



HEALTH COMMITTEE

THE ROYAL SWEDISH ACADEMY OF SCIENCES



Program & abstracts

26-28 April 2010

State of the Science Conference

**School, educational achievement
and mental health among children
and adolescents**



HEALTH COMMITTEE

THE ROYAL SWEDISH ACADEMY OF SCIENCES

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State of the Science Conference

School, educational achievement and mental health among children and adolescents

26-28 april 2010

Beijer hall
Royal Swedish Academy of Sciences

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Background

Swedish politicians and governmental authorities show an increasing interest in school achievements and the mental health of children and teenagers. The political interests in these issues can be exemplified by the Welfare Commission (Kommittén Valfärdsbokslut) that was set up by the Swedish Government in 1999. The results were published in a number of reports and with an English summary: Welfare in Sweden: The Balance Sheet for the 1990s; Ds 2002:32. From the section on "Swedish Level of Living Survey for Children (Barn-LNU) which was carried out in 2000" the following is cited: "Older children and young people spend a large amount of their time at school. The situation there is obviously important for their ability to learn, but the physical and psychosocial work environment in school is in itself important for young people's welfare. In view of this it is alarming that many pupils are critical of their school conditions. For example, nearly half of the children and young people questioned reported that it was not usually quiet in the classroom during lesson time. Some pupils would also have liked to work at a slower pace and/or thought that they did not get help from the teachers. A small but far from marginal group of pupils feel insecure in school and have poor social relations there. They report that they do not have a close classmate or feel that some teacher treats them badly or unfairly. . "The number of students in the individual programs has risen the 1990s and in 1999 encompassed 14 per cent of first year upper secondary students (National Agency for Education 2001c). Sharp criticism has been aimed at the individual programs as they do not seem to have had the desired effect and only a minority of the registered students ultimately graduates from upper secondary school."

During the first decade of the 22 Century the public discussion on issues covering mental health among children and youth, on their school achievements and the frequency of school drop outs has been more intensive.

There has been a claim that the mental health has deteriorated in these age groups. The number of students leaving junior high and senior high without passing grades has successively inclined to be around 20% of each age class leaving school today. Another observation is that students entering Universities to study physics, chemistry, mathematics and technique no longer have the same qualifications in basic mathematics as these students used to have.

The current situation is also exemplified by the Annual Report 2010 from BRIS (Children's Rights in Society) who runs the Children's Help-Line in Sweden. Among boys calling the Help-Line every fourth (26%) wanted primarily to discuss school problems. A similar situation was found among girls (22%).

Between 2008 and 2009, calls on problems related to school increased the most, with 30%.

These circumstances have triggered a discussion on the role of the Swedish school system for the mental wellbeing of school aged children and youth. The Royal Swedish Academy of Sciences has the tradition, since its foundation in 1739, to engage in issues of current interest for the society in order to give grounds for political decisions and action from authorities based on good science.

Based on this tradition, The Royal Swedish Academy of Sciences decided to initiate two State of the Sciences Conferences addressing the following questions: “Has the mental health of Swedish children and youth deteriorated over time?” and “Are there relationships between the mental health of children and adolescents, their learning capacity and the organization of the school”.

In April 2010, these two conferences will take place. On April 12-14, 2010 the first conference is on “Trends in child and adolescent mental health”, while the second on April 26-28, 2010 covers “Relationships between the school system, teaching, school children’s cognition and their mental health”.

The conferences follow the NIH-model which means that a panel of experts will evaluate the current level of knowledge related to some formulated questions and produce a formal written statement based upon systematic literature reviews, expert statements and open discussions.

For the conference on “Relationships between the school system, teaching, school children’s cognition and their mental health” the following questions were put forward:

In Swedish:

1. Frågor om skolprestation och mental hälsa:

Vilka är de ömsesidiga kausala relationerna mellan skolprestation, lärande och psykisk hälsa?

