The goal was to define a method for identification of children who are in need of support to be able to overcome the risk of reading failure. Two methods were compared: traditional predictive measures and a response to intervention - method.

Methods
- 396 (95%) first graders of the year 2008 age cohort (n=415) in the city of Järvenpää agreed to participate in the study.
- Traditional screening assessments took place in the beginning, in the middle, and at the end of the school year by using ARMI – The screening material of literacy skills for the first grade.
- The children with low scores in the group-screens were assessed individually by selected tasks from WISC-III, ARMI, RAN and NEPSY-II.
- The response to the intervention was assessed by children at risk using the “Literate” – computer game (Lyytinen et al., 2007). The children played 2-3 short sessions/week, the total playing time being at least two hours. The game is designed to strengthen the knowledge of letter-sound connections (Figure 1.).
- The children whose literacy skills were far behind their classmates’ in the mid-year screening were provided with individually tailored instructions.
- Their results in the fall assessments were compared to the results of the other first graders by forming z-scores using the means and standard deviations of the control group.

Results
- The children with poor pre-reading skills (n=83; at least 4/6 tasks ≥ -1 sd or 3/6 tasks ≥ -2 sd below the mean) were assessed individually.
- 78 (19.7 % of the age cohort) of these children took part in further assessment, and 57 of them agreed to play the “Literate”-game.
- Playing the “Literate” game helped most of them to reach the scores of their classmates, but 2.5% (10/396) of them were still very poor (≥ -3 sd) in the word reading assessment in the mid-year screening in January.
- These ten children had the lowest scores in letter knowledge, rapid naming and sound detection – tasks (Figures 2. & 3.) in the traditional screening at the beginning of the school-year.

Conclusions
- Children with exceptionally low scores in letter naming accuracy and fluency were the most resistant to phonics-based “Literate” reading intervention.
- Even a short (< 3 hours) intervention, which benefitted the children with milder risk factors for reading problems, was helpful in recognizing the children in need of more intensive training.
- Our next goal is to find out which of these children would benefit from the individually tailored remediation. The follow-up of the age cohort will continue to ascertain the number of the remediated children, who reached the mainstream children’s level by playing the “Literate” game, that will sustain at the age-level at least until the end of second grade.

Literature cited