– View post game activity brain and game score details
- 2 Exit Button
– Exit current activity
- 3 View Graph Button
– View post game activity brain and game score details
- 4 Continue Button
– Continue to next activity (if applicable)



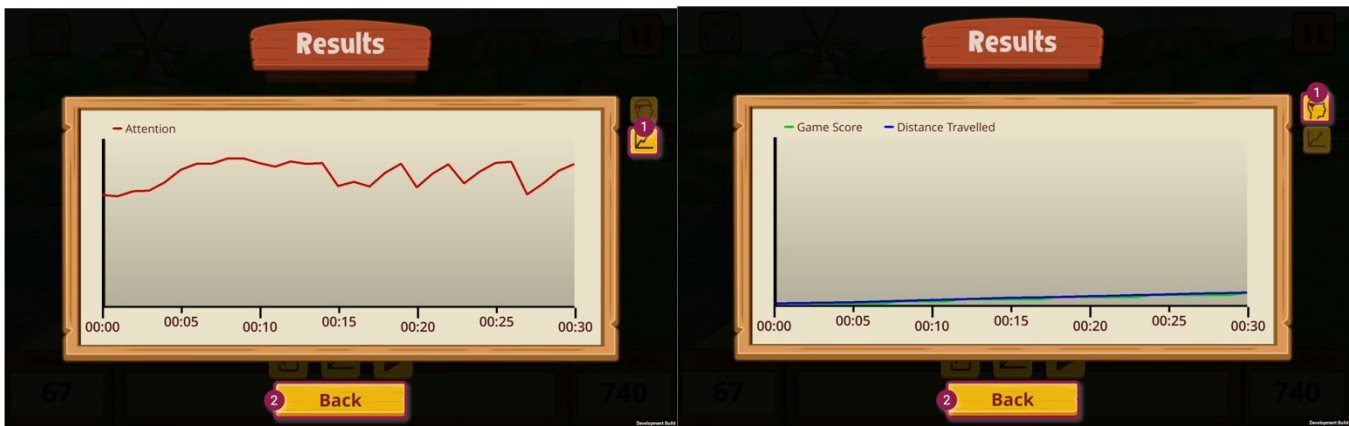
Cogo Mobile App – Post-activity Results Screen UI Controls

4.4.5. Game Results – Understanding Mental State



Brain Score -Attention

Focusing on one thought process at a time. Participant is not distracted with multiple tasks, such as listening and talking at the same time. The longer attention is sustained, the higher the score.



Attention Graph

Shows level of attention recorded throughout game activity.

