**UP-DOWN STUDY DESCRIPTION**

It is known that perceptual representations of items that we see around are tightly wired to how we understand language and abstract thoughts. Based on this, we claim that spatial representation has an active role in language processing. By highlighting those perceptual experiences under experimental conditions, we try to understand if kids use information about spatial location as a cue to understand words.

In this study, we look at the interaction of lexical processing and its spatial position. More specifically, we investigate if the symbolic representation of an object (word) is associated with sensory properties of this given object, including its typical positon where this particular object typically occurs.

20 stimulus which typically occur at upper and lower spatial positions are paired. Those 10 pairs are divided into 2 main groups as 5 living vs 5 non-living pairs. Items in each pair is contextually related to each other (like cloths: hat vs shoes, human body: eye vs foot, vehicle: car vs helicopter etc.). Each item appears on the tablet screen both in congruent and incongruent spatial locations in accordance with where they usually occur. Kids are asked to touch the target item as fast as possible for each condition. We expect a significant interaction in their reaction time between the actual spatial position where the words were presented, and their implicit association with upper or lower spatial position.

**Program goals:**

* Replace Elmo video and pictures with sound files + picture pairs
* Change horizontal layout of picture options to vertical (top/bottom instead of left/right)

**Item pairs:**

bee, fish

balloon, bike

helicopter, truck

cloud, flower

hat, shoe

airplane, car

butterfly, mouse

hat, shoe

helicopter, truck

eye, feet