Hur påverkas relationerna mellan dessa av:

- individuella faktorer som sårbarhet, kognitiv förmåga och kön;
- familjens socioekonomiska/utbildningsmässiga position;
- skolans system för bedömning av elevers skolprestation; samt
- skolans åtgärdssystem vid låg skolprestation och ohälsa.

2. Frågor om skolans organisation, arbetssätt och arbetsmiljö

Hur påverkas relationen mellan elevers lärande och psykiska hälsa av:

- organisatorisk differentiering och integrering av skolans verksamhet;
- läraregenskaper och lärarskicklighet;
- arbetsformen 'eget arbete'; och
- de sociala relationerna mellan elever, och mellan elever och lärare, i skolan och klassrummet.

3. Vilka frågor och områden bör den framtida forskningen fokusera?

In English the questions are summarized as follows:

- 1. Which are the causal relationships between mental health and academic achievement?*
- 2. How are these relationships influenced by other factors, both related to the individuals and their social background, to and to factors in the educational environment (evaluation system, tests, grades, selection procedures, special education system, teaching methods, and social climate).*
- 3. Which areas and specific questions should be in focus for future research?*

For the conference a systematic literature review is available on "School, Learning and mental health". Invited international experts will address the following themes: Prof Sir Michael Rutter, UK, The impact of cognition and social factors on school children's health and academic achievements; Prof Ulla Lahtinen, Finland: Are children in need of special support if their academic outcome is poor? And if so, which educational strategies can be effective?; Prof Kathy Sylva, UK: School and peer influences on child development; Prof Bente E. Hagtvet, Norway: Preschool language skills, later literacy achievements and social-emotional functioning; Prof Jay Giedd, USA: Brain maturation and sex differences - implications for development, health and school achievements

From this input and after an open discussion, the conference ends with a Panel statement summarizing the current knowledge on these questions.

Gunnar Öquist
Permanent Secretary
The Royal Swedish Academy
of Sciences

Arne Wittlöv
Chairman, The Health Committee
The Royal Swedish Academy of Sciences

MONDAY 26 APRIL**Chair: Prof. P-A Rydelius****10.00 Opening of the conference**

Prof. Gunnar Öquist, permanent secretary, The Royal Swedish Academy of Sciences

Dr. Arne Wittlöv, chairman of the Health committee at the Royal Swedish Academy of Sciences

Prof. Robert Erikson, chairman of the Panel

10.15 The systematic literature review

Prof. Jan-Eric Gustafsson, chairman of the project group for the literature review

Questions and comments

11.30 Lunch**13.00 Cognition and social circumstances as possible influences on later achievement and psychopathology**

Sir Michael Rutter, Institute of Psychiatry, London, UK

Questions and comments

14.00 School and peer influences on child development

Prof. Kathy Sylva, Department of Education, University of Oxford, UK

Questions and comments

15.00 Coffee**15.30 Brain maturation and sex differences - implications for development, health and school achievements**

Prof. Jay Giedd, NIMH, Bethesda, USA

16.30 Adjournment - the panel meets

PROGRAM

TUESDAY 27 APRIL

- 09.00 **Preschool language skills, later literacy achievements and social-emotional functioning**
Prof. Bente Hagtvet, Institutet för Specialpedagogik, Oslo, Norge
Questions and comments
- 10.00 **Coffee**
- 10.30 **Are children in need of special support if their academic outcome is poor? And if so, which educational strategies can be effective?**
Prof. Ulla Lahtinen, Specialpedagogik, Åbo Akademi, Vasa, Finland
Questions and comments
- 11.30 **Lunch**
- 13.00 **Presentation of the Literature overview and the Statement from the State of the Science Conference on Time Trends, April 12 –14**
(in Swedish, på svenska)
Prof. Stig Wall and Prof. Bruno Hägglöf
Questions and comments
- 14.30 **Ajournment - the panel meets**
-

WEDNESDAY 28 APRIL (in Swedish, på svenska)