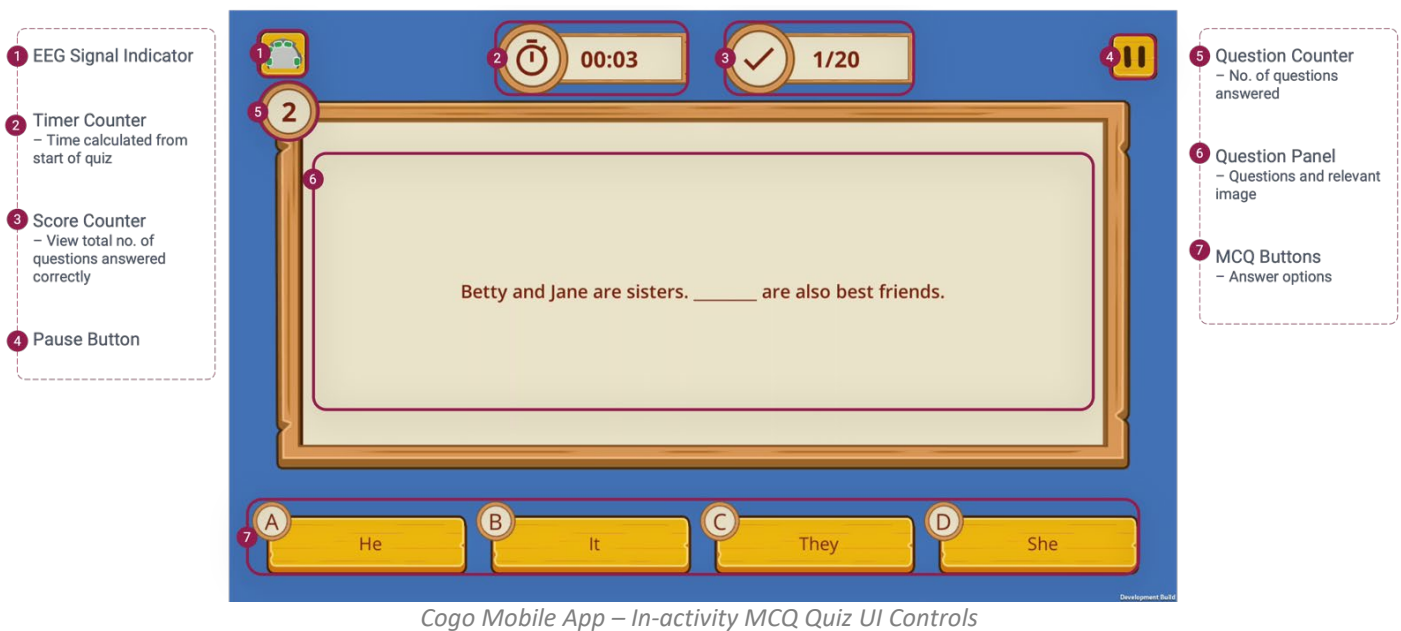
Distance Graph

Compares Game score with Distance travelled in game activity.

[Video #6: Post-game activity results screen](#)

4.5. Participant Undergoes Training Session (MCQ Quiz)

The MCQ activity consists of 20 academic questions. Participants have 30 minutes to complete it. Participant can use paper and pen for calculations, but calculators are not allowed.



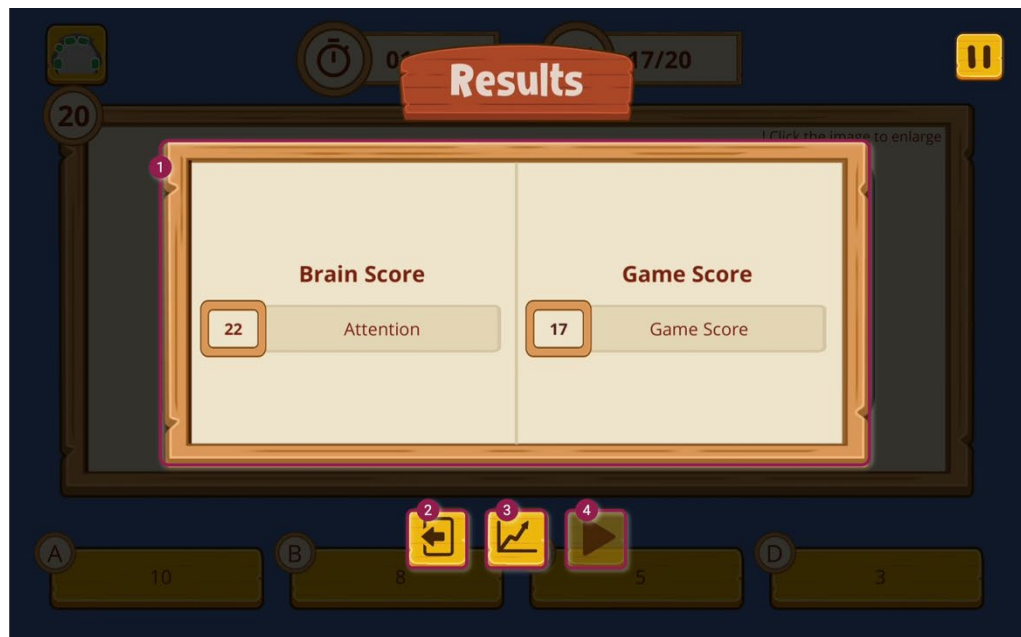
Cogo Mobile App – In-activity MCQ Quiz UI Controls

[Video #7: MCQ Quiz activity](#)

