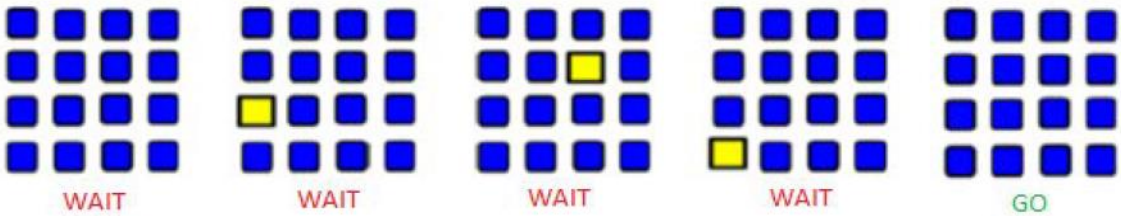
Appendix 6: Descriptions of the Working Memory Tasks

The Blockspan task (WM 1):

In this task, a 4 x 4 series of squares are presented to the test takers on the computer screen, and they are asked to remember the serial order of the yellow blocks in each grid (see the Figure below). Each block within a sequence flashes for one second in one cell on the 4 x 4 grid. Trials are segmented into sets by the appearance of a black square mask that covers the entire grid for one second. After viewing a series of locations flash in a given trial, participants are asked to recall the locations of flashing squares in the order they were presented by clicking on the squares in the same sequence.

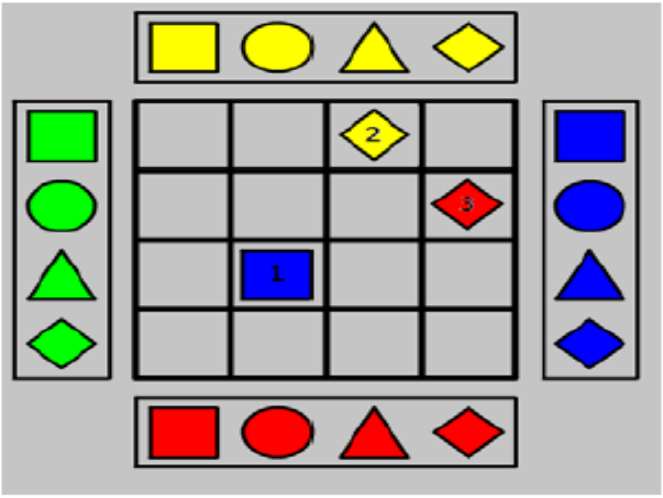


Participants complete 16 trials within each trial block. For the first trial, there is one set with two stimuli. For the next trial, one set is presented with three stimuli, the next with four, followed by five. For a full description of the task, see Clark et al. (2013).

The Shapebuilder task (WM 2):

Shapebuilder is similar to Blockspan, but involves the tracking of additional information. Participants are asked to remember the order and spatial position in which a series of colored shapes are presented. Participants see a 4 x 4 grid (see the Figure below), with a sequence of two to four colored shapes appearing sequentially in one of 16 possible locations. Participants are

asked to remember the location, shape, and color of each item, as well as the order in which items appeared.



After the final item of a trial is presented, participants are asked to recreate the sequence by clicking on the correct colored shape and dragging it to the appropriate location. For a full description of the task, see Clark et al. (2013).