

Learning as a health promoting process: The salutogenic interpretation of the Swedish curricula in state education

Nilsson Lena PHD

Lindström Bengt, Dr PH

County Council Dalarna

Box 712

S-791 29 Falun

Sweden

e-mail: lena.a.nilsson@hv.se

The Nordic school of Public Health

Box 12133

S-402 42 Göteborg

Sweden

e-mail: bengt@nhv.se

Publication Date: 29 December 1998

Lena Nilsson and Bengt Lindström, Learning as a Health Promoting Process – the salutogenic interpretation of the Swedish curricula in state education. Internet Journal of Health Promotion, 1998. URL: <http://rhpeo.net/ijhp-articles/1998/14/index.htm>.

Abstract

Schools are important settings for health promotion. There is little evidence of positive long-term effects of health education programs especially among low performing students. This underlines the need to develop new approaches to health promotion in schools. There is also a difficulty to bridge the disciplinary understanding between the education system and the health system. This paper suggests a salutogenic interpretation of the Swedish curriculum. The curriculum focuses on the multi-dimensional characteristics of knowledge making four aspects explicit: familiarity, facts, understanding and skills. Theories of learning and health promotion include some essential similarities. The learning process is based on perceived comprehension, creation of meaning and making knowledge instrumental. The basis for salutogenic theory consists of comprehension, manageability and meaning. These common perspectives could form a basis for the health promoting school. A review of research on effective schools and a study of salutogenic mechanisms in Swedish schools points to the importance of school organisation and both health and school professionals attitudes in the health promoting process. The Swedish curriculum seems to be a good instrument for the salutogenic school. To improve the health promoting effects schools must consider a learning process focusing on comprehension, manageability and meaning.

Keywords: effective schools, health promotion, health promoting schools, knowledge, learning process, salutogenesis, understanding

Introduction

The school system has always been considered to be an important setting for health education. Health education has been considered as part of the normal responsibility of the school authorities in respect to the development of children and young people (Hagquist & Starrin 1997, Lynagh et al 1997). Since 1970, the school has also served partly as a setting for many large-scale health projects throughout the world such as programmes aiming at the reduction of cardio-vascular disease or cancer. Some of the health initiatives have proved to have positive effects on the health behaviours of the young, such as delaying the onset of smoking. From a short-term perspective, many health education efforts have been successful but in the long term, there is little difference in health behaviours between those exposed to the programmes and their controls (Nutbeam, 1993 a, Lynagh et al 1997). The initiatives have been most effective among school children that do well at school. Several multi-national studies on health behaviours among young people were initiated by WHO in the 1980's. The studies demonstrate a strong correlation between indicators for health damaging behaviours and school alienation (school children who do not like school, who report their achievement as being below average and who do not intend to continue onto further education) (Nutbeam 1993 b).

However, school system has been somewhat reserved in its attitudes towards health projects (Hurrelmann 1995) and the integration of the health projects into the daily activities in the school has been a problem (Nutbeam 1993 a, 1993 b, Stead 1996). Evidence of correlation between health damaging behaviours and school alienation indicate that there is little need for further health education programmes in the existing form. Rather there is a need to create an understanding within the school system of shifting the focus from health-related education to the problems that contribute to school alienation.

WHO has also changed its attitude towards the school system. Since 1993, the organisation has in collaboration with The EC and CE, been running a new programme called "health promoting schools" (WHO 1993). This is today the biggest health promotion program of WHO in Europe where more than 40 countries take part. Its objective is to promote healthier behaviours in the "whole school population". In 1995 the direction again shifted, to focus on the correlation between health and school performance, because there was evidence that the efforts to improve health behaviours were ineffective unless the education system was taken into consideration. The challenge for the health promoting school movement is to find the best possible model for class room education and practice to enable the improvement of health among school children (WHO 1995).

