











since only one electrode position was considered in the current analysis.

Training lead to relatively high ITR increases, but ITR in general was relatively low in comparison to earlier studies (e.g. [3, 4]). Both used BCI versions should be optimized with regard to ITR maximization, for example by lowering the amount of time needed for target-selection (e.g. using less non-targets) and by updating the signal processing pipeline (e.g. using shrinkage LDA). Eventually, both BCI versions have to be tested by LIS users, for example in multiple training sessions or long-term independent home use [1, 3] and therefore include a completely non-visual task design.

For future research, a more exhaustive analysis on a higher number of participants is planned, taking into account data not yet reported in this paper, like questionnaire measures of motivation and of the user-centered design criteria efficiency and satisfaction, further ERP analysis (e.g. different electrode positions) as well as including inferential statistics.

## CONCLUSION

The presented results indicate that the streaming-based P300 BCI is a promising approach with auditory stimuli as well as with tactile stimuli and that the study design motivated the participants; all could achieve successful BCI-use in at least one session of the current study. It seems that there is no superior modality, but individual preferences. These findings should be considered for future research with healthy and LIS users.

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