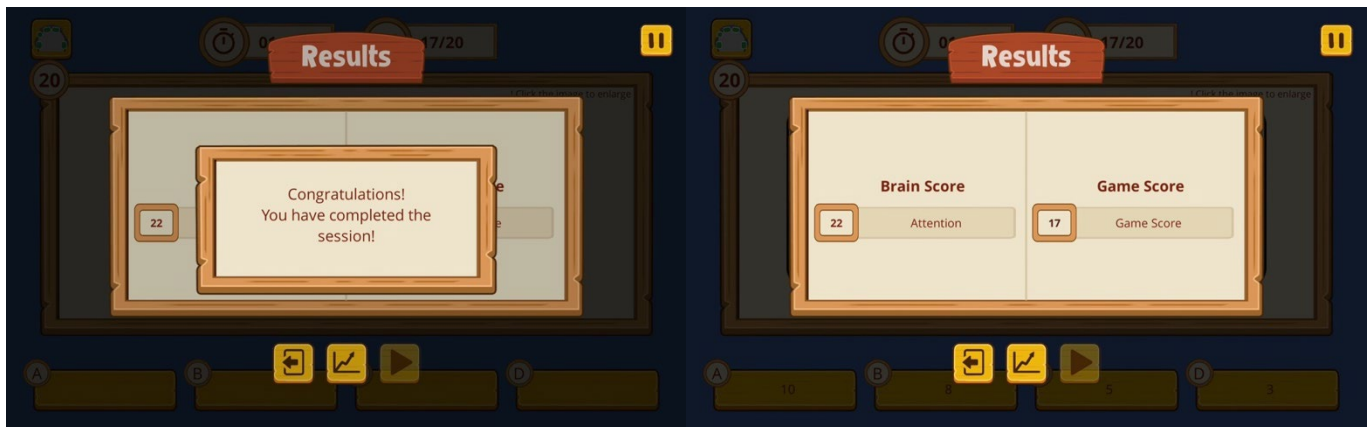
4.6. Cogo Uploads Completed Activity Results to Server

Complete the quiz and ensure that device is connected to the Internet during the data upload.

- 1 Quiz Results
– View post activity brain and quiz score details
- 2 Exit Button
– Exit current activity
- 3 View Graph Button
– View Attention graph of the completed activity
- 4 Continue Button
– Continue to next activity (if applicable)

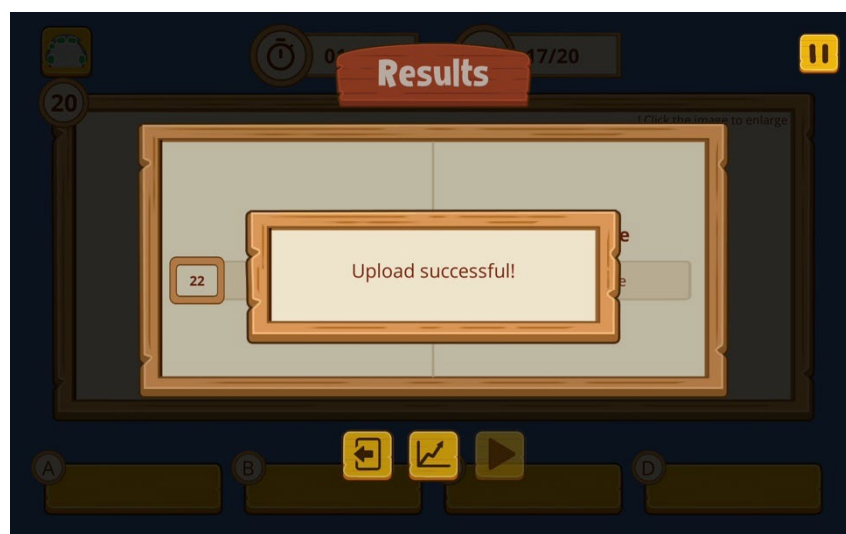


Cogo Mobile App – Post-activity MCQ Quiz Results UI Controls



Completed all 20 questions within the time limit.