There is now a need to find a common agenda and an inter-disciplinary understanding between health researchers/practitioners and school researchers/practitioners in order to make the school system function as a health promoting setting. In Sweden the curricula for the school system (Lpo94) has recently been reformed. The evidence base of the scientific foundation of international and national educational research suggests that there is a strong argument for a holistic approach to child development in order to improve the education.

Aim and objectives

The overall aim is to find a common ground for health and learning to improve the interdisciplinary development of the science of learning and health science.

The objectives of this paper are:

- To use a theoretical approach of health promotion in an analysis of the Swedish curriculum (Lpo94)
- To examine whether the objectives and the agenda of the Swedish curriculum complement the intentions of the WHO Health Promoting School Programme.

The Educational Framework in Sweden

Knowledge and Development

A key element in the Swedish education documents is to promote a democratic and harmonious development. For its success, it is considered vital to have a good interaction between the school and the family setting.

" The main task of the school is to mediate knowledge to school children and in co-operation with the homes promote the development of children towards citizens and human beings who perceive their sense of responsibility. Education and fostering, in a deeper sense, is the question of handing on a cultural heritage – values, traditions, language, knowledge - from one generation to another".

The curriculum states that the main task of the school system is to mediate knowledge. However, in the same sentence there is a statement about the delivery of a cultural heritage. This statement suggests that the school function is an important setting for the process that gives children both the knowledge and deep understanding of the important questions of society. This double task is problematic and contradictory. The official report on the proposals presented by the commission on curricula responds to this contradiction by stating:

" For a long period of time new tasks have been forced upon the school system. Several problems in society have been made educational, in other words, the school system has been urged to find the solutions. This has caused a congestion of new subjects in the school system. The system has been unable to integrate the subjects into the existing curriculum. Therefore the result is an increase of the number of subjects taught at school. The result is a menu of an increasing number of aspects of life to be considered at school. (SOU 1992:94 p. 61)

The school system is expected to take care of health education, which may be considered as a problem of the society. The curriculum explicitly states that it ultimately is the responsibility of the head to integrate all multi-disciplinary subjects into the school education (such as those related to health for example; sexual education, the risks of tobacco, alcohol, and narcotics). The authors of the curricula claim that the conflict between the need to disseminate knowledge and the need to respond to the broad problems of society implies that knowledge is perceived as something objective and external in parallel existence with a deep understanding of knowledge. The curricula gives focus to the multi-dimensional aspects of knowledge (SOU 1992:94). Four aspects are made explicit:

- Familiarity - the background, an invisible part based on a sensory perception, what we see, smell, feel, "know", and further, the sense of being able to apply knowledge in the right situation.
- Facts - a technical form of knowledge, information, knowing something in a specific way.
- Understanding - a theoretical form of knowledge, comprehension, to understand the meaning, to internalise collective concepts, mainly delivered through language, language development enables the recognition of variations of meanings.
- Skills - a practical form, how things are performed, a pattern of activity, intellectual or motor capacity.

In order to be able to use new knowledge in a specific context there is a need for each individual to formulate his personal understanding based on his existing knowledge. Only then, knowledge will become meaningful. The role of the school system is to strike a balance between different forms of knowledge. The school system must function as an enabling forum where school children are able to create a personal basis for knowledge in a meaningful context. This creates the opportunity to develop skills for a rich dialogue, the ability to formulate or articulate ideas and to try out arguments.

The dialogue can be verbal but may also be formulated through music, art, dance and drama, thus integrated in the creation of knowledge (Lpo 1994). Thus knowledge becomes instrumental for problem solving, a mediator of deep understanding and part of a process in the generation of new knowledge. The curriculum states the importance of participation. School children must have a personal responsibility for their development and sense the need to conquer new knowledge. Finally, the text expresses the need for the school system to base its daily functions and activities on democratic principles with respect for all individuals.

The different aspects of knowledge described above are visualised in [Figure 1](#). Here the familiarity forms the background upon which facts can be organised. In order to achieve understanding and skills it is necessary to be able to shift focus between facts and familiarity. In order to obtain an optimal learning situation and to create new experience there is a need to utilise new perspectives.

