

**Report on the Nordic Ergonomics Society (NES) 2008 Workshop on Ergonomics for Schools in the Nordic countries**

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## Introduction

Most earlier work on Ergonomics in Schools has focused on micro-ergonomics issues (Legg 2006, 2007; Legg and Bennett 2007) such as mismatch between student body sizes and their desks and chairs (Milanese and Grimmer 2004), the weight of schoolbags (Whittfield *et al.* 2001) and the prevalence of musculoskeletal disorders amongst school students (Grimes and Legg 2004). Very little of this has been turned into practice, although advances are being made in this area by the International Ergonomics (IEA) Technical Committee (TC) on Ergonomics for Children in Educational Environments (ECEE) ([www.ergonomics4children.org](http://www.ergonomics4children.org)), the UK and New Zealand Ergonomics Societies Special Interest Groups on Ergonomics for Schools ([www.ergonomics4schools.com](http://www.ergonomics4schools.com) and [www.ergonomics.org.nz](http://www.ergonomics.org.nz)). There has been less focus on macro-ergonomics issues such as classroom environments, ergonomics pedagogy and curriculum content/structure (Smith 2007; Woodcock 2007).

The workshop started with a review of Ergonomics in Schools by Stephen Legg and was followed by an overview of the current work of the IEA TC for ECEE by Karen Jacobs (The Powerpoint presentations are available upon request from the workshop convenor by email: [S.J.Legg@massey.ac.nz](mailto:S.J.Legg@massey.ac.nz)). This was followed by subgroup discussions and report back from participants according to national Nordic country groupings. The focus

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of discussions was fitted with the NES2008 conference theme of Ergonomics as a Lifestyle by focusing on the future of ergonomics/human factors education within national curricula, rather than looking at the traditional issued of furniture and classroom organization. The specific aim was to identify how Ergonomics/Human Factors may best be included within each Nordic Country's national school curricula.

### **Outcomes**

The list of attendees is above. All the Nordic countries except Finland were represented and in addition there was strong interest from a Netherlands group. Brief notes on the outcomes of their national groupings discussions are as follows:

#### **Norway**

Regulations (mainly about physical environment) about "educational environment" were introduced about 5 years ago for small & middle age schools. The Norwegian Ergonomics Society has been asked to provide major input to a national project on guidelines for physical plans for school within a whole learning environment. Nevertheless ergonomists are still 'tired of being brought in at start', after the regulations have been introduced rather than being involved with their development. The current issue under discussion will be presented for consideration at the Norwegian ergonomics society Conference this year. The purpose of attending the workshop was to get additional ideas for inclusion at the Norwegian conference.

#### **Denmark**

Denmark already has a more holistic approach to school system and teachers, already enshrined in law (social inclusiveness model) in which student and teacher representatives are active on school - level committees. There is a focus on indoor environments. There is already a Danish Centre for school environments.

#### **Iceland**

Occupational Therapists are trying to influence schools and see that there is an awakening to ergonomics amongst authorities. For example - when building new schools, by taking ergonomics into consideration e.g. furniture. But what is missing is how to use adjustable chairs/tables.

It was agreed that the best way to introduce ergonomics would be to contact the Ministry of education with the aim of working together, and to work towards introducing ergonomics to students via teacher education modules that could be integrated into the school curriculum. It could focus on lifestyle (including acoustics) and would best be introduced to students by their teachers.

#### **Sweden**

There is plenty of focus on psychosocial environment, e.g. mobbing and auditory aspects. There is also a focus on heavy backpacks, lifting furniture and boxes but less on integrating ergonomics into life skills, which is where there could be improvements in the introduction of ergonomics.

### **The Netherlands**

Ergonomics already featured in Netherlands schools in numerous ways. For example there was already some furniture available that is adjustable for 5-11 year olds but no emphasis on how to adjust it or that they need to take control of the adjustment process themselves. There are similar concerns for the 12-18 year age group, though the issue of lockers as an option is considered. In short, there are already some rules about the Physical environment – but may not be in laws. The idea of school modules on ergonomics was a good one but this has not yet happened in the Netherlands. It was considered that there was a need for a focus on the development of school modules on ergonomics, but funds were needed from the government. There could also be internal campaigns on general ergonomics issues and what can be done using an ergonomics approach. Lastly, it was noted that there are already some regulations on a socially health environment and that leaning could be largely by internet and communication via groups.

### **Conclusions**

It was agreed that in most Nordic countries there had been some progress on school furniture and school bags but that more could be done. The opportunity in Norway for the development of a cohesive school environment based on ergonomics principles was an excellent step forward.

There was very little activity in introducing ergonomics into the school curricula but it was agreed that efforts should be made to approach the respective Ministries of education and more practically - to work on developing ergonomics modules for teachers and with teacher training courses.

Finally, there was support for the idea on running a similar workshop at the next International Ergonomics Association Congress at Beijing, China in 2009.

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