- 09.00 **Presentation of the preliminary State-of-the-Science statement**
- 09.30 **Coffee**
- 10.00 **Public discussion**
- 11.30 **Lunch. The panel meets in executive session**
- 14.00 **Press conference and presentation of the final State-of-the-Science Statement**
- 15.00 **Closing of the conference**

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- Bristol Myer Squibb
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 - Stiftelsen Clas Groschinskys minnesfond
 - Stiftelsen Kempe-Carlgrenska Fonden
 - Stiftelsen Marcus och Amalia Wallenbergs minnesfond
 - Stiftelsen Sven Jerrings Fond
 - Svenska Läkaresällskapet
 - Vetenskapsrådet
-

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Rune Åberg, Professor of sociology, Umeå University

Martin Grann, Professor of psychology, Karolinska Institutet

Karin Taube, Professor of Education, Umeå University

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Speakers

Prof Gunnar Öquist, permanent secretary, Royal Swedish Academy of Sciences

Dr Arne Wittlöv, chairman of the Health committee at the Royal Swedish Academy of Sciences

Prof Robert Erikson, chairman of the panel, Professor of sociology, Stockholm University

Prof Jan-Eric Gustafsson, Göteborg University

Prof Sir Michael Rutter, Institute of Psychiatry, London, UK

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Cognition and social circumstances as possible influences on later achievement and psychopathology

Prof. Sir Michael Rutter, Institute of Psychiatry, London

One of the first demonstrations of the major overlap between severe reading difficulties and psychopathology in childhood was provided by the Isle of Wight epidemiological study undertaken by Rutter, Tizard and Whitmore (1970). The key findings will be illustrated. The meaning of this strong association, however, has to be considered in the light of the rather different patterns found in adult life in the follow-up of the Isle of Wight sample, and in complementary studies of other samples. The key findings will be discussed with illustrative data.

The findings at 14 years in the Isle of Wight follow-up showed a higher rate of truancy in poor readers as compared with the general population, but the rate of truancy in controls was high at 14 (whereas it had not been at 10). A similar pattern was found for inattention; that is the rate was higher in poor readers but it was also relatively common in controls.

Fergusson, Horwood and Ridder (2005) found that early conduct problems were predictive of crime, substance use and mental health problems in adult life. A lower IQ was similarly predictive of low educational attainments and a higher level of unemployment. But these two pathways were relatively independent of one another, with associations between the two only a consequence of pre-existing associations in childhood.

Carroll et al. (2005) found that specific reading difficulties were associated with conduct problems but that this association was largely mediated by inattention.

The Isle of Wight follow-up to adult life showed no substantial association with adult crime. This lack of association was a function of the high crime rate in the control group, rather than a low rate in poor readers.

Before turning to the psychosocial consequences in adult life of reading difficulties first manifest in childhood, it is necessary to consider the extent to which reading difficulties per se persist into adult life. Maughan et al. (2009) found an extremely high correlation between poor reading and spelling difficulties in adult life. Moreover, two thirds of poor readers had left school by 15 years as compared with just one in five of controls. Four fifths of poor readers had no higher educational qualification as compared with just over a third of controls. The same pattern of continuing lack of qualifications and manual work was also evident in the mid-40s. Importantly, social class was signifi-

cantly associated with these outcomes in controls, but not in poor readers.

Overall, mental health problems in mid-life were not particularly associated with poor reading in childhood. However, suicidality was increased as compared with controls, a majority were afraid of writing in public and the rate of multiple features of social exclusion was nearly twice as common in poor readers.

It may be concluded that both reading difficulties and low IQ are associated with an increased rate of conduct problems in childhood, but several processes seem to be operative. In childhood, the associations seem to be strongly associated with inattentiveness. Possibly, the causal arrows run from ADHD to conduct disorder and to reading difficulties. Reading difficulties are strongly associated with truancy and truancy, in turn, carries an increased risk for delinquency. Reading difficulties show a very high level of persistence into adult life, but the association between poor reading and antisocial behaviour no longer seems to apply in adult life. Adult crime is predicted by childhood disruptive behaviour and not by reading difficulties.

