Checklist for personalized NIBS for L2 learning - Electrodes placement

- **Montage**
  - ☐ FC3: Anode (Red) & T7: Cathode (Blue)
  - ☐ Stim. elec. Vicinity: FFC3h, FFC5h, FCC3h, FCC5h & None
- **Preparation tACS Electrodes**
  - ☐ **EEG cap**: Measure brain size (circumference) ⇒ Choose and put on EEG cap ⇒ Adjust position (10-20 system) ⇒ **Fasten the chin strap**
  - ☐ **Location marking**: Use EOG sticker to mark FC3 & T7 ⇒ Remove the caps ⇒ Remove the hair in marked area
  - ☐ **Stimulator:** OFF ⇒ Connect the wire ⇒ Apply Ten20 gel on the tACS electrodes ⇒ Place it in the marked area ⇒ Turn ON stimulator
  - ☐ **Impedance check (10k Ohm)**: Add more paste or press until the impedance is under 10kΩ and carefully pressing on the tACS electrodes to avoid tACS electrodes sliding.
  - ☐ **Remove the excess gel with a cotton swab**
  - ☐ Turn OFF the stimulator
- **Mounting the EEG cap**
  - ☐ Carefully and gently put on the cap and MAKE SURE the tACS electrodes are not shifted and no Ten20 gel leaked out
  - ☐ Fasten the strap of the EEG cap
- **Preparation for EEG electrodes**
  - ☐ **Gel electrode:** ground&ref ⇒ Vicinity of the tACS electrodes ⇒ Rest
  - ☐ **Note for vicinity**: Inject the gel with the needle tip pointing in a direction away from the tACS electrode and apply as LESS GEL as possible.
  - ☐ First round
  - ☐ Second round: In the second round use the **cotton swab for the vicinity**
  - ☐ **EEG impedance check**: gel until green/yellow
  - ☐ **!!! Hardware check:** DC mode + 1Kz sampling frequency
  - ☐ **!!! Stimulator setting:** Signal out ON, REMOTE ON
  - ☐ **Saturation test**, i.e., apply 1mA sinusoidial signal and observe any saturation of EEG electrodes from recording signal. (safe_start.py & safe_end.py)
  - ☐ **Check EEG AND tACS impedance again and start recording.**