Obstacles to school functioning as an enabling process

The organisation of work at school, in conjunction with the philosophy of the system, either supports or blocks the acquisition of learning among schoolchildren. According to Nutbeam (1993b), there is a risk that the school system may be counter-productive, enhancing school alienation among the pupils. A Swedish analysis pointed to the fact that traditional organisation of the work at school can enhance learning difficulties (Madsén & Sandström 1989). The critique against the school system is based on two principal problems. First, many children do not acquire an in-depth comprehension of what the school really wants to teach them. In its organisation of daily work the school system has been unable to create time and space to enable the students to go through a profound process of generating knowledge. This process is supposed to create a continuous flow of new knowledge into the children's experience basis. Failing this has the consequence of difficulties to comprehend. Gardner (1992) claims that the school system has to understand and base its education on the perspective that there are different kinds of intelligence. Problems will arise if the school system continues to base its education on "traditional" school type intelligence of mathematical and linguistic skills. Secondly, the school system does not pay attention to the

variation of the school children's backgrounds and life experiences. This means a lack of reciprocity in the education and Cummins (1986) claims it blocks the process of empowerment. According to [figure 1](#) it also blocks the process of comprehension. As a consequence, it is causing school failure among under privileged groups.

A Framework for Health Promotion

The health promotion movement has become a complementary framework to the traditional focus on health protection and disease prevention. WHO has since the mid 80's underlined the importance of health promotion (as explicitly stated in the Ottawa charter of 1986). Health promotion is the process, which enables people to gain control over and improve their health. This process requires supportive settings and an acquisition of individual skills. Many of society's institutions, outside the health sector, need to redirect their functions towards health promotion. The school is definitely a setting in need of incorporating health promotion activities. The development of the concept of health promoting schools is described in a series of documents and articles (Nutbeam 1992, WHO 1993, 1995 and Lynagh 1997). The different models of health promotion stress the need for population participation, comprehension and engagement. In many ways the Health Promotion Process is similar to the processes of Learning and the Comprehension of Knowledge described earlier in this article.

Salutogenesis

The salutogenic model aims at exploring the origin of health rather than explaining causes of disease. According to the salutogenic model people have access to a variation of resources that can help them perceive the world as an organised and structured reality. These resources are called Generalised Resistance Resources (GRRs). The GRRs can be either the internal capability and motivation, or the external possibility to use ones skills. People encounter different challenges in their daily life, the GRRs play a major role in the way that people deal with these challenges. The capability to make use of the GRRs differs between people. This ability is described as a Sense of Coherence, SOC (Antonovsky 1979, 1987). The higher the SOC the better the persons skills to maintain and improve health potential. The SOC helps the individual to comprehend, manage and find meaning in the world.

Sense of Coherence

Sense of coherence, SOC, develops over the first three decades of life (Antonovsky 1987). In early childhood the basis of SOC is established in interaction between the child and his/her intimate social relationships, mainly the family. Later, through childhood and adolescence, the experience of other people and institutions, like school, working life and society at large strengthens or weakens the SOC. If a person is experiencing he is given a high value by other people and finds himself socially appreciated, he will develop a sense of engagement. This again, supports development of meaning. Further, being able to feel engaged in something, and believing that you understand the problems you face, will give you the motivation to try to find the necessary resources to handle that particular problem.

Participation increases your ability to control your own existence. This sense of control can also mean the ability to place trust in people you are confident with, and allow them to exercise your power, and take it back when you want to. Predictability is an important basis for comprehension while a good balance of stressors forms the basis for manageability.

Life experiences, which are characterised by the possibility to be part of shaping the outcomes, support the development of SOC. Further a person's sense of being able to manage a situation is based on his perception of having the necessary resources at his disposal. These resources do not have to be his own, they can also be resources contributed by the significant others (Antonovsky 1987). These salutogenic concepts can be used at individual, group and societal level. According to Antonovsky, the institutions of society can have a salutogenic function and professionals should strive to form institutions salutogenic and health promoting.