Key References

- Carroll, J., Maughan, B., Goodman, R., & Meltzer, H. (2005). Literacy difficulties and psychiatric disorders: Evidence for co-morbidity. *Journal of Child Psychology & Psychiatry*, 46, 524-532.
- Fergusson, D.M., Horwood, L.J., & Ridder, E. (2005). Show me the child at seven: The consequences of conduct problems in childhood for psychosocial functioning in adulthood. *Journal of Child Psychology & Psychiatry*, 46(8): 837-849.
- Maughan, B., Messer, J., Collishaw, S., Pickles, A., Snowling, M., Yule, W., & Rutter, M. (2009). Persistence of literacy problems: spelling in adolescence and at mid-life. *Journal of Child Psychology and Psychiatry* 50, 893-901.
- Maughan, B., Pickles, A., Hagell, A., Rutter, M., & Yule, W. (1996). Reading problems and antisocial behaviour: Developmental trends in comorbidity. *Journal of Child Psychology and Psychiatry*, 37, 405-418.
- Rutter, M., Tizard, J., Whitmore, K. (1970). *Education, Health and Behaviour*. Longmans, London.

School and peer influences on child development

Prof Kathy Sylva, Department of Education, University of Oxford, UK

This paper explores the influences of schooling on cognitive and social-behavioural development. It focuses mainly on the largest “school effectiveness” study in Europe, a longitudinal study of more than 3,000 children in England recruited at age 3 years from different pre-schools and studied until adolescence. This paper focuses on the effects of different kinds of pre-school and primary school experiences (ages 3-11). Many children in the sample have prospered, leaving primary school (at age 11) with confidence and armed with the skills they need to tackle learning in secondary school. However, some children moved onto secondary school with poor skills in key areas of learning or with low self-image and aspiration. The EPPE (Effective Pre-school and Primary education) project set out to explain some of the reasons behind these different developmental trajectories. To do this multi-level modelling was used to identify the unique (statistical) effort of individual schools. Which educational processes in these schools were related to children’s development?

The team established a developmental profile for each child including cognitive and language assessments (standardised assessments), social and emotional assessments (carried out by key pre-school and school staff) and self-reports completed by the children themselves. The longitudinal child assessments undertaken at age 3, 5, 6, 7, 10 and 11 are the core of the study. Parental interviews and questionnaires were used to find out about the child’s history from birth and family demographic characteristics when the child was 3, 6 and 11. Parents were also asked about daily routines and learning activities with their children at home and in the community. The 141 pre-school settings and a subset of the primary schools children attended (125 school) were studied through interviews, questionnaires and observations.

Major findings

1. Pre-school attendance had striking benefits. For all social outcomes, the benefits of pre-school were greater for boys, for pupils with special educational needs (SEN), and for pupils from disadvantaged backgrounds. However, for some of the outcomes, notably English, Mathematics and ‘Hyperactivity’, only pre-schools of medium or high quality had lasting effects; poor quality pre-schools had no impact at all.
2. Learning at home had long lasting effects; the mother’s highest qualification level and the Early years home learning environment (HLE) had strong effects upon academic and social outcomes at ages 7 and 11. Home support for learning during the pre-school period continues to show effects on several outcomes (attainment in English and Mathematics, ‘Self-regulation’, ‘Pro-social’ behaviour and ‘Hyperactivity’) at the end of primary school.

3. The academic effectiveness of the primary school was measured between ages 7 and 11 independently of the longitudinal sample, by analysing national assessments for all pupils (600,000+) in all state primary schools (15,000+) in England. EPPE pupils who attended an academically more effective primary school had significantly better academic outcomes (higher than 'expected' scores on national tests). There was no evidence of any adverse outcome for social behaviour or self-perceptions where pupils attended an academically more effective primary school. Thus, achieving high academic standards has no adverse impact on enjoyment or academic and behavioural self-image or social outcomes. Indeed for more vulnerable groups academic effectiveness seems to be beneficial.

