【Title】Development of an App to Assess Reading and Listening Abilities of Children with Dyslexia

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【Purpose】Here is the revised sentence: "Although the importance of using audio materials for children with dyslexia is becoming recognized, the number of children who use audio textbooks at school is not high in Japan. One reason for this may be the absence of tools to objectively show that a child cannot read independently but can comprehend the material when read aloud. Therefore, we have developed an app that can evaluate a child's reading and listening abilities using a tablet computer. In this study, we report on the features of the app and the results of assessments for children with developmental disorders.

【Method】The study involved 30 typically developing university students and 24 elementary and junior high school students with developmental disorders. We used our developed app to assess the reading and listening abilities of each participant. The assessment tasks measured comprehension of passages presented in written form (the reading task), passages presented in audio form (the listening task), and passages presented in both written and audio form (the simultaneous task). We calculated the mean accuracy and average response time for each task for each participant.

【Results and Conclusions】The results from the university students showed no statistically significant differences in the accuracy rates among the three tasks. The results of the assessments conducted on children with developmental disorders showed that some of them exhibited significant differences in accuracy rates between the reading and listening tasks while others showed longer response time compared to university students. Therefore, it can be concluded that our developed app can be used to measure differences in reading and listening abilities and can serve as a useful tool for identifying children who require audio assistance.

【Presentation type】interactive poster preferred

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