The Salutogenic School

A synthesis of the two themes of this paper, a theory of learning and a theory for the salutogenic foundation of health promotion, is the creation of the salutogenic school system. To support this argument, an example of salutogenic school function is combined to what is known about successful schools. The starting point is a study that suggested that schools could have a salutogenic function. Cederblad et al (1994) studied adults who in their childhood were exposed to various risk factors for mental illness. The study tried to analyse which factors, in spite of the above, could contribute to a positive health outcome. These salutogenic mechanisms were related to the function of the school and the child's relationship to the teachers. (Note it is not a question of a "health intervention" but of the salutogenic function of the "school system"). The child's ability to comprehend contributed to a high SOC, but only when the child was endowed with the necessary social skills, was creative or had "school intelligence".

May the school system, through its core activities (education and dissemination of knowledge), have a salutogenic function? Theories of learning and health promotion have some common theoretical starting points. The learning process is based on perceived comprehension, creation of meaning and making knowledge instrumental. The basis for the salutogenic theory consists of comprehension, manageability and meaning. These common perspectives could serve as an entry point for the health promoting school.

Effective schools is a term used in educational research. It is also used as an indication of the function of the school, as a setting for health promotion or as a model for the health promoting ability of the school system (Lagerberg et al 1995, Hurrelmann et al 1995). The classic book by Rutter et al: *Fifteen thousand Hours* (1979), describes research carried out in schools of the inner city of London. Rutter et al showed that factors related to school, its organisation and the practice of daily work, contributed, not only to the traditional school results but also had effects on the behaviours of the school children independent of socio-economic background. School attendance, delinquency rates and school discipline were the key behaviours measured in this study - all of which can contribute to the alienation from school. These results still remain after correcting for socio-economic difference and the children's previous school performance. Among the processes in school which contribute to positive outcome are the teachers emphasis on education, the expectations of good results, the teachers role model of positive examples, the coherence among the school personnel and the maintenance of the physical environment. Rutter et al introduced the concept of school ethos as a collective term for the above mentioned school processes. Contemporary research from Sweden supports Rutter's results underlining the importance of the school ethos (Grosin 1994). Rutter et al pointed out the positive correlation between school processes, good performance at school and the behaviour of school children. The production of good school results is the traditional task of the school but the school can also contribute to improve behaviour among school children, reduce delinquency and have a health promotive function. These different

processes, their underlying mechanisms and their salutogenic interpretations are described in [table 1](#).

First of all the component of meaningfulness is influenced. The school system loses its effectiveness when a large number of schoolchildren are low performers i.e. they lack the traditional "school intelligence", when admitted to school (Rutter et al 1979). Grosin (1994) claims that the effective schools have the potential of supporting school children that do not have their own social support to perform well in school. Cederblad et al (1994) claims that it is necessary that children acquire "school intelligence", as a precondition for the salutogenic function of the school.

Does comprehension or "school intelligence" limit the possibilities to achieve health and school success?

The principle of the learning process, explained earlier here, is using comprehension as a central component. Comprehension leads to a meaningful learning process. Meaning, on the other hand, also functions as a prerequisite for the comprehension. A state of comprehension is accomplished when the new learning material is related to the learners previous experience and understanding of reality. Gardner (1992) claims that the fundamental problem with traditional schools is the failure to achieve this state of comprehension among the learners. This failure is most evident in children who are not endowed with traditional "school intelligence" but even many of the endowed children lack the same genuine understanding because the learning material is not linked to their earlier experience. As presented earlier, Cederblad et al showed that the school could function as a salutogenic factor for the endowed students where comprehension (the cognitive factor) contributed to their sense of coherence. One could interpret Rutter et al's results by stating that meaning (the motivational component of SOC) exists in schools with an ethos that promote good results. If a large proportion of the children lack "school intelligence" the school performance gets worse. The research evidence of both Rutter et al and Cederblad et al suggest that a traditional way of understanding the concepts of Knowledge and Learning, focusing on the traditional school intelligence, only is supportive to children who already have acquired "school intelligence". Nutbeam (1993b) is also critical of the traditional way of learning, claiming that it causes school alienation and that it functions contradictory to the empowering principles. What remains, is to consider whether a good learning process based on genuine understanding, functions as a core element in the process towards good health and knowledge.