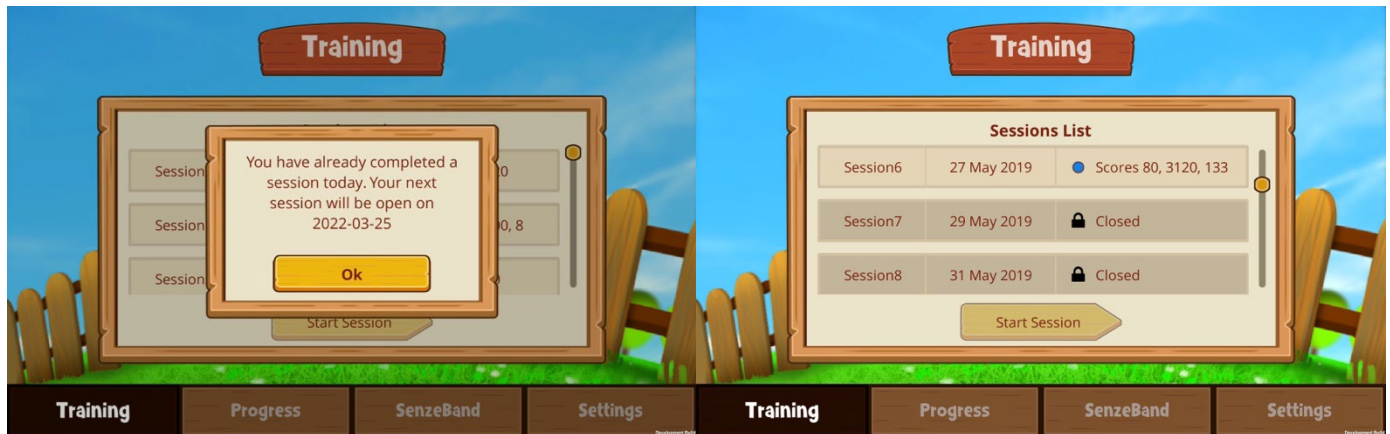
View Brain and Game scores of the completed Quiz activity.



Quiz results successfully uploaded onto Cogo server.

[Video #8: Uploading MCQ Quiz data](#)

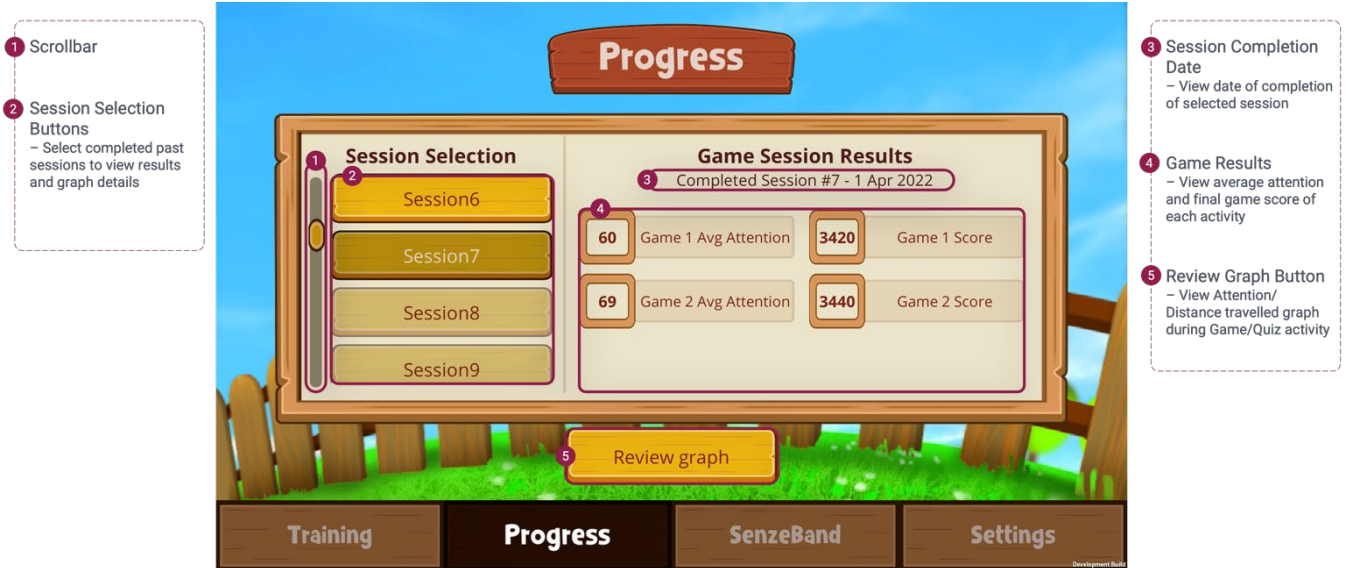
4.7. Cogo App Provides Updates on Upcoming Scheduled Training Session



