Reading development from age 2 to 16: Prediction of divergent developmental paths and understanding of protective and risk factors.

Progress Report from 1.8.2017 to 31.7.2018

Alli Paasikiven Säätiö awarded me a working grant for my dissertation work in the spring of 2017 and I have started using it since August. My project focuses on the risk and protective factors in reading development from age 2 to 16. It examines reading development over time and the key factors for the early identification of risks and resolution of reading difficulties. The project contributes to reading development theorizing and the development of support systems and intervention programs that can be used to support reading skills. It builds on data from two Finnish large-scale longitudinal projects (the Jyväskylä Longitudinal Study of Dyslexia and the Alkuportaat) enabling the analysis of reading development from grade 2 to 9 and the predictive value of factors from age 2 to kindergarten. The specific research questions are the following; (1) Can we predict reading development and reading difficulties at different ages with very early skills and family risk? (2) Are reading skills and reading difficulties stable from grade 2 to grade 9 in a large Finnish sample? (3) What are the key protective and risk factors for different reading pathways from age 2 to 16?

During the last year, I have managed to work full-time on my project. The University of Jyväskylä has offered me a working room and a supportive working environment. The first study has been published in an international journal (doi: 10.1016/j.ridd.2018.05.004). It examined how family risk and age 2 expressive and receptive vocabulary predict reading fluency and reading comprehension development in grades 2 to 9. The second paper is finalized and is going to be submitted by the end of September. It examines the stability of the development of reading fluency and reading comprehension and their difficulties from grade 2 to 6. Moreover, it examines the effects of measurement error and cut-offs on the estimation of reading difficulties stability from grade 2 to 6. The stability of RD was examined with a more advanced methodology (simulation studies) and larger sample (N=2000) than previously. It focuses on the problems that previous studies have had in the identification of RD. These methodological problems cause severe uncertainty if the resolving and late-emerging groups truly exist. By using simulation techniques, the study shows that both resolving and late-emerging groups truly exist in our Finnish data. In addition, we proposed a new analysis, which contributes to more accurate identification of the children with reading difficulties. Although our plan was to submit the second paper earlier this year, we needed more time with the statistical analysis in order to solve some problems and answer questions that had been emerged. Because of this process, we managed to propose the new analysis, that could lead to more accurate identification of children with reading difficulties.

In addition to the progress with the papers, I had the opportunity to present my current work at two European conferences on education and two international conferences on reading development and discuss the results of my study with other internationally well-known researchers. This provided very

useful comments both on the methodology that was used and on the factors that could predict the different developmental trajectories of reading which will be the focus of the third paper. I also participated in an international summer school in the Netherlands in which I had the opportunity to meet several leading senior researchers and discuss my project.

During the academic year 2018-2019, I will be preparing my third article, which is to seek explanation for the differing developmental pathways in the development of reading skills and reading difficulties at different ages with the use of very early skills (including cognitive skills and environmental factors). During November, I will be at the University of Amsterdam for a month, where we will be working on my third article. In addition, my visit there will give me the opportunity to visit another leading research group in the field of reading difficulties conducting longitudinal research (Dutch Dyslexia Programme). This will provide the possibility to meet other researchers in the area of reading, reading difficulties and twin studies as well as to acquire new skills.

The progress with my dissertation would not have been possible without the funding from the Alli Paasikivi Foundation.

Maria Psyridou

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