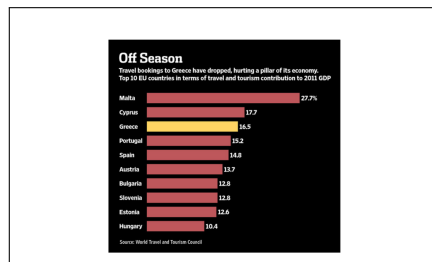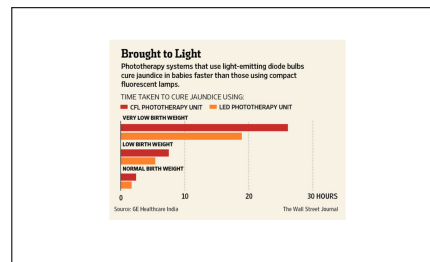The study design is shown above. After performing an eye tracker calibration, each subject begins by filling out demographic information and then completes the three task stages in random order. For each task, 22 total repetitions are performed: 2 training, then 20 trials. Stimuli order within each task stage is randomized.
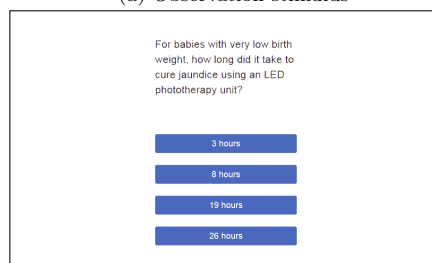
Below are screenshots demonstrating how a set of stimuli were shown in the study interface during each task. The three bar charts (called a triplet) were selected for overall design and content similarity, one for each task. (a–b) For the observation and recall tasks, stimuli are displayed in a similar manner. (c) For the recall task, a multiple choice question is shown subsequent to the stimulus with a 5 second gap. (d) For the search task, the stimulus and question are shown together.
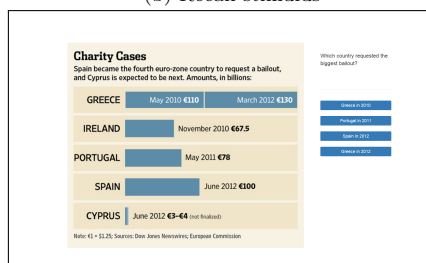

(a) Observation stimulus

(b) Recall stimulus

(c) Recall question (200% zoom)

(d) Search stimulus and question