[Figure 2](#) considers the process of acquiring knowledge as an independent variable affecting both the learning process and the development of SOC. A salutogenic school must promote meaning, manageability and comprehension. The Swedish curricula could serve as a good instrument for the creation of a salutogenic school. The examples given indicate that the school system could have a positive function in the process of health development. Comprehension is the most important key to the learning process. To achieve a state of comprehension, a problem has to be referred to earlier experience, which has to be appreciated and respected by the teacher. Teachers can approach the emotional component, consisting of motivation, interest and engagement both through a good ethos, as Rutter et al showed, and through teachers who have an empowering attitude. However, there seems to be a critical situation for the salutogenic process in the school system, this is the question of improving the process of comprehension in children who are not endowed with traditional school intelligence.

Comprehension must be based on the perceptions and experiences of the children and take into consideration different ways of understanding. The general critique that school researchers raises, focuses on the lacking sense of the school systems to appreciate the value of the background of the children. This ignorance is an obstacle to both the emotional and cognitive development of the children. As a consequence, the school misses the opportunity to contribute to the child's development of skills to manage life.

Discussion

If the school system is using learning methods that supports mainly traditional "school intelligence", there is a risk that the school may be counter-productive and increase the problems it is supposed to solve. This article has presented a theoretical framework for the learning process and compared it to some theories of health promotion. Madsén & Sandström (1989) and Gardner (1992) claim that the school system itself can produce its problems of learning. Nutbeam (1993b) claims the school is a direct cause of health problems. On the other hand, Cederblad et al (1994) and Antonovsky (1996) claim school could have a salutogenic effect. However, this can only be achieved when the school system tries to direct its efforts towards developing understanding and meaningful learning. In this way the school system could act enabling and promote the children's sense of coherence.

Education is a question of disseminating knowledge and experience from one generation to the next. Ultimately it is a question of the distribution of power between generations and the question of who is authorised to exercise it. Every new generation has its own unique historical background to base its experience on. Effective schools are used as a basis for the development of the health promoting schools. The effective schools have been successful instruments regarding the improvement of school performance and healthy behaviour in a broad sense. Effective schools deal with school processes, i.e. how the schools system is organised and how its professionals can function as persons who are courteous and respectful towards the school children. Still there are great problems in schools where the number of children who have not acquired traditional "school intelligence" is too high.

Empirical studies of learning processes are needed to improve the school system and its health promoting effect. The protocol should be designed to study the effect of the processes, where the learning contents delivered to the school children by the school system is incorporated into the knowledge base, background and experience of the children. This would support the salutogenic process of the school system and raise the Sense of Coherence of the school children through an improved comprehension, manageability and meaning for all children. The school system should have the internal responsibility for development of its health promoting activities. Health workers can contribute to this process through their knowledge about health promotion, health problems and suggest methods for health promoting activities of the school.

References

Antonovsky, A. (1979) *Health, Stress and Coping*. Jossey-Bass, San Francisco.

Antonovsky, A. (1987) *Unravelling the Mystery of health*. Jossey-Bass, San Francisco.