4. Pre-school and primary school interact to affect pupils' learning and development. EPPE 3-11 is the first study to investigate the combined effects of pre-school and primary school on pupil outcomes. The combination of attending a higher quality pre-school and then moving on to an academically effective primary school had clear benefits for pupils' cognitive outcomes to age 11, especially for Mathematics. High quality pre-school appears to provide some 'protection' against attending an ineffective primary school; pupils who attended high quality pre-schools fared better in low effective primary schools than pupils who had not attended pre-school or those who had attended lower quality pre-schools. The reverse was also true, pupils who were fortunate enough to attend a primary school of high academic effectiveness showed better outcomes at age 11 (compared to children in low effective schools) even if they had not attended a pre-school or if their pre-school was of low quality.

The findings of EPPE will be related to results of similar studies around the world.

Filmed classroom episodes will be shown to illustrate the kinds of educational 'processes' related to more positive child development.

Brain maturation and sex differences - implications for development, health and school achievements

Prof Jay Giedd, NIMH, Bethesda, USA

Magnetic resonance imaging (MRI), with its lack of ionizing radiation, provides safe and unprecedented access to the anatomy and physiology of the living, maturing human brain. Converging results from longitudinal structural MRI (sMRI) studies of children and adolescents indicate roughly linear increases in white matter and inverted-U shaped developmental trajectories of gray matter. Peak gray matter thickness occurs at different times in different structures/regions. Particularly late to reach adult morphology is the prefrontal cortex, a high association area involved in neural circuitry subserving such functions as impulse control, judgment, and long range planning. Although male and female brains are much more alike than dissimilar, on group average the females reach peak gray matter size 1 - 3 years earlier and male morphometric measures are more highly variable across all structures examined. Pediatric MRI studies of brain function (fMRI) generally show task specific changes in frontal/limbic balance, a diffuse to focal pattern of activations, and increased integration of widely distributed circuitry. Overall the findings paint adolescence as a distinct neurobiological stage (as opposed to a simple linear transition from childhood to adulthood) with highly dynamics changes in structure and function. The relationship between these neuroimaging findings and changes in cognition, behavior, and emotion is far from elucidated and remains an area of active research. Likewise, the implications of recent neuroscience findings for educators are only beginning to be systematically approached. Possible realms of investigation include: (1) how to harness the brain's incredible ability to adapt to the demands of its environment; (2) the relationship between exceptionally active developmental changes and sensitive/critical learning periods in which environmental effects are maximized; (3) discerning the influences, for good or ill, on developmental brain trajectories; and (4) assessing whether individual differences in brain imaging patterns may help to optimize teaching strategies.

Preschool language skills, later literacy achievements and social-emotional functioning

Prof. Bente E. Hagtvet, Department of Special Needs Education, Faculty of Education, University of Oslo, Norway

The focus of my talk is on the relationships between oral language skills in preschool and the following literacy- and social-emotional development, first and foremost from the perspective of children who develop poor reading skills. This is an underresearched area of crucial importance to school success and potentially also to the individual's quality of life. Also, in preschool and school the interplay between language and emotions is most typically underestimated as a domain of didactic importance until a child has developed behavior problems or (s)he suffers from an obvious language-cognitive delay (for exceptions see Bloom 1993; Bloom and Beckwith 1989). We know that delayed language-cognitive development is often associated with social-emotional problems and maladjustment, but we know less about the interaction between language and emotions in more typical and "sub typical" development (Baker and Cantwell 1982; Clegg, Hollis, Mawhood and Rutter 2005; Conti-Ramsden and Botting 2008; Snowling, Bishop, Stothard, Chipchase and Kaplan 2006; Tomblin, Zhang, Buckwalter and Catts 2000).

