

Teachers' Ability to Identify Children at Early Risk for Reading Difficulties in Grade 1

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The aim of the study was to investigate what kinds of assessment practices classroom teachers and special educational needs (SEN) teachers use in assessing first grade students' pre-reading skills (letter knowledge and

phonological skills). The data from two Finnish longitudinal studies were used: JLD sample (class teachers, n = 91; SEN teachers, n = 51; 200 students) and First Steps sample (class teachers, n = 136, SEN teachers, n = 34; 598 students). Most classroom teachers used qualitative assessment, and SEN teachers also relied on tests. Although teacher ratings correlated with the test scores, some children in need of extra support for their early reading development according to test scores remained unidentified. The findings underline the importance for developing more specific and reliable assessment tools for pedagogical purposes.

- Teachers play a key role in identifying the need for early support in reading skill development because they generally observe the first signs of reading difficulties (RD).
- The main purpose of teachers' evaluations of students should be to produce accurate knowledge of the students' skills in order to plan tailored instruction and support when necessary.
- Particularly, children with poor pre-reading skills who are potentially at risk for reading difficulties (RD) should be identified as early as possible.
- Prior studies have shown that screening batteries and standardized achievement tests predict those at risk for reading failure better than teachers' evaluations based on, for example, rating scales, whereas teachers' evaluations have tended to produce high false-negative rates.

Assessment of pre-reading skills by teachers

- To ensure accurate identification, the screening batteries should cover several skill areas related to developing reading skills, such as phonological skills, orthographic and letter knowledge, word reading ability, vocabulary, and syntactic ability.
- However, the accuracy of screening measures differs with

respect to sensitivity and specificity.

- Sensitivity refers to the degree of true positives, meaning how accurately the measure identifies students at high risk for RD.
- Specificity refers to the degree of true negatives, or how accurately the measure identifies students at low risk for RD.
- Teachers' assessment practices can be divided into three categories: tests comprising screening or individual test batteries (performance-based assessment), curriculum-based measures (CBM), and qualitative assessments such as observations in the classroom.
- CBM may be used to monitor students' progression in an entire school or classroom, to track an individual's progress toward end-of-year benchmarks or individualised education program goals.
- Teachers' decisions seem to be sometimes based on situational or other irrelevant factors (e.g. gender, behaviour) instead of solely performance assessments.

Correspondence between teacher ratings and test scores

- In most studies, the correlations between teacher ratings and test scores have varied between 0.40 and 0.70.
- Teachers may, however, systematically over- or underestimate student performance.
- Flynn and Rahbar (1998) developed a theory-based screening instrument for teachers to assess reading competency, and their results suggest that teachers' predictions of children at risk for RD can be improved by using rating instruments that include research-validated antecedents of reading with behavioural descriptions of low and high achievement.
- The best predictors of a pre-schoolers' or kindergarteners' later reading achievement when the child has a familial history of dyslexia have proven to

be measures that require processing printed material together with oral language proficiency measures and performance-IQ measures.

- Compared to teacher ratings, standardized tests more accurately identify students who are potentially at risk for RD in future.

Learning to read in Finnish

- Finnish children attend kindergarten at age six, and reading instruction begins at age seven when they enter first grade.
- Upon entering school, letter knowledge seems to be one of the best predictors of reading and spelling accuracy in the Finnish language.
- The Finnish orthography is almost purely phonemic: the grapheme-phoneme correspondences are regular and symmetrical at the level of the single letter, and early reading instruction in Finnish almost uniformly rests upon synthetic phonics.
- Finnish students who struggle with reading do not typically have problems with reading accuracy but do experience persistent problems with reading fluency.
- In the case of RD, the forms of support are remedial teaching during or after school by the class teacher, part-time special education given by the SEN teacher individually or in small groups during school days, or co-teaching by the class teacher and the SEN teacher during normal literacy lessons.



The study

The aim of the study was to investigate teachers' evaluation

practices, and the sensitivity and specificity of their assessments or pre-reading skills, especially of children with the lowest achievement, and how the teacher ratings corresponded to the reading test scores at the beginning of the first grade.

Research questions:

1. Which assessment practices do class teachers and SEN teachers use to assess pre-reading skill (e.g. letter knowledge, phonological skills) at the beginning of grade 1?
2. Are teacher ratings associated with test scores in pre-reading skills?
3. How accurately do the teachers identify students' pre-reading difficulties to test scores, and what are the sensitivity and specificity rates of their assessments?

The data for this study were drawn from two Finnish longitudinal studies: the Jyväskylä Longitudinal Study of Dyslexia (JLD) and the First Steps study. The JLD data comprised 91 class teachers, 51 SEN teachers and 200 first-grade students. The First Steps data comprised 136 regular classroom teachers, 34 SEN teachers and 598 children.



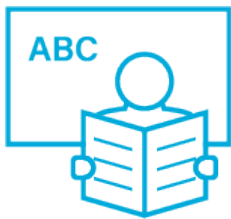
Findings

- In the JLD sample, most SEN teachers reported that they used only one type of assessment, with qualitative or CBM being the most common.
- If the SEN teachers used two types of assessment practices, they were usually tests combined with qualitative assessments.

- Altogether, tests were used by 47% of the SEN teachers.
- In the First Steps sample, class teachers used more often and SEN teachers less often than expected only one assessment practice.
- Most class teachers used qualitative assessment as their only practice.
- When the class teachers assessed students using two types of practices, they were usually either CBM or tests combined with qualitative assessment.
- More than half of the SEN teachers relied on two types of assessment practices, most commonly tests combined with CBM.
- Nearly 90% of the SEN teachers used tests in their assessment.
- Associations between teachers' ratings and the reading test scores were moderate in both samples.
- In the JLD sample, the sensitivity of class teacher ratings in letter knowledge was 31% and specificity was 90%, meaning that 69% of the at-risk students remained unidentified, and 10% of the students with no difficulties were falsely identified as at-risk.
- In phoneme identification, the sensitivity rate was 17%, and the specificity rate was 93%.
- In phoneme blending, the sensitivity rate was 46%, and the specificity rate was 70%.
- The results indicate that it was highly challenging for the class teachers to identify the difficulties.
- The SEN teachers' ratings of students' letter knowledge were associated with students' categorical letter knowledge test scores.
- The sensitivity of SEN teacher rating in letter knowledge was 55%, and specificity rate was 83%.
- In phoneme identification, the sensitivity rate was 43%, and the specificity rate was 84%.
- In phoneme blending, the sensitivity rate was 72%, and the specificity rate was 54%.
- These results show that it was also challenging for the

SEN teachers to identify at-risk students who had difficulties with phonological skills.

- Regarding the First Steps sample, the results first showed that the sensitivity of the SEN teacher ratings for letter knowledge was 100%, and the specificity rate was 23%.
- The sensitivity of teacher ratings for phoneme blending was 100%, whereas specificity was only 9%.



Conclusions

- The results first showed that the class teachers mostly used one single assessment practice, whereas the SEN teachers often used a combination of several assessment practices.
- Second, it turned out the correlations between teacher ratings and test scores were mostly weak or moderate.
- For the JLD sample, there were differences between the accuracy of the class teachers' and the SEN teachers' ratings, and in the First Steps sample, the specificity rate was particularly low.
- Because most class teachers used only qualitative assessment, the collaboration between class teachers and SEN teachers on assessment issues is desirable, if not necessary.
- Early identification and intervention in specific deficit areas can improve students' reading skill levels immediately as well as prevent later difficulties.
- The findings suggest that more attention should be paid to teacher training as well as developing reliable

assessment tools for teachers.