- Antonovsky, A. (1996) The salutogenic model as a theory to guide health promotion. *Health promotion international*, 11, 11 -18.
- Cederblad, M., Dahlin, L., Hagnell, O., Hansson, K. (1994) Salutogenic childhood factors reported by middle-aged individuals. *Eur Arch Psychiatry Clin Neurosci*, 244, 1 - 11.
- Cummins, J. (1986) Empowering Minority Students. *Harvard Educational Review*, 56, 18-36.
- Gardner, H. (1991) *The unschooled Mind. How Children Think and How Schools Should Teach*. Basic Books New York.
- Grosin, L. (1994) Effective schools and equality. Paper at the International Congress for School Effectiveness and Improvement. Melbourne January 3-6, 1994
- Hagquist, C. and Starrin, B. (1997) Health Education in schools - from information to empowerment models. *Health promotion international*, 12, 225-232.
- Hurrelmann, K., Leppin, A., and Nordlohne, E. (1995) Promoting health in schools: the German example. *Health Promotion International*, 10, 121-131.
- Lagerberg, D., Mellbin, T., Sundelin, C., Vuille, J-C. (1994) Growing up in Uppsala. The "new morbidity" in the adolescent period. *Acta Paediatrica*, 83, Suppl 398.
- Lpo 94. (1994) Curriculum for the Compulsory Schoolsystem. The Ministry of Education.
- Lynagh, M., Schofield, M. J. and Sanson-Fischer, R.W. (1997) School health promotion programs over the past decade: a review of the smoking, alcohol and solar protection literature. *Health promotion international*, 12, 43-60.
- Madsén, T. and Sandström, I. (1989) *Livlina för livslångt lärande. Lifeline for life-long learning*. SOU 1989:114.
- Nutbeam, D. (1992) The health promoting school. Closing the gap between theory and practise. *Health Promotion International*, 7, 151-153.
- Nutbeam, D., Macaskill, P., Smith, C., Simpson, J. M. and Catford, J. (1993a) Evaluation of two school-smoking programs under normal classroom conditions. *BMJ*, 306, 102-107.
- Nutbeam, D., Smith, C., Moore, L., Bauman, A. (1993b) Warning! Schools can damage your health: Alienation from school and its impact on health behaviour. *J Paediatr. Child Health*, 29, Suppl 1, 25-30.
- Rutter, M., Maughan, B., Mortimore, P. and Ouston, J. (1979) *Fifteen thousand hours. Secondary schools and their effects on children*. Great Britain: Open books, 4 th printing 1982.
- SOU 1992:94, Swedish Official Reports Series (1992) *Skola för bildning. Towards a Civic School*.

Stead, M., Hastings, G. and Tudor-Smith, C. (1996) Preventing adolescent smoking: a review of options. Health Education Journal, 55, 31- 54.

World Health Organisation Europe / Council of Europe / Commission of the European Communities (1993) The European Network of Health Promoting Schools. A joint WHO/CE/CEC project.

World Health Organisation (1995) Comprehensive school health education and promotion. Fact sheet 92, September 1995.

Figures and Tables

Figure 1. Framework for relationship between different aspects of knowledge

	Familiarity		
	Facts		Meaningful learning
Understanding		Skills	

Figure 2. A "rich" dialogue on different aspects of knowledge can support meaningful learning, understanding and skills

Familiarity	Meaningful learning
Facts	Understanding/ Comprehensibility
	Skills / Manageability

Table 1. Salutogenic interpretation of school processes

School processes	Mechanisms / educational meaning	Salutogenic interpretation
Academic emphasis, well-prepared lessons, successful class management	Fostering an enthusiasm and interest in learning	Meaningfulness
Good care of buildings, Atmosphere of confidence	The school and the pupils are valued	Meaningfulness
Willingness of teachers to see pupils about problems at any time	Staff appreciate the needs of children to give their own time to help them	Meaningfulness
General expectations set by the school, Courses planned jointly, Teachers support one another	Principles and guidelines are clearly recognisable and accepted by the school as a whole	Comprehensibility
Staff provide examples of positive models E g good timekeeping, interaction and behaviour	Pupils can copy the behaviour, Model – learning	Manageability