I will address these issues by three main approaches, and I shall make use of research carried out by my research group and myself as starting points.

The first regards typical language development in preschool and early schooling. As stated above, we have limited knowledge about the "typical interplay" between language and emotions in preschool and early schooling, i.e. at the time where school failures and negative feelings may potentially be prevented if preventive steps are taken. Research shows that "typical variation" within the "normal" range is considerable both in terms of language skills and social-emotional functioning (McGee, Williams, Share, Anderson, and Silva 1986). This was confirmed in a longitudinal study of 70 randomly selected children, aged 4 through 9 years (Hagtvet 1996; 2000). The results showed that the interrelationships between aspects of oral and written language skills and emotional functioning could be visualized as a "mirror picture" where high language scores were associated with low scores on a scale of test anxiety and stress (Nottelman and Hill 1977; Wine 1980). This association was revealed as early as at age four, i.e. before the children who developed poor reading skills were influenced by negative school experiences.

The second approach regards children at familial risk of dyslexia (Hagtvet, Horn, Lassen, Lyster and Misund 1999). A sample of 140 children of dyslexic

parents was followed longitudinally from preschool (age 2) to school (age 9). A subsample who at age 11 showed continuous reading problems was offered a 10 week intervention program (Hagtvet, Frost and Refsahl 2010, in press). Not surprisingly they were also in different ways socially and emotionally affected. The success of the intervention program appeared influenced by a child's social-emotional functioning and also by the developmental history that we retrospectively could trace due to the longitudinal design of the study. The third approach regards prevention of reading impairment. Since language and emotions appear to develop in interaction in typical as well as delayed development, early oral and written language should be stimulated by paying due attention to this interplay. Research underscores the importance of teaching reading and writing within playful and explorative contexts that facilitate motivation to learn and also the functionality of subskills of literacy, e.g. functional letter knowledge (Adams 1990; Frost 2002, 2003; Seymore 1997). This emphasis on the importance of the individual child's well being and ego involved learning stands in some contrast to a teaching practice that more recently have been observed in kindergartens and schools and that in a simplified jargon may be seen as "a focus on the formalities that are measured by the tests" (Hagtvet 2003; Klette 2007). The results are discussed in developmental, psychological and educational perspectives.

Literature:

- Adams, M. (1990). *Beginning to read*. Cambridge, Mass: The MIT Press.
- Baker, L. and Cantwell, D. (1982). Language acquisition, Cognitive development and emotional disorders in childhood. In: K.E.Nelson (ed): *Children's language* (vol 3), Hillsdale, NJ: Lawrence Erlbaum.
- Bloom, L. (1993). *The transition from infancy to language*. Cambridge: Cambridge University press.
- Bloom, L. and Beckwith, R. (1989). Talking with feeling: Integrating affective and linguistic expression in early language development. *Cognition and Emotion*, 3, 313-342.
- Clegg, J., Hollis, C., Mawhood, L. and Rutter, M. (2005). Developmental language disorders – a follow-up in later adult life. Cognitive, language and psychosocial outcomes. *Journal of Child Psychology and Psychiatry*, 46 (2), 28-149.
- Conti-Ramsden, G. and Botting, N. (2008). Emotional health in adolescents with and without a history of specific language impairment (SLI). *Journall of Child Psychology and Psychiatry*, 49 (5), 516-525.
- Frost, J. (2003). *Prinsipper for god leseoppl ring*. Oslo: Cappelen Akademisk.
- Frost, J. (2002). *Selvforst rkende strategier hos begynderl seren. Vigtige sprogfunktioner for l seudviklingen hos skolebegyndere og for metodisk tilrettel ggelse af l seundervisningen*. K benhavn: Psykologisk Forlag.
- Hagtvet, B.E. (1996). *Fra tale til skrift. Om prediksjon og utvikling av leseferdighet i fire-til  tte rsalderen*. Oslo: Cappelen Akademisk.