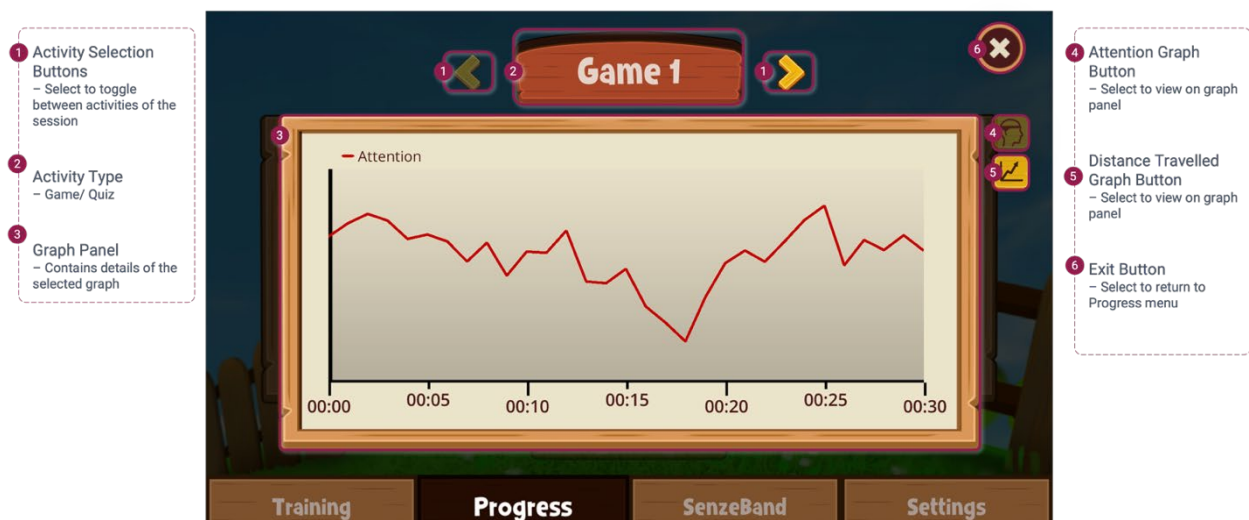
In the Training menu, a pop-up screen confirms the completed session and reminds participant of the next scheduled session. The scores achieved for the various activities will also be displayed.

4.8. Review Session Results in Progress Menu

Participant may view results of completed sessions from the Progress menu.



Cogo Mobile App – Progress Menu UI Controls



Cogo Mobile App – Progress Menu Session Details UI Controls



Go to the 'Progress' menu to see results of completed sessions. Click 'Review Graph' to view data graphs.

Toggle between the activities completed during the session to view the various data graphs.

[Video #9: Session results in Progress menu](#)

5. Game Level Mechanics

5.1. Basic Level Gameplay



Cogo Mobile App – In-game Basic level screen UI Controls (Repeated slide)



Focus and sustain your attention on Cogo to keep running. The screen displays the distance traveled and total time taken. Allocate 10 minutes to achieve the furthest distance, as it determines the game score.

[Video #10: Cogo Basic level gameplay](#)

5.2. Intermediate Level Gameplay



Cogo Mobile App – In-game Intermediate level screen UI Controls



In the game, your objective is to have Cogo collect as many fruits as possible from the list within a 10-minute duration. Focus on Cogo to make it run and sustain your attention to keep it going. Collect the fruits along the path in any order as displayed in the list.



If Cogo is below a fruit, it will shake slightly. Use the 'Jump' button to make Cogo jump and collect the fruit. Use the 'Turn' button to make Cogo turn and obtain missed fruits. Once the correct fruit is collected, it is removed from the list. Only collect fruits within the list. Penalties of 10 points are incurred for obtaining unlisted fruits, jumping without collecting any fruit, and skipping fruits in the list.

[Video #11: Cogo Intermediate level gameplay](#)

5.3. Advanced Level Gameplay



Cogo Mobile App – In-game Advanced level screen UI Controls



In the Advanced level, the objective remains the same as Intermediate, but the collected fruits must be in the correct left-to-right sequence within 10 minutes. Focus and sustain your attention to keep Cogo running.



Once you collect the correct fruit, it will be removed from the list. Keep collecting the next fruit in sequence. Penalties of 10 points are incurred for obtaining incorrect fruits, jumping without collecting any fruit, and skipping the correct fruit.

[Video #12: Cogo Advanced level gameplay](#)