## Prevention and practice for students at risk for dyslexia in Sweden

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I

Much due to a nationwide information campaign, supported by Swedish politicians and the Royal Family in 1990, dyslexia is today widely recognized and a well established term among citizens, teachers and decision making bodies in Sweden. But there are still some problems to handle. The reading level among the Swedish students has been sinking every year. The number of struggling students are increasing.

Swedish educational policy documents are outlined as being goal-orientated. It leaves a lot of space for the individual teacher to make his or her own choice of educational form and contents. For decades, reading instruction hasn't been a priority in the teacher education programme and many teacher educators though Whole language methods were the best methods. It was also widely spread that reading instruction didn't demand teachers special knowledge.

A political decision to implement more focus on reading- and writing difficulties (as well as dyslexia), in Teacher's Education Programmes, leaves behind few objectors today that dyslexia does impair learning conditions for some individuals and special educated teachers are needed. However, there is still confusion in how to handle the problem further.

In the Swedish educational policy documents, the definition of reading and writing difficulties is included in the more general definition of "difficulties". Implicitly, this means that dyslexia and reading and writing difficulties are so widely recognized that they no longer need to be defined. Consequently, there is no need for a student to have a diagnosed dyslexia in order receive more special support in elementary school and upper secondary school in Sweden.

A diagnosed dyslexia is just needed for a student to receive learning support on university level, as well as in driving license schools and tests. The learning support include opportunities to have extended time to carry out aptitude tests for admittance to university education, or examinations when enrolled in programmes.

The educational policy clearly states the individual student's right to adapted education in elementary an upper secondary schools, in order to achieve the fundamental educational goals. This should be regardless what kind of learning difficulties the student might experience.

When there is a risk that a student will not achieve the educational goals, the school has an obligation to carry out an investigation that deals with the problem from an organizational-, group- and individual parametries. This is parameter and only focus on the parametries that the student of the control of the parametries are the parameters and the parameters are the parameters.

and individual perspective. This in order to not only focus on the perspective that the student just need to study harder. In many cases, when problems occur, it might also include a need for reorganizing current forms and contents of teaching in the local school or a need for increased qualifications and competences among the teachers. The same investigation of why educational goals are at risk of not being achieved, may this way contribute to organizational development. That in turn might benefit other students. It is important that the experiences of both student and parents are integrated in the investigation carried out. Should there be evidence of specific needs of support in order for the student to achieve the goals, an individual educational programme is to be established. This must clearly state responsibility and how, where and when the needed support is implemented. An evaluation of the individual educational programme should be carried out within a couple of months.

II

A longitudinal study and comparison of students who scored low in word decoding, compared to other students in the same second grade, started in 1989 (Jacobson, 1998). This study showed that students with reading difficulties, but with the support of special education, did develop their ability to decode words, but not sufficiently enough to achieve the normal level of word decoding.

Later on, the same study showed that the students who had word decoding difficulties in second grade, received lower marks in all subjects in upper secondary school. There was also large discrepancy in what kind of educational programmes the same students chose in upper secondary school. Only 11% percent of the students with word decoding difficulties in second grade chose a

theoretical programme, in comparison with 49% from the control group (Söderberg Juhlander et, al 2012). The differences in marks continued in upper secondary school.

A large interest has developed in Sweden to work proactively and prevent problems with word decoding for students. This work starts in almost all preschools.

Phonological training in preschool showed beneficial to all students learning to read, but most of all, the students at risk of having difficulties later on (Lundberg et al 1986). Intensive, early input has had a large impact (Torgesen et al 2001; Torgesen et al 2003). A follow up on students' phonological abilities when they start elementary school and early imput, such as reading training until reading is fluent, is important (Söderberg Juhlander, 2002). Structural work with phonological training is very common in Swedish preschools today, but results depend largely on the quality of education and the competences and knowledge of the teachers (Kjeldsen, Niemi & Olofsson, 2003).

In a longitudinal cross linguistic study by Olofsson & Söderberg Juhlander (2010) Swedish first graders word decoding and spelling development were followed in four test points during their first school year. A computer was used for single word reading tasks, letter knowledge, rapid naming and reaction time. The words were divided into four groups, mono syllable simple words, mono syllable pseudo words, high frequent complex words and bi syllable pseudo words. The origin of this study is a part of Reading acquisition and disability in European orthographies (grant to Åke Olofsson, Umeå university and Philip H.K. Seymour, University of Dundee).

The results indicate that Swedish readers confirm well to the general pattern of development found in earlier studies. The Swedish student developed their word decoding ability as much as students in other orthographies did but the level seem to depend on the orthography and the students pre reading ability when they entered school. Both letter knowledge and skills in phonological awareness seem to be very important factors in reading instructions as well as the word length and ortographic complexity. Simple words were generally read correctly more often than complex words. In the first three test points monosyllable pseudo words were read more correct than simple words. It also seems like it is necessary to achieve most of the letters to decode more than occasional words. The results indicate that Swedish students in the beginning of the reading process have their attention focused on decoding words with using phonological skills and letter knowledge rather than using a logographic strategy. The results give no support to the claim of an initial logographic strategy in reading accuracy.

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