Hagtvat, B.E. (2000). Prevention and prediction of reading problems. In: N.A.Badian. (ed): Prediction and prevention of reading failure. Baltimore, Maryland: York Press.

Hagtvat, B.E. (2003). Skriftspråstimulering i første klasse: faglig innhold og didaktiske angrepsmåter. In: K.Klette (red.): Klasserommets praksisformer etter Reform 97. Det utdanningsvitenskapelige fakultet, Universitetet i Oslo. 173-222.

Hagtvat, B.E., Horn, E., Lasssen, L., Lyster, S. and Misund, S. (1999). Når lese- og skrivevansker går igjen i familier. Tidlige risikotegn skoleerfaringer og forebyggende tiltak. *Spesialpedagogikk*, 2, 29-39.

Hagtvat, B.E., Frost, J. and Refsahl, V. (2010). Den intensiverte leseopplæringen. Oslo: Cappelen Akademisk. In Press.

Klette, K. (2007). Bruk av arbeidsplaner I skolen – et hovedverktøy for å realisere tilpasset opplæring? In: *Norsk pedagogisk tidsskrift*, 91 (4), 344-358.

McGee, R., Williams, S., Share, D.L., Anderson, J., and Silva, P.A. (1986). The relationship between specific reading retardation, general reading backwardness, and behavioural problems in a large sample of Dunedin boys: A Longitudinal study from five to eleven years. *Journal of Child Psychology and Psychiatry*, 27(5), 597-610.

Nottelman, E.E. and Hill, K.T. (1977). Test anxiety and off-task behaviour in evaluative situations. *Child Development*, 48, 225-231.

Seymore, P.H.K. (1997). Foundations of orthographic development. I: C.A. Perfetti, L.Rieben & M Fayol (red): Learning to spell. Research, theory and practice across languages. Mahwah, New Jersey: Lawrence Erlbaum, 319-337.

Snowling, M., Bishop, D., Stothard, S.E., Chipchase, B. and Kaplan, C. (2006). Psychosocial outcomes at 15 years of children with a preschool history of speech-language impairment. *Journal of Child Psychology and Psychiatry*, 47 (8), 759-765.

Tomblin, J.B., Zhang, X., Buckwalter, P. and Catts, H. (2000). The association of reading disability, behavioral disorders, and language impairment among second-grade children. *Journal of Child Psychology and Psychiatry*, 41 (4), 473-482.

Wine, J.D.W. (1980). Test anxiety and the direction of attention. *Psychological Bulletin*, 76, 92-104.

Are children in need of special support if their academic outcome is poor? And if so, which educational strategies can be effective?

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The academic outcome of our children varies. Some are doing very well, others are not. We naturally accept that we have a variation, but in accordance with our educational goals and strategies, we try to find means to support all our children in their learning and developing processes. We try to help them in the process of living a good life. The challenge in all sectors of our societies, in the education, health and social sector, is to support the individuals, the families and all the groups, which are in the risk zone of not having a good life.

Children with a poor academic outcome in the school often face different kinds of problems in their current situation. In addition they can be regarded as being in a risk of having problems with education, work and other areas in their future life. There are plenty of reasons why we should support children with poor academic outcome. And there are also plenty of findings showing that support to these children lead to improved outcomes.

The educational situation and the findings and experiences from research and discussions in Finland are chosen as a case for the discussion of the topic and the described issue.

1. The presentation is mainly based on the Finnish good Pisa results, most of them well known and published.
2. A few recently analyzed and earlier not published figures from Pisa data comparing the Finnish and Swedish speaking children in Finland with the children from Sweden are also reported.
3. Data showing some kind of a paradox to the Pisa results and a challenge for the Finnish schools are shortly presented (the WHO survey, Health Behaviour among School-aged Children). The satisfaction with the school and the level of mental well-being of school aged children needs attention in Finland.
4. Possible reasons behind and explanations for good Finnish Pisa results are discussed.
5. Special support and (special) educational strategies in Finland are presented.

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